

# 21<sup>st</sup> INCOFYRA

International Conference on Frontiers  
in Yoga Research and Its Applications

**Theme:** Integrating Best of East with Best of West in Medical Practice

**Jan 3-7, 2016 | Prashanti Kutiram, Bengaluru - 560 105**



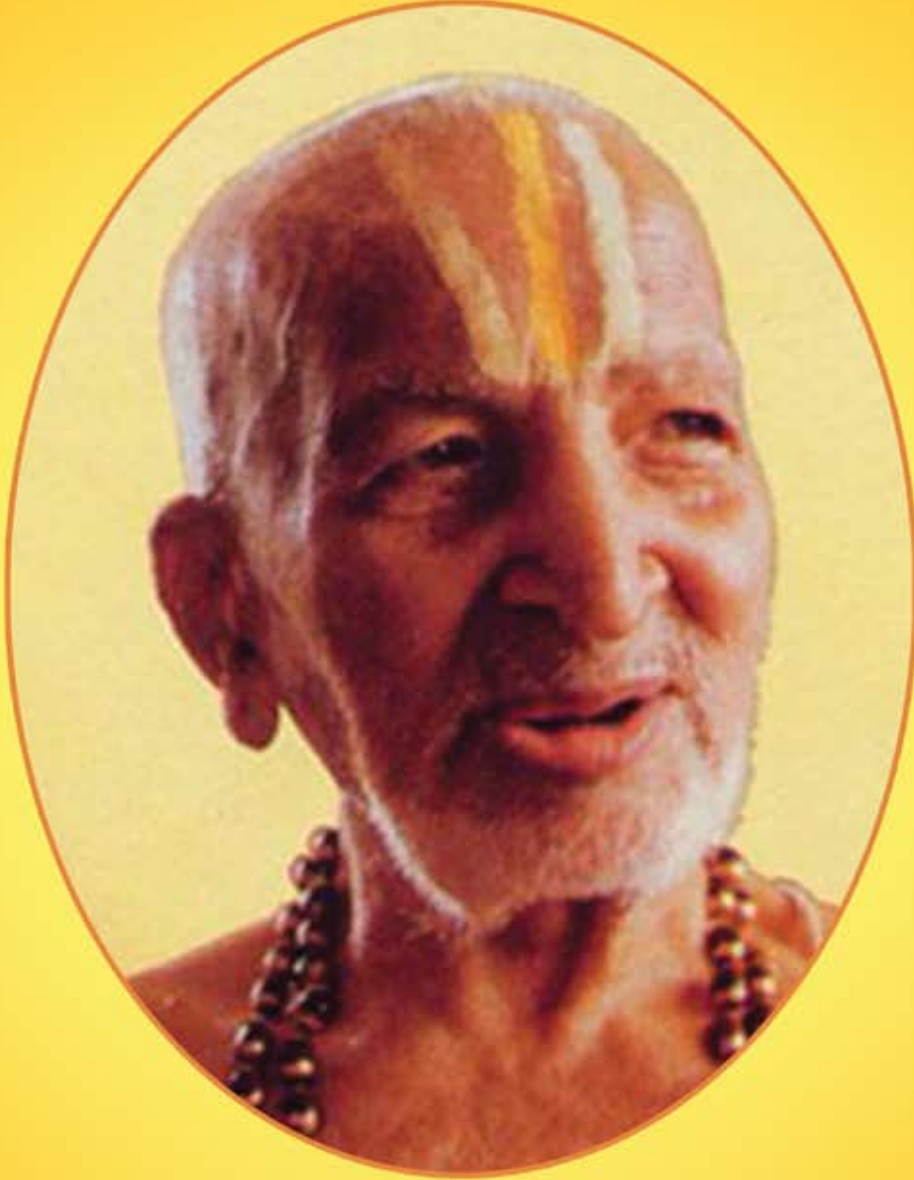
## SOUVENIR



Organised by: VYASA, Bengaluru

Technical Support by: S-VYASA Yoga University, Bengaluru

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Email: mails@kym.org, ceo@kym.org | Website: www.kym.org

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in Yoga Research and Its Applications

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Jan 3 - 7, 2016

Venue

**Prashanti Kutiram**

International Headquarters of VYASA, Bengaluru

Organised by

**Vivekananda Yoga Anusandhana Samsthana  
(VYASA), Bengaluru**

Technical Support by

**S-VYASA Yoga University**

**Swami Vivekananda Yoga Anusandhana Samsthana**  
(Declared as Deemed-to-be University under Section 3 of the UGC Act, 1956)  
Bengaluru

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### **COLLABORATORS:**

European Association for the Study of Diabetes

International Society of Hypertension

British Heart Foundation

### **ASSOCIATES:**

Indian Yoga Association

CYA International

SDM College of Naturopathy and Yogic Sciences

Medical Colleges, Universities & National Institutes



### **HOST:**

Government of Karnataka

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# *Conference* Song



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# ॥ विश्वभैषज्यभाग्यगानम् ॥

॥ Viśvabhaisajyabhāgyagānam ॥

॥ विश्वभैषज्यभाग्यगानम् ॥

स्वास्थ्यस्य शान्तै जगतो हिताय भैषज्यगानं बहुभिः प्रदत्तम् ।  
तान् विश्ववन्द्यान् प्रणिपत्य मूर्ध्ना योगस्य तन्त्रे निपुणा भवेम ॥

*svāsthyasya śāntai jagato hitāya bhaisajyagānaṁ bahubhiḥ pradattam ।  
tān viśvavandyān praṇipatya mūrdhnā yogasya tantre nipuṇā bhavema ॥*

ಸ್ವಾಸ್ಥ್ಯಸ್ಯ ಶಾಂತೈಜಗತೋ ಹಿತಾಯ ಭೈಷಜ್ಯಭಾಗ್ಯಂ ಬಹುಭಿಃ ಪ್ರದತ್ತಮ್ ।  
ತಾನ್ ವಿಶ್ವವಂದ್ಯಾನ್ ಪ್ರಣಿಪತ್ಯ ಮೂರ್ಧ್ನಾಯೋಗಸ್ಯತನ್ತ್ರೇ ನಿಪುಣಾ ಭವೇಮ ॥

योगस्य मन्त्रं नितरां जपामः विश्वस्य भूतिं सततं स्मरामः ।  
भैषज्य भाग्यं भुवि दापयामः मेहेन मुक्तं भुवनं प्रकुर्मः ॥

*yoagasya mantrāṁ nitarāṁ japāmaḥ viśvasya bhūtiṁ satataṁ smarāmaḥ ।  
bhaisajya bhāgyaṁ bhuvī dāpayāmaḥ mehena muktāṁ bhuvanāṁ prakurmaḥ ॥*

ಯೋಗಸ್ಯ ಮಂತ್ರಂನಿತರಾಂಜಪಾಮಃ ವಿಶ್ವಸ್ಯ ಭೂತಿಂ ಸತತಂ ಸ್ಮರಾಮಃ ।  
ಭೈಷಜ್ಯಭಾಗ್ಯಂ ಭುವಿ ದಾಪಯಾಮಃ ಮೇಹೇನ ಮುಕ್ತಂ ಭುವನಂ ಪ್ರಕುರ್ಮಃ ॥

नरेन्द्रमार्गः शमिनां सुलभ्यः विवेकमार्गः सुखभाग्यपूर्णः ।  
स्वास्थ्यस्य मार्गः सुभदः सुयोग्यः अमृतस्यपुत्राः इति शोधयामः ॥

*narendramārgaḥ śamināṁ sulabhyaḥ vivekamārgaḥ sukhabhāgyapūrṇaḥ ।  
svāsthyasya mārgaḥ subhadaḥ suyogyāḥ amṛtasyaputrāḥ iti śodhayāmaḥ ॥*

ನರೇಂದ್ರಮಾರ್ಗಃ ಶಮಿನಾಂ ಸುಲಭ್ಯಃ ವಿವೇಕಮಾರ್ಗಃ ಸುಖಭಾಗ್ಯಪೂರ್ಣಃ ।  
ಸ್ವಾಸ್ಥ್ಯಸ್ಯ ಮಾರ್ಗಃ ಶುಭದಃ ಸುಯೋಗ್ಯಃ ಅಮೃತಸ್ಯಪುತ್ರಾಃ ಇತಿ ಶೋಧಯಾಮಃ ॥

प्रशान्ति धाम्नि अभ्यास हासः प्रभातकाले सुखशान्तिश्वासः ।  
आरोग्यधाम्नि भवतात् चिकित्सा आयुः प्रकृत्या नवनित्यभासः ॥

*praśānti dhāmnī abhyāsa hāsaḥ prabhātakāle sukhaśāntiśvāsaḥ ।  
ārogyadhāmnī bhavatāt cikitsā āyuh prakṛtyā navanītyabhāsaḥ ॥*

ಪ್ರಶಾಂತಿಧಾಮ್ನಿ ಅಭ್ಯಾಸಹಾಸಃ ಪ್ರಭಾತಕಾಲೇ ಸುಖಶಾಂತಿಶ್ವಾಸಃ ।  
ಆರೋಗ್ಯಧಾಮ್ನಿ ಭವತಾತ್ ಚಿಕಿತ್ಸಾ ಆಯುಃ ಪ್ರಕೃತ್ಯಾ ನವನಿತ್ಯಭಾಸಃ ॥

नमो महद्भो नम उत्सुकेभ्यः नमोस्तु मन्त्रे जगदात्मशक्तै ।  
नमो मुनिभो नम अभकेभ्यः नमोस्तु व्यासाय विवेकदात्रे ॥

*namo mahadbho nama utsukebhyah namoastu mantre jagadātmaśaktai ।  
namo munibho nama arbhakebhyah namostu vyāsāya vivekadātre ॥*

ನಮೋ ಮಹದ್ಭೋ ನಮ ಉತ್ಸುಕೇಭ್ಯಃ ನಮೋಽಸ್ಮು ಮಾತ್ರೇ ಜಗದಾತ್ಮಶಕ್ತೈಃ ।  
ನಮೋ ಮುನಿಭೋ ನಮ ಅರ್ಭಕೇಭ್ಯಃ ನಮೋಽಸ್ಮು ವ್ಯಾಸಾಯ ವಿವೇಕದಾತ್ರೇ ॥

**Dr. Ramachandra G Bhat**

*Vice-Chancellor  
S-VYASA Yoga University, Bengaluru*



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# *Conference* Schedule



# CONFERENCE SCHEDULE

## January 4 - 7, 2016

### Jan 4, 2016, Monday

9:00 - 10:30 am	<b>Plenary 1: Modern Medicine</b> Venue: Main Hall			
	<p><b>Speakers:</b>  <b>Prof. Andrew Boulton</b>, Professor of Medicine, University of Manchester, UK  <b>Title:</b> Diabetes -The Epidemic of the 21st Century  <b>Dr. H R Nagendra</b>, Chancellor, S-VYASA University, Bengaluru  <b>Title:</b> Integrating Eastern Wisdom of Panchakosha, Adhi and Vyadhi with Western approach of Rigorous Research</p>			
10:30 - 11:00 am	Tea Break			
11:00 - 1:00 pm	<b>Plenary 2: Integrative Medicine</b> Venue: Main Hall			
	<p><b>Chair Persons:</b>  <b>Dr. Vijay Bhatkar</b>, Chancellor of India International Multiversity, and National President of Vijnan Bharati, New Delhi  <b>Dr. R Nagarathna</b>, Medical Director, Arogyadhama, VYASA, Bengaluru</p> <p><b>Speakers:</b>  <b>Padmabhusan Prof. B M Hegde</b>, Ex Vice Chancellor, Manipal University, Mangalore  <b>Title:</b> Current challenges and Future of Integrative medicine in India  <b>Dr. Bhushan Patwardhan</b>, Vice-Chancellor, Symbiosis International University (SIU), Pune  <b>Title:</b> Challenges in integrating modern medicine with traditional Indian medicine  <b>Dr. Sat Bir Khalsa</b>, Assistant Professor of Medicine, Harvard Medical School  <b>Title:</b> Yoga in Schools for Mental Health: The Science and the Research Evidence</p>			
1:00 - 2:00 pm	Lunch			
2:00 - 3:30 pm	<b>Symposia 1:</b> <b>Recent advances in T2DM</b> organized by <b>European Association for the study of Diabetes (EASD)</b> Venue: <b>Mangal Mandir</b>	<b>Symposia 2:</b> <b>Oncology</b> Venue: <b>Main Hall</b>	<b>Symposia 3:</b> <b>Mental Health</b> Venue: <b>Sushruta Medical College</b>	<b>Poster Presentations</b> Venue: <b>Main Hall</b>
	<p><b>Chair Persons:</b>  <b>Prof. Andrew Boulton</b>, Professor of Medicine, University of Manchester, UK  <b>Title:</b> Latest EASD / ADA guidelines for the management of diabetes</p>	<p><b>Chair Persons:</b>  <b>Dr. Lorenzo Cohen</b>, Professor and Director of the Integrative Medicine Program, University of Texas, MD Anderson Cancer Center, USA</p>	<p><b>Chair Persons:</b>  <b>Dr. Shashi Bala Singh</b> DIPAS, New Delhi  <b>Dr. Ramaswamy</b>, Director General. CCRS, New Delhi</p>	<p><b>Dr Raghavendra Rao</b>, Senior Scientist &amp; Head, CAM Program, HCG, Bangalore</p>

2:00 - 3:30 pm	<p><b>Dr. Prasanna Rao Balakrishna</b>, Manchester, UK  <b>Title:</b> Importance of lifestyle modification in the management of pre-diabetes and diabetes</p> <p><b>Dr. Satish Babu</b>, Bangalore, India  <b>Title:</b> Weight management in the treatment of diabetes</p> <p><b>Dr Kashinath Dixit</b>, Manchester, UK  <b>Title:</b> Newer medication for the treatment of diabetes</p>	<p><b>Chair Persons:</b>  <b>Dr. Darshan Shankar</b>, Vice Chancellor, Institute for Trans-Disciplinary Health Sciences, Bengaluru</p> <p><b>Speakers:</b>  <b>Dr. Rajesh K Grover</b>, Director, Delhi State Cancer Institute, New Delhi  <b>Title:</b> Role of Lifestyle in Differential Demographic Distribution of Cancer</p> <p><b>Dr. S K Chaturvedi</b>, Department of Psychiatry, NIMHANS, Bangalore  <b>Title:</b> Cancer and Mental Health</p> <p><b>Dr. Prof. K S Gopinath</b>, Chairman, HCG Bangalore  <b>Title:</b> Role of Yoga in Integrative oncology: an evidence based approach</p>	<p><b>Speakers:</b>  <b>Dr. Kamini Rao</b>, Founder and Medical Director, Milann, Bengaluru  <b>Dr. Rama Jayasundar</b> Department of NMR, AIIMS, New Delhi  <b>Title:</b> Effects of Gayatri mantra on brain studied by proton Magnetic Resonance Spectroscopy in healthy volunteers</p> <p><b>Dr. M Kannan</b>, Research Officer, Siddha Central Research Institute  <b>Title:</b> Mental Health in Siddha - A review</p>	
3:30 - 4:00 pm	<b>Tea Break / Vsoft Infoware E Clinic Presentation (Main Hall)</b>			
4:00 - 5:00 pm	<p><b>Dr. Lalantha Leelarathna</b>, Manchester, UK  <b>Title:</b> State of art devices for the management of diabetes</p> <p><b>Dr. Shesha Pramod</b>, Bristol UK  <b>Title:</b> Diabetes in pregnancy - challenges in the management</p> <p><b>Dr. Karin Schara</b>  <b>Title:</b> Management of painful neuropathy and diabetic foot problems</p>	<p style="text-align: center;"><b>Panel Discussion</b>  <b>Venue:</b> Sushruta Medical College  <b>Moderator:</b> Dr. R Nagarathna</p> <p><b>Dr. Lorenzo Cohen</b>, Professor and Director of the Integrative Medicine Program, University of Texas, MD Anderson Cancer Center, USA  <b>Dr. Shashi Bala Singh</b>, DIPAS, New Delhi  <b>Dr. Rajesh K Grover</b>, Director, DSCI, Institute, New Delhi  <b>Dr. Rama Jayasundar</b>, Department of NMR, AIIMS, New Delhi  <b>Dr. Ishwar V Basavaraddi</b>, Director, MDNIY, New Delhi  <b>Dr. Vanita</b>, President, CCIM, New Delhi  <b>Dr. VyasahKalyanasundaram</b>, Director, Centre for Human Excellence, Colombo, Srilanka  <b>Dr. B T Chidananda Murthy</b>, Principal, JSS  <b>Shri Suhash Malkhede</b>, Director, Dept. of AYUSH, Govt. of Karnataka</p>		

## Jan 5, 2016, Tuesday

9:00 - 11:00 am	<b>Plenary 1: Integrative Medicine</b> Venue: Main Hall			
	<p><b>Chair :</b> Dr. K S Ravindranath, Vice-Chancellor, RGUHS, Bengaluru</p> <p><b>Speakers:</b> Dr. Lorenzo Cohen, Professor and Director of the Integrative Medicine Program, University of Texas, MD Anderson Cancer Center, USA Title: Integrating Yoga into Cancer Care Dr. D Nagaraja, Director, School of Integrative Medicine, Title:</p>			
11:00 - 11:30 am	Tea Break			
11:30 - 1:00 pm	<b>Plenary 2: Modern Medicine</b> Venue: Main Hall			
	<p><b>Chair:</b> Dr. S C Manchanda, Senior Consultant Cardiologist, Sir Ganga Ram Hospital, New Delhi</p> <p><b>Speakers:</b> Prof. Rhian Touyz, President, International Society of Hypertension Title: Hypertension – past, present and future Dr. Anthony Heagarty, Professor of Medicine, Cardiac Centre lead in the Institute of Cardiovascular Sciences, Manchester University Title: Dr. D Prabhakaran, Vice President, Public Health Foundation of India Title: How do we address the ring burden of Hypertension in India</p>			
1:00 - 2:00 pm	Lunch			
2:00 - 3:30 pm	<b>Symposia 1:</b> Update on Hypertension - a global challenge Symposium by International Society for Hypertension	<b>Symposia 2:</b> <b>Oncology</b> Venue: Main Hall	<b>Symposia 3:</b> <b>Integrative Medicine</b> Venue: Sushruta Medical College	<b>Oral Presentations</b> Venue: Vivekananda Hall
	<p>Dr. D Prabhakaran, Vice President, Public Health Foundation of India Title: Innovations to reduce the burden of hypertension In India Dr. Rajeev Gupta, Preventive Cardiology, Internal Medicine and Research Centre at Eternal Heart Care Centre and Research Institute, Jaipur Title: Combining old and new technologies (clinical tools) for better hypertension control in India</p>	<p><b>Chair Persons:</b> Dr. Vijayalaxmi Deshmane, Professor &amp; Head, Medical Oncology, Kidwai Memorial Institute of Oncology Bangalore Dr. Jayakumar, Secretary General, Vijnanabharati, New Delhi</p> <p><b>Speakers:</b> Dr Ajai Kumar BS, Founder &amp; Chairman, HCG, Bengaluru Title: Recent Advances in Cancer Management: An Overview</p>	<p><b>Chair Persons:</b> Shri N V Raghuram, Chairman, Yoga Bharati, Dr. Ishwar V Basavaraddi, Director, MDNIY, New Delhi</p> <p><b>Speakers:</b> Dr. Timmappa Hegde, Director - Narayana Institute of Neurosciences, Bengaluru Title: A Spiritual Journey</p>	<p>Dr. Sat Bir Khalsa, Brigham and Women's Hospital, Harvard Medical School, Boston, US + Dr. Naveen K V, Doctor, Yogaksema - Stress &amp; Lifestyle Clinic, Bangalore + Dr. Sathyaprabha T N, Professor, Dept. of Neurophysiology, NIMHANS, Bengaluru</p>

2:00 – 3:30 pm	<p><b>Dr. Narsingh Verma</b>, Secretary General Indian Society of Hypertension  <b>Title:</b> Circadian variability in blood pressures as risk factor of complications</p>	<p><b>Speakers:</b>  <b>Dr. Senthamil R Selvan</b>, Vivekananda Yoga Research Foundation, Norwalk, CA, USA  <b>Title:</b> Immune System and Cancer: Relationships and Alterations  <b>Dr. Jayashree Todkar</b>, Laparoscopic Surgeon  <b>Title:</b> Disability- a rising challenge: a multi-disciplinary approach</p>	<p><b>Speakers:</b>  <b>Dr. Balasubramanyam</b>, Assistant Director &amp; Senior Scientist, Madras Diabetes Research Foundation, Chennai, India  <b>Title:</b> Molecular dynamics of T2DM  <b>Dr. B T Rudresh</b>, Classical homeopathic practitioner, Bengaluru  <b>Title:</b> Integrative Medicine - Homeopathy</p>
3:30 - 4:00 pm	<b>Tea Break</b>		
4:00 - 5:00 pm	<p><b>Dr. Sailesh Mohan</b>, Senior Research Scientist and Associate Professor PHFI,  <b>Title:</b> Innovative community based approaches to improve hypertension prevention and management in India</p>	<p><b>Panel Discussion</b>  <b>Venue:</b> Sushruta Medical College  <b>Moderator:</b> Dr. K Subramanyam, Pro-Chancellor, S-VAYSA, Bengaluru</p> <p><b>Dr. Balasubramanyam</b>, Assistant Director &amp; Senior Scientist, Madras Diabetes Research Foundation, Chennai, India  <b>Dr. Senthamil R Selvan</b>, Vivekananda Yoga Research Foundation, Norwalk, CA, USA  <b>Dr. Issac Mathai</b>, Medical Director, Saukya, Bengaluru  <b>Dr. Vijayalaxmi Deshmane</b>, Professor &amp; Head, Medical Oncology, Kidwai Memorial Institute of Oncology Bangalore  <b>Dr. Ishwara Acharya</b>, Director, CCRYN  <b>Dr. Ramaswamy</b>, Director General. CCRS, New Delhi  <b>Dr. Jayakumar</b>, Secretary General, Vijnanabharati, New Delhi</p>	

## Jan 6, 2016, Wednesday

9:00 -10:30 am	<p><b>Plenary 1: Modern medicine: Sessions</b>  <b>Venue:</b> Main hall</p>	
	<p><b>Prof. Paula Fioretto</b>, Professor of Medicine, University of Padova, Italy, Senior Vice President of EASD  <b>Title:</b>  <b>Dr. Lalantha Leelarathna</b>, Consultant Diabetologist, Manchester Royal Infirmary  <b>Title:</b></p>	
	<b>Tea Break</b>	
10:30 - 11:00 am	<p><b>Plenary 2: Integrative Medicine</b>  <b>Venue:</b> Main hall</p>	
11:00 - 1:00 pm	<p><b>Dr. Shirley Telles</b>, Director, Patanjali Research Foundation, Haridwar  <b>Title:</b> Yoga for physical and mental wellbeing  <b>Dr. Khetrpal C L</b>, Distinguished Professor, Centre of Biomedical Research, Uttar Pradesh  <b>Title:</b> Scientific approach to understand mental health benefits of YOGA and MEDITATION: fMRI studies  <b>Dr Ananda Pandurangi</b>, Medical Director &amp; Chairman, Inpatient Psychiatry and Director, Schizophrenia and ECT Programs  <b>Title:</b> Serious Mental Illness and Yoga</p>	
1:00 - 2:00 pm	<b>Lunch</b>	

2:00 - 3:30 pm	<p>Symposia 1: <b>Diabetes Mellitus</b> Venue: Mangal Mandir</p>	<p>Symposia 2: <b>Oncology</b> Venue: Main Hall</p>	<p>Symposia 3: <b>Cardiology</b> Venue: Vivekananda Hall</p>	<p>Symposia 4: <b>Mental Health</b> Venue: Sushruta Medical College</p>
	<p><b>Chair Persons:</b> <b>Dr. Narasimha Shetty</b>, Director, Karnataka Institute of Diabetes, Bengaluru <b>Dr. Gautham Sharma</b> Cardiologist, AIIMS, New Delhi</p> <p><b>Speakers:</b> <b>Dr. G Gangadharan</b>, Director, M S Ramaiah Indic Centre for Ayurveda and Integrative Medicine, Bangalore <b>Title:</b> An integrative model of healthcare pivoted around Ayurveda to meet current healthcare challenges: an example of Diabetes mellitus (DM) <b>Dr. V Guruprasad</b>, Consultant in Rehabilitation Medicine at Central Manchester Teaching Hospitals and Salford Royal hospital. <b>Title:</b> Exercise Prescription in diabetes <b>Dr. Montu Saha</b>, Scientist, DIPAS, New Delhi <b>Title:</b> Yoga in Extreme Environmental Conditions</p>	<p><b>Chair Persons:</b> <b>Dr. H Sudarshan</b>, Founder &amp; Secretary, Karuna Trust, Bengaluru <b>Dr. Lata Venkaram</b>, Gynecologist, Bengaluru</p> <p><b>Speakers:</b> <b>Dr. Raghavendra Rao</b>, Senior Scientist &amp; Head, CAM Program, HCG, Bangalore <b>Title:</b> Integrating Yoga into Oncology Care: Is the Wait Over? <b>Dr. Anja Schröder</b>, Clinic for Holistic Medicine and Traditional Chinese Medicine, Germany <b>Title:</b> Chlorophyll in cancer prophylaxis and -therapy <b>Dr. Lilly Ganju</b>, Scientist F, DIPAS, New Delhi <b>Title:</b> The consequences of Antarctic conditions and Ship Voyage: Yoga for Indian Expeditioners</p>	<p><b>Chair Person:</b> <b>Prof. Alex Hankey</b>, Distinguished Professor, S-VYASA, Bengaluru</p> <p><b>Speakers:</b> <b>Dr. S C Manchanda</b>, Senior Consultant Cardiologist, Sir Ganga Ram Hospital, New Delhi <b>Title:</b> Yoga for Prevention of Heart Disease <b>Dr. Ram Manohar</b>, Director, AVP Research Foundation, Coimbatore <b>Title:</b> <b>Dr. Getha Krishnana</b>, Department of Integrative Medicine &amp; Holistic Therapies, Medanta - the Medicity, Gurgaon <b>Title:</b> Cardiology and Integrative Medicine.</p>	<p><b>Chair Person:</b> <b>Dr. B N Gangadhar</b>, Professor of Psychiatry, NIMHANS, Bengaluru</p> <p><b>Speakers:</b> <b>Dr. Rajesh Sagar</b>: Associate Professor of Psychiatry, All India Institute of Medical Sciences, New Delhi <b>Title:</b> Depression in diabetes <b>Dr. Savita Eranti</b> <b>Title:</b> Overview of common mental disorders <b>Dr. Shivarama Varambally</b>, Associate Professor, Dept. of Psychiatry, NIMHANS, Bengaluru <b>Title:</b> Yoga in severe mental disorder</p>
3:30 - 4:00 pm	<b>Tea Break</b>			
4:00 - 5:00 pm	<p style="text-align: center;"><b>Panel Discussion</b> <b>Venue:</b> Sushruta Medical College <b>Moderator:</b> Dr. H R Nagendra</p> <p><b>Prof. M A Siddiqui</b>, Director, National Institute of Unani Medicine <b>Dr. Prashanth Shetty</b>, Principal, SDMCNYS, Ujire <b>Dr. H Sudarshan</b>, Founder &amp; Secretary, Karuna Trust <b>Dr. Getha Krishnana</b>, Department of Integrative Medicine &amp; Holistic Therapies <b>Dr. Ram Manohar</b>, Director, AVP Research Foundation, Coimbatore <b>Dr. Lilly Ganju</b>, Scientist F, DIPAS, New Delhi <b>Dr. V Guruprasad</b>, Consultant in Rehabilitation Medicine at Central Manchester Teaching Hospitals and Salford Royal hospital. <b>Dr. B R Ramakrishna</b>, Principal, Sushruta Ayurveda College</p>			

## Jan 7, 2016, Thursday

9:00 -11:00 am	<b>Plenary: Integrative Medicine</b> <b>Venue: Main Hall</b>
	<b>Dr. C N Manjunath</b> , Director and Professor of Cardiology, Sri Jayadeva Institute of Cardiology, Bengaluru <b>Title:</b> Profile of cardiovascular diseases and recent advances <b>Dr. Nagarathna</b> , Medical Director, Arogyadhama, VYASA, Bengaluru <b>Title:</b> Yoga as evidence based life style intervention for the management of NCDS <b>Dr. B N Gangadhar</b> , Professor of Psychiatry, NIMHANS, Bengaluru <b>Title:</b> Science of Yoga as Therapy on Psychiatry: Depression
11:00 - 11:30 am	<b>Tea Break</b>
11:30 - 1:00 pm	<b>Valedictory Program</b>
1:00 - 2:00 pm	<b>Lunch</b>

# Vision Statement from the President



*My dear brothers and sisters...*

I extend a warm welcome and congratulate all of you for participating in this unique gathering- The International Conference on Frontiers in Yoga Research and its Applications (INCOFYRA), from Jan 3 - 7, 2016 organised by VYASA, Bengaluru.

The theme for this 21<sup>st</sup> version of INCOFYRA, 'Integrating the Best of the East with the Best of the West in Medical practice', is of high relevance for addressing general health problems worldwide. The focus of the scientific sessions will be on covering the latest trends in prevention, management and rehabilitation of ills associated with major Non-Communicable diseases like Diabetes, Hypertension, Cardiovascular disease and Cancer. The conference is expected to bolster the integration discussion by bringing experts, in medical practice and research, from Ayurveda, Naturopathy, Yoga, Unani, Siddha, Homeopathy and Modern Medicine on a common platform. The importance of doing this is corroborated due to backing by visionaries, prominent among them Shri Narendra Modi Ji, Honourable Prime Minister of India, who will be inaugurating this milestone event.

The conference will start with Policy makers meet which brings together the policy makers and advisors on one platform to help in forecasting the future of integrative medicine, evolving ways to promote it and identifying areas which require immediate action. The overwhelming support from academia, research and medical practitioners from all different medical systems required us to organise satellite symposia. Organised jointly by VYASA, European Association of Diabetes Studies (EASD) and International Society of Hypertension (ISH) a two-day satellite symposium on "Recent advances in diabetes" and "Update on hypertension - a global challenge" will be held in Bengaluru city. At the Prashanti Kutiram campus venue, morning session will be dedicated for plenary talks followed by invited talks

in the afternoon parallel sessions separately for each Non-Communicable disease by distinguished researchers. Poster and oral sessions are equally important contributors for promoting the integration of medical systems where ideas emerge and exchanged through direct one-to-one interaction with the researchers.

On the whole we sincerely hope and wish this 21<sup>st</sup> INCOFYRA will forge the integration intent stronger in the medical and research fraternity. Cost and cure will be better taken care by integrating the Best of the East with the Best of the West in Medical practice.

*With Love*

**Dr. H R Nagendra**

President, 21<sup>st</sup> INCOFYRA  
President, VYASA and  
Chancellor, S-VYASA University



## MESSAGE FROM THE CHAIR SCIENTIFIC COMMITTEE

The 21<sup>st</sup> International Conference on Frontiers in Yoga Research and Applications (INCOFYRA) with the most comprehensive theme: Bringing together the best of the east with the best of the west in medical practice will be an historical event for several reasons.



Inauguration by Hon. Prime minister of India, Shri Narendra Modi ji will be the biggest event ever in the history of Vivekananda Yoga Anusandhana Samsthana (VYASA) for more than three decades now. This is for the first time, with Yoga research as the foundation, we are moving to Integrative Medicine based International conference platform which would promote Evidence based approach in the practice of Integrative Medicine.

With the main focus on Diabetes, Cardiology, Oncology and Mental Health, the 21<sup>st</sup> INCOFYRA has for the first time official participation of professional bodies from main stream medicine such as the European Association of Diabetes Studies, International Society of Hypertension and British Heart Foundation. Scientists and practitioners representing more than 17 countries across the world will be presenting recent trends and updates in their respective fields.

The structure of the conference includes plenary sessions, specialized symposia, and oral as well as poster presentations. The day's deliberations will be concluded through a panel discussion which would recommend points for conference resolution. Exclusive prize paper sessions would encourage researchers as well as students.

An International networking meet is planned to facilitate networking and collaborations across international researchers and groups participating in the conference. A High level Policy makers meet has been proposed to bring together Policy

makers, Educational institutions and Industry representatives. The National Arogya Expo would bring together researchers, practitioners, industry and general public.

Beyond the intellectual feast, participants would also participate in our food festival and enjoy cultural extravaganza.

**Dr. N K Manjunath**

Joint Director of Research  
S-VYASA University, Bengaluru

# S-VYASA

## Yoga University



The institution was formally registered as a research based charitable organization called Vivekananda Kendra Cikitsa Tatha Anusandhana Samiti [YOCTAS] in the year 1981 with the objective of scientifically evaluating the therapeutic benefits of yoga and its' applications. Following the path breaking work in evaluating the therapeutic use of yoga in the management of bronchial asthma in 1985, the Swami Vivekananda Yoga Research Foundation was recognized as a Scientific & Industrial Research Organization [SIRO] from the Department of Scientific & Industrial Research, Ministry of Science & Technology, Government of India in the year 1988. The scientific accomplishments thereafter and the disciplined education based on the science and philosophy of yoga resulted in receiving University affiliations leading to a doctoral level program in yoga & allied sciences under the Faculty of Science, Bangalore University, and subsequently getting the recognition as a Deemed-to-be University by the Ministry of Human Resource Development, Government of India, through the University Grants Commission in the year 2002. Currently, the parent organization, Vivekananda Yoga Anusandhana Samsthana (Research Foundation) [VYASA] sponsors the University, Swami Vivekananda Yoga Anusandhana Samsthana (Research Foundation) [S-VYASA]. S-VYASA has published more than 450 research papers in national and international journals. Also S-VYASA is equipped with a 250 bedded yoga therapy hospital. Recently Naturopathy and Ayurveda hospital was added to the holistic health home.

The Govt. of India, Ministry of Health & Family Welfare, Department of AYUSH has accorded the status of Center of Excellence in Yoga for S-VYASA. S-VYASA has been designated as Center of Excellence in yoga and the Research Department is designated at the ICMR Center for Advanced Research in Yoga and Neurophysiology (ICMR CAR Y & N). Recently S-VYASA has got ISO 9001 -2008 certification & NAAC accreditation.





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*Messages*  
from Dignitaries





सत्यमेव जयते


प्रधान मंत्री

Prime Minister

**MESSAGE**

I am happy to learn that the S-VYASA Yoga University, Bengaluru is organizing a five-day international conference on Frontiers in Yoga Research and its Application, which will include deliberations on subjects such as diabetes, oncology, mental health, hypertension and cardiology.

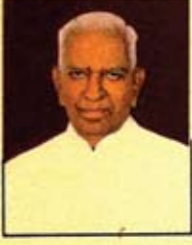
On this occasion, I extend my best wishes for the success of the Conference, and hope that it will lead to productive outcomes.



(Narendra Modi)

**New Delhi**

**29 December, 2015**



**VAJUBHAI VALA**  
Governor of Karnataka

**No.GS 217 MSG 2015**

**22<sup>nd</sup> December, 2015**

### **MESSAGE**

I am happy to learn that Swami Vivekananda Yoga Anusandhana Samsthanam, Bangalore, is organizing annual International Yoga Conference and also holding 13<sup>th</sup> Convocation to confer degrees on Phd. M.Sc. BSc., and other degree students. I understand that Swami Vivekananda Yoga Anusandhana Samsthana is the only Yoga University in the world, total dedicated to the study of Yoga, Ayurveda and Naturopathy.

I send my best wishes and greetings to the Organizers on this memorable occasion and convey my best wishes for its growth to greater heights in the years to come.

**(VAJUBHAI VALA)**

SIDDARAMAIAH  
CHIEF MINISTER



No. CM: PS: 278: 2015

VIDHANA SOUDHA  
BANGALORE - 560 001

Date: 31.12.2015

MESSAGE

I am very much delighted and pleased to learn that the Swami Vivekananda Yoga Anusandhana Samsthana is organizing 21<sup>st</sup> International Conference on ***Frontiers in Yoga Research and its Applications*** in Bengaluru from January 2 to 7 and bringing out a souvenir to commemorate the occasion.

Yoga is, perhaps, the first known and also the best known health care system in the World !

We, as Indians, should feel proud as Yoga was evolved in our country. Yoga reflects our great culture. Yoga has a great heritage, a great history, a great tradition and now, in a great demand too !

**NO YOGA, NO LIFE ! KNOW YOGA, KNOW LIFE !!**

I wish the 21<sup>st</sup> INCOFYRA, a grand success.

*Siddaramaiah*  
(SIDDARAMAIAH)

The Registrar,  
S-VYASA YOGA UNIVERSITY,  
Eknath Bhavan,  
No. 19, Gavipuram Circle, Kempe Gowda Nagar,  
BENGALURU – 560 019.



**जगत प्रकाश नड्डा**  
**Jagat Prakash Nadda**



**स्वास्थ्य एवं परिवार कल्याण मंत्री**  
**भारत सरकार**  
**Minister of Health & Family Welfare**  
**Government of India**



**MESSAGE**

It gives me immense pleasure that a five days International Conference is being organized between 3<sup>rd</sup> - 7<sup>th</sup> January, 2016 by SVYASA Yoga University.

Health is a major challenge in the country, and all efforts must be put to develop the best medical care practices. I hope this conference will give new directions in this way of integrative medicine.

I wish the organizers and participants all success.

**(Jagat Prakash Nadda)**

348, ए-स्कंध, निर्माण भवन, नई दिल्ली-110011  
348, A-Wing, Nirman Bhawan, New Delhi-110011  
Tele : (O) : +91-11-23061647, 23061661, 23061751, Telefax : 23062358, 23061648  
E-mail : hfwminister@gov.in

डॉ. हर्ष वर्धन  
DR. HARSH VARDHAN



मंत्री  
विज्ञान और प्रौद्योगिकी एवं पृथ्वी विज्ञान  
भारत सरकार  
नई दिल्ली - 110001

MINISTER  
SCIENCE & TECHNOLOGY AND EARTH SCIENCES  
GOVERNMENT OF INDIA  
NEW DELHI - 110001

MESSAGE

I am happy to learn that S-VYASA Yoga University at Bengaluru is organizing a five days International Conference with the theme "Integrating Best of East with Best of West in Medical Practice" from 3<sup>rd</sup> to 7<sup>th</sup> January, 2016.

I appreciate S-VYASA for their research contributions. I hope this Conference spreads the science of yoga to the world.

I wish this Conference great success & congratulate all the Organizers.

  
(Dr. Harsh Vardhan)



श्रीपाद नाईक  
SHRIPAD NAIK

राज्य मंत्री (स्वतंत्र प्रभार)  
आयुर्वेद, योग व प्राकृतिक चिकित्सा, यूनानी, सिद्ध एवं  
होम्योपैथी (आयुष) मंत्रालय  
राज्य मंत्री, स्वास्थ्य एवं परिवार कल्याण  
भारत सरकार

MINISTER OF STATE (INDEPENDENT CHARGE) FOR  
AYURVEDA, YOGA & NATUROPATHY  
UNANI, SIDDHA AND HOMOEOPATHY (AYUSH)  
AND MINISTER OF STATE FOR HEALTH & FAMILY WELFARE  
GOVERNMENT OF INDIA

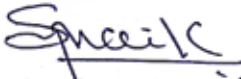


## MESSAGE

*I am delighted to know that Vivekananda Yoga Anusandhan Saunsthana (VYASA), Bangalore has planned to organize a five-day "International Conference on Frontiers in Yoga Research and its Application" from 3<sup>rd</sup> to 7<sup>th</sup> January 2016 at Prashanti Kutira, Bengaluru. This initiative of VYASA is most welcome at a time when Yoga has gone global with the UN declaration and celebration of 21<sup>st</sup> June as International Day of Yoga.*

*The inherent potential of Yoga for promoting human health and peaceful living is well known and scientifically proven. In the emerging scenario of mental health problems and stressful living and working conditions to increasingly cause lifestyle diseases, regular Yoga practice seems helpful to combat illness and promote positive health and well-being of the society.*

*I congratulate VYASA and the collaborating partners - The European Association for the study of Diabetes, the International Society for Hypertension and the British Heart Foundation for this noble initiative for the cause of Yoga. May the deliberations in the Conference be focused for development of Yoga.*

  
(Shripad Y. Naik)

Dated: December 31<sup>st</sup>, 2015.

Office : 101, AYUSH Bhavan, 'B' Block, GPO Complex, INA,  
New Delhi 110023  
Tel. : 011-24651955, 011-24651935 Fax : 011-24651936  
E-mail : minister\_ayush@nic.in  
Office : Nirman Bhavan, 250, 'A' Wing, New Delhi 110001  
Tel. : 011-23061016, 23061551 Fax : 011-23061157  
E-mail : shripad.naik@sansad.nic.in

Res. (Delhi) : 1, Lodhi Estate, New Delhi-110003, Tel.: 011-24635396, 011-24641398  
Res. (Goa) : "Vijayshree" House No. 111, St. Pedro, Oldgoa, Goa-403402  
Tel. : 0832-2444510, 0832-2444088

कर्नल राज्यवर्धन राठौड़ (रिटा.) एवीएसएम  
Col Rajyavardhan Rathore (Retd.), AVSM



सूचना और प्रसारण राज्य मंत्री  
भारत सरकार  
MINISTER OF STATE FOR  
INFORMATION & BROADCASTING  
GOVERNMENT OF INDIA



29 December, 2015

### MESSAGE

I am happy to learn that "SVYSA" Yoga University at Bengaluru is organizing a five days International Conference with the theme Integrating Best of East with Best of West in Medical Practice from 3<sup>rd</sup> to 7<sup>th</sup> January 2016.

I am sure this conference will help understanding the depth of health crisis and spread the message of holistic health care management. I wish this conference all success.

(Col. Rajyavardhan Rathore)

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119 'ए' विंग, शास्त्री भवन, नई दिल्ली-110001  
119 'A' WING, SHASTRI BHAWAN, NEW DELHI-110001  
E-mail : mosib@gov.in, Website : www.rajyavardhanrathore.in  
Tel. : 011-23381194, 23381193, / Ra\_THORe

डॉ. नरोत्तम मिश्र

मंत्री

लोक स्वास्थ्य एवं परिवार कल्याण,  
चिकित्सा शिक्षा, आयुष, भोपाल गैस त्रासदी  
राहत तथा पुनर्वास एवं संसदीय कार्य विभाग,  
मध्यप्रदेश



निवास : बी-6 (चार इमली), भोपाल

दूरभाष : { निवास : 0755-2441462  
: 0755-2441672  
मंत्रालय : 0755-2441674

अर्द्ध शा.पत्र क्र. ....  
मं/लो.स्वा.परि.क./चि.शि./आयु./भो.गै.त्रा./सं.का./

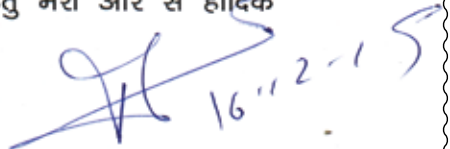
दिनांक .....

## संदेश

हर्ष का विषय है कि स्वामी विवेकानंद योग अनुसंधान संस्थान, बेंगलोर द्वारा योग और स्वास्थ्य पर अन्तराष्ट्रीय सम्मेलन 3-7 जनवरी, 2016 को एस. व्यासा संस्थान, बेंगलोर में आयोजित किया जा रहा है।

मनुष्य के सुखमय, कल्याणकारी जीवन को संजोने एवं संवारने में योग कियार्ये श्रेष्ठ साधन के रूप में हर जगह लोकप्रियता के शिखर की ओर निरन्तर अग्रसर है। जिस प्रकार मानव देह के लिये जल और अन्न जरूरी है उसी प्रकार मन, बुद्धि एवं आत्मा की शुद्धि हेतु योग-मुद्रा का प्रयोग आवश्यक है।

सम्मेलन एवं स्मारिका के सफल प्रकाशन हेतु मेरी ओर से हार्दिक शुभकामनाएं

  
(डॉ. नरोत्तम मिश्र)

**D. Veerendra Heggade**  
DHARMASTHALA - 574 216  
KARNATAKA STATE



☎ : (08256) : 277121  
E-Mail : dvheggade@hotmail.com

## MESSAGE

The most critical and controversial issue facing the world in the twenty-first century is Global warming. Global warming is the increase of earth average surface temperature due to the effect of greenhouse gases such as carbon dioxide, emissions from fossil fuels and burning gasoline for transportation, use of chemical fertilizers or from deforestation which leads to extreme weather, droughts, heavy snowfall, ocean acidification and ultimately species extinctions.

Human species for his comfort have gone deeper into the different layers of globe for extracting natural resources. This pollution of the earth has resulted in a massive pollution of the atmosphere. For this, measures should be taken to prevent further damage to all three aspects; Urdhvaloka (above earth), Bhooloka (earth) and Adholoka (below earth).

All these years' Asian countries including India were treated as backward and anti-progressive, but India is leading the spirit of protecting the nature and its future, due to which we are not a part of this imbalance in Prakruthi caused by other developed countries.

Our Hon'ble Prime Minister Narendra Modi has been propagating the protection of nature through his Swach Bharath Abhiyaan. Since he has immense faith in Indian system of medicine [AYUSH], I request him to promote Yoga and Naturopathy for wellness and healing with the vision to make Sadhrud Bharath and Swasthya Bharath.

In order to spread this wonderful message of yoga, a way of life to the entire world, Swami Vivekananda Yoga Anusandhana Samsthana under Dr. H R Nagendraji magnificent guidance has been rendering tremendous scientific work for collaborating yoga tradition and science. I, congratulate Shri Dr. H.R. Nagendraji for constantly directing works of VYASA that has benefited thousands of people in achieving their health goals since their establishment over three decades ago.

The 21<sup>st</sup> INCOFYRA organized by this Institute with a main theme of integrating the "Best of east with the Best of west in medical practice" is highly appreciable. India, being regarded as a "Young Nation" bears the responsibility of shaping its future leaders in the right direction by practice of yoga. The conference will be a right platform for the yoga scholars to reach out and reach high in order to reach beyond and implement evidence based medicine to the world.

May Lord Manjunath Swami bless all.



*D. Veerendra Heggade*  
(D. VEERENDRA HEGGADE)





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*Abstracts*  
Keynote Addresses





## INTEGRATING EASTERN WISDOM OF PANCHAKOSHA, ADHI AND VYADHI WITH WESTERN APPROACH OF RIGOROUS RESEARCH



**Dr. H R Nagendra**  
Chancellor, S-VYASA, Bangalore  
chancellor@svyasa.edu.in

Dr. Nagendra, a former space scientist at NASA, returned to his native India, changing, as he says, from engineering to human engineering “in search of truth.” Dr. Nagendra is at present the president of VYASA, Bangalore, and Chancellor of S-VYASA University. He has authored and co-authored about 35 books on yoga, nearly 35 research papers in engineering and 185 in yoga. He has awards from the ministry of health, and a Yoga Sri award from BKS Iyengar. He is consultant in yoga to many universities in Australia and USA, member of several bodies in the government of India. He was nominated by the American Biographical Association for the distinguish “Leadership Award” for his service to humanity.

Dr. Nagendra is the mastermind behind the magnificent Prashanti Kuteeram, International headquarter of Swami Vivekananda Yoga Research Foundation. Prashanti Kuteeram is a translation of his vision into reality. He is an individual utmost simplicity, despite his immense knowledge, through twin ideas of renunciation and service, he has been rendering YEOMAN Service to uplift humanity.

His aim is to combine the best of east with the best of west by combining modern scientific research to examine the efficacy of yoga to solve the challenges of the modern era.

Specialisation and Super-specialisation in most modern medical conferences dealing with one disease as Diabetes or cardiology or Hypertension or Psychiatry or oncology, etc are in vogue. But never do all experts of these diseases meet together in a conference to evolve a holistic outlook and integration. The medical practice has become so specialised that one specialist will direct his patient to the super-specialist; and the super-specialists look at one organ of the body in great depth and try to diagnose the problem there and treat that problem. The holistic view of the patient is totally lost. In multi speciality hospitals, they will be meetings of specialists and Super-specialists who look at different organs and sometimes the systems. But most pharmaceutical interventions are done to tackle only one organ. This no doubt gives good relief but leads to side effects and complications. Hence the trend is to administer multiple drugs. Unless we look at human beings in totality and evolve treatment modalities, the modern NCDs cannot be tackled effectively and fully.

So is the case with Indian Systems of treatment. Different systems of AYUSH also work in isolation as islands. The top specialists in each believe that they cannot integrate at all as



there are vital differences in basic concepts. Specialisation and Super-specialisations have also crept-in often losing sight of total human beings and the Holistic approach. The greatest problem is inadequacy of treatment effectiveness compared to modern medicine and lack of evidence-base in terms of modern research paradigm.

The world at large is realising the usefulness of each system having its own strengths in a particular area of operation and limitations in other areas. So pluralistic medicine is becoming popular; integrative health clinics and centres are being set up in most hospitals in USA and other countries also.

Yet another reason is the escalating costs of treatment by allopathic system which is becoming unaffordable by most people. The increasing premiums for medical insurance has made most people not to go for insurance coverage. In countries like UK where NHS offers free medical services to all, the cost of health budget has increased drastically. And there are large queues for cardiac surgeries, etc. Hence the whole emphasis is to evolve cost effective treatment modalities even in developed countries. It is here the integrative medical units have started offering some good solutions.

In developing countries like India where the rural population is the majority, the affordability of modern treatment modalities is becoming more and more difficult in spite of increasing earning potential of even the rural citizen. Our ancient system of Ayurveda, Yoga etc have been in vogue over millennia and have been providing cost effective, affordable modalities of treatments all over India. Similarly the local traditions of healing have been used to provide health care. So it is time that we should integrate our health systems to a harmonious well-knit system of health care delivery system with pluralistic approach.

But what can be the basis for this integration? Yoga provides that basis for effective integration through the PanchaKosha model and the concepts of Adhi and Vyadhi which we have been using for nearly four decades with very effective treatment of modern common ailments. The integrated approach of Yoga Therapy as an effective adjunct to modern medical system has proven its usefulness in providing a strong solid foundation for integration. The four streams of Yoga [Jnana, Bhakti, Raja (including Hatha Yoga) and Karma Yoga] and their practices to bring out the necessary balances at all 5 layers and thereby annihilating Adhi for a move towards normalisation and perfect health. This brings about the necessary life style changes for effective treatment of various diseases. Most AYUSH system practitioners also have started using Yoga as a compliment in their treatment modalities.

Similarly, over the last few years we have been evolving a pluralistic health care delivery system using the concept of Pancha Koshas and Adhi-vyadhi as a platform for integration of modern medicine and also AYUSH systems. If the first is rooted in matter-based paradigm and most useful in dealing with physical ailments, the latter is based on consciousness-based approach and can deal with the subtle and causal dimensions of these common ailments.

Most specialists have started recognising the limitations of the bio-chemical model and are moving towards more holistic approach for treating modern NCDs. As some medical expert said we need the aggressive front in a foot-ball team as also a strong defence for winning the game. Similarly we need a symbiotic approach of combining the aggressive approach of



modern medicine and strong defence of AYUSH systems.

Even in providing evidence base, the gold standard double blind studies evolved in Pharma world to eliminate all confounding variables of subjectivity have started taking into consideration the different types of personalities in the initial matching criteria. In AYUSH systems we don't have to start from scratch to treat these ailments as we have the evidence of these treatments for several thousands of years. So reverse pharmacological approach is being adopted to provide the necessary evidence base by RCT trials and then go to understand the mechanisms studies as to how the medicines work at different levels holistically. As we proceed in integration the newer and better research methodologies will be evolved to expand the horizons of double blind studies for drug research on one hand and RCT for non-pharmacological research where subjective aspects are not eliminated as placebo but used as a strength to treat diseases. Long term testing over several years of follow up and for large number of patients are becoming better evidences than short term Double blind Studies in shaping the research methodology to examine the efficacy of treatments.

For understanding the mechanisms, we have been able to develop research lab Anveshana which has the modern research equipment to measure all aspects of not only Physical (annamaya kosha), but also other Koshas. A glimpse of the same will be presented.

Published research using Yoga as an adjunct on the four streams of diseases of this conference will be presented in brief.



## CURRENT CHALLENGES AND FUTURE OF INTEGRATIVE MEDICINE IN INDIA



### **Padmabhusan Prof B M Hegde**

Former Vice Chancellor, Manipal University, Mangalore  
hegdebm@gmail.com

Professor B.M. Hegde started his career at the Kasturba Medical College and was Dean of the College and became the Vice Chancellor of Manipal University. He was a visiting Professor of Cardiology at The Middlesex Hospital Medical School in London from 1982 to 2005. He is a Fellow of all the four Royal Colleges of Physicians. He is a Fellow of the American College of Cardiology, and Indian Academy of Medical Sciences. He is the editor in chief of *Journal of the Science of Healing Outcomes*. Professor Hegde heads the World Academy of Authentic Healing Sciences. He has numerous publications and thirty five published books. His innovative bedside diagnostic tests are cited in 'Bedside Medicine' textbook by the College of Physicians, Philadelphia. His book, *'What Doctors don't get to study in Medical School'*, is described as a Holy Text of medicine. He is the recipient of **Padma Bhushan** award for medicine, **Dr. BC Roy National** award, **Dr. JC Bose** award for life sciences research, **Distinguished Physician of India** award, and Karnataka **Rajyothsava** award. For his contributions to medical education, research, and patient care, a honorary PhD was conferred on him recently by the Sri Venkateshwara Institute of Medical Sciences, Tirupati.

Robust circumstantial evidence goes to show that the 80% of the world population that does not have access to modern medicine lives using their intuition in times of need and get benefit from many other time-tested alternative systems of medicine, many of whom being much more ancient compared to the modern medical wisdom. One of them, the Indian system of Ayurveda, is much more ancient, having survived the discouragement in the recent past even in India. We now have unequivocal data to show that Ayurveda is the mother of most other systems, notably the modern medical system. Present day modern medicine originated in the Nile Valley five thousand years ago as sorcery, witchcraft, magic and mumbo-jumbo. Present day "much of the news and advertisements of health education with which we are bombarded are designed to heighten our worries, not soothe them; many drug companies play upon our tendencies toward hypochondriasis," wrote Herbert Benson in his celebrated book *Timeless Healing*.

The idea of mooted this strategy is to stimulate people to think about this possibility to make medical care available to all the people of the world, rich and poor, that is not only equally effective but cost effective as well. We must take care to see that the new system is put in place after due care to see that untested, unproven, and potentially dangerous methods do not get included. The scientific methods and agencies overseeing this stupendous task must not



only be highly competent, but should be equally authentic. We hear of the fraud in medical research in modern medicine almost daily, to be brushed aside lightly. With that background in view, the people at the helm of affairs must have proven track record.

There would be great opposition from the all-powerful drug and technology lobbies that literally run medical education in the west these days. They start brainwashing the future doctors from day one at the medical school, only to stop at their graves! It is heartening to know, though, that there are very good people even in those areas, but they are like an occasional oasis in the vast desert sand and are an endangered species, indeed. We should be able to get their help in this humanitarian venture.

With the present worldwide communication facilities the task of bringing the best people together need not be difficult. Well-meaning people in the modern medical field should take the lead to bring respectability to this effort. We need to do a lot of education of the common man and the media to accept this line of thinking in the midst of the powerful and rich medical claptrap. The latter has a vested interest in keeping the system as it is. The present hi-tech medical care delivery system is a big business. This is the very reason why medicine has lost its heart today. The time-honoured doctor patient relationship is replaced by the doctor being viewed as the seller and the patient the buyer of medical technology, bringing in its wake the consumer movement into medicine. The crux of the medical scenario is the trust that the patient has in his/her doctor that provokes the immune system to heal the sick. Healing is a much larger concept than the concept of "curing" used commonly by doctors. Doctor only dresses the wound; the immune system heals it. Let us bring back the patient confidence in his/her doctor back into the medical arena for the common good, before it is lost for ever.



## INTEGRATION OF YOGA, PHYSIOTHERAPY, NATUROPATHY AND AYURVEDA AS EVIDENCE BASED LIFE STYLE INTERVENTION FOR NCDS



### **Dr. Nagarathna Raghuram**

Medical Director, Arogyadhama, VYASA, Bengaluru  
rnagaratna@gmail.com

Dr. R. Nagarathna is one of the pioneers in the field of Yoga therapy. She is the Dean, Division of yoga and life sciences and chief consultant at Arogyadhama, SVYASA. Dr Nagarathna did her MBBS from Bangalore medical college, MD in internal medicine from Mysore medical college, Her MRCP and FRCP from Edinburg, UK. She has over 80 publications in national and international journals and has 11 books on series of yoga for different ailments published. She been felicitated with numerous awards such as the: Patanjali Award" (2000) for contributions in the field of yoga by Indian Systems of Medicine and homoeopathy (ISM & H), Ministry of health and family welfare, Government of India, arranged through Director, ISM & H in Bangalore. "Dr P S Shankar Vaidya Shree" award (2001) by Dr P S Shankar Pratistana, Gulbarga. "Woman of Excellence" award (2003) by the Badaganadu Sangha Association, Bangalore, for service to humanity through Yoga Therapy. "Karnataka Kalpavalli" award (1995) for 'Service to women through Yoga' awarded by 'Shaswathi' a women's organization, NMKRV College, Bangalore. "Doctor's Day" award (July 1992) by IMA, Bangalore branch.

Integrative medicine aims at offering the best of all systems of medicine for the health of humanity primarily by maintaining positive normal health, prevention and cure of diseases in the shortest period of time through least toxic and least expensive protocols. It is now known that most NCDs are caused by disturbed life style (wrong diet, lack of physical activity, bad habits like alcohol, and smoking and psychological stress) that unfolds the genetic tendency. Hence there is a need for a holistic approach offered by yoga based life style change for handling these problems.

SVYASA's research over the past thirty years had brought out the complimentary role of yoga in NCDs. Our journey started in December 1979 with the first outpatient yoga camp for asthma in Bengaluru. About 600 asthmatics were followed up over 54 months with publication in BMJ (1985) and Jo Asthma (1986) that showed significant reduction in medication requirement (80%) with increased PFR. Since then several randomized controlled trials (funded by AYUSH and/or institutional) have been published in indexed peer reviewed journal on NCDs including asthma, Diabetes, coronary artery disease, anxiety neurosis, breast cancer, premenopausal syndrome, PCOS, osteoarthritis of knee, chronic low back pain, COPD, schizophrenia, IBS, HIV, and also normal and high risk pregnancy. Several collaborative researches have added more evidence: e.g. collaboration with MDACC, Houston USA- RCT on integrated yoga during radiation treatment in breast cancer patients (one completed and one ongoing).

Over the past five years physiotherapy, naturopathy and Ayurveda have been effectively integrated in our clinical protocols for NCDs. The experiences and results of this integration will be presented and discussed in the key note.



## CHALLENGES IN INTEGRATING MODERN MEDICINE WITH TRADITIONAL INDIAN MEDICINE



### Dr. Bhushan Patwardhan

Professor and Director, Interdisciplinary School of Health Sciences, University of Pune  
bhushan@unipune.ac.in

Professor Bhushan Patwardhan brings over 30 year experience in research and development in the area of evidence based Ayurveda, ethno-pharmacology, drug discovery & development and integrative medicine.

He is a Fellow of National Academy of Medical Sciences (India). He is currently the Chairman of Academic Planning and Development Committee of National Institute of Pharmaceutical Education & Research. He has been academic head of Manipal Education Group; Director, Institute of Ayurveda and Integrative Medicine, Bengaluru and was Vice Chancellor of a deemed University. He has authored many books and his recent book 'Integrative Approaches for Health' received excellent reviews. He has guided 19 PhD students, and has 8 Indian Patents, 2 US Patents and over 120 research publications. He is Editor-in-Chief of Journal of Ayurveda and Integrative Medicine published by Wolters Kluwer, Section Editor of CCHTS of Bentham Science, Academic Editor of eCAM (Hindawi) and is on Editorial Boards of many reputed Journals. He is recipient of many awards and orations including Parkhe Award for industrial excellence, Dewang Mehta award for education excellence. He is recipient of IASTAM - Shri Gopaldas Parikh Award 2015 for Contribution to Drug Development and Harihar Mukherjee Memorial Award 2015 of the Society for Ethno-pharmacology.

The Global crisis in health care is deepening. Affordable and accessible health has become priority agenda of sensitive polity. The high-tech interventions of biomedicine including pharmaceutical drugs are becoming too myopic in their perspective. Societal expectations about drug safety and efficacy are rising while R & D productivity in the pharmaceutical industry is falling. Typical diseases of poor are being unkindly neglected. Over this scenario, it is necessary to critically review present healthcare system and move from illness focused to wellness centric paradigm. In these efforts towards holistic and integrative health, Indian systems of medicine including Ayurveda, Yoga, Unani, Siddha, Sowa Rigpa and Homoeopathy (AYUSH) can play a major role. The review of history, evolution, and advances in biomedical sciences, philosophy, precepts and practices of medicine define the urgent need for a paradigm shift in modern medicine towards an integrative approach for health. No single approach – be it one of modern medicine or traditional medicine – can meet the changing requirements of global health. This lecture presents various ongoing efforts in integrative health care happening in different parts of the world. This lecture advocates the need for a change in mindset from illness-, disease-, and drug-centric curatives, to person-, health-, and wellness-centric approaches. The systematic promotion of health, early prediction, and prevention of ill-health should be given priority, so that the dependency on treatments, and therapies can be reduced. The approaches should be personalized, where people are empowered to actively participate in maintaining their own health. The edifice of integrative health for the future must meld trans-disciplinary scientific approaches, to create a confluence of modern medicine, and traditional systems.



## YOGA IN SCHOOLS FOR MENTAL HEALTH: THE SCIENCE AND THE RESEARCH EVIDENCE



**Dr. Sat Bir Khalsa**

Assistant Professor of Medicine, Harvard Medical School,  
Boston, USA

khalsa@hms.harvard.edu

Sat Bir Singh Khalsa, Ph.D. has conducted biomedical yoga research since 2001. He has practiced a yoga lifestyle since 1971 and is a certified Instructor in Kundalini Yoga as taught by Yogi Bhajan. He is Director of Research for the Kundalini Research Institute and the Kripalu Center for Yoga & Health, Research Associate at the Benson Henry Institute for Mind Body Medicine, and an Assistant Professor of Medicine at Harvard Medical School.

He has conducted research evaluating yoga for insomnia, stress and anxiety disorders, and within public schools. He works closely with the International Association of Yoga Therapists, conducts the annual Symposium on Yoga Research and serves as editor-in-chief of the International Journal of Yoga Therapy. He is author of the Harvard Medical School ebook *Your Brain on Yoga*, and editor of the medical textbook *The Principles and Practice of Yoga in Health Care*. Since 2005 he has led a Harvard Medical School elective course in mind-body medicine.

There is a substantial need for addressing the high and growing incidence of child and adolescent mental health conditions. Unfortunately, there are few existing resources and programs within public schools that are available for addressing these and their known risk factors.

Yoga is known to be effective for improving mind body awareness and mindfulness, self-regulation of stress and emotion, and physical fitness and for reducing risk factors for a wide variety of disorders and behavior problems in both adults and children and adolescents. Yoga programs are being applied increasingly in public school settings. Research on the efficacy of yoga for improving mental, emotional, and behavioral health characteristics in school settings is a recent but growing field of inquiry. The preliminary studies in this field have suggested that yoga practice may lead to improvements in mood, anxiety, stress, resilience, mind body awareness and emotional regulation.

A review and bibliometric analysis of published research studies in peer-reviewed journals indicates that most of the published research trials are preliminary in nature with numerous study design limitations, including limited sample sizes and relatively weak research designs, as would be expected in an infant research field. Nevertheless, these preliminary trials suggest that yoga in the school setting is a viable and potentially efficacious strategy for improving child and adolescent mental health and for preventing mental health disorders and is therefore worthy of continued research.



## INTEGRATING YOGA INTO CANCER CARE



### Dr. Lorenzo Cohen

Professor and Director of the Integrative Medicine Program,  
University of Texas, MD Anderson Cancer Center, USA  
lcohen@mdanderson.org

Dr. Lorenzo Cohen is the Richard E. Haynes Distinguished Professor in Clinical Cancer Prevention and Director of the Integrative Medicine Program at The University of Texas MD Anderson Cancer Center (Houston) and Distinguished Clinical Professor, Fudan University Cancer Hospital, Shanghai, China. Dr. Cohen is passionate about educating others on how to prevent cancer and maintain optimal health across the lifespan. As the majority of cancers are preventable, Dr. Cohen is conducting research to demonstrate that lifestyle factors can influence cancer outcomes. Dr. Cohen leads a team conducting NIH-funded research and delivering clinical care of integrative medicine practices such as meditation, yoga, tai chi, massage, diet, exercise, acupuncture and other strategies such as stress management, music therapy, emotional writing and more aimed at reducing the negative aspects of cancer treatment and improving quality of life and clinical outcomes. Ongoing studies are examining lifestyle changes in the areas of diet/nutrition, physical activity, and stress management/social network to change the risk of developing cancer and influencing outcomes in those with cancer.

It is now clear that Yoga's popularity around the world has gone well beyond a fad or passing curiosity. The burgeoning field of mind-body research and contemplative practices in medicine, of which yoga from the Indian tradition is prominent, is beginning to show that the contribution of these practices to health and wellbeing go well beyond the simple "relaxation response". Yoga when practiced in a comprehensive manner including *asana*, *pranayama*, meditation, diet, and social consciousness will have profound effects on all aspects of life. In fact, lifestyle factors are increasingly being recognized for their role in most non-communicable diseases such as cancer, cardiovascular disease, diabetes, and respiratory diseases. The science of yoga has expanded dramatically in the past few decades with the benefits of yoga being documented through the use of rigorous research across our population from multiple medical conditions to how it can help school children become better students and ultimately better adults to foster a healthier world. Yoga, a quintessential mind-body practice, when approached as a way of life, can have a profound impact on people with cancer. The state-of-science of yoga for people with cancer will be reviewed with an emphasis on past and ongoing research conducted at the MD Anderson Cancer Center. Yoga plays an important role for cancer patients and caregivers alike to help improve aspects of quality of life and possibly even clinical outcomes.



## YOGA FOR PREVENTION OF HEART DISEASE



**Prof. S.C. Manchanda**

Sr. Consultant Cardiologist, Sir Ganga Ram Hospital, New Delhi

Former HOD (Cardiology), AIIMS, New Delhi  
doctormanchanda@yahoo.com

**Prof. Subhash C. Manchanda**, MD (Medicine), D.M. (Cardiology), FIMSA is a senior Consultant in Dept. of Cardiology, Sir Ganga Ram Hospital, New Delhi. He was formerly Professor and Head of Dept. of Cardiology, AIIMS, New Delhi. He has over 45 years of experience in Professional teaching and research.

He is a recipient of several national & international awards including **Padma Shri** by president of India and life time achievement award by Cardiological Society of India, Delhi. He has done original research work in the field of high altitude problems and lifestyle modification including Yoga/Meditation. He serves as Editor in Chief, Journal of Preventive Cardiology. He also is the Chairman, World Academy of Spiritual Science (WASS) & Diya India Foundation.

He has over 400 Scientific Papers in various National and International Medical Journals including 50 Chapters in Standard Medical Books. He also authored 4 books including Oram's Clinical Heart Disease (1999). His area of interest is Preventive and Clinical Cardiology.

Heart Diseases are the leading cause of death globally and their incidence is rapidly increasing especially in the developing countries. The main reason for heart diseases is considered to be unhealthy life style consisting of high fat diet, mental stress, tobacco intake and lack of physical exercise. Yoga is a holistic life style which has the potential to control all these risk factors. Several published studies suggest that yoga is helpful in controlling risk factors for heart diseases like mental stress, hypertension, diabetes mellitus, obesity, metabolic syndrome, dyslipidemia, smoking and inflammatory and oxidative stress. Recently a scientific statement from American Heart Association has concluded that meditation can be used as a non-pharmacologic technique to control blood pressure. Several other randomized studies suggest that yoga can reverse early and advanced coronary atherosclerosis and may be useful in secondary prevention and rehabilitation of patients with coronary heart disease. Cardiac arrhythmias (atrial fibrillation, ventricular premature beats) and heart failure has also been demonstrated to improve by yoga in a few studies. Though there are several limitations of the reported studies, yoga being a simple cost effective and safe technique can be recommended for primary and secondary prevention of heart disease and that it can play a primary & complimentary role in this regard.



## INNOVATIONS TO REDUCE THE BURDEN OF HYPERTENSION IN INDIA



### **Dr. D. Prabhakaran**

Vice President - Research, Public Health Foundation of India  
Executive Director of Centre for Chronic Disease Control.

New Delhi, India

[dprabhakaran@ccdcindia.org](mailto:dprabhakaran@ccdcindia.org)

Professor Prabhakaran is a cardiologist and epidemiologist by training.

He is an internationally renowned researcher and is currently the Vice President - Research, Public Health Foundation of India, Executive Director of Centre for Chronic Disease Control, New Delhi, and Professor (Epidemiology) London School of Hygiene and Tropical Medicine, UK. He heads the Centre for Control of Chronic Conditions at PHFI, a joint initiative of four leading institutions (Public Health Foundation of India, London School of Hygiene and Tropical Medicine, All India Institute of Medical Sciences, and Emory University). His research work spans from understanding the causes for increased propensity of cardiovascular diseases (CVD) among Indians, to developing solutions for CVD through translational research and human resource development. He is a Fellow of the Royal College of Physicians, UK, Fellow of the National Academy of Sciences, India, and an Adjunct Professor at the Emory University. He is member of Executive Council of the International Society of Hypertension (ISH) and Vice Chair of the International Society of CVD Epidemiology and Prevention (ISCEP). He has mentored over 40 post-doctoral and doctoral students. He authored several chapters and over 275 scholarly papers. He is the lead editor of the Cardiovascular Disease Volume of the latest Disease Control Priorities Project.



## YOGA FOR PHYSICAL AND MENTAL WELLBEING



**Dr. Shirley Telles**

Director, Patanjali Research Foundation, Haridwar, India  
shirleytelles@gmail.com

Dr. Shirley Telles completed M.B.B.S. and subsequently M.Phil and Ph.D. in Neurophysiology from the National Institute of Mental Health & Neurosciences [NIMHANS], Bangalore, India. Dr. Telles directs research at Patanjali Research Foundation, Haridwar, India <[www.patanjaliresearchfoundation.com](http://www.patanjaliresearchfoundation.com)>. She has 159 research publications related to the above mentioned areas of research in journals indexed in international bibliographic databases [such as Medline, PsycLit and others], 16 chapters in books and 3 published books. She received an award from The Indian Council of Medical Research, The John Templeton Foundation ([www.templeton.org](http://www.templeton.org)), U.S.A. (January, 2002), and a Fulbright Fellowship (J. William Fulbright Foundation, U.S.A) to study “Functional magnetic resonance imaging in meditators”. Dr. Telles is an enthusiastic practitioner of yoga herself.

All over the world people of different ages are interested to use yoga to improve their overall health. There is an increasing amount of scientific evidence that yoga can improve different aspects of physical health. This presentation would especially cover the impact of yoga on food choices and long-term weight management; the effect of yoga on pain tolerance and how yoga practice can improve motor functions and mobility in people of all ages. Mental wellbeing involves feeling happy and having healthy and constructive thinking patterns. There is evidence to suggest that yoga can positively impact the emotions of people in a wide range of circumstances which evoke a range of emotions which can influence health and wellbeing. Several studies through the years have shown that combinations of yoga techniques can help reduce the experience of potentially harmful emotions (such as fear, anger, or sadness) and hence positively impact emotional wellbeing. Through the practice of yoga there is also the potential to enhance positive emotions such as compassion (as distinct from empathy), which can be emotionally draining) and hence contribute positively to one’s own wellbeing as well as that of Society.



## SCIENTIFIC APPROACH TO UNDERSTAND MENTAL HEALTH BENEFITS OF YOGA AND MEDITATION: FMRI STUDIES



### Dr. C.L. Khetrapal

Distinguished Professor & Vice Chairman, Centre of Biomedical Research  
Sanjay Gandhi Post Graduate Institute of Medical Sciences  
Campus Lucknow  
clkhetrapal@hotmail.com

Professor C.L. Khetrapal is one of the leading scientists working in the field of Nuclear Magnetic Resonance (NMR) and is the founder president of NMR Society, India. His contributions on NMR in liquid crystals have literally opened new avenues of research and has given him international recognition. He was conferred **D.Litt. (h.c.)** in 2013, by the Tata Institute of Fundamental Research, Bombay. He served in various capacities at Raman Research Institute, Indian Institute of Science, Sophisticated Instruments Facility and as a Vice-Chancellor of Allahabad University and the list goes on. He has nearly 300 publications and several reviews, books, chapters in books and monographs. Research interests include NMR of Oriented Systems for the study of molecular structure and function, developments of novel techniques, and applications of NMR imaging and spectroscopy for biomedical applications with emphasis on disease diagnosis, treatment monitoring and human behavior studies. His latest research interests include providing scientific evidence for the beneficial effects of Yoga, 'mantras', meditation and positivity on daily human life and behavior, decision making and emotion. He received many awards, of note are, S.S. Bhatnagar Award, C.V. Raman Award, Goyal Prize in Chemical Sciences. P.C. Ray Memorial medal and Life Time Achievement Award of the Indian Chemical Society.

Though it is well known that YOGA and MEDITATION can reduce stress and cure many diseases, recent times have drawn extensive worldwide attention in the use of modern scientific technologies to demonstrate the beneficial effects of Yoga and meditation. Neuro-imaging and genomics technologies have been employed to measure physiological changes in greater detail. Such studies open numerous possibilities for exploring alternative routes for tackling many disorders and diseases. Keeping in mind the fact that India occupies a frontline position in the field of Yoga and meditation due to inherent reasons, we have examined the utility of functional MRI to scientifically demonstrate benefits of Yoga and meditation. The results show that the OM sound influences the attention process, motor coordination, and auditory perception. The SOHAM meditation regulates attention, cognitive aspects of emotional processing and spatially guided behaviours. The negative thoughts excite the same area of the brain as the one in mentally depressed persons. A study at the Boston School of medicine demonstrates that some of the Yoga exercises increase the Gama Amino Butyric Acid (GABA - a neurotransmitter) concentration in humans to the extent of 27 %. Some such results will be presented. A major question which will be put forward for discussion is whether such studies can result in providing a scientific approach for achieving religious harmony and world peace?



## SERIOUS MENTAL ILLNESS AND YOGA



**Dr. Anand K. Pandurangi**

Director, Schizophrenia Program, and Brain Stimulation  
Therapy Program

Chairman and Medical Director, Division of Inpatient  
Psychiatry

Vice Chair, Department of Psychiatry

Virginia Commonwealth University, Richmond, Virginia

[ananda.pandurangi@vcuhealth.org](mailto:ananda.pandurangi@vcuhealth.org)

Dr. Pandurangi received MD degree and completed two residencies in Psychiatry, one at NIMHANS, Bangalore, India, and the second at Upstate Medical Center, Syracuse, New York. He completed a 2-year fellowship in schizophrenia research in the Department of Psychiatry at Columbia University in New York. He is a recipient of many national and international awards, Distinguished Academician Award (Indo-American Psychiatrists Association), Exemplary Psychiatrist award (National Alliance for the Mentally Ill (USA)), Hippocampal Award (Residents in Psychiatry), VCU Distinguished Service Award and is listed continuously since 1996 in the "Best Doctors in USA". He is a two term appointee to the Board of Behavioral Health by the Governor of Virginia. He is a visiting professor at Howard University, Washington DC, PGIMER, Chandigarh India and SRM Medical College Chennai, India. His interest and expertise include schizophrenia, bipolar disorder, refractory depression, tardive dyskinesia, structural & functional brain imaging, antipsychotics, brain stimulation therapies, hospital psychiatry, and public-academic liaison and mental health policy. He has over 200 major and minor publications. He is a Distinguished Life Fellow of the American Psychiatric Association, Indian Psychiatric Society, and member of several professional psychiatric societies and mental health boards.

Serious mental illnesses (SMI) affect and disable about 5% of the population. SMI include autism spectrum disorders, schizophrenia, bipolar disorder, and recurrent major depression. Conditions such as obsessive compulsive disorder, anxiety, post-traumatic stress and personality disorders may be categorized as SMI, if additional criteria are met such as hospitalization, suicide attempt or enduring disability. Some definitions also include intellectual disability, dementia, and organic mental syndromes.

- Schizophrenia is a cognitive disorder with onset between ages 15-25, chronic course and some social and/or occupational decline.
- Bipolar disorder is an intermittent mood disorder with manic and depressive episodes and relatively normal function between episodes.
- Recurrent major depression is characterized by low mood and other symptoms of depression that recurs periodically.



- Autism spectrum disorders are evident in early childhood and persist life long, with impairments in social interaction, and repetitive motoric and verbal behaviors.

It is cautioned that the above descriptions are simplistic and many variations and complexities exist.

SMI are largely genetic in origin although symptoms and impairments depend on interaction with the environment, both biological (birth trauma, infections, substances, etc) and psychosocial (family, community, socio-economic resources, etc). Traditional management includes professional assessments, diagnosis, medications, psychotherapies, family and psychosocial support. Advocacy, dignity, reduced stigma promote fuller recovery.

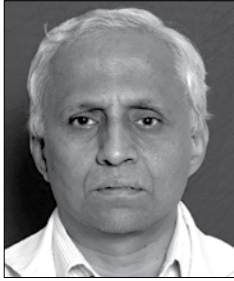
Alternative therapeutic approaches may have a complementary role in management and recovery. These include yoga, meditation, music, animal-assisted, nutrition, ayurvedic, homeopathic and natural medicines, acupuncture, etc.

Yoga offers specific benefits in managing SMI. These benefits include reducing stress, anxiety and fears, improved sleep, improved mood, reduction in self-harming behaviors, and a positive sense of self and environment. Sustained yoga practices may alter neural circuits and optimize states of arousal.

Research into yoga and SMI with controlled trials and biological markers has begun in the last decade and will vastly increase in the coming years.



## SCIENCE OF YOGA AS THERAPY ON PSYCHIATRY: DEPRESSION



### **Dr B.N. Gangadhar**

Professor of Psychiatry, Dean Behavioral Sciences,  
NIMHANS  
& Hon. Dean Life Sciences, S-VYASA Yoga University,  
Bangalore 560029  
kalyanybg@yahoo.com

Dr. B. N. Gangadhar obtained MD in 1981 from national Institute of Mental health and Neurosciences (NIMHANS), premier Psychiatry Institute in India. He has been a faculty in the same Institute since then. Currently, he is a professor of Psychiatry. He was also the Medical Superintendent of NIMHANS hospital till Jan 2010. He has published over 240 scientific articles in peer-reviewed national and International journals. His research areas include ECT, rTMS & Yoga, Schizophrenia and Community Psychiatry. He heads an advanced center for Yoga therapy at NIMHANS. He has coordinated the development and design of a patented indigenous ECT machine. He has received the prestigious Sir CV Raman award in 1999 and the BC Roy award in 2010 by the Karnataka Government. He is also the Fellow of National Academy of Medical Sciences. He has guided four PhDs and nearly 20 MD dissertations. Dr. Gangadhar is the associate editor of *Acta Psychiatrica Scandinavica* and a coeditor for the *Asian Journal of Psychiatry*. He has traveled widely on scientific agenda and has served on organizations like WHO.

Mental health is an integral part of health; WHO defines health that includes physical and mental (also social) wellbeing. Ayurveda, even centuries earlier, defined health with mental wellbeing (*prasannaatmendriyamanahitiswastya*). Hence there is no health without mental health. Close to 1% of population needs medical treatment for mental disorders. If other common mental disorders (that may also be managed by other interventions) are included, the population needing mental health care is over 5%; that translates into a whopping 7 crores, as big as the population of Karnataka. In the existing medical system, psychiatrists, psychiatric nurses, psychologists and psychiatric social workers are the professionals caring these individuals; together their number is barely ten thousand. This exposes the inadequacy of manpower resources for the ill. Uneven distribution of professionals, being concentrated in urban areas, compounds the scarcity. This explains why the treatment gap is nearly 80% for even the severe mental disorders. There is immense potential for AYUSH practitioners to overcome this massive draught of resources to address the needs of the mental health services. Yoga among these AYUSH systems holds promise to fill the gap effectively.



## PREVENTION OF DIABETES THROUGH COMMUNITY EMPOWERMENT - SOME SUCCESS STORIES FROM CHENNAI



### Dr. V. Mohan

Chairman & Chief of Diabetologist, Dr. Mohan's Diabetes Specialties Centre,  
dr mohans@diabetes.ind.in

Dr. V. Mohan is the Chairman and Chief of Diabetology at Dr. Mohan's Diabetes Specialties Centre which is a WHO Collaborating Centre for Non-communicable Diseases Prevention and Control, and IDF Centre of Education. He is President and Director, of the Madras Diabetes Research Foundation. Dr. Mohan has over 940 publications in international journals and has contributed 153 chapters to books on Diabetes and Internal Medicine published in India and abroad. His work is highly cited. His current research interest includes Epidemiology of Diabetes and its complications, Genomics of Diabetes and Prevention through community empowerment. Dr. Mohan has received innumerable awards, including the prestigious **Dr. B.C. Roy National Award** by the Medical Council of India, the **Basanthi Devi Amirchand Prize** from the Indian Council of Medical Research and "**Padma Shri**" award from the Govt. of India in 2012 for his extensive contribution in the field of diabetes. He had received Fellowships from all four Royal College of Physicians, London, Edinburgh, Glasgow and Ireland. He was also conferred 'Diabetes Technology Society Leadership Award' from the Diabetes Technology Society, USA. He also received "Mastership of American College of Physicians (MACP)" from the American College of Physicians, for services as a teacher and Mentor.

The epidemic of diabetes in India is still spiraling upwards and the recent **Indian Council of Medical Research, India Diabetes (ICMR-INDIAB)** study, which is perhaps the largest epidemiological study on the prevalence of diabetes, was estimated to be 62.4 million individuals with diabetes and 77.2 million with prediabetes. According to the International Diabetes Federation (IDF), Seventh Edition 2015, India has the second largest number of people with diabetes in the world with 69.2 million in the year 2015 which is expected to increase by 123.5 million in the year 2040. Though genetic factors undoubtedly play a major role in the predisposition of diabetes in Indians, environmental factors contributes to over 50% of the risk and indeed the epidemic is driven by environmental factors as our genes did not change in 40 years. Rapid economic growth in India has resulted in rapid nutritional transition contributing to excess calories (high glycemic loads) along with decreased physical activity. Recently, we showed that consumption of white rice was strongly associated with risk of type 2 diabetes in our population. A recent study from our centre has shown that replacing white rice with brown rice could improve 24 hour blood glucose and insulin levels. Therefore, it is logical to assume that adopting a diet that is rich in whole grains along with increasing physical activity could be a cost-effective, feasible and sustainable approach to diabetes prevention and control in India. The Asiad colony and Chunampet Rural Diabetes Prevention Project (CRDPP) showed that it is possible to prevent diabetes through community empowerment. The time for action is **NOW!**



## PROFILE OF CARDIOVASCULAR DISEASES AND RECENT ADVANCES



### **Dr. C.N. Manjunath**

Professor & Head of Cardiology Director,  
Sri Jayadeva Institute of Cardiovascular Sciences & Research,  
9<sup>th</sup> Block Jayanagar Bannerghatta Road, Bangalore - 560069  
drcnmanjunath@gmail.com cnm\_vidhatri@satyam.net.in

Dr. Manjunath obtained MD (General Medicine) from BMC, Bangalore and specialized in cardiology from KMC, Mangalore. He is the Director at Sri Jayadeva Institute and has innovated a new technique of performing Balloon Mitral Valvuloplasty in difficult cases; this was published as Manjunath Technique Catheterization Cardiovascular Interventions Journal. He has trained many doctors of various nationalities on Balloon Valvuloplasties at Sri Jayadeva Institute of Cardiology, Bangalore. He has over 125 Publications in International and National Journals and authored chapters in many Text Books. He has over 32 years of Teaching Experience in the Medical Profession.

Dr. Manjunath is Hon. Editor - Journal of Indian College of Cardiology and Editorial Member - of Indian Heart Journal. He is an Advisory Committee Member of Indo-French Heart Foundation and a Scientific Board Advisor of Asia-Pacific.

He has authored and implemented projects for poor patients, Open heart Surgeries and Angioplasties are done free of cost for deserving under privileged patients. He had received numerous awards including **Padma Shree Award** in 2007; **Distinguished Service Award** in 2006, by World Congress on Clinical and Preventive Cardiology (WCCPC 2006). He was also conferred with "Doctorate of Science" Award from Rajiv Gandhi University of Health sciences, Bangalore.

Cardiovascular Diseases can be broadly classified into four categories:

- Congenital Heart Disease
- Valvular Heart Disease
- Coronary Artery Disease (Heart Attack related)
- Cardiomyopathies / Pericardial / Hypertensive disease.

In last 3 decades, there has been a sea change in the diagnosis and management of heart disease. Nearly 50% of Heart Diseases which were requiring surgery then, now can be treated by non-surgical methods by way of Angioplasty, Stenting, Balloon Valvuloplasty, Device Closure, Percutaneous Valve Replacement.

Cardiovascular Disease alone accounts for 30% of Deaths in India, by 2025, higher number of heart attacks will be in India. According to Jayadeva Heart Watch Study, 25% who suffer



heart attack are below 40 years of age. Hence disease in India is premature and accelerated process.

Risk factors for Coronary Artery Disease are classified into Non-Modifiable and Modifiable Groups.

NON-MODIFIABLE FACTORS	MODIFIABLE FACTORS
Age > 55 Years	Smoking
Male Sex	Elevated Cholesterol
Family H/o CAD	Diabetes
	Hypertension
	Obesity
	Type A Personality
	Lack of Physical Activity
	Alcohol in Excess

There are Two Modalities of Treatment for Acute MI in the form of Thrombolytic Therapy and Angioplasty. Angioplasty is superior to thrombolytic therapy with statistically significant reduction in Death, Reinfarction and Heart failure. Newer generation Stents have contributed for better outcome, Stent has three layer, metal polymer drug. The polymer used in the stent can be non-absorbable and absorbable. The absorbable polymer restores the Endothelial function, so it is less thrombogenic, with lower stent thrombosis. Recently Bio-absorbable Stents are evolving where Stents are absorbed at the end of 1-2 years which restores the vessel wall to normal. These good outcomes is all possible because of improvements, innovations in hardwares and potent anti-platelet drugs.

Under Structural Heart Disease, Balloon Valvuloplasties have been successful alternative to surgery. In India, annually 7000-8000 Balloon Mitral Valvuloplasty procedures are done. Nearly 1/5<sup>th</sup> of these procedures are performed at Jayadeva Institute of Cardiovascular Sciences and Research for Rheumatic Mitral Stenosis with good short and long term results.

The advantages of these procedures are done under local Anaesthesia and discharged next day. No scar on the chest and resume physical activities in 3-4 days. Heart defects (Holes) are closed now a days by using Umbrella Devices without Surgery with excellent result.





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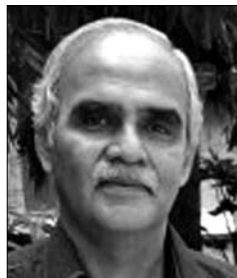
# *Abstracts*

Invited Talks





## CANCER AND MENTAL HEALTH



### Dr. Santosh K Chaturvedi

Professor of Psychiatry  
National Institute of Mental Health & Neurosciences,  
Bangalore, India  
skchatur@gmail.com

Dr. Santosh Chaturvedi is a Consultant Psychiatrist and Faculty at NIMHANS since 1982 to date. His training included Psychosocial aspects of Cancer, at CRC, Manchester. To empower his knowledge base, he had attended numerous short term courses in England on Pain relief and symptom control; Communication Skills & Counseling, and Medical Teaching.

He teaches in various hospitals, Kidwai Memorial Institute of Oncology, St. Johns Hospital, AIIMS Delhi, to name a few. He is a member of various organizations, such as International psycho-oncology society, Indian Society of Oncology, European School of Oncology, Royal College of Psychiatrists and the list goes on.

His Research interests are integrating Psychiatry with other medical disciplines, Oncology & Terminal Illnesses, Neuropsychiatry, and Gynecology & Obstetrics. He worked with Terry Fox Foundation on Quality Of Life of Cancer patients & their Caregivers. He has more than 100 publications on **psychosocial oncology & palliative care** in National and International journals. He has edited and published four books and the most recent being, "**Communication skills in Palliative Care**". Dr. Chaturvedi was conferred with National Award by the Indian Council of Medical Research on three occasions for contributions in the field of Mental Health.

The study of cancer and mental health related issues is called psychosocial oncology, which is a developed area of interest. This deals with numerous psychiatric, psychological and social aspects of malignancies. Psychiatric Oncology relates to some of the common psychological and emotional problems encountered in persons with malignancy and their formal and informal caregivers.

This presentation will discuss the common mental reactions to the diagnosis of cancer, psychological and emotional problems related to cancer, like depression and anxiety. This talk would also share the findings and researches of the presenter. These range from studies on cancer pain and palliative care, screening for psychiatric morbidity, quality of life, communication skills for health professionals in breaking bad news and handling difficult questions and counseling. The findings on researches on somatic symptoms and illness behavior in cancer patients would highlight newer challenges in this field.

Caregivers of persons with cancer are as important as the patient, but usually ignored. The stress, strain, burden, positive emotions and coping in the context of care giving for persons with cancer are being increasingly realized. Professional caregivers should be aware of caregiver difficulties and support them through their ordeal. Lastly, the importance of dealing with staff stress and burnout among health professionals looking after families with cancer patients and survivors will be emphasized.



## ROLE OF YOGA IN INTEGRATIVE ONCOLOGY: AN EVIDENCE BASED APPROACH



**Dr. Gopinath K S**  
Health Care Global Enterprises Ltd. Bengaluru

**Dr. Gopinath** obtained his MBBS from University of Mysore and MS from G.S. Medical College, Mumbai in 1978. He worked at KIDWAI Memorial Institute of Oncology till 1991. He did fellowship in 1986, in Cancer surgery, at Memorial Sloan - Kettering Cancer Center, New York. He is the Founder, Promoter, and Director of Bangalore Institute of Oncology

since 1991 till date.

He was conferred with many awards, **PADMASHRI** award in 2009; Col. Sangam lal Oration National Academy of Medical Sciences 2009; Dr. B.C. Roy National Award in 2008 from Medical Council of India; Dr. R. M. Kasliwal Award from National Academy of Medical Sciences in 2007; Dr. R.K. Menda Oration 2005 Jaipur, Association of Colorectal Surgeons of India.

He held many honorary and distinguished positions such as Chairman / Editor Journal of Indian Association of Surgical Oncology 2009 – 2012; National President, Indian Association of Surgical Oncologists, National President Association of Surgeons of India, Joint editor Indian journal of Surgery. He was a honorary fellow, Royal College of Surgeons, Edinburgh, and Honorary Fellow of Association of Colorectal Surgeons of India. He has several publications in national and international journals and also has authored several books and chapters.

The advances in cancer treatment has markedly improved survival with more people having to endure cancer symptoms longer than ever before. Persons with cancer experience a range of symptoms related to both the disease and its treatment. This causes severe psychological distress and couple with cancer related intrusive thoughts can exacerbate symptoms in cancer patients. Most of these symptoms also have a psychological and emotional component that effects the way it is perceived and felt by the cancer patients and can impact neuro endocrine and immune stress responses thus impacting survival outcomes in these patients. Integrative oncology encompasses a holistic care using a multidisciplinary approach to improve quality of life and well-being in cancer patients by reducing their distress and painful experience of cancer and its treatment related symptoms. This is facilitated by helping cancer patients allay their fears and concerns of disease and distress and cope with them effectively through mind body approaches that involves cognitive restructuring and relaxation. Yoga is an ancient mind body intervention that has found beneficial effects in reducing psychological distress and improving quality of life in cancer patients. Our experience since last 13 years with yoga intervention in breast cancer patients has shown yoga to reduce affective states, perceived stress, treatment related distress and toxicity, modulate antitumor and anti-inflammatory immune responses, reduce genotoxic stress during radiation and normalize diurnal salivary cortisol rhythms thus modulating the psycho neuro endocrine immune axes. Results from 4 RCTs in breast cancer patients comparing yoga with supportive care will be discussed. The basic principles underlying mechanism of action of yoga in oncology and its impact on clinical outcomes in breast cancer are elucidated.



## EFFECTS OF GAYATRI MANTRA ON BRAIN STUDIED BY PROTON MAGNETIC RESONANCE SPECTROSCOPY IN HEALTHY VOLUNTEERS



### Dr. Rama Jayasundar

Department of NMR, All India Institute of Medical Sciences,  
New Delhi

ramajayasundar@hotmail.com

Dr. Rama Jayasundar has a Ph.D. in Nuclear Magnetic Resonance (Physics) from Cambridge University, UK. Apart from her main training as a physicist, she has also completed the basic 5 ½ years Ayurvedic medical course from Chennai in 2008 and holds the Bachelor's degree in Ayurvedic Medicine (BAMS).

She started her career in 1990 at Defence R & D Organisation (DRDO), Delhi. In 1993, she joined the Department of NMR (Nuclear Magnetic Resonance), All India Institute of Medical Sciences (AIIMS), New Delhi. Her area of specialization is Biomedical NMR - clinical imaging and spectroscopy, Radiofrequency (RF) coil designing & building, and RF pulse sequence programming. She has developed a low cost RF transmitter / receiver coil for clinical use, and had received "Young Scientist Award". She was a visiting Professor at the Max Planck Institute of Biophysical Chemistry, Gottingen, Germany (1997-1998). She has authored a number of research publications in peer reviewed journals and has also won many awards and honors.

She is currently involved in scientific research in Ayurveda. Her research interests range from applications of NMR, MRI (Magnetic Resonance Imaging), MRS (MR Spectroscopy) and other analytical techniques in both basic and clinical ayurvedic research.

Although reciting mantra is believed to have a psycho physiological effect on the person who chants, the underlying neuronal mechanisms to explain its cognitive impact are not known. This study has evaluated the effects of Gayatri mantra, one of the oldest and considered to be the most powerful mantra, in brain of normal healthy volunteers using the non-invasive technique of Magnetic Resonance Spectroscopy (MRS). The study has focused on changes in chemical laterality in the frontal lobes of the volunteers as a result of recitation of Gayatri mantra. The volunteers were all right-handed males in the age group of 20-30 years. Proton MR spectra were recorded using a 1.5 Tesla MR scanner (Siemens) over a period of nine months: baseline spectra without recitation (0-3 months); recitation of the mantra 1008 times every day (4-6 months); follow-up spectra without recitation (7-9 months). The inter hemispheric differences in the MR visible metabolites (e.g. N-acetylaspartate, creatine / phosphocreatine, and choline containing compounds) observed before the recitation of the mantra (0-3 months) were significantly reduced during the period of recitation (4-6 months). This reduced laterality of the neurochemicals was sustained for a further period of 3 months during which the volunteers did not recite the mantra (7-9 months). The major inference from this preliminary study is that Gayatri mantra induces measurable neurochemical changes in brain.



## MENTAL HEALTH IN SIDDHA: A REVIEW



**Dr M Kannan**

Research officer, Siddha Central Research Institute

One of the earliest documentation on human feelings and its classification is available in the ancient Tamil literature *Tholkappiyam* which dates back to 1400 BC, in which the author *Tholkappiyar* discussed 8 types of feelings viz. laughter, Melancholy, Dejection with guilt and deistic for living, Wonder, Fear, Jubilation, Anger/Resentment, Buoyancy. The understanding of human emotions, behavior and the associated psychopathology was in advanced stage in the ancient Tamil land and comparable to the other ancient cultures of the world.

As a part of civilized society, medical science including mental health care was well developed in the Ancient Tamil speaking regions, and this medical science acquired the name Siddha medicine after it was developed by a group of people known as Siddhars (knowledgeable and spiritually enlightened people).

Mental health is one of the important factors in building a healthy society. Siddhar *Thirumoolar* in his famous book *Thirumanthiram* (dating back to 3000 B.C.) emphasizes mental wellbeing as an important criterion for perfect health and the verse is as follows:

One that cures physical illness is medicine

One that cures mental illness is medicine

One that prevents illness is medicine

One that bestows immortality is medicine

*Thirumanthiram* [13]

The definition given in the above verse matches more or less with the current definition for health given by World Health Organization i.e., Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.



## RECENT ADVANCES IN CANCER MANAGEMENT: AN OVERVIEW



**Ajaikumar**  
Chairman & CEO  
Healthcare Global Enterprises Limited  
Add: No. 3, Ground Floor, Tower Block, Unity Buildings  
Complex,  
Mission Road, Bangalore - 560 027

Dr. BS Ajaikur, is the Founder Chairman of HCG - Healthcare Global Enterprises. He completed his graduation in medicine from Bangalore and left to the United States to pursue higher education. He did his residency in oncology from the University of Verginia, Charlottesville and completed his fellowship in radiation oncology and medical oncology from the world renowned M.D. Anderson Cancer Center, Houston. With a vast experience in the field of oncology at some of the reputed cancer centers in US. Dr. Ajaikumar wanted to improve the way cancer treatment was provided in India and decided to setup a network of cancer centers. He joined a group of Oncologist at Bangalore in 1989 and started the Bangalore Institute of Oncology' the first and only private comprehensive cancer hospital in Bangalore.

In the year 2005 he returned to India & founded HCG - HealthCare Global with vision of redefining cancer care. Today with over 27 Cancer Care Centers across metros, tier 2 and 3 cities, it is the largest network of cancer centers in Asia. Under his leadership HCG changed the landscape in Oncology by being the first to introduce the concept of hub & spoke model, from cobalt to linear accelerators, to the latest in cancer treatment the whole body robotic surgery system - Cyberknife & stereotactic body radio therapy, True Beam, from a generalized practice of cancer to sub specialty and multi team approach to cancer and from general diagnostic to molecular diagnosis.

Cancer today is considered a chronic disease. In the past we used to talk about, cure for cancer or we used to say that cancer is in the advanced stage, terminal stage, all the other such terminologies were used. Today considering that cancer is a lifestyle disease and like we do not cure multiple other diseases like diabetes or blood pressure are failure. Cancer in certain stages while it may be curable, otherwise it is a treatable disease to be looked upon more like a chronic disease and a lifestyle disease. The better understanding of cancer and advances in therapy has made it this possible. Today, majority of the patients with cancer die of other causes, not of cancer.

So what are the factors that has made this possible are

1. Better understanding of the disease



2. By increased awareness the ability to detect cancer early
3. Improvement in certain lifestyle changes, decrease the incidents of cancer and
4. Advances in cancer therapy whether it is surgery, radiation of medical oncology, more and more targeted treatments are given. preservation of organs and good quality of life has lowered the fear about cancer and this has resulted in better outcome of cancer, because patients are beginning to come in early stages even in India. Also with the advent of molecular imaging today we are able to exactly know what is the status of the disease, where it is located and accordingly appropriate therapy are able to get control or emission. Even if there is recurrence we are now focusing on identifying early phase of recurrence so appropriate therapy can be given at the early stage. This obviously has made a big difference in making cancer a chronic disease.

In this regards, personalized therapy has become the key word in cancer care. This is once again because of the better understanding of the disease and the genomic understanding of the cancer. Today, we know that genetics plays an important role in cancer and we may be able to predict in certain cancers as to who is likely to develop cancer. So with this knowledge more and more we are subjecting our cancer patients to do a biopsy of that and subject it to biorepository as well as genetic analysis and identifying which are the possible actionable genes not only for the present but also for the future. In this regard we believe drug discovery becomes a very important aspect. We do know for the wellness of the patient and tolerance and possible for the overall outcome yoga has played a vital role and continues to play a vital role. In our own studies it has shown that significant improvement when yoga is incorporated along with the regular therapy for cancer care. But the interest for us is of course in the research in our traditional medicine like Ayurveda medicine. When we have a patient with advance disease who is not responding to conventional therapies like chemo therapy, targeted therapy, what we are able to do today is to do the genomic analysis and possibly see why they may not be responding. Along with this we have a means of what we call a Canscript with this in veto we can test certain medication to see whether by this the patient will respond to therapy. This is the area of highly personalized medicine. So it is quite possible that we can go into the data bank of the Ayurveda for certain tumors and use these drugs and combine that with the Canscript and try to come up with a possible new drug and then identify the active ingredient in this. which would really become the standard of therapy for future. After all Taxol took the same route and how Taxol was identified as a potent drug. So I am sure there are similar drugs like this and we have to go into the data bank which is well established in various groups and put together a project group to study this. HCG is moving towards this. not only in the form of targeted therapy also in the form of radio sensitizers. So this area would be provided another dimension to the cancer care for our Indian patients and this would also have an impact on the global cancer as a whole. For this HCG has now establishing a dedicated center for personalize medicine, next generation sequencing as well as canscript. Along with this we are coordinating with number of institutions which are involved in the traditional therapy and together we think we can better understand cancer and we can also make the impact on the outcome of cancer.



## IMMUNE SYSTEM AND CANCER: RELATIONSHIPS AND ALTERATIONS



**Dr. Senthamil R. Selvan,**  
Vivekananda Yoga Research Foundation, Norwalk, CA, USA  
senthamils59@gmail.com

Dr. Senthamil Selvan is an established Clinical Research Scientist in the areas of Cancer Immunotherapy and Yoga therapy with more than 50 peer-reviewed original research publications and reviews. He received Ph.D. in Cancer and Immunology from Jawaharlal Nehru University, New Delhi and pursued post-doctoral training at Virginia Tech and Duke University Medical Center, USA. Currently, he is the Vice-President of R&D, Omni Array Biotechnology, Maryland and continues to serve as the Research Director of Vivekananda Yoga Research Foundation (VYRF), California.

He worked as an Associate Professor, Medical Oncology Department, Thomas Jefferson University, Pennsylvania; Principal Scientist at Bria Cell Therapeutics, and Hoag Hospital Cancer Center, California; and Assistant Professor at Duke University Medical Center, North Carolina. He serves in European Commission and National Institute of Health as translational oncology expert reviewer. He is in the editorial board of integrative medicine and modern science journals.

Since 2010, Dr. Selvan has been deeply interested in Yoga Therapy research due to his own personal journey. He directed a randomized trial of Yoga Therapy for Irritable Bowel Syndrome (IBS) with remarkable results that were published in International journals. Based on this positive outcome, he is interested in extending studies for other disorders, such as obesity, hypertension, asthma, sleep apnea, and arthritis.

The presentation will aim at correlating modern scientific understanding of the immune system and cancer with the knowledge of traditional science, particularly Ayurveda. In this context, therapeutic manipulation of the immune system *in vitro* and *in vivo* animal and human cancer models will be highlighted to understand the relationships of the immune system and its alterations during cancer. In the process, how the body's immune system can tip toward or away from the disease will be discussed. Evidences will be presented to strengthen Charaka's concept in the context of how a given signal could bring about differential responses of an innate immune cell under a different physiological status or tumour micro-environment. The presentation will also explore the opportunity created by modern science for better understanding and strengthening of the time-honored Yoga and Ayurveda approaches.



## DIABESITY - A RISING CHALLENGE: A MULTI-DISCIPLINARY APPROACH



### **Dr. Jayashree Todkar**

Director - JT Obesity Solutions, International Centre of Excellence Bariatric Surgery, Ruby Hall Clinic, Poona Hospital, Pune  
jayatodkar@gmail.com

Dr Jayashree Todkar is the First Lady Bariatric surgeon hailing from India and Asia. She completed her Medical graduation and post-graduation from BJ Medical College, Pune, followed by Diploma in Laparoscopic surgery from University of Strasbourg, France and Fellowship in Bariatric and Metabolic surgery from Cleveland Clinic, USA and Brazil. Currently she is placed as the Director of Dept. of Bariatric Surgery- International Centre of Excellence for Bariatric Surgery under Surgical Review Corporation, USA, Ruby Hall Clinic Pune, Poona Hospital, and Dr L H Hiranandani Hospital, Mumbai. She is the Secretary of Obesity Surgery Society of India.

She entered the Limca book of Records for performing 45 hernias in 10 hours in year 2005. She has Multiple research and original articles published in various National and International Indexed Journals about Obesity and metabolic surgery and is an Invited faculty for various national and international conferences in surgical gastroenterology and bariatric and metabolic surgery for presentations and live surgical demonstrations. She received Scholarship as "YOUNG SCIENTIST SURGEON 2011": from IFSO for contribution to the field of metabolic and bariatric surgery. She is the first Indian to present a video on 'Revision bariatric surgery' at IFSO World Congress in 2006 and is honored as SUPER SURGEON by Surgical Review Corporation, USA.

Diabetes is a major silent killer disease of the era. It is a disease with multifactorial etiology with the emergence of outcomes and studies related to mechanistic of bariatric and metabolic surgery, a completely new understanding of the pathophysiology of obesity and diabetes has come up and accordingly the treatment protocols have completely changed. The surgical treatments have proven themselves as the best scientific tool to significantly improve the disease status of the patients, prevent the cardiovascular and other life threatening disease complications and improve the health related quality of life. It also needs the multidisciplinary support to achieve maximum success. The newer understanding of the disease, changing paradigm in the treatment and the outcomes and mechanistics caused by bariatric surgery will be discussed.



## THE SPIRITUAL JOURNEY



### Dr. Thimappa Hegde

Director, Narayana Institute of Neurosciences, Bangalore  
thegde@gmail.com

Dr. Thimappa Hegde is presently the Director and Senior consultant Neurosurgeon at Narayana Hrudayalaya Institute of Neurosciences. He was Additional Professor of Neurosurgery at NIMHANS, Bangalore. He had basic medical and neurosurgical training in India and specialized training in USA, Japan and the Netherlands. He has authored 30 scientific publications in leading journals and has contributed few chapters to a book, “**History of Neurosciences**”. He also served as President, Neuro-Spinal Surgeons Association. His interests include the history of medicine and the humanities of medicine.

Dr. Hegde has been the recipient of “**Outstanding Citizen Award**” by the Lions Club of Bangalore and was selected as a member of the Group Study Exchange Program of the Rotary International to visit USA and Canada in 1997. He was invited by the Vatican to speak at an International Meeting in November 1999 at the Vatican City with the Pope, His Holiness John Paul II.

- o For a spiritual seeker life becomes a spiritual journey.
- o This spiritual journey can become meaningful and successful only if it is a conducted journey with the help of a guide or Guru who has the scriptures as guidance.
- o Spiritual journey is a journey from samsara to moksha from bondage to freedom which is a journey from false notion to fact (asath to sath) which finally works as from ignorance to knowledge. The path of bhakti is an essential part of a spiritual journey.
- o A spiritual journey happens in three stages. The first stage is stage GnanaYogyatha ,obtaining the eligibility for spiritual pursuit. The next stage GnanaPrapthi the acquisition of spiritual knowledge. The last stage is GnanaNishta. Getting firmly established in this knowledge. Each stage involves some relevant spiritual exercises.
- o In our tradition the word “spiritual” is used to convey the message of Vedanta. “Spiritual” therefore refers to the teaching of Vedanta or Upanishads.
- o The spiritual journey is “knowledge of Vedantic teaching”. The message of Vedanta is “Brahma Satyam, JagatMithya ” and “JivahahamBrahmiva.
- o The Taitteriya Upanishad says Bramhavid ApnotiParam. The one who knows the Truth attains the highest. This knowledge is not ParokshaJnanam indirect knowledge but AparokshaJnanam, direct first hand knowledge.
- o Spiritual Knowledge takes place when pramatha (the knower), premeyam (the object to be known) and pramanam (the instrument through which we know) come together.



## YOGA TO FIGHT AGAINST STRESS WARS IN DIABETES: THE NEED FOR YOGANOMICS AND INTEGRATED MEDICINE STUDIES



### **Dr. M. Balasubramanyam**

Dean of Research Studies & Senior Scientist

Madras Diabetes Research Foundation, Chennai-600086 India  
diasignal@gmail.com

Dr. M. Balasubramanyam (balu) is Dean of Research Studies & Senior Scientist at the Madras Diabetes Research Foundation (MDRF). After completing his PhD from S.V University, Tirupati, Dr. Balu went and received his post doctoral training (1991-95) at the Hypertension Research Centre, New Jersey Medical School, USA. He was trained in the areas of signal transduction in health and metabolic diseases with special reference to molecular pathogenesis of Type 2 diabetes and vascular biology. Having worked as a faculty at the Center for Biotechnology, Anna University, Chennai for 3 years (1996-99) he has joined MDRF in 1999. He is instrumental in setting up the basic infrastructural facilities at MDRF and coordinates various research programmes and educational activities from time-to-time.

Dr. Balu's laboratory at MDRF is involved in studying cell and molecular signatures with special reference to insulin secretion, insulin action and vascular function. Our research integrates physiological and pharmacological approaches with biochemical and molecular biological techniques (transcriptomics, miRNA, RNAi, epigenetics) to study mechanisms underlying development and progression of diabetes, its complications and cardiovascular diseases.

Yoga has been found to benefit all the components of health viz. physical, mental, social and spiritual well being by incorporating a wide variety of practices. Extensive research directed to the better understanding of the pathogenesis of diabetes by molecular medicine techniques now points out that chronic cellular stress signaling (oxidation, inflammation, glycation, endoplasmic reticulum (ER) stress, mitochondrial dysfunction, autophagy, proteosomal stress, altered neurotrophic factors) could be the common denominators in both the genesis of diabetes and its complications. Apart from these endogenous stressors, psychosocial stress and depression are closely associated with diabetes. *It is at this context, yoga for diabetes prevention and control assumes importance.* Recent studies show that yoga brings about a balance in autonomous nervous system and regulates metabolic parameters (blood pressure, glucose, lipids) by stabilizing sympathetic and parasympathetic nervous system. The mechanism of action of yoga appears to operate through parasympathetic activation and the associated anti stress mechanism. It reduces perceived stress and hypothalamo-pituitary adrenal (HPA) axis activation thereby improving overall metabolic and psychological profiles, increasing



insulin sensitivity, and improving glucose tolerance and lipid metabolism. While type 2 diabetes is influenced by psychoneuroendocrine and immune mechanisms, yoga appears to impact important positive role in combating stressors and improving these systems to regain health. In a series of *Chennai Urban Rural Epidemiological Study (CURES)* investigations, we have demonstrated increased oxidative stress, proinflammation, advanced glycation and ER stress not only in patients with type 2 diabetes and but also in subjects with prediabetes. In this context, it is important to notice from the emerging literature that yoga practices also decreases endogenous oxidative and inflammatory signaling. There is '*brain connection to diabetes*' and new biology insights emphasize that the human brain is an insulin-sensitive organ, it modulates food intake, body weight and peripheral metabolism and overcoming brain insulin resistance could be a novel approach for the prevention and treatment of metabolic diseases such as type 2 diabetes mellitus. In this context, *mindfulness-based interventions* with conventional medical approaches need to be considered for obesity and diabetes prevention and treatment. In the era of evidence-based medicine, alternative medicines and lifestyle measures (including yoga) should be subjected to modern scientific evaluation and testing (applying various omics technologies) to ascertain and position their metabolic health benefits and exploit disease prevention and control avenues. A recent transcriptome study in relaxation response (RR) practitioners (that includes meditation and yoga) revealed that RR practice enhanced expression of genes associated with energy metabolism, mitochondrial function, insulin secretion and telomere maintenance, and reduced expression of genes linked to inflammatory response and stress-related pathways. The long-term consequences of frequent high stress reactivity may include greater cortisol responses and accelerated telomere shortening. In fact, we are the first to demonstrate increased telomere shortening not only in patients with type 2 diabetes but also in subjects with prediabetes. It has been shown that yoga can lead to improved mental and cognitive functioning and lower levels of depressive symptoms accompanied by an increase in telomerase activity (and maintenance of telomere length) suggesting improvement in stress-induced cellular aging. '*Is mind-body relaxation by yoga effective to combat lifestyle stress*' is a virgin territory of research with a new dimension of scientific approach, which is are liable avenue not only to have holistic and integrated health but also to combat lifestyle disorders including diabetes. Future research directions in this exciting field should be oriented towards the documentation of diabetes prevention by yoga and meditation as well as clinical trial-based primary outcomes of glucose control and metabolic benefits by yoga in prediabetics/diabetics supplemented by mechanistic disease-biology insights through biomarker(s), epigenetics and other omics investigations.



## INTEGRATIVE MEDICINE - HOMEOPATHY



### **Dr. B T Rudresh**

Homeopathic Physician, Ashiwini Homeo Clinic, Bangalore  
drbtrudresh@gmail.com

**Dr. B.T. Rudresh**, a classical practitioner of homoeopathy has completed 3 decades of committed service. Dr. Rudresh initiated his career as a serious student of Homoeopathy. His hands on experience in a leading allopathic hospital, the clarity of knowledge gained while teaching homoeopathy as a lecturer and his understanding of human nature added to the experience provided by the vast patient populace from all walks of life and chiseled an approach that is noticeably individualistic in him. He is the President of Karnataka Board of Homeopathy, an executive member of Central Council of Homeopathy, AYUSH and a long list of associations. He also authored four books on Homeopathy. A book was written on him, "Hahnemann, Homeopathy and Dr. B.T. Rudresh".

He is a recipient of many esteemed awards such as Eminent teacher, Hahneman Gold award, excellency award from Karnataka homeopathy Mandali, Vaidyarathna award, just to name a few. He was honored by many societies in the last 20 years and has given numerous Television interviews about the efficiency of Homeopathic medicine in various disorders. Dr. Rudresh is also famous for conception, production and direction of homeopathy documentaries for Doordarshan National channels, channels of New Delhi and Karnataka.

Homeopathy is on a revival movement. For more than two centuries, people around the world have enjoyed the benefit of homeopathy. Discovered by a qualified modern medical doctor in Germany in eighteenth century, it has come a long way to take roots in Indian subcontinent.

If there is a shining model where west meets the east, it is undoubtedly homeopathy. Even though hailing from the European continent, the founder of homeopathy - Dr. Samuel Hahnemann was a great admirer of eastern philosophy. His writing and practices resonate for eastern philosophy of holistic nature of health and a comprehensive focus for healthcare.

In India, about 10% of population is actively taking homeopathic medicines; the situation is similar in many western countries. It is growing rapidly in appeal because of the effectiveness in iatrogenic disorders, ease of scaling the magnitude of operations and economic softness.

The truth is that modern medicine is desperately short of new treatments. It takes years for a new drug to get through the research and development pipeline to manufacture and the cost is enormous. And growing drug resistance, in part caused by the misuse of medications, has rendered several antibiotics and other life-saving drugs useless. Both these trends mean that scientists and pharmaceutical companies are urgently looking for new drug sources and are increasingly turning their eyes to the complementary medicines. In this context, homeopathy is the beacon light for the suffering humanity as a fusion of western origins and the eastern philosophy.



## AN INTEGRATIVE MODEL OF HEALTHCARE PIVOTED AROUND AYURVEDA TO MEET CURRENT HEALTHCARE CHALLENGES: AN EXAMPLE OF DIABETES MELLITUS (DM)



### Dr. G. G. Gangadharan

Director, MSR Indic Centre for Ayurveda and Integrative Medicine,  
Bengaluru

Dr. G. G. Gangadharan, is the Director of MSR Indic Centre for Ayurveda and Integrative Medicine, Bengaluru. He has dedicated himself to propagation of Ayurveda knowledge and local health traditions.

He did his Ayurvedacharya course from Madras University. He obtained his PhD from Tilak Ayurveda Mahavidyalaya, Pune and an International Masters in Health Leadership from McGill University, Canada.

He started his career with Arya Vaidya Pharmacy, Coimbatore. He founded the Institute of Ayurveda and Integrative medicine, Bangalore and served as its Medical Director till Sept. 2014. He served as editor of peer reviewed journals, prominent among which are 'Ancient Science of Life' and 'Journal of Ayurveda and Integrative Medicine'. He had co-authored 4 books on medicinal plants, and has over 20 research papers to his credit in National and International journals. He is a member of several national committees.

He is a regular Consultant for CAPART, DST (Govt. of India) on Medicinal Plant related projects and has served on several other committees.

The *Vedas* believed in the concept of one global family (*Vasudhaiva Kutumbakam*), which presupposes the absence of boundaries for knowledge systems like Ayurveda. Ayurveda can play a positive role in an inter-disciplinary collaboration for an effective model of healthcare with universal application and relevance. An approach that combines the clinical strength and wisdom of Ayurveda with Allopathy may be better than Allopathy in isolation for treating chronic diseases.

When we take DM as an example, the approach of Allopathy and Ayurveda are diagonally opposite. To be more specific, Allopathy perceives DM as a condition wherein insulin is either not secreted sufficiently or the cells develop resistance to insulin. This understanding is reductionist in nature and the management strategy also is simply either to provide insulin externally or enable the cells to increase its production or give chemical agents to alter the receptibility of cells. Whereas Ayurveda and other holistic systems view this as an imbalance in the internal milieu of the body due to various etiological factors that bring about systemic changes in the body leading to blockage of channels that carry bio-regulatory signals, energy and nutrition, impairing conversion of tissue materials. Cleansing the micro-channels and improving the tissue metabolism through correction of diet and lifestyle and detoxification, then the end point of bringing the serum sugar levels to normal limits is achievable. The talk will shed more insight into these aspects of an integrative approach for managing Diabetes mellitus.



## EXERCISE PRESCRIPTION IN DIABETES



**Dr. Guruprasad Venkat**  
Manchester, UK

Dr Guruprasad Venkat is currently a Consultant in Rehabilitation Medicine at Central Manchester Teaching Hospitals and Salford Royal hospital, UK. He is the lead Rehabilitation physician for Major trauma, Cancer and Sexual Rehabilitation.

He did his medical graduation from Mysore Medical College, India before joining post graduation in Physical Medicine and Rehabilitation at Safdarjang Hospital New Delhi. He has also worked as a Consultant Rehabilitation Medicine at Manipal super speciality Hospital Bangalore before moving to United Kingdom in 2005.

His interests are philosophy, yoga, meditation apart from special interests in cultural and social influence on non verbal human behaviour. He has also done presentations on meditation and yoga especially from scientific perspective on international yoga day at London. He is involved in quite a number of research activities and currently active in a research project on biomechanics of yoga postures.



## YOGA IN EXTREME ENVIRONMENTAL CONDITIONS



### **Dr. Montu Saha**

Defence Research and Development Organization, Delhi-54  
msaha1234@yahoo.com

Dr. M Saha, is senior scientist and Head, Exercise Physiology & Yoga Laboratory at Defence Institute of Physiology and Allied Sciences, Defence Research and Development Organization, Ministry of Defence, Delhi-54. He has more than 20 years of research experience in several DRDO projects in the area of Human Performance Improvement strategies.

He did B.SC, M.SC & Ph.D from Calcutta University. He was the Project Director of Centre for Advanced Research and Training in Yoga, at present he is the member of national advisory board of MR Int. Journal of Applied Health Sciences and also associated with Sports Authority of India as Sports Science Specialist. He is chairman and expert board member of several committees in many institutes. Besides being a guide to many Ph.D students, he is also a reviewer & editorial board member of several International Journals. He chaired many symposiums in national & international conferences, delivered invited lectures. His area of work is mainly in scientific real time assessment, comparative evaluation, standardization and implication of physical performance improvement strategies in adverse environmental condition. He has got more than 50 publications as book chapters, research papers in indexed journal and conference proceedings.

Yoga is the oldest known ancient Indian system of science, philosophy, culture, tradition and holistic means of self-development and maintaining better health through physical, mental and spiritual control. The Sanskrit word yoga means union of body and mind through breath control methods, asanas and meditation. Regular yogic practices endow perfect physical and mental health to its practitioner. A series of yoga research projects has been conducted on soldiers to explore the prophylactic, primitive and curative potential with particular reference to its application for the armed forces. Evidence shows that regular Yogic practices provides the practitioner with more aerobic capacity, anaerobic capacity, flexibility, strengthening in muscular endurance, increased vitality, delineated psychological stress, and reduced cardiovascular risks in any environmental conditions. Positive developments were observed in cardio-respiratory, biochemical and psychological function by the practice of a combination of yogic practices including asanas, pranayama and meditation for six months. It has been observed that yogic practice helps to achieve a stable autonomic balance and better thermoregulatory efficiency to cold stress thereby improving performance in cold environment. The real time scientific studies revealed that yogic exercises facilitated acclimatization process to high altitude and physical performance of subjects practicing Yoga was at par with those practicing conventional physical exercises. At high altitude, after 4 days



of continuous strenuous military operation subjects who were practicing yoga for 6 months had better recovery heart rate after exercise, improved aerobic capacity as compared to those who followed usual physical training programme. At high altitude with low atmospheric oxygen, yogic practices may be appropriate to achieve the sub-maximal cardio-respiratory conditioning with the help of very moderate level of oxygen consumption without much exertion. It has got potential application for the persons confined in the limited space like inside the submarine, bunkers and during prolonged stay in a place with limited space in inhospitable climate and terrain condition. Scientific researches on yoga have drawn attention to explore the potentiality if yoga for its application in adverse climate conditions. Modern warfare with its sophisticated technologies requires an alert and balanced mind with quick decisions at right moment along with a high level of endurance, muscle power and optimal level of aggression during combat situations. Considering this aspects, yogic training is considered to be helpful for the individuals involved in endurance, vigilance and stressful activities in extreme environments.



## INTEGRATING YOGA INTO ONCOLOGY CARE: IS THE WAIT OVER?



**Dr. Raghavendra Rao M**  
Presently Senior Scientist, Clinical Research and Head CAM  
Program  
Health Care Global enterprises Ltd

**Dr. Raghavendra Rao** was born in 16<sup>th</sup> July 1975 did his early education in Bangalore and completed his BNYS with second rank from SDM College of Naturopathy and Yogic Sciences under Mangalore University. He passed out from 5<sup>th</sup> batch to pursue his passion for research and joined S-VYASA in fall of 1998. His area of focus has been Yoga and psychoneuroimmunology and has been working primarily with Cancer patients since 1998. He has completed several research projects in Rheumatoid arthritis, Prediabetes, Diabetes, CVD risk prevention using both yoga and naturopathy interventions. He was a collaborator and Osher PICRC fellow at UCSF School of medicine, Sanfrancisco from 2004-2006. He completed Indo US study on yoga and Prediabetes, and yoga and HIV with UCSF School of Medicine Sanfrancisco. He completed his PhD in 2007 and joined Health Care Global enterprises Ltd., South East Asias Largest Network of Oncology Hospitals as a Senior Scientist. He has 21 international research publications and one international book chapter. He has won several awards such as Sushila thakur prakriti mandir prize in 2001 by APPICON, Manonmani Rudraiah award from S-VYASA for best thesis and ASCO Conquer cancer foundation award in 2012 by American Society of Clinical Oncology. He has set up a Department of CAM at Health Care Global Enterprises which is accredited by European Society for Integrative Oncology (ESMO) for Integrative Oncology. He has collaborated with University of Texas and is a member of consortium of Vegetable and Fruit Improvement Center that validates beneficial effects of fruits and vegetables for health. He is a recognized PhD guide for Yoga, Clinical nutrition and Nutraceuticals. He has also started a Cancer registry at HCG and is involved NCI sponsored phase III trial on Yoga for Breast Cancer. His vision is to develop a center for excellence in Mind Body Medicine. He is presently into advanced research using FMRI for Chemo brain and Gene expression studies in a lifestyle intervention trial for early prostate cancer. He is presently an Expert member on AYUSH Research Portal, Govt of India.

**Background:** Advances in cancer treatment have markedly improved survival with more people having to endure cancer symptoms longer than ever before. This causes severe psychological distress and coupled with cancer related intrusive thoughts can exacerbate symptoms and impact immune responses in these patients. Yoga is an ancient mind body intervention that has found beneficial effects in reducing psychological distress and improving quality of life in cancer patients. More patients are taking recourse to CAM therapies during



their primary treatment

**Aim:** To evaluate the use of CAM therapies by cancer patients and evaluate the effects of integrated yoga intervention on mood states, symptom distress, quality of life and immune responses and chemotherapy induced nausea and emesis in cancer patients.

**Methods:** We present results from three randomized controlled trials using yoga intervention with cancer patients and survey on use of CAM therapies during their primary treatment.

**Results:** Results from these studies with breast cancer patients has shown yoga to reduce affective states (anxiety and depression), perceived stress, treatment related distress and toxicity, chemotherapy induced nausea and vomiting (CINV), modulate antitumor and anti-inflammatory immune responses (TNF alpha, NK cell counts) following surgery, reduce fatigue and improve quality of life. Another study comparing yoga vs jacobsons relaxation has shown yoga to reduce impaired gastric motility and reduce CINV Survey results from 3 centers show prevalence of CAM use at 24% with 48% not informing their oncologist on its usage. Another survey in head and neck cancer patients shows that patients who take recourse to yoga intervention report more confidence with their conventional treatment and lesser distress than those who do not.

**Conclusions:** Results from these studies suggest yoga to have benefit finding in cancer patients. The basic mechanism of yoga interventions in conferring these effects needs to be evaluated further.



## CHLOROPHYLL IN CANCER PROPHYLAXIS AND THERAPY



### **Dr. Anja Schroder**

Dr. F. Bahr, Dr. R. Herwig, Dr. I. Triebnig, Dr. J. Greilberger, & Dr. A. Schröder  
Professor, Munich, Germany  
info@tcm-bayern.de

Dr. Anja Schroder was born in Germany in 1970. After completing her Medical degree, she was trained as an Anesthesiologist and had practiced till 2010 in various capacities. She was a senior physician at the department of Anesthesiology, University Medical Center, Munich, Germany until 2004. She served as a Head of the Department of Anesthesiology from 2004-2008 at the clinic for Orthopedic Surgery, Schwarzach, Germany. Since 2010, she owns her own office and practices acupuncture, laser acupuncture and holistic pain therapy and medicine at Munich, Germany. Additionally, since 2015, she works with Dr. Frank Bahr, President of the European Academy for Traditional Chinese Medicine (EATCM), Munich.

Studies on chlorophyll initially focused on the important issue of hyperacidity in connection with the pH-indication acupuncture point. In the course of these studies Prof. Dr. Bahr observed that chlorophyll also shows resonance with nearby acupuncture points, which are related to developing and manifest carcinoma. Positive experience of Prof. Bahr has led to a professional pilot study on chlorophyll for prostate- and mamma-carcinoma patients with 18 verum-patients and a placebo-group of 14. This research shows significant evidence of direct correlation between oxidative stress, tumor progression, tumor stage and cytological differentiation of the tumor. Furthermore, newest reports demonstrate, that chlorophyll is able to reduce or anticipate oxidative stress and the effect of it, which is apoptosis and immuno-suppression. Therefore, we have investigated the effect of chlorophyll on clinical and laboratory parameters in patients with hormonal resistant metastatic prostate cancer and chronic prostatitis and also in patients with breast cancer. The chlorophyll application leads to clear significant improvement in clinically and laboratory parameters in these patients. Furthermore, no side effects could be observed during the period of chlorophyll intake. Therefore, chlorophyll medication seems to be uncritical. We strongly advise patients of a certain age, to take chlorophyll in cancer prophylaxis and we prescribe also chlorophyll after chemotherapy, in case chemotherapy is necessary.



## THE CONSEQUENCES OF ANTARCTIC CONDITIONS AND SHIP VOYAGE: YOGA FOR INDIAN EXPEDITIONERS



### Dr. Lilly Ganju

Head Immunomodulation Division, Defence Institute of Physiology & Allied Sciences (DIPAS), DRDO, Delhi, India  
lganju@rediffmail.com, lganju@dipas.drdo.in

Dr. Lilly Ganju obtained her PhD from National Institute of Immunology in 1989 and joined DRDO after completing Post Doctoral Fellowship in AIIMS, New Delhi. Her research interests include Determination of immunomodulatory activity of various agents like herbal, synthetic, Heat Shock Proteins etc; Development of potential herbal adjuvant effect of stressful environmental conditions like high altitude, hypoxia, cold on immune system of the body; and Development of Pharmacological countermeasures for various diseases. She was conferred with many awards, DRDO Scientist of the Year 2013; Outstanding scientist – Contribution in Seabuckthorn Research, 2015; Laboratory Scientist of the year Award, DIPAS, DRDO, 2007; and Laboratory Technology Award, DIPAS, DRDO, 2011. She has five patents and more than 60 publications in International journals.

Antarctica - remote, isolated and frozen all year, is the most untouched and undisturbed region on the planet, offering many scientific advantages over anywhere else on earth. The, Antarctic milieu comes with extreme cold, intense UV radiation, white-outs, varying magnetic fields, sleep deprivation, altered circadian biorhythms, memory loss, isolation, - causing significant physiological and psychological stresses. The traumatic journey to Antarctica by ship causes severe sea sickness to expeditioners. We carried out investigations to observe the effect of multiple stresses like ship journey, isolation, cold, Magnetic field and UV exposure, on Immunological, Biochemical and Proteomic parameters, on two participating teams of Indian Scientific Expedition to Antarctica, 28<sup>th</sup> in 2008 and 34<sup>th</sup> in 2015.

The study conducted on expeditioners indicated that ship journey and acute exposure (summer) to Antarctica increased Th1 cytokines, while both acute and chronic exposure (winter), to Antarctica persistently up regulated the sIg-A level. Therefore, sIg-A could be considered as possible biomarker for stress under extreme environmental conditions. Activation of complement system during entire ship journey and winter months indicated manifestation of certain diseases to be clinically correlated later on. Further, there were significant variations in number of metabolites, clearly suggesting alternations in different metabolic pathways. These changes were further confirmed and attributed to drastic variation in buckle and gut microbial diversity. Though no specific patterns of disease have, as yet, been predicted by these variations; however, these findings are important because there might be long-term health implications due to significant alterations in various body components. To overcome the problems of stressful conditions of Antarctica, few yoga modules have been introduced which will help in mitigating the problems and make the life of expeditioners better and comfortable at Antarctica.



## AYURVEDA FOR CARDIOVASCULAR DISEASES



### Dr. P. Ram Manohar

Research Director, Amrita School of Ayurveda,  
Kollam, Kerala  
rammanoharp@gmail.com

Dr. P. Ram Manohar, received BAMS from Bharathiyar University, Coimbatore and MD (Ay) from Rajiv Gandhi University, Bengaluru. He was the Principal Investigator of NIH sponsored study to evaluate the efficacy of Ayurveda in rheumatoid arthritis, in collaboration with

University of Washington, Seattle, University of California, Los Angeles and AVP, Coimbatore under the leadership of Daniel Furst, MD.

The outcomes of this study were published in Annals of Rheumatic Diseases and Journal of Clinical Rheumatology and won **Excellence in Integrative Medicine Research Award** from the European Society of Integrative Medicine. He has established online indexing service for Ayurveda research papers called DHARA. He has served as Principal Investigator for several research projects.

He has 20 research publications in peer reviewed journals and contributed chapters in few books. He serves on the editorial board of many journals. He was honored with the **Ayurveda Marga Pravarthaka Award**, by Mahadevan's Ayurveda Foundation in 2014 and **Vaidya Sundarlal Joshi Smriti Sodha Puraskara** by the Mahagujarat Medical Society in 2015.

He is a Research Director at Amrita Centre, Amrita University. He serves as faculty in several institutions in Germany, Italy and USA. He currently serves as a member of Scientific Advisory Group of Central Council for Research in Ayurvedic Sciences (CCRAS), Government of India.

Cardiovascular disease (CVD) is a general term that describes disease of the heart or blood vessels. This includes numerous problems, from coronary artery disease leading to myocardial infarction, cerebro-vascular accidents, heart failure, arrhythmia, valvular disease, blood pressure and peripheral vascular disease. Classical Ayurvedic texts have described heart diseases under the heading of hrdroga and a summary of the Ayurvedic understanding of cardiovascular disease will be presented in this paper. The experience of clinicians in managing heart diseases will also be collated to supplement the information from the textual sources. The evidence matrix will be completed by compiling information from modern scientific research on the topic highlighting the scope and limitations of Ayurveda in the management of cardiovascular diseases.

The paper will discuss about the most promising herbs like Terminalia arjuna, Desmodium gangeticum, Commiphora mukula and others that are widely used in the treatment of heart diseases. It will also look at the evidence supporting the efficacy of herbal and herbomineral formulations used to treat this condition. Complex treatment protocols that includes dietary and lifestyle modifications apart from medications for treating heart disease - especially the prevention of coronary artery disease and rehabilitation for post myocardial infarction patients will also be taken up for discussion.



## CARDIOLOGY AND INTEGRATIVE MEDICINE



**Dr. Geetha Krishnan,**  
Head, Integrative Medicine, Medanta- The Medicity  
Hospital, Gurgaon, Haryana, India  
drgk2000@gmail.com

Dr. Geetha Krishnan is the Head of Integrative Medicine program at Medanta - The Medicity. He has propounded the 'Axial model' of integration which favors translational medicine and supports judicious, need based integration of medical systems. Based on clinical benefits he has put in practice several complementary interventions at Medanta. Among these, three integrated interventions, minimally invasive thoracic surgery, chronic pelvic pain syndrome and dengue care, are implemented as clinical protocols at Medanta.

Collaborative research is one of the strongest fortes of Dr Geetha Krishnan. At present his department has collaborative clinical research with CCRAS, S-VYASA University, Foundation for Medical Research, and Rhur university. He also leads two herbal drug development programs, solid tumors and thrombocytopenia, working in collaboration with IIM (CSIR).

Dr Geetha Krishnan, as the Founder of Innoveda Biological Solutions Private Ltd., has independently established a joint drug development program with IIM (CSIR) and secured government funding for the developmental activities involving five drugs. He has several patent (Indian as well as international) applications and approvals.

In broad sense, heart's functional ability and an individual's mental and physical functions are inseparably related. Cardiac diseases are understood as variations in functional ability of the heart, its influence on other organ systems and its broad effect on the individual's physical and mental activity. Formulating Ayurveda based interventions for cardiac patients, requires to analyze the dysfunction on the basis of its origin and influence, which can be broadly classified into three groups, (i) structural defects, (ii) *ama* based *shodha* or *dhatu-paka*, and (iii) influence of *doshas*. Formulating Yoga based interventions requires understanding the dysfunction as either originating from the Body, or Body & Mind, or Mind & Consciousness. Further analysis to identify involvement of *Srotas*, *Bala*, *Prana*, *Agni*, *Dosha*, *Dhatu* and *Prakruti* helps to create the link between the Ayurveda and Yoga based perspectives and create combined intervention modules, personalized for each patient. These analyses of the clinical condition and the designed interventions can be improved and integrated with diagnostic advances of biomedicine and allopathic clinical interventions. We have enough evidence to rethink the current approach to heart diseases, which mostly focuses on management of a clinical situation, and advance to a curative approach. We have limited but convincing evidence suggesting ability to reverse atherosclerosis, functional resurrection in cardio-myopathies, reversal of occlusion in partially occluded cardiac vessels and correction of cardiac arrhythmias. We also have considerable evidence supported with numbers, to support introduction of Ayurveda and Yoga as supportive care in management of thoracic and cardiothoracic surgery. We also have identified and developed drugs which targets and improves the anti-oxidant, free-radical scavenging activities (*ama* reducing activities) of the myocardium.



## DEPRESSION AND DIABETES



### Dr. Rajesh Sagar

Professor of Psychiatry, AIIMS, New Delhi

Dr. Rajesh Sagar is currently working as Professor in department of Psychiatry, AIIMS. After completing MBBS and post-graduation (MD) in psychiatry, he did Certificate of Completion of Specialist Training (CCST) of UK. He is Secretary to Central Mental Health Authority (Govt. of India) and Honorary Advisor on mental health, Dte. GHS, Ministry of Health & Family Welfare. He is the member of National Academy of Medical Sciences (MNAMS) & fellow of International Medical Science Academy (FIMSA), He has received several awards, honors & fellowship in the field of psychiatry. He has published more than 260 research papers/chapters and has presented several papers in national and international conferences. He has been the investigators for more than 65 funded projects. He is editor of Journal of Mental Health & Human Behavior (JMHHB), the official journal of Indian Psychiatry Society, north zone and convener of Specialty Advisory Board in Psychiatry in National Board of Examination. He has been advisor/ expert member to WHO, Ministry of Health & Family Welfare, Indian Council of Medical Research (ICMR), Department of Science & Technology (DST), Central Council of Homeopathic Research, National Brain Research Centre, Public Health Foundation of India, Central Adoption Resource Authority etc.

Mental health plays a major role in chronic non-communicable diseases such as diabetes mellitus. Moreover, diabetes mellitus is a major cause of morbidity and mortality in our society. A large proportion of people with diabetes suffer with poor psychological well-being and there is consistent evidence of elevated rates of depression disorders. For example, the rate of depression is doubled in people with diabetes compared with controls. Some of the studies show that people with depression and diabetes compared to those with diabetes alone were less likely to adopt healthy lifestyle and were also more likely to have lapses in refilling prescriptions for medication and subsequently develop diabetes related complication like heart attack, stroke, nephropathy, neuropathy, retinopathy, peripheral vascular disease. In addition to the severe impact of these psychological problems in their own right, the 'costs' of untreated depression in diabetes are high. This is due to its negative impact on diabetes self-care and medication adherence, leading to hyperglycaemia and increased complications and healthcare costs, lost productivity and increased mortality.

There is a need for early identification of depression in persons with diabetes mellitus and more importantly the capacity building and empowerment of non-specialists along with integrated management.



## COMMON MENTAL HEALTH DISORDERS



**Dr. Savitha Eranti**

Consultant Psychiatrist, Newham Early Intervention Service,  
Shrewsbury road, London E7 8QP.

Dr. Savitha Eranti, MD, PhD is presently a consultant Psychiatrist and a Honorary lecturer at Queen Mary University, London. Dr. Eranti had completed her Doctorate in Medicine (MD) in 1996 from NIMHANS, Bangalore. She had obtained PhD in Psychiatry in 2009, from Institute of Psychiatry, London. She has been working as an Honorary Clinical Lecturer at the Institute of Psychiatry, Queen Mary University London, since September 2004. She had worked as a Clinical research worker from 2001 to 2004. She is also a Mental Health Tariff clinical lead for East London Foundation Trust since November 2014. She also worked as an Honorary Lecturer at the Institute of Psychiatry, De Crespigny Park, London. She was an elected member of the Faculty executive at the Royal College of Psychiatrists

She was involved in a range of research projects since 1993 in various capacities resulting in numerous publications and research degrees. Currently she is involved in various research projects as a Principal Investigator. She has over 15 years of teaching & management experience in India and UK. She has several publications in peer reviewed journals on schizophrenia and depression, and had presented in various International and National conferences.

An estimated 350 million people of all ages suffer from depression. Suicide is the second leading cause of death in 15-29-year-olds. Over 800,000 people die due to suicide every year (World Health Organisation). Common mental health disorders include depression, anxiety, phobia, obsessive compulsive disorder, post traumatic stress disorder and other neurotic disorders. This talk will give an overview of these common mental health disorders with focus on depressive and anxiety disorders. The talk will also include symptoms and diagnosis of these disorders, variations in their presentation and the treatments available. Yoga is an emerging treatment in these disorders.



## YOGA IN SEVERE MENTAL DISORDERS



**Dr. Shivarama Varambally**  
ssv.nimhans@gmail.com

Dr. Shivarama Varambally has an MD in Psychiatry from NIMHANS and is an Additional Professor in Department of Psychiatry, National Institute of Mental Health and Neurosciences, Bangalore. He was a consultant Psychiatrist at various hospitals in Australia. He has many awards such as Dr. Vimla Virmani Award 2014, awarded by the National Academy of Medical Sciences (India) for outstanding work in the area of Rehabilitation of neurologically and/ or mentally afflicted subjects; Dean's Award 2005 (CMO) for Excellence in Teaching from the Teaching and Research Unit, the University of Newcastle and Northern Sydney Central Coast Health, Australia; Dr. SS Jayaram Award for the best paper at IPSOCON - 2003 (Annual conference of the IPS South Zone). He is an Elected Life Fellow of the Indian Psychiatric Society (FIPS); Elected member of the National Academy of Medical Sciences (India) (MAMS) in 2012.

He has over 70 publications in National and International journals. He is the Principal Investigator and Co-investigator for many ongoing projects dealing with mental disorders and Yoga, funded by various agencies. His areas of interest are Neurobiology and treatment of psychosis, especially schizophrenia; Yoga and its applications in mental health; and Metabolic Disorders in Psychiatry.

Yoga as a therapy has proven to be effective as a sole or additional intervention in several psychiatric disorders such as anxiety and mild forms of depression. However, the use of yoga-based interventions for severe mental disorders remained uncharted territory till the end of the 20<sup>th</sup> century. Psychoses, including schizophrenia, are the most severe mental disorders, causing significant morbidity and burden. In spite of significant advances in pharmacotherapy, treatment remains sub-optimal, with many patients having persisting deficits, especially in cognitive and social functioning. Several recent studies, including randomized controlled trials from NIMHANS have shown that add-on yoga-based interventions reduce symptomatology, improve functioning and cognition in patients with schizophrenia, as well as in the early phase of psychosis. However, the biological underpinnings of these effects remain unclear, although there are some indications that hormones like oxytocin may contribute. Yoga-based interventions have been found useful for reducing stress and burden in caregivers of patients with schizophrenia.

Yoga-based interventions have demonstrated antidepressant efficacy as sole or adjunct therapies in Major Depressive Disorder, and recent studies suggest improved neuroplasticity may be one of the primary mechanisms of action.

The presentation will focus on the rationale for using yoga-based interventions in psychosis and major depression, the current status of evidence for the benefits, and the possible neurobiological mechanisms underlying the effects.





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*Abstracts*  
Oral Prize  
Paper Presentation





## BEYOND MINDFULNESS TO AANANDAMAYA KOSH

Dr. C.M. Bhandari

Devamber Arogya Dham  
cmbhandari@gmail.com

There is one-sided focus on the first three body sheaths (*Koshas*), viz. *Aanandamaya Kosh*, *Praanmaya Kosh* and *Manomaya Kosh* (food sheath, energy sheath and mind sheath respectively) in several health and stress management programs/practices being taught currently whereas the role of the last two sheaths, viz. intellect sheath (*Vigyanmaya Kosh*) and memory sheath (*Aanandamaya Kosh*) are not even mentioned. Likewise, these two sheaths are being totally overlooked and rarely been considered as possible parameters for research. In fact, the body health is directly controlled by Consciousness (*Aanandamaya Kosh*) of the individual as all lifestyle activities of the individual are controlled by his/her Consciousness and these activities determine not just body health but also the holistic health of the individual at all three levels, viz. physical, subtle and causal. This Paper seeks to analyze current trends in Yog practices worldwide and provides practical applications of the spiritual dimension of the individual in determining the overall Health and Happiness level of the individual. It makes use of two Cover Page stories - the first from Time Magazine of United States of America in its 3 February 2014 issue on Mindfulness and the second from India Today weekly magazine of India, 28 September 2015, issue on 'the Digital Junkies' and one research paper from the monthly Anesthesia News Magazine of US, September 2015, Vol 41/9 issue.

The author has been a practitioner of classical Yogic way of life for past four decades based

on Vedic Sciences, and more specifically on *Yogsutras* and *Bhagwat Gita*, in maintaining a fine balance between his high profile diplomatic life and normal personal life as a householder. The result is he still enjoys absolute normal health at 67 years age without use of any medicines. That is why Yog has been defined as '*Chittavrittinodh*' and not '*manovrittinodh*' (thought management and not mind management). In meditation when the practitioner directs his/her consciousness to the true source within, the *Atman* or soul, and seeks to get beyond the illusory perceptions to reality, he/she is able to transcend the illusion - a key factor in making right decisions. This has been described as '*Samatvamयोग*' in *Bhagwat Gita* where intellect and right knowledge combine in decision-making, which ensures perfect balance in life. It is, therefore, essential that people learn to think beyond the *Manomaya Kosh* and tackle their concerns at the actual source, the '*Aanandamaya*

## THE EFFECT OF YOGA ON CORTICAL INHIBITION IN HEALTHY INDIVIDUALS: A PILOT STUDY USING TRANSCRANIAL MAGNETIC STIMULATION

Dr. Ramajayam Govindaraj\*, Sneha  
Karmani\*, Vinod Kumar\*, Urvakhsh  
M Mehta\*, Shivarama Varambally\*,  
Jagadisha Thirthalli\*, BN Gangadhar\*.

\*Dept. of Psychiatry, NIMHANS, Bengaluru  
ramji.zero@yahoo.com

**Background:** Yoga is an apt tool for managing stress. But the mechanisms underlying yoga practices needs investigation. Yoga works by increasing the vagal tone. Evidence suggestan increased amount of inhibitory neurotransmitter Gamma Amino Butyric



Acid (GABA) as a possible mechanism for improving vagal tone. Transcranial magnetic stimulation (TMS) is a non-invasive tool which can be used for studying cortical inhibition, as a measure of GABA mediated neurotransmission. This study aims at elucidating the effect of yoga on two cortical inhibitory paradigms-short interval intracortical inhibition (SICI) and cortical silent period (CSP) with TMS.

**Methods:** Healthy adults (n=13) of 18-50 years age, either sex, were recruited from participants of the monthly Yoga appreciation course at NIMHANS Integrated Centre of Yoga (NICY) with written informed consent. After one month of Yoga practice including asanas, pranayama and meditation one hour a day, SICI and CSP were measured from the motor evoked potential (MEP) recorded from First Dorsal Interossei (FDI) by stimulating the contralateral motor cortex with a figure of eight TMS coil, with coordinated EMG.

**Results & Conclusion:** There was significant increase in duration of CSP ( $P=0.013$ ) following one month yoga, but not in SICI. There was no change in the motor threshold after yoga. Increase in CSP duration implies increased GABA<sub>B</sub> receptor mediated neurotransmission. This finding concurred with the result of an earlier study, with only meditation as intervention. Further studies with robust design are needed to establish the findings for its application in psychology.

## EXPERIMENTAL INVESTIGATION OF FLOW FIELD VELOCITY DURING FORCED BREATHING USING SCHLIEREN FLOW VISUALIZATION TECHNIQUE

S.N. Omkar<sup>\*</sup>, Ravi Vishwanath Mangipudi,  
Karthick S.K, Jagadeesh G.

<sup>1</sup>Chief Research Scientist, Department of

Aerospace, Indian Institute of Science,  
Bangalore  
omkar@aero.iisc.ernet.in, yogaomkar@  
yahoo.com

**Background:** Forced or deep breathing techniques which have many advantages such as detoxifying and releasing tension, massaging your internal organs and strengthening the immune system. Although the benefits of these techniques are well studied, there are hardly any studies available on the dynamics of breath. It is of interest to understand the nature of the air flow in and out of the nostrils, which includes the turbulence, velocity profile, etc. In this study an attempt is made to visualize and analyze forced breathing technique using Schlieren flow visualization. Such studies may be extended to diagnostic and clinical applications.

**Methods:** The exhaled breath is captured using the Schlieren flow visualization technique which is based on the deflection of light by a refractive index gradient. Variations in refractive index are caused by density gradients in the fluid distorting the collimated light beam. By digitizing the expanding visible boundary of the exhalation flows generated by breathing, frame-by-frame, it is possible to obtain estimates of the evolving propagation distance of these flow fields over time. This study adds new data using a new, noninvasive, visualization approach to the flow field dynamics of breathing in human volunteers.

**Results:** As previously discussed the range of breath velocities reported here are within the range of 1.5m/s–2.5m/s for normal breathing, and in the case of Bhastrika pranayama (forced breathing) the velocities were found to be around the range of 3.75 m/s to 3.99 m/s for inhalation and 24.1 m/s to 25.33 m/s



during exhalation.

**Conclusion:** Exactly there is no comparative data available for yogic breath analysis. With this shadowgraph method, the fact that the maximum breath velocities obtained using this approach are comparable with other published experimental methods. Such studies may be extended to diagnostic and clinical applications.

## FUNCTIONAL ANATOMY OF CORE MUSCLE AND ITS ACTIVATION IN DIFFERENT YOGIC POSTURE- A CONCEPTUAL REVIEW

Dr. Mrithunjay Rathore

All India Institute of Medical Science,  
Raipur, Chhattisgarh  
drmrithunjay77@gmail.com

**Background:** Activating the core muscles through the different yogic posture is believed to be important for the designing of safe and effective yoga program. Considerable attention has been credited to the erector spine, transverse abdominis, rectus abdominis, external oblique and gluteus maximus in designing evidence based yoga protocol. Although a few research studies have quantified the core muscle activity, collectively, a consensus on the type of different yogic posture. Therefore, the objective of this presentation is to examine the literature and synthesize the muscle activity produced across various yoga postures to determine which type of yoga posture elicits the largest amplitude for the core muscle in healthy individuals.

**Methods:** The literature search performed using the following electronic databases: Cochrane library, NCBI, PubMed, Google Scholar, EMBASE, web science. And the search

terms used to contain: Core muscle activation and yogic posture OR yoga and rehabilitation OR intervention AND Electromyography.

**Result:** It has been found that the variation in core muscle firing patterns which depends on the trunk and pelvic positions. And the different yoga poses produce specific muscle activation patterns like *chaturanga Dandasana*, *Adho mukha Svanasana* are effective for strengthening external oblique, and *Utkatasana*, *Virabhadrasa pose* for targeting the gluteus maximum muscle and *Ardha uttanasana* for strengthening erector spine muscle.

**Conclusion :** The finding suggest that this approach could be useful for the designing of safe and effective evidence based yoga practice which improves the yoga performance and it's assume importance in the decline the incidence of injuries related to the practice of yoga.

## DIFFERENTIAL MODULATION OF CARDIAC AUTONOMIC RHYTHM DURING DIFFERENT YOGASANA: UNDERSTANDING THE PROCESS

Leena S. Phadke\*, Sanjay S. Phadke,  
Reinhard Bogle Dipl. Päd.,  
S.B. Sarmukaddam, S.N. Bhavsar  
\*SKN Medical College, Pune  
leena\_phadke@hotmail.com

**Background:** Disturbance of cardiac autonomic rhythm assessed by HRV (Heart rate variability) is a topic of current research interest because of its association with several diseases of public health importance viz. Diabetes, metabolic syndrome, hypertension, heart diseases, and neuropsychiatric disorders. Yoga intervention has shown promising results in these disorders and there are pointers that action of yogāsana on



autonomic modulation could have unique character.

**Method:** HRV measurement was carried out through Ambulatory Polygraph in eighteen experienced yoga practitioners during practice of seven different yogāsana in protocolized sequence of 5-minute blocks starting with a 5-minute Rest block that served as the baseline. ECG was recorded @ 1 KHz and HRV computed (frequency domain analysis) as per HRV Task Force Guidelines.

**Results:** Significant changes in cardiac autonomic modulation observed during performance of different yogāsana (Friedman test). While significant parasympathetic attenuation occurred during Tadasana, significant sympathetic attenuation occurred during practice of Sarvangasana, Shirshasana, and Pschimottanasana (Signed Rank Order test). Inverse relationship between sympathetic and parasympathetic divisions remained significant (Spearman's Rank Correlation Coefficient) and corresponding augmentation was seen (i.e. sympathetic in Tadasana and parasympathetic in Sarvangasana and Shirshasana).

**Conclusion:** Results demonstrate differential autonomic modulation through different yogāsana. Attenuated sympathetic and augmented parasympathetic modulation sans bradycardia is a unique pattern representing a 'physiological paradox' and hinting that the character and mechanism of cardiac autonomic modulation in yoga could be different than that in physical exercise.

## EVALUATION OF THE EFFICACY OF THE AYURVEDA ISCHEMIA REVERSAL PROGRAM (IRP) AS AN ADD ON THERAPY TO CONVENTIONAL TREATMENT IN PATIENTS WITH STABLE ISCHEMIC HEART DISEASE (IHD)

Dr Rohit Sane, Dr Rahul Mandole

**Objectives:** To analyze the efficacy of IRP as an add on therapy to conventional treatment in patients with Ischemic Heart Disease IHD by assessing predominantly Time to onset of Ischemia along with Heart Rate Recovery (HRR), Quality Of Life, MET value & VO<sub>2</sub> Max before and after study.

**Methods:** 29 patients; 26 males and 3 females with clinical diagnosis of IHD, meeting the inclusion & exclusion criteria were provided with IRP session once daily for 7 days. Patients were evaluated on day 1 & 30 of study.

**Results:** According to stress test, the change in Time to onset of ischemia [day 1:414.41±149.34 & day 30:561.89± 167.01] ( $p<0.001$ ) & change in METs [day1:5.36±1.60 & day 30:7.51±1.75] ( $p<0.01$ ) were found to be statistically significant. Also, amplitude of ST change at day 1 was 1.5 mm and at day 30 was 0.7 mm. Dukes treadmill score (DTS) increased significantly from -6 mm to -1.5 mm from day 1 to day 30, hence the risk of mortality over 5 years reduced from 25% to 20% i.e. by 5%. As DTS score close to Positive value indicates low risk, proves positive impact of the treatment. HRR period was shortened notably by approx. 49.71Secs, ( $p<0.05$ ). Significant reduction in body weight ( $p<0.001$ ) and improvement in cardiac functional capacity ( $p<0.05$ ) were observed.

**Conclusion:** IRP when administered as an add-on therapy to conventional treatment may reduce ischemia as well as symptoms



of angina consequently improving quality of life in patients with stable (IHD).

## YOGA INTELLIGENCE IN THE FUNCTION OF MEASURING OF THE YOGA THERAPY EFFECT

Prof. Predrag Nikic

International Society for Scientific  
Interdisciplinary Yoga Research  
Belgrade, Serbia, Europe

Yoga intelligence is a concept that enables measuring of the awareness development, deepness of understanding and management of the psychological abilities that appeared as the result of the yoga practice. Yoga intelligence instrument has good metric characteristics by which it is possible to follow up on certain therapeutic effects before and after the beginning of the therapeutic process. The concept includes following up the changes of the psychological characteristics. The importance of the measuring of cognitive, motivational and affective changes during the yoga therapy - energy therapy is seen as the need to eliminate the cause of the illness and not only resolving the visible consequences. The illness should be seen as reminder that the harmony is the balance of physiological, psychological and social processes. The instrument has been used in researches conducted with students of the Faculty for Sports in Belgrade and students at the Patanjali University in Haridwar as the part of postdoctoral research, in 2013. The instrument also show good metric characteristics during the postdoctoral research in S-VYASA in 2014, where the respondents were students of S-VYASA and Faculty for Sports from Belgrade, Serbia, Europe.

## RANDOMIZED CONTROL TRIAL, DOUBLE BLIND PLACEBO CONTROL STUDY ON THE EFFECTS OF PRANIC HEALING ON CHRONIC OBSTRUCTIVE PULMONARY DISEASE - PILOT STUDY

P. A. Mahesh, Srikanth N. Jois, M.S. Ananthakrishna, Parthasarathi Gurumurthy, S. K. Chaya, Rajendra Rajagopal, Lancy D'Souza, Amrutha D. Holla, M. Renuka Devi

srikanth@pranichealing.co.in

**Background:** GOLD in 2011 defined Chronic Obstructive Pulmonary Disease (COPD) as common preventable and treatable disease that is characterized by persistent airflow limitation that is usually progressive. This study seeks to explore the beneficial effects of Pranic Healing (PH) as adjunct therapy for COPD.

**Method:** In this study, double blind placebo controlled randomized trial design was followed. The study participants were of COPD stage 2 according to GOLD guideline, current tobacco smokers with a minimum exposure of 10 pack years. After screening 410 smokers, 29 participants with GOLD stage 2 were recruited and 20 completed the 1 year study. Mean age of study participants was 61.6 years. All patients received daily Tiotropium and Salbutamol as rescue medication according to GOLD guidelines. In addition, the test group received PH sessions thrice weekly during the study. Sham PH was received by the control group.

**Results:** The results were analyzed with Descriptive statistics, repeated measure ANOVA and independent sample t-Test and SGRQ Calculator. The participants test results were compared between the baseline



and visitive. On intergroup comparisons, we observed a significant improvement in FEV1 of PH group as compared to the control group ( $p=.027$ ). Total SGRQ scores were significantly decreased ( $p=.000$ ) and distance walked in 6 Minute Walk Test had a non-significant increase ( $p=.199$ ).

**Conclusion:** This pilot study indicates that PH could potentially improve lung function and quality of life of COPD subjects as an adjunct to conventional treatment.

## MATHEMATICAL MODELING OF THE MECHANISMS OF PERIODIC BREATHING AND CONTROL OF BREATHING

Anju Saini\*, Sarita and  
V.K. Katiyar

\*Centre for Transportation Systems, IIT  
Roorkee, Roorkee, India  
anju.iitr@gmail.com

We use a recently developed mathematical model that integrates a reduced representation of the brainstem respiratory neural controller together with peripheral gas exchange and transport to study numerically the dynamic response of the respiratory system to several physiological stimuli. We compare between the system responses with two major sources of delay: circulatory transport vs. neural feed-back dynamics, and we show that the dynamics of the neural feedback processes dictates the dynamic response to hypoxia and hypercapnia. The source of the circulatory delay (blood velocity vs. distance from the lungs to chemoreceptors) was found to be important. Our model predicts that periodic breathing is associated with the ventilatory “after discharge” (slow recovery of ventilation) after a brief perturbation of  $CO_2$ . We also predict that there could be two possible mechanisms for the appearance of

periodic breathing and that circulatory delay is not a necessary condition for this to occur in certain cases.

## A CLINICAL EVALUATION OF EFFICACY OF AROGYAVARDINI RASA AND MARICHYADI TAILA EXTERNAL APPLICATION ALONG WITH PRANAYAMA IN EKA KUSTA W.S.R TO PSORIASIS

Dr. Sandesh Shetty

Assistant Professor Dept. of Swasthavritta  
S.D.M college of Ayurveda Udupi  
deshushetty@gmail.com

*Ekkusthais* a type of *kshudra kustha* described in different *Ayurvedic* classics. It is a *vata-kaphaj* disorder. The clinical symptom of *Ek kustha* described in *Ayurveda* resembles with the clinical symptom of Psoriasis. The clinical feature of *Ek kustha* described by Kashyap represents remission, relapse and seasonal variation, which are present in Psoriasis. In modern medicine there is no definite treatment for this disease. The medicines, which are available to treat the disease, are not very effective and cannot be used for long-term management because of their local and systemic side effect as well as toxicity. Medicines, which are used in *Ayurveda*, are safe and being practiced since thousands of year. A large number of drugs and measures are described in *Ayurveda* for the treatment of *Kustha*. This study was designed to access *Ayurvedic* treatment plan in the treatment psoriasis (*Ek kustha*). The study was randomized open phase clinical trial. The patients of age group 18 to 60 were selected on the basis of *Ayurvedic* signs and symptoms of *Ek kustha* and advised treatment of *arogyavardini rasa* and *marichyadi taila* external application along with *pranayama*, Observations were recorded for sharply



defined erythemosquamous lesions varying in size; presence of erythema, scaling and induration in the lesions; surface consists of non-coherent scales; positive Auspitz sign – (Bleeding occurs after scratching of scales); positive onion peeling sign/candle grease sign (after scratching the scales fall like peels of onion). Since the assessment criteria was Quantitative, paired ‘t’ test was applied. In the current study the treatment was found significantly effective in treating psoriasis.

### NEUROHEMODYNAMIC EFFECTS OF YOGA PRACTICE IN HEALTHY VOLUNTEERS: A FNIRS STUDY

\*Harleen Chhabra, Pooja More, Sneha J Karmani, RamajayamGovindaraj, Urvakhsh M Mehta, G Venkatasubramanian, Shivarama Varambally, B N Gangadhar  
\*Department of Psychiatry, NIMHANS  
harleenchhbr1@gmail.com

**Background:** Yoga is a multicomponent practice that includes physical postures, breath regulation techniques, deep relaxation practice and meditation/mindfulness techniques involving attention. Yoga practices have been shown to enhance social cognition. In this study, we examined potential effects on yoga on mirror neuron activation (ventral premotor cortex) using functional Near Infra-red Spectroscopy (fNIRS).

**Methods:** Seventeen adult healthy volunteers underwent one hour of yoga sessions for a period of one month. This yoga module comprised of *asanas* (physical postures), relaxation exercises, *pranayama* (breathing exercises), and chanting meditation. To tap the mirror neuron activation changes brought about by practice of yoga, pre- and post- cognitive task was administered. The task comprised of 30 second videos

(dynamic pincer grasp, dynamic control) and a static image of hand and cup. Cerebral hemodynamic changes were acquired with a continuous wave fNIRS system (two wavelengths, bilateral with 5 channels each, sampling frequency 15.6Hz). Optodes were placed at dorsolateral and ventral pre-motor cortex. Data was processed using the nirsLAB software.

**Results:** There was significantly increased activation in Left ventral premotor cortex following yoga in subjects (N=13) that had participated in at least 10 yoga sessions (t=2.9; p=0.015). No significant change in activation pattern was observed in subjects who participated in less than 10 sessions (N = 4)

**Conclusion:** Observation and imitation of the yoga practices during one month training may cause changes in the activation pattern of the mirror neurons and is evident after significant number of repetitions. These findings require replication and further systematic evaluation.

### EFFECTIVENESS OF STANDARIZED YOGIC PRACTICES ON NON-NUTRITIONAL FACTORS ASSOCIATED WITH ANAEMIA AMONG MEDICAL STUDENTS - A PROSPECTIVE RANDOMIZED CONTROLLED TRIAL

Dr. B.T. Chidananda Murthy, Renjish M, Vijayaraghavan N, Tarannum J, Sharmila A, Jyothi D, etal

Principal & CMO, JSS Institute of Naturopathy & Yogic sciences, Coimbatore

**Background:** Anemia is the biggest health problem in developing country like India. It affects all ranges of the population and



its burden is often considered trivial and eventually occurs in similar proportions in all cultures, interferes with quality of life and work performance and is the most common reason for medical reason. Assessment of yogic practices in among medical students has a great importance.

**Materials & Methods:**The study was conducted on basis of randomized controlled trial and participants were selected under criteria of WHO. Randomly 108 female medical students age between 18±21 were recruited after general physical examination among 108 subjects 68 were in experimental group and 40 were in control group. Yogic practices were given for 12-13 weeks (Asanas & Kriyas).

**Results:** The result showed that after doing yogic practices for 12-13 weeks there is slight increased Hemoglobin percentage. Experimental group shows there is increased in strength ability by yogic practices after 7-8 weeks, but after 12-13 weeks of regular practices of yoga techniques there is increased in Hb%(6% to 10.5% an average), but control group also there is increased in Hb%(4% to 7%an average).Overall yogic practices an average of both group the hemoglobin percentage is increased from 6.95 to 9.54 % but experimental group shows significant results in practicing of Yoga (P<0.001).

**Conclusion:** The present study reveals that yogic therapy helps efficiently in reducing the symptoms of anemia with minimum effort. Based on above results, regular practice of yoga (12-13 weeks) has showed significant results in Anemia. Hence, yoga therapy would yield more results if it is carried out for longer duration.

## **A PROPOSAL FOR A UNIFIED SYSTEM OF MEDICINE BASED ON ANCIENT SYSTEMS LIKE CHINESE MEDICINE AND YOGA-AYURVEDA WITH CASE STUDIES OF CHRONIC HEADACHE AND OTHER AILMENTS**

Dr. C.R. Narayanan,

Executive Director, Life in Yoga Institute

[rnarayanan.us@gmail.com](mailto:rnarayanan.us@gmail.com)

A Unified System of Medicine hypothesis is offered that can explain every system of medicine, given the incomplete model of modern medicine that cannot understand traditional and alternative systems of healing that have become popular. Several approaches of developmental research, like Primo Vascular System, EAV and Electro-Photonic Imaging, Matrix Rhythm Therapy, impact of yoga on gene expression, that provide some support to this hypothesis is explained. In addition, a new concept called Measured Yoga Therapy based on the Unified System of Medicine is explained; demonstrated and actual case reports are presented. Measured Yoga Therapy, developed by the author, is a method of instantly assessing the healing impact of specific yoga practice for a specific condition for a specific subject, measured objectively by Electro-Photonic Imaging, thus predicting the longer term impact of the practice for the subject. 7 Cases of Chronic Headache patients are presented, and case observations from other disorders and general findings are noted. The 7 cases demonstrate the point that while the common symptom may be headache, the cause may be different from Naadi readings, and therefore is addressed with different types of yoga practices. Implications for furthering research to understand the human system better is discussed.



## EFFICACY OF ACUPUNCTURE IN THE MANAGEMENT OF PRIMARY DYSMENORRHOEA: A RANDOMIZED CONTROLLED TRIAL

Dr. Geetha B Shetty

Associate Professor and Head, Department  
of Acupuncture,  
SDM College of Naturopathy and Yogic  
Sciences, Ujire, Karnataka, India;  
gbsujire@gmail.com

**Background/Objectives:** Dysmenorrhea constitutes one of the most frequent disorders in women of a fertile age, characterized by severe uterine pain during menstruation. The objective of this study was to evaluate the efficacy of Acupuncture in the management severity of pain and its associated systemic symptoms in primary dysmenorrhoea.

**Materials and Methods:** A total of 60 females with the age varied from 17 to 23 years were randomly assigned to either a treatment group or a wait-list control group. Treatment group received Acupuncture for the duration of 20-minutes per day, for 15-days per month, for the period of 90-days. Wait-list control group did not receive Acupuncture for the same study period but received after study period. Baseline, during and post assessments were taken on 1<sup>st</sup> day; 30<sup>th</sup> & 60<sup>th</sup> day; 90<sup>th</sup> day respectively. Statistical analysis was performed by repeated measures of analysis of variance followed by *Post-hoc* analysis with *Bonferroni* adjustment for multiple comparisons, independent samples-*t*-test for Visual Analogue Scale score and Mann Whitney U test for the rest of the variables with the use of statistical package for the social sciences, version 16.

**Results:** This study showed significant reduction in all the variables such as Visual analogue scale score for pain, menstrual

cramps, headache, dizziness, diarrhoea, faint, mood changes, tiredness, nausea, vomiting in study group compared to wait-list control group.

**Conclusion:** Results of this study suggest that Acupuncture could be considered as an effective treatment modality in the management severity of pain and its associated systemic symptoms in primary dysmenorrhoea.

## VIVEKANANDA YOGA PROGRAM FOR PATIENTS WITH ADVANCED LUNG CANCER AND THEIR FAMILY CAREGIVERS

Dr. Smitha Mallaiah

MD Anderson Cancer Centers  
gmallaiah@mdanderson.org

**Background:** The primary purpose of this study was to establish the feasibility of a couple-based Vivekananda Yoga (VKC) intervention in lung cancer patients and caregivers. Secondly, we examined preliminary efficacy regarding quality of life (QOL) outcomes. **Method:** In this single-arm feasibility trial, patients with lung cancer undergoing radiotherapy and their caregivers participated in a 15-session VKC program that focused on the interconnectedness of the dyad. We assessed pre- and post-intervention levels of fatigue, sleep disturbances, psychological distress, overall QOL, spirituality, and relational closeness. We tracked feasibility data, and participants completed program evaluations. **Results:** We approached 28 eligible dyads of which 15 (53%) consented and 9 (60%) completed the intervention. Patients (mean age = 73 years, 63% female, all stage III) and caregivers (mean age = 62 years, 38% female, 63% spouses) completed a mean of 10 sessions and 95.5% of them rated the program as very useful. Paired *t* tests revealed a significant



increase in patients' mental health ( $d = 0.84$ ;  $P = .04$ ) and a significant decrease in caregivers' sleep disturbances ( $d = 1.44$ ;  $P = .02$ ). Although not statistically significant, for patients, effect sizes for change scores were medium for benefit finding and small for distress ( $d = 0.65$  and  $0.37$ , respectively). For caregivers, medium effects were found for improvement in physical functioning ( $d = 0.50$ ).

**Conclusion:** This novel supportive care program appears to be safe, feasible, acceptable, and subjectively useful for lung cancer patients and their caregivers and lends support for further study.

### EFFECT OF YOGIC PRACTICES IN IMPROVEMENT OF NEURO MUSCULAR CO-ORDINATION AND MOTOR SKILLS IN LEPROSY PATIENTS SUFFERING FROM DIABETES

Dr. Ulka Natu, Neela Tamhane,

Dr. Vimal Borgaonkar, Vaishali Patil,

Special Guidance: Yogacharya Shrikrishna  
Vyavahare, Ghantali Mitra Mandal, Thane,  
Maharashtra

[gmmresearch@gmail.com](mailto:gmmresearch@gmail.com)

**Background:** Anandvan, a community rehabilitation centre for isolated and ostracized disabled leprosy patients, is founded by Karmayogi Baba Amte. Though the lepers are cured, they are facing a challenge of diabetes.

Baba Amte always used to say "They are not disabled but differently able persons having tremendous potential." Taking inspiration from Baba Amte's golden message, our Guruji, Yogacharya Shrikrishna Vyavahare decided to treat these patients in the yogic way with missionary zeal.

**Material and Method:** The study was

conducted on 21 subjects. Yogic intervention was given by modifying the SDM module of SVYASA, taking into consideration the physical disabilities and deformities of the subjects. The techniques were practiced for seven months i.e. from March to Oct 2014. Finger dexterity, hand grip, hand steadiness, anxiety levels were assessed initially and at the end of the camp.

**Results:** In hand steadiness test, there is significant decrease in errors occurred ( $p = 0.04$ ). There is significant improvement ( $p = 0.0008$ ) in finger dexterity task, fasting blood glucose and HbA1C ( $p = 0.006$ ). Anxiety levels also decreased.

**Conclusion:** Yogic practices helped in improvement of Neuro Muscular co-ordination and Motor Skills in these differently able diabetic subjects. The results also deserve a special credit as the techniques were practiced by leprosy patients with irreparable deformities.

### AN FMRI STUDY OF YOGA NIDRA USING INTER-SUBJECT CORRELATION: A PILOT STUDY

Dr. Saloni Tandon<sup>1</sup>, Mohd Imran<sup>2</sup>,  
Rahul Garg<sup>3</sup>

MS, Indian Institute of Technology,  
Delhi, India

[salonitandon2008@gmail.com](mailto:salonitandon2008@gmail.com)

Yoga Nidra, based on an ancient Indian yogic technique, provides a systematic method of relaxing the body and mind. It has been found to relieve stress, treat psychosomatic disorders and increase the dopamine levels. EEG studies on Yoga Nidra show occurrence of predominantly alpha and theta waves confirming its relaxation properties. Conventionally, it was not possible to analyze the fMRI Yoga Nidra data. This is



the first fMRI study on Yoga Nidra where we demonstrate that it is possible to find activated brain regions during different stages of Yoga Nidra by using Inter-Subject Correlation method.

**Materials and Methods:** Two fMRI scans recording BOLD response of a healthy volunteer while carrying out the Yoga Nidra practice were recorded. The fMRI analysis was done using technique of Inter-Subject Correlation. The overall activation in different brain regions as well as activations during various stages of Yoga Nidra practice were studied.

**Results:** During the full duration of practice, significant activation was seen in auditory cortex, Insula, Wernicke's and Broca's area. Activations were also seen in somatosensory and visual cortex. Some activations were also observed in ACC, precuneus and amygdala

**Conclusion:** We demonstrate that fMRI-based studies of Yoga Nidra are possible by using Inter-Subject Correlation analysis. The preliminary results obtained in this pilot study (activations in Insula, ACC, Precuneus, Amygdala) are promising. A larger study is needed to establish these results conclusively. These findings will help enhance the understanding of neural basis of relaxation, sleep and stress-related disorders.

## STAND-ALONE AYURVEDIC TREATMENT IN ACUTE ISCHAEMIC STROKE: A NON-RANDOMIZED CONTROLLED TRIAL

J. Aarthy Harini<sup>1,2</sup>, Avineet Luthra<sup>1</sup>, Shrey Madeka<sup>1</sup>, Prasan Shankar<sup>2,3</sup>, Pitchaiah Mandava<sup>4</sup>, Ravishankar Pervaje<sup>2,3</sup>, Sanjith Aaron<sup>5</sup> and Archana Purushotham<sup>1,2</sup>

1. Institute for Stem Cell Biology and

Regenerative Medicine, Bangalore, India  
2. Institute for Ayurvedic and Integrative Medicine, School of Health Sciences, Transdisciplinary University, Bangalore, India

**Background:** The Allopathic arsenal for treating stroke is rather limited, and the only treatments shown to improve outcomes are not accessible to the majority in the third world. Stroke patients in India commonly use Ayurvedic therapies, but there is no evidence regarding the efficacy or safety of these therapies, the latter being of particular concern in acute ischaemic stroke (AIS).

**Methods:** We present here a pilot study prospectively comparing outcomes in two cohorts of AIS patients treated with whole-system Ayurveda (n=13) at Sushruta Ayurveda Hospital, Puttur, or conservative (non-thrombolytic) Allopathic care (n=20) at the Christian Medical College Hospital, Vellore. The Ayurvedic arm underwent an in-patient treatment regimen about 2 weeks long, based on the classical protocol described to treat *pakshaghata* in the *Sushruta Samhita*.

**Results:** Pooled intention-to-treat analysis of outcomes did not show statistically significant differences in mortality (15.38% vs. 15%, p = 1.00), non-fatal adverse event rates (7.69% vs. 30%, p = 0.2), or functional disability measures. A paired analysis performed after using a matching algorithm to reduce baseline disparities between the cohorts continued to suggest that the safety profiles of classical Ayurveda and conservative Allopathy in AIS over the period of follow-up were similar.

**Conclusion:** This is the first ever report of stand-alone Ayurvedic therapy in AIS. Our results indicate that Ayurvedic treatment of AIS is safe, and support the conduct of a larger randomized trial to study the efficacy of Ayurvedic treatment of AIS.





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*Abstracts*  
Posters





Paper ID: 03

## CONGESTION OF THOUGHTS - ITS CAUSES, EFFECTS AND CURE

Dr. Murlidhar Rao,

Advance Pranic Healer. Founder Dhyana Lok  
Meditation center 21<sup>st</sup> Main B.T.M. Layout II  
stage. Bangalore.  
anandams@rediffmail.com

**Background:** Excessive and repetition of thought causes congestion resulting in various physiological and psychological problems. Hence remedy for such ailments lies in mind and not in body. Specific ancient techniques of meditation are found very effective in treating such disorders.

**Methodology:** A survey was conducted to study the life style of patients suffering from common ailment. Data of patients from different spectrum of life, having complaints of fatigue, headache, morning sickness, back and lower limbs pain was collected from various medical centers and super specialty hospitals. Data was collected from urban and rural back ground as well as different section of society. Exhaustive study of their professional and personal lifestyle was made.

**Result:** The problem was analyzed of acute cases, discussed with professional doctors and verified by clinical examination results. It was found that the problem is neither anatomical nor physiological, but deep rooted psychological problem. Both the categories mentioned about are having a common factor. They are tense, worried and work in a confined space. They have limitation of sharing their feelings and dissipating thoughts. This result in thought congestion, which when grossified, percolates down words, consolidates in lower parts of body.

**Treatment:** Thought congestion cannot be treated by convention methods because of simple reason that convention scientific methods act at the physical levels not at mental or thought level. The cure of such subtle ailments which are psychological in nature are by subtler methods like Pranic healing and Reiki. Thought congestion can be cleared by sweeping a Pranic healing process and further occurrence can be prevented by specific thought cleaning process of Meditation. It gives immediate relief from stress and related problems.

**Conclusion:** The paper is based on actual case studies of acute cases of disorder due to thought congestion which were treated by Pranic Healing and Special meditation techniques. These case studies are of the patients with not only acute physical ailments but also pschycological disorders like acute depression or hyper activity.

Paper ID: 05

## VASUDEVA KRIYA

Shri Rajendra Damodara Yenkanamoole

Founder- Vasudeva Kriya Yoga

Pranayama is the key to the good health. It said that one who knows the art of pranayama, no disease can come near him or her. Slower you breath longer you live. When the breathing rate slows down life span increases. When we breathe slowly, mind is de-stressed. De-stressed mind detoxifies the body and relaxes the mind. With detoxification health improves. Relaxed mind expands. In the expanded mind creativity dawns in and flashes of truth dawns in. Above this, if the breathing is divined our life is also divinized. Vasudeva Kriya exactly does this.



Paper ID: 07

## EFFECT OF YOGA ON THE PRAKRTI OF CHILDREN- A RANDOMIZED CONTROL STUDY

S P Suchitra\*, HR Nagendra  
SVYASA University, Bangalore

**Background:** Yoga has an established effect on bringing positive aspects in personality, reducing the stress, and increasing the memory in the children. However, there are no randomized control studies available on the effect of Yoga on the *prakriti* (constitution) children.

**Objective:** To understand the effect of Yoga on *tridoshas* and *trigunas* in children.

**Method:** This study was a pre-post design with a control group. One hundred children ages 8-12 were selected from the New Generation National Public School and were randomly assigned to either an experimental or a control group. Children in the experimental group practiced an Integral Yoga module that included Asanas, pranayama, nadanusandhana (chanting of A-U.M for three rounds separately and together) and chanting. Children in the control group practiced physical exercises only. The Caraka Child Personality Inventory and The Sushruta Child personality inventory were administered before the intervention and then again after one month of the yoga module or physical exercises. The data were analyzed using the Mann-Whitney U test and Wilcoxon Signed Ranks Test.

**Results:** In the yoga group, *Vata* was significantly decreased while both *Pitta* and *Kapha* significantly increased. In addition, *Sattva* was significantly increased while *Rajas* and *Tamas* were significantly decreased compared to the control group. Children in the control group showed a small increase

in *Rajas* and a small decrease in *Tamas*, but neither of these effects was significant.

**Conclusions:** Children participating in the yoga module had significant changes in *tridosha* and *trigunas* compared to exercise alone.

Paper ID: 09

## IMPACT OF PRACTICE OF PRANAYAM AND DHYAN ON DAILY ENERGY, MULTITASKING AND WHOLESOME ENGAGEMENT DURING MBA PROGRAM

Dr. Ashish Pandey

(I.I.T. Bombay)

ashish.pandey@iitb.ac.in

This is experimental study based on randomized trial with daily practices of *Pranayam* and *Dhyan*. This study was conducted with the participants of Indian leading management institution. Students of this program are required to go through a challenging routine filled with classes, academic projects and assignments, live projects with industry and rigorous practical training for the placement with few of the most valued recruiters. We examined the impact of practices of *Pranayam* and *Dhyan* practices on participants' ability to cope up with daily challenges, energy levels and wholesome engagement with studies.



Paper ID: 10

## AN INTEGRATED APPROACH OF YOGA SEQUENCING AND CORRECT LIFE STYLE TO REDUCE INSOMNIA AND STRESS DESEASES:ITALIAN STUDY

Dr. Daniela Laudani

Director of I yoga Sardinia (Yoga school) -  
Cagliari, Italy  
laudani.daniela@gmail.com

**Background:** A brief introduction on Italian yoga scenes and the abundance of yoga studios and gyms. A study on Italian managers with different types of insomnia (primary and secondary). The study investigates how a daily yoga practice can affect people with insomnia disease and help to keep stress under control. The yoga routine was, during the all study, completed with food control, use of oils and regular massages.

**Methods:** The study participants were asked to maintain regular yoga practice twice a week involving cycles of yoga postures. In twenty male and female volunteers that were asked to keep sleep diary for one week before the beginning of the study and every day during the study. In the required information: amount of hours of sleep, number of times of awakening during the nights, use of insomnia medications, details about sleep quality. After the 2 months study they evidenced improvements in: sleep quality and duration, total wake time, reduced use of medicines and their substitution with natural and less chemical remedies.

**Results:** There was a significant improvement in all the participants, with better results in case of primary insomnia. All the study participants improved sleep qualities, reduced feeling of fatigue, some of them registered also weight loss, and a better

quality of life with a significant reduction of sleep medication.

**Conclusion:** A regular practice of yoga postures improves sleep quality and mind stress. Not only with the practise of the classical yoga relaxation (yoga nidra) but also with a regular sequencing and an intense practice as preferred in the West.

Paper ID: 11

## PROMOTION OF YOGA THROUGH TOURISM FOR DEVELOPING A HOLISTIC APPROACH TO MEET SUSTAINABLE DEVELOPMENT GOALS

Sarang Shirish Nandedkar

Officer on Special Duty - Alumni &  
Corporate Relations, IIT Bombay, Mumbai  
Ph D Student in Management at Tilak  
Maharashtra Vidyapeeth  
sarang.nandedkar@gmail.com

With the advent of modern lifestyle & material prosperity, mundane engagements have been seen growing with many of its undesirable effects in the form of greed, selfishness and insensitivity towards the life and environment. These patterns made United Nations to remodel its development plan based on Sustainable Goals in September 2015. An extension of these goals in tourism development could be realized as sustainable ecotourism that encompasses and holistic lifestyle or wellness tourism. The present study aims at understanding and promoting a holistic approach towards sustainable eco-tourism with yoga. Yoga with its proven transformative value can enrich tourism industry with solutions that harbor sustainability and desirable human qualities. Lessons learnt at Yoga educational set-ups/



ashrams or retreats empower tourists/ students to blossom into better individuals while helping them cope up with their everyday life problems at mental, physical, psychological, intellectual, social and spiritual levels. Yoga based tourism serves mutually benefiting purpose of “bread earning” and “man-making” both in the same framework of allotted resources. The study sees Yoga being used as an effective transformative tool for tourism sector for the host (Yoga ashram or destination) as well as the guest students (patients/tourists) while also promoting sustainable cum harmonizing values in the global scenario. The growing interest in healthy lifestyle tourism and the need to address the rising threats to environment, social harmony, peace and sustainability creates a never before global demand for yoga through tourism interventions - which must be met by India - by offering yogic lifestyle based educational tourism.

Paper ID: 12

## **EFFICACY OF YOGA, COGNITIVE INTERVENTIONS AND PSYCHOEDUCATION IN BREAST CANCER PATIENTS**

**Dr. Bhupinder Singh<sup>1</sup> and Colonel Ramesh Babu Chirumamilla<sup>2</sup>**

Dept of Psychology, Barakatullah  
Vishwavidyalaya, Bhopal  
Staff Officer, Karnataka and Kerala Sub  
Area, Bangalore, India  
rchiroo@yahoo.com

**Background:** Cancer is a disease of the mind body and soul. Yoga is a ‘mind-body’ exercise, with combination of yogasanas, pranayama, meditation, stilling modification of mind. Yoga may help cancer patients to cope with cancer.

**Methods:** Forty women with breast cancer (mean age 44.2 years) were enrolled in this study with twenty each in experimental and control groups. Experimental group was given 24 sessions of yogasanas, pranayama, meditation, cognitive interventions and psycho education over twelve weeks. Participants were assessed at baseline and week thirteen on Mental Adjustment to Cancer, Perceived Social Support and Quality of Life Questionnaires.

**Results:** Significant improvements found in experimental group in Helplessness-Hopelessness, Fatalism, Anxious preoccupation, Fighting spirit, Cognitive avoidance, Family support, Significant other support and Friends support. No such improvement noticed in control group except in Cognitive avoidance. Significant improvements also found in both groups in most variables of Quality of Life Questionnaires.

**Conclusion:** The results suggest that yoga, cognitive interventions and psycho education are effective in management of individuals with cancer. They can bring about improved sense of mental adjustment to cancer, enhanced social support and improved quality of life which can positively affect health and daily life of cancer patients.

Paper ID: 13

## **SRIYANTRA AND PYRAMID INFLUENCE ON SEEDS GERMINATION**

**Jang Jungyun, Itagi Ravi Kumar**  
S-VYASA, Bangalore  
itagi.ravi@gmail.com

**Background:** Under the Indian philosophy yantra and mantra are inevitable relation. They are using in the form of an image or in the



form of a diagram or in the form of the sound for therapeutic application, spiritual growth and as a tool of meditation. The pyramid has been known from ancient times as a powerful design that connects to energy forces and its shape is identified with pranic energy. Research and experiments have shown that mantra and pyramid powers increasing the plant growth and positive energy as healing qualities.

**Method:** Here experiment had conducted on germination of green gram with the influence of sriyantra and pyramid. Paper sriyantra and two models of pyramids were used, one of pyramid made of plywood and another pyramid made of plastic with both of them having square base. The control sample was kept under normal white paper.

**Result and Conclusion:** Result shown that sample of plywood pyramid model have maximum percentage emergence and percentage change in radical length. Plastic pyramid sample had shown maximum percentage change in fresh radical weight. Paper sriyantra sample had shown maximum percentage change in dry radical weight. Samples of paper sriyantra and pyramids have shown exponential significant in radical length with respect to control sample.

Paper ID: 14

### GERMINATION OF SEEDS WITH MAHAMRTYUNJAYA MANTRA

Pan Jeeye and Itagi Ravi Kumar

S-VYASA, Bangalore  
itagi.ravi@gmail.com

**Background:** Earlier studies had been conducted to know the effect of sound on the growth of seeds. They measured biologic effects of music, noise and healing energy

on okra and zucchini seeds germination and found out that sound vibrations affect on living biologic systems. In another study on the effect of agnihotra on the germination of rice seed, the result concluded that the germination was significantly influenced by agnihotra.

**Method:** In the present study, maha mrtyunjaya mantra was used as a solitary intervention. The design of this study consisted of two samples: control and mantra. Each sample contained total of 600 fenugreek. Total five trials were conducted with 120 seeds in each trial for two months. Mahamrtyunjaya mantra was chanted for 108 times for treatment sample twice in a day at sunrise (05:15 a.m.) and at sunset (07:00 p.m.).

**Results and Conclusion:** The result showed that treatment sample with maha mrtyunjaya mantra showed 1% more in emergence, exponential significant in radical length, 0.33 gm more in fresh emerged seeds weight and 0.02 gm more in dry emerged seeds weight compared to control sample.

Paper ID: 15

### EFFECT OF INTEGRATED YOGA ON NURSING STUDENTS WITH BREAST PAIN

Sukanya Raghunath<sup>1</sup>, Dr. Nagarathna  
Raghuram<sup>2</sup>, Dr. Sandhya Ravi<sup>3</sup>

<sup>1</sup>Division of Yoga and Physical Sciences.  
SVYASA, Bengaluru, India  
sukanya.raghu@gmail.com

**Background:** Mastalgia is a common breast disorder with high prevalence. Studies say that the main cause is psychosomatic. Yoga is known to be an effective mind-body intervention but there are no published studies on integrated yoga in young adults



with mastalgia. The present study estimated the prevalence of mastalgia among young Indian women and the RCT looked at the efficacy of integrated yoga.

**Methods:** The prevalence study was on 748 (18 to 29 years) women with mastalgia from four colleges in Bengaluru; eighty with mastalgia who satisfied the selection criteria from one college were randomized into yoga and control arms. Yoga (asanas, pranayama and meditation) was taught by post graduate certified yoga therapists for 12 weeks (6 days/week) and the control group did supervised brisk walk for the same period. Both groups continued the practices unsupervised for six months.

**Results:** The Prevalence of mastalgia was 47.33% (354 out of 748); of which 88.70% (314) had cyclical mastalgia and 9.89% (35) had acyclic mastalgia.

RM-ANOVA showed a significantly better reduction in the yoga than the control group at the end of 3 months ( $p < 0.001$ ) in numerical Pain Analogue Scale, quality of life (WHOQOL-BREF) and depression (BDI). There was also significant ( $p < 0.001$ ) time\*group effect after 6 months with better improvement than the control group.

**Conclusion:** Integrated Yoga is more effective than physical activity in alleviating mastalgia, thereby improving the quality of life and reducing the depression scores.

Paper ID: 16

## EFFECT OF BUTTERMILK ON CONTROL OF DIABETES MELLITUS ALONG WITH IAYT FOR DIABETES MELLITUS

Nyak Pandurang and Manya Goutham  
Amitha Hospital, Sagar Road, Bhatkal,

Uttara Kannada, Karnataka, India, 581320  
gouthamnature@gmail.com

**Background:** Diabetes is multifactorial disease and intestinal microbiota is one of the causes for diabetes mellitus. Buttermilk prevents the growth of harmful bacteria in intestine and prevents subclinical bacteremia and reduces the stress. Reduced fat intake and fat globules in the liver cells also reduces stress. Buttermilk is laymen diet with preprobiotic properties. So we have studied 5 known diabetes patient by giving buttermilk therapy along with IAYT.

**Methodology:** Known diabetes mellitus patient is admitted for IAYT and buttermilk therapy for 3 days. All anti diabetic and insulin were stopped. Blood glucose was done thrice daily, followed up for 3 months. First 3 days only 3 to 4 liters or more buttermilk was given. IAYT practice advised. After 3 days only green salads along with buttermilk were given for 3 days. After that slowly changed to diabetic diet.

**Result and Discussion:** Our experiment shown, almost all diabetes benefited by buttermilk 3 to 4 Ltrs/day with IAYT. Later continuing with 1 litre of buttermilk per day along with diabetic diet reduced their antidiabetic drugs. Out of five, two diabetes who are on insulin we could stop and start antidiabetic drugs orally. The reasons,

- 1) Lactobacilli reducing growth of harmful bacteria and altering gut microbiota
- 2) Reduced fat intake and fat globules in liver reducing stress.

**Conclusion:** Insulin and ant-diabetic drug requirement can be assessed during admission and even after that depends on diet choose to have it. Insulin could be stopped and can be put on oral antidiabetic drugs.



Paper ID: 17

## YOGA THERAPY & MODERATE DIET FOR ENHANCING THE LEVEL OF SOCIAL FUNCTIONING IN AUTISTIC CHILDREN

Manju Deorari<sup>1</sup> and Dr. Ishwar Bhardwaj<sup>2</sup>

<sup>1</sup>Research Scholar, Dept. of Human Consciousness & Yogic Science  
manju.deorari@gmail.com

**Background:** Autism is a pervasive developmental disorder defined by the presence of abnormal and/or impaired development. The characteristic type of abnormality is in main areas of social functioning. It involves severe impairments in social interaction, communication, imaginative abilities, and rigid, repetitive behaviours.

**Methods:** This study was conducted on a sample of 50 children suffering from Autism spectrum disorder from which 30 children were selected for experimental group and the remaining 20 were placed in the control group through purposive sampling. The subjects were selected from various care centres and special schools in Haridwar and Dehradun, and their age ranged from 8.1 to 14.7 years. Case Study was taken from parents/caregivers regarding the daily activities of the child. The pre and post values for both the groups were assessed on the basis of Vineland Social Maturity Scale (Indian Adaptation) by Dr. A.J. Malin (1971). Yoga therapy including mantra, asana and pranayama, along with Moderate diet (Mitahaar) were given as intervention for a period of 6 months.

**Results:** There was improvement in some of the areas of social functioning in autistic children after 6 months of experimental treatment.

**Conclusion:** The result reveals significant

difference in the level of social functioning between experimental and control groups of the study, which concludes that there is a need for continuous assessment regarding the efficacy of yoga therapy and moderate diet in children suffering from autism spectrum disorder.

Paper ID: 18

## YOGA BASED PULMONARY REHABILITATION FOR THE MANAGEMENT OF DYSPNOEA IN COAL MINERS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE: A RANDOMIZED CONTROLLED TRIAL.

Dr Rajashree Ranjita<sup>1</sup>,

Dr Alex Hankey<sup>2</sup>, Dr H R Nagendra<sup>3</sup>

<sup>1</sup>Research Scholar, Division of Yoga and Life Science, S-VYASA Yoga University, Bengaluru, India.

drrajashreeyoga@gmail.com

**Background:** Coal mine dust exposure causes chronic airflow limitation in coal miners resulting in dyspnoea, fatigue and eventually chronic obstructive pulmonary disease (COPD). Yoga can alleviate dyspnoea in COPD by improving ventilatory mechanics, reducing central neural drive, and partially restoring neuro-mechanical coupling of the respiratory system. This study aimed to evaluate the effectiveness of Integrated Approach of Yoga Therapy (IAYT) in coal miners with COPD.

**Methods:** This was a randomized, waitlist-controlled, single-blind clinical trial. Eighty one coal miners (36-60 years) with stable stages II and III COPD were recruited. The Yoga group received an IAYT module tailored for COPD population 90 min. per day, 6 days per week for 12 weeks. Measurements



of dyspnoea and fatigue on the Borg scale, exercise capacity by the six minute walk test, peripheral capillary oxygen saturation (SpO<sub>2</sub>%), and pulse rate using pulse oximetry were made before and after the intervention.

**Results:** Statistically significant within group reductions in dyspnoea ( $P<0.001$ ), fatigue ( $P<0.001$ ) scores, pulse rate ( $P<0.001$ ), and significant improvements in SpO<sub>2</sub>% ( $P<0.001$ ) and 6-min walk distance ( $P<0.001$ ) were observed in the yoga group; all except the last were significant compared to controls ( $p<0.001$ ).

### Conclusion

The findings suggest that yoga has significant potential to produce benefits. There is a need for further research to substantiate these findings and to better understand the mechanism of yoga, also to investigate its long-term effects. Yoga can be included as an adjunct to conventional therapy in pulmonary rehabilitation programs for COPD patients.

Paper ID: 20

## YOGA PRACTICE INCREASES MINIMUM MUSCULAR FITNESS IN CHILDREN WITH VISUAL IMPAIRMENT

Soubhagyalaxmi Mohanty<sup>1</sup>,

Peri Venkata Ramana Murthy<sup>1</sup>,

Balaram Pradhan<sup>1</sup>, Alex Hankey<sup>2</sup>

<sup>1</sup>Division of Yoga and Humanities,

S-VYASA Yoga University, Bangalore, India

mohantyslaxmi@gmail.com

**Background:** Muscle strength, a component for balance, gait and functional mobility is vital for children with visual impairment (VI). Yoga has frequently been demonstrated to improve physical and mental fitness in children. This study aimed to assess the effect

of 16 weeks yoga training on muscular fitness in children with VI.

**Method:** This was a wait-listed two-armed-matched case-control study. Eighty (41 yoga, 39 control) VI students of both genders aged 9-16 years matched on age, gender and degree of blindness were assessed at pre, mid (after 8 weeks) and post (after 16 weeks) yoga intervention using the Kraus-Weber test.

**Results:** The percentage of students passed in yoga group were 12.2%, 43.9% and 68.3% whereas percentages in the control group were 23.1%, 30.8% and 30.8% in pre, mid, and post tests respectively. Mc-Nemar test showed significant differences between pre and mid ( $P<0.001$ ), mid and post ( $P<0.001$ ) in the yoga group while those parameters were not significantly different in the control group. Yoga therapy seemed to have considerable benefits for the children's muscular fitness.

**Conclusion:** The study suggests that yoga has considerable benefits for improvement of fitness level in children with VI and may be recommended as an effective, alternative, inexpensive low risk training activity option for them.

Paper ID: 21

## RASA- AN ESOTERIC JOURNEY

Padmaja Venkatesh

Aatmalaya

padmajasuresh@hotmail.com

Rasa, the aesthetic enjoyment is realized when the life forces and dramatic stories are first appropriated within and then transmitted across to the world around -the Rasikās, Bhaktās as and others, in creative, ecstatic and emancipatory ways. The epitomic personage Abhinavagupta calls Rasāyana [the science of art, of the rasās, or of vegetables juices,



etc.), more or less the Indian equivalent of alchemy, an esoteric science.

Tantra Yoga attempts to unify Shiva and Shakti by raising the serpent power from the lowest Mūlādhāra to the highest Sahasrāra Chakras. The subtle body is composed of seven cakrās or energy centres.

The common coining of Nātya Yoga as synonymous with dance forms such as Bharatanātyam is since ages, not without sufficient ground. The process is designed and practised to ultimately raise the same Kundalini Śakti, mentioned above. In Nātya, the power is similarly awakened, but spontaneously. With self-surrender, the Nātya Sādhaka transports himself and others to the ecstatic reign of the supreme consciousness. In Tandava and Sukumāra, there is unification of Śiva and Śhakti - male and female principles, matter and spirit, energy and consciousness. Dance is the union of Shiva Shakti, the Laya Yoga when Ardhanareeshwara within one's subtle body is in action portraying the generative, operative and destructive forces.

In principle, laya is affected as the kundalini rises from center to center. Here lies the foundation for the emergence of PRAJAPATI, the creative spirit in the dance and the consequent buildup of Rasa or the flow of empathy leading both artiste and spectator to the no-man's realm of eternity. Rasa, the various colors of the golden prism of consciousness, is the outcome of Tantra which is the 'loom' wherein threads are woven diligently to create the canvas of Natya.

Paper ID: 22

## YOGA AIDED INTEGRATED THERAPIES FOR TREATMENT OF CORONARY HEART DISEASES

Dr. Ram Gopal<sup>1</sup> and  
Dr. Debasis Bakshi<sup>2</sup>

<sup>1</sup>Chairman, Research Advisory Board  
(IRIIM), Howrah;

Former Director, DRDO, Ministry of  
Defence, Govt. of India, New Delhi;  
drramgopalresearch@gmail.com

**Background:** In spite of miraculous development of allopathy from invention of various drugs to stem cell research and therapy there is very high incidence of cardiac disorders all over the world. Yoga with Integrated Medicine approach is increasingly popular now. ICMR (2010), WHO Traditional Medicine Strategy (2014-2023) and other surveys have shown a rising prevalence of major risk factors of CHD in India.

**Methods:** Only diagnosed patients were taken. Prophylactic and therapeutic yoga integrated packages applied included - Yogic postures, *Sahaj Pranayams*, meditation, acupressure therapy, specific organic diets and naturopathic treatment practices. The traditional tongue and pulse diagnostic therapy used proved effective not only for diagnosis but helpful in assessing the condition of patients as well as for prognosis. The Traditional Chinese Medicine associating CHD with deficiency of "Xin Qi" or "Xin Yang" and stagnant sign "Xin Xue" were used in the diagnosis and treatment plan. Specific Acupuncture and Moxibustion Therapy as per prescription was given daily at 6-8 Acupuncture points.

**Result:** Patient were treated and followed up for 1 year. More than 50% clinical improvement was observed. Now they can



walk 3 to 4 km. comfortably with negligible heaviness in chest.

**Conclusion:** It is concluded that Yoga with integrated approach of pro-nature therapies aided by acupuncture with tongue and pulse diagnosis is acceptable for treatment and prevention of CHD. During the last 35 years of dedicated service this approach developed by IRIIM being simple, cost effective and easily adoptable has proved very effective and needs future research for its inclusion in health service.

Paper ID: 29

## INTEGRATED MEDICINE APPROACH FOR DRUG ABUSE

Dr. Debasis Bakshi<sup>1</sup> and  
Dr. Sujata Pal<sup>2</sup>

Research Institute for Integrated Medicine  
(IRIIM), Mourigram, P.O.Unsani, Howrah-  
711 302, West Bengal,

<sup>2</sup>BHMS (Cal), Post-Graduate Certificate in  
Acupuncture-Moxibustion (IRIIM), Senior  
Faculty and Registrar, Indian Research  
Institute for Integrated Medicine (IRIIM),  
Mourigram, Howrah 711 302 West Bengal

**Background:** Drug Abuse, a challenging problem in society is conventionally managed primarily by modern medicine. But mental isolation associated with stress and strain make the system of the sufferer more tensed and 'close type'. System approach of life believes that human-system is basically 'open type' and for survival and strengthening mind needs relaxation and interaction with the surroundings. IRIIM during last 35 years of working on pro nature therapies has developed a yoga based integrated medicine protocol for management of drug abuse.

**Methods:** As per diagnostic criteria of DSM - IV, 30 drug addicts (age-20-50 yrs) without

any major morbidity were selected for this study. A 30 days treatment plan included pro nature therapies (PT) like yoga-naturopathy-diet-acupuncture, psychological counseling and rehabilitation with minimum support of modern medicine as needed. Case history details along with tongue images of patients before and after treatment were acquired and transferred to database for evaluation.

**Results:** Developed PT protocol successfully controlled the symptoms in 24 cases while 6 cases did not show significant improvement. It was observed that integrated management primarily by PT benefited majority addicts for relieving symptoms without side-effects in less time and minimized frequency of relapse.

### Conclusion

PT with minimum modern medicine support showed in 80% cases sustained recovery while 20% cases needed to develop more supplementary and selective therapies.

Tongue-data showed features vary with clinico-pathological changes, which can well be utilized as an important additional non-invasive traditional diagnostic tool for evaluating the better efficacy of the traditional wisdom and prepare a suitable database which can well be used for further study and software development.

Paper ID: 31

## EFFECT OF JAGGERY IN RELATED TO MENTALLY STRESS. (NCS)

Dr. Murikipudi Navyasudha

BNYS Yoga Doctor In N.P.C.D.C.S Regional  
Research Institute of Homeopathy,  
Gudivada. (A.P)  
drnavyasudha@gmail.com

**Back ground:**Jaggery is a natural, traditional



sweetener made by the concentration of sugarcane juice and is known all over the world. It is a traditional unrefined non-centrifugal sugar. It contains macro nutrients like carbohydrates, vitamins & minerals present in jaggery. Consuming jaggery regularly it boosts up our psychological state of our brain. Carbohydrate consumption - acting via insulin secretion and the "plasma tryptophan ratio increases serotonin release.

**Methodology:** In this study have taken age limit was 20 yrs to 40 yrs. have taken 60 subjects those who are mentally stressed. These 60 subjects are divided into two groups GROUP1: taking 3gm of jiggery regularly in morning. GROUP 2: not consuming jaggery. The 60 subjects have been assessed by the scale called perceived stress scale. (PPS)

**Result:** Significant improvement in the group1 subjects (consuming 3gms of jaggery regularly in the morning) compared to group 2 subjects (not consuming jaggery regularly) the significance assessed by using the perceived stress scale.

**Conclusion:** After this study the conclusion was mental stress reduced group 1 subjects taking 3gm off jaggery regularly in the morning. Compared to group 2 subjects.

Paper ID: 32

## YOGA FOR ORPHAN CHILDREN

Shambhu Dayal Sharma  
S-VYASAYoga University

Orphan children are vulnerable to experiencing multiple traumatic events and suffer physical and mental disorders leading to emotional and behavioral difficulties. More than 153 million children worldwide have been orphaned by the loss of one or both parents, and millions more have been abandoned. Yogic practices

provide good physical and mental health. Yoga is the efficient method in which the restless mind is calmed and energy directed to constructive channels. Yogic practices have significant effect on emotional stability of orphan children.

The study "The integrated approach of yoga: a therapeutic tool for mentally retarded children: a one-year controlled study by "Uma K , Nagendra HR, Nagarathna R, Vaidehi S, Seethalakshmi R." shows the efficacy of yoga as an effective tool in the management of mentally retarded children. There was highly significant improvement in the IQ and social adaption parameters. The study "Effect of Yogic Practices on Mental Health of Orphans Children" by Morteza Alibakhshi Kenari\*- Martyr Beheshti University of Medical Sciences and Health Services, Tehran, Iran concluded that yogic practices have significant effect on mental health of orphan children. Yoga is the science of practice, being recognized worldwide. Its holistic understanding offers a total approach to the modern day challenges. Evidence based yoga therapy; a feasible and acceptable program may play an effective role in **rehabilitation** of orphan children. It will have a positive effect on the overall well being of the orphan children.

Paper ID: 33

## SUBTLE ENERGY CHANGES IN MALES AND FEMALES PRACTICING MEDITATION: A CROSS-SECTIONAL STUDY

Guru Deo, Itagi Ravi Kumar, T.M.  
Srinivasan, Kuldeep Kumar Kushwah  
Department of Bioenergy,  
S-VYASA, Bangalore, Karnataka, India.  
gurudeo.yoga@gmail.com

**Background:** Anapanasati is one of



the meditation techniques discussed in Buddhism. In this meditation, one focuses one's attention on bodily sensations caused by incoming and outgoing breath. Study aims to track cumulative effect of in long-term meditators (LTM) and short-term meditators (STM) using electrophotonic imaging.

**Methods:** To execute the current study, 432 subjects (264 male and 168 females with mean age  $34.36 \pm 6.83$ ) were recruited from two meditation centers. LTM had practiced for more than 60 months (mean of months  $111 \pm 47.20$ , hours per day  $1.71 \pm 1.20$ ). STM had practiced meditation from six months to less than 60 months (mean of months  $37.17 \pm 19.44$ , hours per day  $2.14 \pm 4.99$ ). The cross-sectional research design was applied, and data were collected using Electrophotonic Imaging (EPI).

**Result:** In both groups, LTM and STM results showed lower values of stress (Activation Coefficient) in female meditators as compared to males. In both groups, highly significant gender related differences, were observed in Integral Area parameter, which measures overall health of an individual. Integral Entropy (index of disorderliness of subtle energy in the body) was fluctuating in both groups in both directions for both genders. Observation of nostril was contributory to observe trends in subtle energy in meditators.

**Conclusion:** Females of LTM and STM demonstrated lesser stress in comparison to males. Both groups showed cumulative health related improvement. Moreover, in gender-related analysis female meditators exhibited more positive improvement in EPI parameters than males.

Paper ID: 35

## EFFECT OF BHARAMARI PRANAMAYAMA PRACTICE ON PULMONARY FUNCTION IN HEALTHY ADOLESCENTS - A PILOT STUDY

Maheshkumar.K<sup>1</sup>, Dilara.K<sup>1</sup>,  
Ravishankar.P<sup>1</sup> and Julius.A<sup>2</sup>

<sup>1</sup>Sri Ramachandra Medical College &  
Research Institute,

Sri Ramachandra University, Porur, Chennai

<sup>2</sup>Sri Balaji Dental College and Research  
institute, Bharath University, Chennai.

doctor.mahesh1985@gmail.com

**Background:** Pranayama, the fourth limb of ancient ashtanga yoga consists of breathing techniques which produces various physiological and psychological effects. Though various types of pranayama and their effects has been scientifically established, Bhramari pranayama is among the one whose effects still remain unstated. So the present study was conducted to see the effects of Bhramari pranayama practice on pulmonary function in healthy adolescents.

**Methods:** 90 apparently healthy adolescents including 32 girls and 58 males participated. They were randomly divided into Pranayama group (n=45) and Control group (n=45) by simple lottery method. Pulmonary function test was done in baseline and end of 12<sup>th</sup> week by using RMS Helios spirometry. Pranayama group students were made to do Bhramari pranayama 4- 6 breaths/min for 5min followed by 2 min rest. This was one cycle and in this way, they were allowed to do 5 cycles each time for 45 minutes for five days in a week. Control group students were not allowed to practice any kind of exercise throughout the study period.

**Results:** A significant ( $P < 0.05$ ) improvement



in all pulmonary function parameters like FVC, FEV1, FEV1/FVC ratio, FEF 25%-75% and PEFr was present in the Pranayama group than control group adolescents. Slow vital capacity (SVC) and Maximum Voluntary Volume (MVV) also showed significant improvement in the pranayama group.

**Conclusion:** Bhramari Pranayama practice is effective in improving the pulmonary function among the adolescents and hence to prevent respiratory diseases in future.

Paper ID: 37

### POSTURE GEOMETRY AND AUTONOMIC MODULATION: UNDERSTANDING THE PROCESS

Dr. Leena Phadke<sup>1</sup>, Dr. Sanjay Phadke, Reinhard Bogle, Dr. S.N. Bhavsar  
<sup>1</sup>SKN Medical College, Pune  
leena\_phadke@hotmail.com

**Background:** Cardiac autonomic modulation is mediated by complex interaction of higher influences and peripheral reflexes. Orthostatic stress induced increment of sympathetic influence and parasympathetic withdrawal as assessed by HRV (Heart Rate Variability) is well documented. However there is dearth of information about the influence of other postural possibilities on autonomic modulation. Yogasana provide opportunity to assess autonomic activity vis-a-vis postural challenge through 180° arc.

**Method:** HRV and other physiological measurements were carried out through Ambulatory Polygraph in 23 experienced yoga practitioners during practice of seven different yogāsanas in protocolized sequence of 5-minute blocks starting with a 5-minute Rest block that served as the baseline. These yogāsanas, starting with Tadasana and going upto Sirsasana (the head-down/inverted

posture exactly opposite of Tadasana) represented different grades of tilt in the 180° arc.

**Results:** Results indicate change in polarity of ANS modulation from sympathetic to parasympathetic mode that closely followed the change in postural polarity from head-up to head-down/inversion; the magnitude of change increased with the grade of tilt.

**Conclusion:** Respiratory mechanism (slowing) is often considered to be responsible for genesis of parasympathetic dominance. Our results demonstrate interesting paradox of parasympathetic dominance in the setting of increased respiratory rate during the head-down/inverted poses. Another paradox was seen during same poses: parasympathetic dominance in the setting of increased heart rate. Both paradoxes indicate a greater role of peripheral (baroreceptor and local) reflexes independent of the respiration in generation of posture mediated ANS changes.

Paper ID: 38

### A STUDY TO ASSESS THE EFFECT OF RELAXATION TECHNIQUES AND REGULAR MEDICATION ON POST SURGERY CONDITIONS IN POST OPERATIVE PATIENTS.

Dr. Sri Guru Rajasekhar Ch and Dr. Alekya Bavisetty

Sri Sanjeevini Yoga and Nature Cure Clinic,  
Vijayawada, Andhra Pradesh.  
drrajasekharchimira@gmail.com

**Background:** Pain conditions are the most frequently reported health concern and are high with trauma. However, availability of specialized pain care is limited and few treatment opinions have been found to be effective for management of chronic pain. Yoga Nidra is a type of relaxation technique



that promotes deep relaxation through breathing, guided imagery, and progressive relaxation. This study examined whether relaxation techniques like meditation and yoga nidra relieved chronic pain more effectively than standard care alone.

**Methods:** Study participants Inclusion criteria included 20-60 years old, bisexual, post-surgical ward self-reported pain > 5 out of 10. Exclusion criteria self-reported pain < 5 out of 10 and were given prescription of medications that could influence pain perception. Screening conditions included the following: 1) Visual Analog Scale (VAS) to measure intensity from 'no pain' (0mm) to 'worst pain imaginable' (100mm) 2) Interference of pain with activity, sleep, mood and stress.

**Results:** 80 Patients were randomly assigned to 8 weeks of relaxation techniques with standard care and standard care alone Measures were given at baseline (B), endpoint (E) and a weekly follow-up. A 20% reduction in pain was recorded clinically important, according to the Methods, Measurements, and Pain Assessment.

**Conclusion:** This study preliminary support for the post-surgical patient's benefiting of relaxation techniques for chronic pain. Study achieved clinically important reduction in pain intensity and interference reported a improvement in activity limitations, symptoms, and quality of life.

Paper ID: 39

## DEVELOPMENT AND RELIABILITY OF A SCALE FOR ASSESSMENT OF MUSCLE CONTRACTION/RELAXATION DURING YOGASANA

Sanjay S. Phadke, Leena S. Phadke,  
Reinhard Bogle, S.B. Sarmukaddam,

**S.N.Bhavsar**

Centre for Behavioural Medicine, Pune  
sanjay\_phadke@hotmail.com

**Background:** Each yogasana is characterized by controlled contraction of certain key muscles and relaxation of others. Appropriateness of these actions is critical for attainment of stable and comfortable (sthir-sukh) asana which can then be held for extended period. Learning appropriate muscle action is the crux of yogasana training. Palpation, which is an established method of muscle testing in neurology, offers a good possibility for application to assessment of yogasana but no appropriate scaling tool is available.

**Method:** A scale was developed to assess the degree of muscle contraction/relaxation during yogasana through palpation that involved judgement about the state of muscle and the degree of contraction/relaxation as full or partial. Two experienced yoga teachers (non-medical) were trained as raters. Fifteen experienced yoga practitioners proficient in holding yogasana for several minutes were instructed, and four key muscles viz. Biceps, Triceps, Quadriceps, and Hamstring on the same side were assessed independently by the raters in succession.

**Results:** A total of 60 observations were available for assessing the inter-rater agreement. Observed agreement, chance expectation, and Kappa coefficient were computed and reflected high agreement both for the judgement about the state of the muscle (Kappa coefficient 0.68) and the degree of contraction/relaxation.

**Conclusion:** Palpation based scale for assessment of state of muscle contraction/relaxation during yogasana can be applied reliably. The scale will find application for training purpose and also in research on yogasana as an objective method for confirmation.



Paper ID: 40

## EFFECT OF YOGA AND HOMOEOPATHY ON “MIGRAINE” IN CHILDREN

Dr. S P R Tirumalareddy,

Dr. G. Siva Prasad,

M.Sc Yoga Therapy, M.Phil., Yoga  
Instructor, RRI[H], Gudivada-521301,  
Andhra Pradesh

**Background:** Migraine is the most common form of disabling head ache that prompts patients to seek care from doctors. This mostly affects people of working age but does trouble children as well. Children who are unable to verbalize the source of their discomfort may exhibit spells of instability, sleepiness, polar and vomiting. This study was an attempt to see the effect of Yoga and Homoeopathy in treating Migraine. A total of 30 patients between 9-18 years age group children suffering from migraine were selected. Yoga was taught to the children to practice daily about half an hour in two sessions per day, along with Homoeopathy. Asanas which improve digestion and relaxation, Pranayamas to reduce stress and Relaxation techniques have been administered. A migraine headache questionnaire was administered before and after yoga and Homoeopathic management about 6-9 months. There was a significant decrease in their symptoms, stress perception of the children.

**Methodology :** The study work be carried out on migraine in children between the ages 9-18 years.(n=30) with the following inclusion and exclusion criteria.

**Inclusion :** a) Children aged 9-18 years

b) Able to follow yoga instructions

**Exclusion :** a) Children who are suffering from any serious physical or psychological disorders.

b) Children who have other type of headaches.

**Result:** Out of 30 patients, marked improvement observed in 20 patients, moderate improvement in 7 patient and no improvement in 3 patients.

**Conclusion:** There was a significant decrease in their symptoms, stress perception of the children in migraine with Yoga and Homoeopathy.

Paper ID: 41

## AN INTEGRATED APPROACH OF YOGA AND AYURVEDA IN CANCER CARE

Dr. Aparna Anand, Dr. Agaja M,

Dr. Nidhin Chandran, Dr. Jyotilal.K,

Prof. & H.O.D, Dr.Cijith Sreedhar

Dept.of Swasthavritta, Amrita School of  
Ayurveda,

Vallikkavu, Kollam, Kerala 690525

apar.000@gmail.com

Cancer has become the most dreadful disease with second largest position among non-communicable diseases with only 20% getting cured and 20% get a prolonged life after treatment. It is expected to be the most fatal disease in the early 21<sup>st</sup> century. The integration of traditional, complementary and integrative medicine (CIM) in contemporary cancer care is an emerging field of clinical practice and research throughout the world.

The goals of integrative oncology must be to reduce the side effects and enhance the effects of conventional treatment, to improve cancer symptoms, to enhance emotional health and to improve the Quality Of Life. Ayurvedic science is supposed to add a step on the curative aspects of cancer that have resemblance with clinical entities of *Arbuda*



and *Granthi* mentioned in *Susrutha Samhita*.

The therapeutic approach of Ayurveda involves *Prakritisthapana*, *Rasayana*, *Naishthiki* and *Roganashini chikitsa*. *Rasayana chikitsa* encompasses the treatment of ageing through rejuvenation. The enhancement of *Rasa* is the quintessential quality that all *Rasayana* medicines possess, ultimately helping to promote health and vigour of the tissues in the body. They have a characteristic tendency to improve the nutritional status of the body and alleviate symptoms of stress through three basic mechanisms - *Rasa* (nutrient effect), *Agni* (digestion and metabolism) and *Srotas* (microcirculation and tissue perfusion). *Rasayana* drugs are rich in antioxidants and are good hepatoprotective, nootropic, adaptogenic and immunomodulating agents. Yoga stands 3<sup>rd</sup> among all CAM that is being used by cancer patients today. Different modules of yoga can be integrated with Ayurvedic treatment modalities as an add-on to the conventional management of cancer.

Paper ID: 42

### DIABETES -A LIFESTYLE MODIFICATION THROUGH AYURVEDA & YOGA

Dr. Bindu V, Dr. Soumya J

Dr. Karthik K Nandan, Dr. Jyothilal. K,

Dr. Cijith Sreedhar

Dept. of Swasthavritta, Amrita School of  
Ayurveda, Vallikkavu, Kollam, Kerala  
bindu.vasanthy111@gmail.com

Diabetes is one of the major killers of the modern world. Over the past 30 years, the status of diabetes has changed from being known as a mild disorder of the elderly to one of the major causes and morbidity and

mortality affecting the youth and middle aged in the country. Indians have a high rate of developing diabetes and the highest rate of premature coronary artery disease in the world, both occurring about 10 years earlier than in other populations. The situation sure is alarming.

Diabetes is known as *prameha* or *madhumeha* in ayurveda. Diabetes is a life style disease which mainly relates to sedentary life style, imbalanced diet and incorrect eating habits. Diet and life style modifications are the two main necessities in Ayurvedic diabetes management. While diet control of mainly starches and sugars, daily exercises includes brisk walking in fresh air for an hour or practicing yoga and *Pranayama*. According to Ayurveda, *Dinacharya* is the force stronger than any other curative medicines. *Dinacharya* includes all aspect of regimen and diet to stay healthy and happy. Yoga and Ayurveda are two closely related spiritual or sacred sciences rooted in the Vedic tradition of India. Both classical yoga and ayurveda looked at the whole human being, which is not only includes body but also mind and soul.

Paper ID: 43

### COMPARATIVE STUDY OF STAGES OF SPIRITUAL PROGRESS IN YOGA AND JAINISM

Deepak Bagadia

Ph.D. scholar and Asst. Professor, K. J.  
Somaiya Bharatiya Sanskriti Peetham,  
Vidyavihar

**Background:** Our Indian Philosophies are full of scientific practices well researched by great spiritual masters aimed at total silence to bring about body-mind coordination, free



from afflictions and diseases.

**Aim:** To compare and therapeutically utilize different practices of various meditative stages/levels 1) As suggested by Sage Patanjali and 2) of spiritual development as per Jainism.

**Methods:** 1. Collection of data of spiritual practices in Patanjali Yoga and Jainism from scriptures, discussion with monks and spiritual scholars

2. Research based data analysis and comparative study of findings of both

3. Deriving the optimum blends out of these findings for the purpose of health and therapeutic applications

**Results:** 1. Various levels of spiritual practices in both areas having the same goal are comparable based on progressive states of consciousness in the form of various "Samapattis" of Patanjali and Jain's *Gunasthanakas'* steps of self-perfection.

2. Depending on the level of suffering of people, an integration of different practices are used as therapy to minimize the suffering.

**Conclusion:** Patanjali has indicated progressive levels of consciousness. He has left it on us how to take these indicators to identify our strengths and weaknesses and choose Yoga practices accordingly. Jainism has given stepwise details of spiritual progress and check points for identification and improvement, with similar principles and goal but different practices. Application of these integrated practices from both in each other's area would reduce stress level, social problems; improve moral values, mental stability and also act as an effective therapy.

Paper ID: 44

## CASE STUDY OF A CANCER PATIENT

Deepak Bagadia

Ph.D. scholar and Asst. Professor  
K.J.Somaiya Bharatiya Sanskriti Peetham,  
Vidyavihar, Kavi Kulguru Kalidas Sanskrit  
University, Ramtek  
bagadia\_9@yahoo.com)

**Background:** Yoga, our Indian culture has proved its efficacy and applicability in almost all the fields including Therapy. Through increased level of awareness and body-mind coordination, one can improve tolerance and immunity to any ailment. Here, a chemotherapy and radiotherapy treated case of carcinoma of endometrium and the response to Yoga is discussed.

**Aim:** To justify the role of Yoga practices in chronic and incurable ailments like Cancer through a Case study. The case presented here is of Ovarian Cancer of a 50years old lady.

**Methods:** 1. Observe all available Cancer patients and compare modes of treatment and various test results to select a few or any one of them.

2. Select a specific case of a patient who would like to share all test-data and details of stages of symptoms.

3. Give him/her Yoga practices on daily basis for an hour for a period of three months including lifestyle corrections and suggestions

4. Testing for 'CA-125 test' which measures amount of the protein CA-125 (carcinoma antigen125) in blood to detect cancer and an Ultrasound scan or MRI of tummy and pelvis were done before starting Yoga and after the period of one to three months.

3. Data collection of Pre and Post testing,



analyses and interpretation of results

**Results:** 1. Significant improvement in observed value of CA 125 U/ml, serum in one month.

2. No significant development in MRI features of Abdomen

**Conclusion:** Yoga practices to continue for further improvement and motivational results.

Paper ID: 45

### **IMPACT OF OM MEDITATION ON EMOTIONAL INTELLIGENCE AND LIFE SATISFACTION: A PRE AND POST ANALYSIS**

**Dr. Sumita Chahal and Dr. Anita Yadav**

Assistant Professor in Psychology, F.G.M.

Government College,

Adampur, Hisar, Haryana, India

sumita\_chahal@yahoo.co.in

**Background:** Meditation was previously shown to improve performance, intelligence and satisfaction in different domains of life. This was ascribed to improve emotional intelligence and satisfaction in life.

**Methods:** In thirty adolescent (boys and girls) effect of Om meditation was studied on emotional intelligence and life satisfaction. All participants were assessed before and after Om meditation. Emotional Intelligence scale was used to assess emotional intelligence. Life satisfaction was assessed using Life satisfaction scale.

**Results:** There was a significant improvement in the scores of emotional intelligence and life satisfaction studied after Om meditation.

**Conclusion:** The positive impact of Om meditation has been found on variables emotional intelligence and life satisfaction.

Paper ID: 48

### **SMRITI MEDITATION: A TOOL FOR DIAGNOSIS AND MANAGEMENT OF PSYCHOSOMATIC DISEASES: A CLINICAL OBSERVATION STUDY**

**Dilipkumar K. V.**

Institute of Oriental Medicine

drdilipkv@yahoo.com

**Background:** Web of causation of diseases are well narrated in Ayurveda classics. Intellectual error is identified as prime cause of disease and its role in the manifestation of psychosomatic diseases is well explained in charaka samhita. Smriti, exploration of memory is suggested as one of the five components of psychotherapeutic techniques in the managing the psychic components of diseases.

**Method:** A modified version of smriti is developed as a guided - interactive meditation and tested for its therapeutic efficacy. A clinical observational study conducted in 104 patients is reported in this article.

**Results and conclusions:** The finding of the observational study shows that smriti meditation can be an effective tool in identifying the cardinal reason for psychosomatic disease. Also the study observed that the emotional component of the disease could clear off so that further somatization of the disease can be prevented. Study observed the potential of smriti meditation in curing many psychosomatic symptoms. EEG studies during the smriti meditation in patients showed typical increased high frequency alpha rhythm comparable to that of experienced meditators



Paper ID: 50

**YOGA AND PSYCHOTHERAPY**Mag. Sc. Bosiljka JanjusevicInternational Society for Scientific  
Interdisciplinary Yoga Research  
Alpen-Adria University, Vienna, Austria  
bosiljka.janjusevic@gmail.com

In this paper we discuss connection between yoga and psychotherapy, efficacy of implementation of yoga in psychotherapy and yoga methods as psychotherapy. Scientific researches confirm effects of yoga practice in psychology, medicine, sports, human resources, psychotherapy. The modern world recognizes the need for the system of values that includes truthfulness towards oneself and other people, nonviolence, acceptance of reality as it is, dedication to the chosen path, ability to manage our potentials, ability to postpone satisfaction, being in satisfaction, which yoga techniques teach through the awareness. Therapist who uses yoga has one more tool in reaching awareness about his/her body and emotions and possibility to use integrated values and knowledge to transform himself/herself, other people and the world. With this paper we would like to make the yoga techniques that can be used in the psychotherapy work with clients more familiar in the direction of achieving greater awareness of emotions which are grounded in the body, as same as our whole existence.

Paper ID: 53

**EFFECT OF INTEGRATED YOGA ON PSYCHOLOGICAL DISTRESS AMONG WOMEN WITH PRIMARY DYSMENORRHEA- A RANDOMIZED CONTROLLED TRIAL**Shreya S. Revaditsynn, Shivaprasad ShettyS-VYASA University, B'lore  
shreyarevadi@gmail.com

**Background:** Emotional insecurity, psychological distress, depressive or/and anxiety symptoms are common with variable severity among patients with primary dysmenorrhea. Yoga has been found to be beneficial in reducing psychological distress and anxiety symptoms.

**Objective:** To evaluate the effect of integrated yoga on psychological distress among women with primary dysmenorrhea

**Materials & Methods:** In this study, Subjects aged 18-25 years undergoing pre-university and undergraduate courses were recruited from a residential college, Ujire, Karnataka, India. A total of 76 female subjects were randomly assigned to either an intervention or a control group. The experimental group (38 subjects) was given an integrated yoga practices for 40 minutes in the morning for 3 months, 5 days a week. Control group on the other hand was receiving structured physical exercises followed by supine rest. Practices were not given during their menstrual cycles. Assessments were made to the both the groups before (baseline) and after 3 months of intervention. The assessments included were PGWBI, SF-36, VAS.

**Results:** Intervention group which practiced yoga showed significant improvement in Psychological well-being ( $p < 0.01$ ), quality of life ( $p < 0.05$ ), by Wilcoxon's t-test but no significant decrease in menstrual pain ( $p > 0.05$ ) as compared with control group.

**Conclusions:** Twelve weeks of yoga practice has been shown to reduce psychological distress and improve quality of life among primary dysmenorrhea women. Hence yoga can be effectively used in the management of primary dysmenorrhea.



Paper ID: 54

## **A STUDY ON THE EXPECTATIONS OF EMPLOYERS AND EMPLOYEES ON “CORPORATE YOGA” PROGRAMS IN INDIA**

**Vittal S.P.R., Rama Krishna K.**

Narsee Monjee Institute of Management  
Studies, Hyderabad, India  
sprvittal@gmail.com

The impact of yoga programs in addressing corporate stress has been well documented, with many studies showing improvements in employees' health indicators (Sharma, Chauhan & Khanna, 2012; Abraham & Paul, 2011; for a detailed review read Bhandari, Bālakrīshā, Bhandari, Sharma, Singh, Pandya, & Katiyar, 2012). There is a growing interest among Indian corporations to incorporate Yoga into their workplace<sup>1</sup>. There are many organizations offering “Corporate Yoga Programs” in India, as well as abroad. Especially with reference to India, there is a huge potential in the corporate segment for these programs, as the concept of Yoga is well understood by Indians, compared to westerners. However, there has not been any documented research till date on the benefits anticipated out of such programs from employees' perspective or from organizations' perspective. Especially with the growing incidence of lifestyle diseases in India, corporates are showing increased awareness and caution to keep their workforce healthy. The growing industries such as IT/ITES segment represent a growing sector where such incidence of lifestyle diseases is prevalent. In order to take a step towards that direction, we propose to conduct a twofold study to understand the expectations of “Corporate Yoga Programs” from the two aforementioned perspectives. A survey will be conducted for the purpose of the study

and questionnaires will be distributed among employees (predominantly working in IT/ITES sector) as well as HR executives who take care of employee welfare activities. We anticipate a positive response from both the corporate and employee side. Based on the study, we would like to make suggestions for yoga practitioners, researchers and corporates.

Paper ID: 55

## **PRACTICING AYURVEDA AND YOGA IN AUSTRALIA: A CRITICAL REVIEW OF LITERATURE**

**Dr. Vibhuti S Rao and Dr. Samarth P Rao**  
AmruthAyurvedic Centre, Bangalore, &  
Green Tree Ayurveda, Australia,  
drvibhutihirao@gmail.com

Ayurveda and Yoga are quickly gaining a reputation internationally as a capable and efficient system of traditional medicine taking a growing share in the alternative medicine market. Ayurveda and Yoga are understood as sister science in Australia. People generally believe that Yoga is for mind and Ayurveda for body ailments. Therefore, their interest in Yoga leads to Ayurveda or vice versa. As documented, Yoga came to Australia in 1950 and since then a number of Yoga center and schools have been operating throughout Australia and there are almost 5,000 yoga teachers in Australia. Along with the knowledge of Yoga, people started recognizing the health benefits of Ayurveda. However, there is no government regulation body for both the science yet. Anyone with skills and qualifications can practice Yoga and Ayurveda; however, one needs to follow some rules and regulations of practicing any Complementary Medicine.



This paper is going to provide a brief introduction of Integrating Yoga and Ayurveda in Australia. Moreover, the purpose of this paper is to document, describe and examine the various issues surrounding the practice of Ayurveda in Australia. Standards and regulations surrounding the practice of Ayurveda and Yoga in Australia were collected. Issues surrounding Ayurveda and Yoga: ethics, law and setting up a practice.

Paper ID: 57

### **NABHI PARIKSHA- A NOVEL DIAGNOSTIC METHOD FROM ANCIENT INDIAN SCRIPTURES**

Sonu V.

Asst. Professor, The School of Yoga and Naturopathic Medicine,  
S-VYASA University, Bengaluru

Navel region has special significance in the lives of all mammals as it connects the fetus with the mother during pre-partum life. It not only is an important region anatomically or physiologically but also has special significance in Yoga and spirituality. It represents the Manipura Chakra which designates the digestive system. Any imbalance in the digestive system could therefore be reflected in the navel region. Anatomically this region also represents abdominal blood vessels, muscles of abdominal wall and position of the spinal cord.

Nabhi Pariksha is the method of diagnosis that uses examination of navel region for interpretation of health and disease. It is been traditionally used in parts of India, which essentially examines the position, symmetry and pulsations of navel.

The displacement of navel from center represents imbalance of digestive system, nerves, muscles of abdomen, spine as well

as movement of *Prana*. Most frequently the displacement corresponds to weakening of ligaments of large intestine, which is common in women who have excessive menstrual pain and abnormal bleeding.

The treatments suggested traditionally, in such cases include correction of the navel position and pulse through specific manipulations, cupping therapy and therapeutic use of *yogasanas*. Thus the main objective to practice nabhipariksha is to diagnose and treat through yoga in addition of conventional diagnostic procedures.

Paper ID: 60

### **EFFECT OF TWO YOGA BASED RELAXATION TECHNIQUES ON BIO-ENERGY OUTCOMES IN MANAGERS USING ELECTRO PHOTONIC IMAGING TECHNIQUE**

Kuldeep Kumar Kushwah, Thaiyar M.

Srinivasan, Hongasandra R. Nagendra and  
Judu V. Ilavarasu

Department of Bio-energy, Bengaluru  
kuldeepkush86@gmail.com

**Background:** Meditation techniques are known to elicit relaxation responses. The technique which combines moving meditation with the practice of yoga postures and guided relaxation is known as cyclic meditation (CM), and is reported to be helpful in reducing the sympathetic arousal and improving health of practitioners.

**Objectives:** The objective of this study was to measure the effect of CM on stress and health indices in managers as measured by electro photonic imaging (EPI) technique.

**Materials and Methods:** EPI technique was carried out to assess subjects before and



after 35 min of CM and equal duration of supine rest (SR) session. A total of 66 male managers (CM = 33 and SR = 33), age ranged from 35 to 60 years ( $M \pm SD$  53.97  $\pm$  5.96 years), were included in the study. EPI parameters, including activation coefficient (AC), integral area (IA) left and right and integral entropy (IE), left and right, were taken for statistical analyses.

**Results:** There was a significant reduction in stress level after CM ( $p=0.005$ ) and not after SR ( $p=0.15$ ). Significant improvement was observed in health index, IA values, both left ( $p=0.03$ ) and right ( $p=0.05$ ) sides within the CM group and only IA in right ( $p=0.02$ ) side within the SR group. The IE value right side decreased significantly ( $p=0.04$ ) within the CM group, whereas IE left deteriorated within the SR group. In addition, only IE in left side has shown a significant difference ( $p=0.05$ ) in between the groups after the intervention.

**Conclusion:** The outcomes in this study suggest that CM practice reduces stress and improves psycho physiological health indices more effectively than SR in managers.

Paper ID: 61

### NUMERICAL STUDY OF TRANSPORT AND DEPOSITION OF AEROSOLS WITHIN HUMAN LUNGS BIFURCATION TUBES

Sarita Singh, Anju Saini, V.K. Katiyar

Department of Mathematics, Doon  
University Dehradun Uttarakhand, India  
saritamath@gmail.com  
ssingh.math@doonuniversity.ac.in

A deposition characteristic of aerosol particles within human upper airways is to be significant importance in two main applications. (i) Effect of assessment of potential on health. (ii) Deposition of drug.

The model of transport and deposition of aerosol within human lung bifurcation tubes will be solved numerically and a comparison will also be discussed with the available experimental data.

Paper ID: 62

### ELECTRIC LINEAR ACTUATOR BASED PRESSURE OPTIMIZATION FOR ACUGRAPH BASED ELECTRODERMAL ASSESSMENTS

Karthick V, Kuntal Ghosh

B. Tech, Final Year, Department of  
Mechanical Engineering,  
Periyar Maniammai University, Thanjavur,  
Tamilnadu  
jksivaap@gmail.com

**Acugraph Instrumentation:** AcuGraph is an instrument measuring electrodermal conductance at acupoint and thereby assessing Qi energy. It consists of a software, an electronic control unit, a metal ground bar and a pen shaped probe set. The subject typically holds the ground bar in a hand while the operator applies the probe to measure acupuncture points on the subject's opposite hand and foot. The probe completes a circuit and maximum 40  $\mu$ A electric current flows at specific acupuncture points and the hand held ground bar. Each reading is recorded by the computers appropriate pressure is applied by the operator.

**Limitation of Existing Measurement:** As pressure is manually controlled by operator to obtain reliable reading, inter operator pressure is reported to be a confounding factor. This can induce high variance while performing statistical analyses on data collected from large samples using different users, and thereby causing poor statistical



conclusions.

### Probe Modification for Optimizing Pressure:

In order to make the AcuGraph more reliable under different operator conditions, we developed a setup with an electric linear actuator. Usually, operator places the probe on acupuncturepoint and mildly pushes the probe to create the pressure. Here we are going to use electric actuator for pushing the probe instead of manual pushing. After holding the probe at the initial position, button will be pressed and probe will move towards the acupoint on the skin to the required distance and it will create the needed pressure according to the designed stroke length of the actuator. This can ensure even pressure application across different readings.

Paper ID: 64

## YOGA: ITS COGNITIVE BENEFITS AMONG HEALTHY ENGINEERING SUBJECTS

H. Nagendra, Vinod Kumar, and S. Mukherjee

Faculty, Poojya Doddappa Appa College of Engineering, Gulbarga, Karnataka, India  
hnagendra1@gmail.com

**Background:** Yoga is ancient Indian science, consisting of various physical postures (*asanas*) as codified by sage Patanjali in his work "Yoga Sutra". Yoga is a mind-body praxis that synchronizes human physiology through physical postures, breathing exercises, and meditation. Though, yoga practice can produce many physiological and psychological benefits, but there are limited numbers of studies which focus on their cognitive benefits.

**Methods:** The study was conducted on 30 young healthy Engineering subjects. They were randomly selected into two groups.

*Yogic* group (n=15, male=13, female=2, age=22.42±2.30) and *non-yogic* group (n=15, male=14, female=1, age=25.67±2.09). The *yogic* group practiced yoga, one hour per day for a period of six months. Yoga practice involved uncomplicated *asanas*, meditation and *pranayamas*. The *non-yogic* group did not practice any form of *yogic* exercises. The EEG signal was recorded before and after the yoga training period for duration of ten minutes. The data was processed offline and EEG signal was decomposed into its five frequency bands using discrete wavelet transform to interpret cognitive impact.

**Results:** The *yogic* group showed increased  $\alpha$ ,  $\beta$ , and  $\delta$  EEG band powers and significant reduction in  $\theta$  and reduction in  $\gamma$  band power. The heart rate index  $\theta/\alpha$  and executive load index  $(\delta+\theta)/\alpha$  were decreased; while performance enhancement index  $\alpha/\theta$  and attention resource index  $\beta/(\alpha+\theta)$  were significantly increased. The ratio  $(\delta+\theta)/(\alpha+\beta)$  was decreased, indicating better functioning of the brain.

**Conclusion:** The regular practice of yoga can enhance certain cognitive functions, in addition to the improvements in physiological and psychological benefits.

Paper ID: 67

## A SYSTEMATIC REVIEW ON YOGA FOR THE PREVENTION OF MIGRAINE HEADACHES

Mr. Vishnu Renjith, Dr. Anice George, Dr. Aparna Pai, Dr. Preethy D'Souza, Dr. Judith A Norohna

Junior Research Fellow, Manipal College of Nursing Manipal, Manipal University  
vishnurenjith@yahoo.co.in

**Background:** Migraine headaches are the unilateral pulsatile type of headaches that



usually present with moderate to severe pain intensity. Literature suggests that practicing simple yogasanas for a few minutes every day will help to prevent migraine attacks. The aim of this systematic review was to explore the current evidence regarding the effectiveness of yoga in prevention of migraine headaches

**Methods:** This study systematically reviewed PubMed, Medline and Ovid databases. Prospective randomized controlled trials (RCTs) evaluating the effectiveness of yoga among migraineurs aged 18 to 65 years were selected. The frequency of migraine headaches was considered as the primary outcome. The secondary outcomes considered for the study were disability, anxiety, depression and quality of life.

**Results:** PRISMA 2009 guidelines were used to summarize the findings. Records identified through database searching were n= 134. Out of this, 99 articles were published between Jan 2004 and September 2014. Forty-two articles were found to be repeated between the databases. The remaining 57 articles were assessed for eligibility. Among these 57 articles, a total of 2 articles met all criteria and have been reviewed. Kisan R et al (2014) did a randomized control trial on the effectiveness of yoga therapy for migraine. The researchers randomized subjects to receive either yoga along with conventional care (n=30) or only conventional care (n=30). A significant reduction was observed in migraine frequency and intensity among subjects in the intervention arm. John et al (2007) conducted an RCT to evaluate the effectiveness of yoga for the treatment of migraine. The analysis showed a noteworthy decrease in frequency of migraine and related clinical parameters, among subjects treated with yoga.

**Conclusion:** The review of studies concluded that there are relatively fewer studies in

relation to yoga for migraine headaches. Promisingly the studies demonstrated that yoga was effective in reducing the headache intensity and frequency. The studies suggest that yoga can be used as an effective non-pharmacological intervention for patients with migraine headaches.

Paper ID: 69

## EFFECT OF JYOTIR TRATAKA AND QUALITY OF SLEEP

Bhagyashree Salgar

Medical officer, Shubham Naturo Wellness,  
Hyderabad

**Background:** When a person is born, with him mental skills and performances also grow. These developmental aspects have an influence on them by the environment where he brought up, type of food he takes, genes; etc. Trataka is one of the oldest and safest modality in the system of yogic medicine which uses different forms of eye exercise and concentration or gazing at an object without blinking. Trataka Kriya is said to be mainly intended for developing concentration, mental focusing and calming the mind. Trataka not only gives eyewash, but also challenges the people to practice overriding unconscious urges. There are three stages involved during the trataka practice. It mainly increases your ability to be more attentive in everything you do. Therefore a study was planned to know the quality of sleep, with one of the most beneficial yogic Kriya 'Jyotir-Trataka' in inpatients of a Nature cure centre.

**Methods and materials:** Ten individuals (age: 20 to 50yrs) were selected by considering inclusion criteria and after a complete examination. Trataka was practiced daily 30 minutes for a period of one month. Pittsburgh Sleep Quality Index (PSQI) Questionnaire



assessments were taken before and after the intervention. Data was analyzed by SPSS 21 assessing mean differences across the baseline (Pre) and endpoint (post) based on the quality of data.

**Results:** People who practiced bahiranga trataka for a period of onemonth showed significant improvement in the quality of sleep( $p < 0.001$ ).

**Conclusion:** The effect of Jyotir Trataka was much significant in improving the Quality of sleep.

Paper ID: 71

### USE OF CHROMO-THERAPY AS AN ADD ON TO CANCER MANAGEMENT.

Kousthubha J.

The School of Yoga and Naturopathic  
Medicine, S-VYASA University, Bengaluru

Cancer is a condition of uncontrolled and excessive proliferation of cells. Cancerous conditions may occur due to various factors and reasons. Conventionally cancer is treated by surgery, chemotherapy and radiation therapy, which has its own known benefits as well as side effects due the drugs used and prolonged exposure to radiations. Also, conventional therapies fail to address the psychological problems encountered by the patients during the active stages, treatment and rehabilitation of cancer.

Chromo therapy can be used as a mode of treatment along with the conventional treatments and methods for cancer patients. Colors like turquoise, blue and shades of green and blue are known to be effective in stimulating immune system response and healing process of the body. By application of these colors to the cancer patients we

can enhance their body's immune response which will help the cells fight better against the cancerous cell and post treatment recovery. Heliotherapy (sun bath) could be used effectively in detoxification and also stimulating the production of hormones that stimulate and enhance the functioning of the brain thus helping the patients with psychological problems. Application of yellow, orange and shades of this color is very effective in resolving problems of depression, anxiety and stress. Problems like vomiting, loss of weight, loss of appetite; weakness etc. can also be treated with the application of blue, green and yellow colors.

Paper ID: 74

### EFFECT OF YOGIC PRACTICES ON SELECTED RISK FACTORS AMONG MENOPAUSAL WOMEN

M. Anjaladevi and Dr. R. Elangovan

Phd Scholar, Department of Yoga, Tamil  
Nadu Physical Education and Sports  
University, Melakottaiyur, Chennai  
anjala@anjalayogalaya.com

**Background:** The present random group experimental study was designed to find out the effect of yogic practices on selected risk factors among menopausal women. It was hypothesized that there would be significant differences in selected risk factors such as LDL and Blood Sugar (Fasting) level among menopausal women due to the influences of yogic practices.

**Methods:** To achieve the purpose of the study, 30 peri menopausal women from Chennai city aged between 40 years to 45 years were selected randomly into experimental and control group of 15 subjects each. Experimental Group underwent yogic practices for 12 weeks, six days a week for a maximum of



one hour in the morning. The control group was kept in active rest. The pretest and posttest were conducted before and after the training for all two groups. LDL and Blood Sugar (Fasting) level were measured by laboratory test. The data collected from the groups before and after the training period were statistically analyzed by using Analysis of Co-variance (ANCOVA) to determine the significant difference and tested at 0.05 level of significance.

**Results:** The result of the study showed that the LDL and Blood Sugar (Fasting) level were significantly decreased as a result of yogic practices. Hence the hypothesis was accepted at 0.05 level of confidence.

**Conclusion:** The conclusion was that the yogic practices helped to decrease the LDL and Blood Sugar(Fasting) level among menopausal women.

Paper ID: 75

### **CHROMOTHERAPY AND HELIO THERAPY AS A NEW DIMENSION OF TREATMENT FOR DIABETES.**

Lakshmikanth Chiluku

The School of Yoga and Naturopathic  
Medicine, S-VYASA University, Bengaluru

Diabetes is a chronic metabolic condition associated with abnormally increased levels of glucose in the blood, attributed to insufficiency or inefficiency of insulin. The risk factors include stress, obesity and endocrine disorders.

Chromotherapy is involvement of colors for the therapeutic benefits. The philosophy of Chromotherapy understands human body being composed of electromagnetic energies in the form of colors. Therefore the cause of

disease is attributed to imbalance or lack of colors in the human body. This imbalance can be regulated by application of colors on body. The cause of diabetes according to chromotherapy is lack of yellow and orange colors in body. The color of pancreas is lemon yellow, and therefore lack of yellow may affect the production of insulin. The Possible therapies suggested for diabetes in chromotherapy are providing the yellow and orange colors through the diet, direct exposure of sunlight, either directly or through a colored glass film. Another method suggested is charging of water which should be consumed before major meals. Sun bath is also advised, as there is growing evidence for correlation of Vitamin D deficiency and Type 2 Diabetes Mellitus.

Paper ID: 76

### **EFFICACY OF BHRAMARI ON WOUND HEALING IN THE PATIENTS OF DIABETIC NEUROPATHY.**

Monika j ,Venugopal V

Final B.N.Y.S., The School of Yoga  
and Naturopathic Medicine, S-VYASA  
University

Around 8.3% of adults worldwide are estimated to have diabetes, and among these around 180 diabetic patients lose their limbs every day due to diabetes complications. People with diabetes are at high risk of neuropathy and impaired circulation, both of which leads to foot ulcers, impaired wound healing and may cause gangrenous infections resulting in amputation and a lifelong disability. However, no complete cure for impaired wound healing in diabetes is available so far, rather proper management and prevention of the ulcers holds the key in managing the condition.



Earlier studies have illustrated reduction in levels of nitric oxide (NO) in patients with diabetes, suggesting its relevance to impaired wound healing. Nitric oxide influences wound healing via its action in angiogenesis, inflammation, cell proliferation, matrix deposition and remodeling which mediates vasodilatation with smooth muscle relaxation, leucocyte activation, platelet aggregation and vascular smooth muscle cell proliferation. A yoga based practice of bhramari pranayama has been reported to enhance wound healing in few texts, which might be beneficial for patients with chronic ulcerations in diabetic neuropathy. This study aims at understanding the underlying mechanism of action on how brahmari pranayama might possibly help in diabetic neuropathy, especially in delayed wound healing.

Prolonged and intense practice of Bhramari pranayama (sound produced resembles humming) might increase the levels of nitric oxide production in the body which could enhance wound healing. Hence, Bhramari pranayama might be an effective measure in the treatment of impaired wound healing in patients of diabetic neuropathy with chronic ulcerations.

Paper ID: 77

### **ANATOMICAL ANALYSIS OF COBRA POSTURE AND ITS CORRELATION WITH LOWER BACK PAIN-CONCEPTUAL PAPER"**

Dr Somitra Trivedi, Dr Mrithunjay Rathore

<sup>1</sup>All India Institute of Medical Science

Anatomical analysis of cobra posture is important, because the correct knowledge of its providing solid platform for correcting the

spinal disorder. The Cobra pose is derived from a Sanskrit word meaning snake; and it is also called *bhujangasana*. The cobra posture is commonly performed in the prone position, where position of the spine extended. Cobra posture is an essential posture for developing the strength and flexibility of the spinal muscle and increasing the tone of buttocks and leg.

The role of muscular system, as "stabilising system of the spine. "And weakness of inefficient muscular stabilization of lumbar spine associated with lower back pain. The lower back pain is one of the major Spinal disorder and public health problems in the community. And is one of the most common reasons for medical consultation. The instability of spinal segment is often a combination of inert tissue damage, insufficient muscular strength or endurance, and poor neuromuscular control. The poor muscular endurance in the spinal extensor muscles is the greatest association with lower back pain. In patient with Lower back pain, medical imaging studies show paraspinal muscle wasting with reduction in cross-sectional surface area and fiber density.

Therefore, the purpose of this presentation is to explore the anatomical analysis of cobra posture and its correlation with lower back pain. And our presentation provide the scientific concept to our clinician for the management of lower back pain. And our presentation is the integrated approach of modern medical science along with the yoga science.



Paper ID: 78

## YOGA IN DIABETES MANAGEMENT: A CRITICAL REVIEW OF PRE AND POST STUDIES

Biswamitra Sahu, Megha Thakur and  
Satyanarayana TN

Indian Institute of Public Health, Bangalore  
Magadi Road, I Cross, Bangalore-560023  
meghathakur@iiphh.org

**Background:** Several interventional studies have empirically supported the role of yoga for the management of diabetes. However, the scientific credibility of these interventional studies that is likely to establish the relevance of yoga for diabetes is directly dependent on the methodological rigor that is employed by these studies.

**Aim:** We undertake a critical review of the methodological rigor of the pre post yoga interventional studies conducted on yoga and diabetes.

**Methods and Material:** A comprehensive search of research paper was done using sources such as Pubmed, Google scholar and Swami Vivekananda Yoga Anushandhan Samsthana (S-VYASA) digital database. The selected papers were initially screened based on title and abstract and later full text were analyzed after papers were included in the review.

**Results:** The critical analysis of these six articles reveal that several studies have failed to describe sampling procedure, justification for adopting certain intervention, process of administering intervention and monitoring of intervention. This critical review underlines the need to standardize the yoga intervention meant for the management of diabetes.

**Conclusion:** Such standardization will help generalize the relevance of yoga for diabetes and enhance the empirical basis of yoga in

mitigating ailments resulting from diabetes. For enhancing the methodological rigor studies should also provide 1) adequate justification for employing a certain selection of yoga interventions such as, the *asanas* and *pranayama*, sequence of administration, supervision etc. 2) adequate description of the process (expertise of instructor and intervention protocol) through which intervention was introduced.

Paper ID: 79

## EFFECT OF SURYA NAMSKARA AND MEDITATION ON PHYSICAL HEALTH WITH BODY MASS INDEX IN HEALTHY VOLUNTEERS

Dr. Patil Amit Ashok and

Dr. Gound Anjali Rameshwar

Assistant Professor, Department of  
Swasthivritta evam Yoga –nisargopachar  
patil.amit909@gmail.com

**Background:** A yogic practices and meditation involving suryanamaskara and pranayama (breathing exercises) was performed for 6 months and assessed with their body mass index.

**Methods:** In thirty six volunteers (between the age group 18 to 21 years) of both sex were participated in daily half an hour suryanamaskara and pranayama practices. In All participants the effect on physical state were assessed by effect on body mass index and special Performa based on history taking.

**Results:** A cyclic combination of suryanamaska and meditation improves health status of volunteers and participants with high BMI before yoga practices was found with decreased BMI after completion of yoga practices. The assessment with Performa also



shows changes in their day to day habits like sleep, concentration, bowel and appetite.

**Conclusion:** A cyclic combination of suryanamaska and meditation improves the health status.

Paper ID: 80

### EXPLORING RELEVANCE OF EXPERIENTIAL ASPECTS OF YOGIC PRACTICE FOR THE MANAGEMENT OF DIABETES

Biswamitra Sahu and Sathyanarayana TN  
Indian Institute of Public Health, Bangalore  
Magadi Road, I Cross, Bangalore-560023  
Biswamitra.sahu@iiph.org

Twenty five years of research has generated sufficient evidence suggesting several short term benefits of yoga interventions for the management of Diabetes. However, the empirically rigorous studies so far; namely, six pre-post studies, five randomized controlled trials, two clinical trials, one observational study, one prospective study, and seven non-specified research design studies; have primarily analyzed and revealed positive change in the participant's biomarkers after the introduction of yoga interventions. Nevertheless, relying solely on yoga as a therapeutic regimen is likely to limit the full potential of *experiential* aspects of yogic practice. For instance, yogic scriptures suggest the importance of spiritual experiences that are beneficial for restoring balance of mind and body which can eventually heal diseases such as diabetes. So far, there is lack of empirical examination of this hypothesis based on systematic analysis of subjective experiences. Contrarily, a systematic empirical analysis of a participant's own account of what is meaningful for him/her has the potentiality to reveal some unexplored routes of healing.

Further, there is hardly any study that empirically examines the *experiential* aspects of yogic practice in India. Currently there are more methodological questions than answers on this topic. Consequently, there is no methodological breakthrough made in this area. In this conceptual paper we seek to make a methodological contribution by discussing the relevance and protocol of qualitative research as an empirical method to systematically explore the *experiential* aspects of yogic practice in order to equip us for exploring newer yogic pathways to healing diabetes.

Paper ID: 81

### EFFECT OF YOGA NIDRA AND DEEP RELAXATION TECHNIQUE ON SELECTED PHYSIOLOGICAL VARIABLE AMONG STRESSED SERVICE PERSONNEL

Urmil Sharma, & Dr. R. Elangovan  
Ph.D Scholar, Department of Yoga, Tamil  
Nadu Physical Education and Sports  
University, Melakottaiyur, Chennai  
relangovantnpesu@yahoo.co.in

**Background:** Stress creates an imbalance in the body. It is the cognitive or emotional response made by the individual towards any situation. The random group experimental study was designed to find out the effect of Yoga Nidra and Deep Relaxation Technique on selected Physiological variable among stressed service personnel. Yoga Nidra is an efficient technique to induce Physical, Mental & emotional well being. Yoga helps to access inner strength that allows to face the challenges of everyday life.

**Methods:** For the purpose of study forty five male service personnel, with the age



range between 25 to 40 years, were selected randomly into experimental group (A) & (B) and one control group (C), each consisting 15 subjects. Experimental group A & B underwent training for six weeks, six days a week for one hour daily. The control group was kept in active rest. The pre and post test were conducted before and after the training for all three groups.

**Results:** The data collected from the groups before and after the training period were statistically analyzed by using Analysis of Co-variance (ANCOVA) to determine the significant difference tested at 0.05 level of significance. The result of the study showed that there was a significant decrease in the blood pressure due to Yoga Nidra and Deep Relaxation Technique.

**Conclusion:** The conclusion was that Yoga Nidra and Deep Relaxation Technique helped to decrease Blood Pressure significantly among service personnel.

Paper ID: 82

### **EFFECT OF YOGA ON PHANTOM LIMB PAIN OF AMPUTEES IN A DIABETIC POPULATION**

**Dr. Padmavati Maharana**

Research Analyst & Yoga Therapist, VYASA,  
Wellington, New Zealand  
padmavatimaharana@gmail.com

Limb loss is one of the most physically and psychologically devastating events that can happen to a person. In 2008, 1.6 million persons were living with the loss of a limb in the United States. It is projected that the number of people living with the limb loss will more than double by the year 2050 to 3.6 million. In 2009, the hospital costs associated with amputation totaled more than \$8.3 billion. Among those living with limb loss,

the main cause is diabetes (54%). Diabetics are 15 times more at risk of amputation than of non-diabetic. Phantom Limb Pain (PLP) is common in amputation. Studies show phantom pain is often quite intense that leads to secondary depression, even suicide and responds poorly to allopathic intervention. People with stress and anxiety experience more PLP. The biomedical model of pain, perception and memory is reviewed, and found to be unable to explain various aspects of the phantom phenomenon, while the multidimensional approach offers explanatory power and opens the door to new therapeutic strategies. Yoga as an ancient therapeutic intervention has found beneficial effects and reducing psychological distress and improving Neuro-physiological wellbeing. Various studies on yoga have found in lowering the blood sugar level in diabetics, but the complications remain till alarming and no studies have reported on effect of yoga on PLP. However, a systematic study on the effects of yoga, meditation and relaxation techniques on phantom limb pain can open a new paradigm in the field of pain management.

Paper ID: 83

### **A COMPARATIVE STUDY OF WELLNESS INDEX AMONGST YOGA AND NON YOGA PRACTITIONERS**

**Wodeyar.D.S., Nagendra.H.R., & Deshpande S.**

Inspector of Motor vehicles, Regional  
Transport office, Nelamanagala, Bengaluru  
dswodeyar.65@gmail.com

**Background:** The State of wellbeing is determined by individual's physical, mental and emotional health.



**Methods:** Four hundred ninety four participants (243 Yoga practitioners and 251 non practitioners of Yoga) suffering from various psychosomatic disorders like diabetes, heart diseases, etc. participated in this study of a comparative survey design. The average age was  $37 \pm 12.6$  for Yoga practitioners and  $30.4 \pm 10.4$  for non-Yoga practitioners.

**Design:** Survey method design. The subjects were administered standardized WHOGHQ questionnaire, cut-off scores for the GHQ used for the study was 15, and accordingly 30 subjects were excluded. Those who were qualified for the study were administered valid Life style checklist questionnaires and Subjective wellbeing Inventory questionnaires to assess the various indices.

**Data collection and Analysis:** The data of the participants were assessed with test for normality. SPSS 10 was used to analyse the data. Appropriate comparisons and correlations were conducted to evaluate the difference between the two cohorts by using t-test and chi square test.

**Results:** The results showed significantly higher scores in subjective wellbeing ( $p < 0.01$ ). Stress level showed significantly lower values in Yoga group compared to non Yoga group. ( $p < 0.01$ ).

**Conclusion:** These results suggest that Yoga can make a substantial contribution to the subjective wellbeing by enhancing wellness and decreasing stress level in the lifestyle disorders.

Paper ID: 84

## Therapeutic Effects of Trataka: Bibliometric Analysis & Narrative Review

Mr. Kiran Kumar Menon,  
Dr. Meena Menon, Mr. Vishnu Renjith  
MSc Yoga therapy Student, S-VYASA,  
Bengaluru  
kiran007menon@gmail.com

**Background:** Trataka is a fundamental concentration technique in both Yogic and Tantric systems, as well as in the Upanishadic systems. It is the practice of gazing steadily at one point. Trataka includes Pratyahara Trataka and Dharana Trataka. The aim of this review was to analyze the bibliometric characteristics of studies pertaining to trataka and to make a narrative evidence on therapeutic benefits of trataka.

**Methods:** A systematic search of literature from Ovid, PubMed Medline, CINAHL and ProQuest databases were undertaken. MeSh terms, keywords and other controlled vocabulary pertaining to trataka were used and Boolean operators were applied for the search. PRISMA 2009 guidelines were used to summarize the search flow. A total of 20 records were identified in the initial search. After retrieving de-duplicating and screening the titles, the full text of 10 studies were retrieved. Published between 1993 and 2014, these studies represented three randomized controlled trials (true experimental design), three non-randomized controlled trials (quasi-experimental designs) and four single group trials (pre-experimental trials).

**Results:** Bibliometric data, data on participants, and intervention were extracted. The data were summarized to identify the Population (P), Intervention (I), Comparator



(C), Outcomes and Study design (S) and were analyzed descriptively. Six studies explored the therapeutic effects of *trataka* alone, whereas four of them used an integrated yoga approach in which *trataka* was a component. The studies found that *trataka* was effective in: improving the heart rate variability (Raghavendra B, 2004), improving the cognitive function of elderly (Talwadkars, 2014), subjective improvements of refractors errors and presbyopia (Gopinathan, 2012), critical flicker fusion (Mallick, 2012), improving the anxiety, attention, and concentration among adolescents, (Rajpoot, 2004 & Ganghadar, 2012).

**Conclusion:** Even though the search could not retrieve a level I (systematic review) evidence, level II and Level III (RCTs, NRCTs, and single group trials) evidence suggests promising therapeutic effects for *trataka* & paves the way of evidence-based yoga therapy and practice.

Paper ID: 86

### COMPLEMENTARY SYSTEMS OF MEDICINE: DO THEY COMPLEMENT EACH OTHER?

Sriloy Mohanty, Krithika A Ramaswamy

Intern B.N.Y.S, The School of Yoga and  
Naturopathic Medicine, S-VYASA  
sriloy21@gmail.com

**Background:** India is a country with a rich traditional medical heritage. Multiple native traditional systems of medicine are practiced, which have their origin in India or have come to India from elsewhere and got assimilated into Indian culture.

**Objectives:** The aim of this paper is to establish that the integration of these independent practices into a single system of medicine is a realistic possibility. The

practices of Naturopathy, Ayurveda, Yoga, Unani and Siddha systems of medicine are all based on similar principles and complement each other.

Naturopathy and Ayurveda, being one of the ancient systems of the AYUSH believe that the human organism is composed of five elements called *panchamahabhootas*. Under AYUSH, Yoga and Naturopathy share the same platform as they complement each other to provide a holistic system of healing which takes care of both mind and the body. Ayurveda and Siddha at the same time are based on the *tridosha* concept, which are *vatta*, *pitta* and *kapha*. Unani medicine believes in the existence of four humours in the body: Blood, phlegm, yellow bile and black bile, which also can be correlated with the *tridoshas* and thereby the *panchamahabhootas* theory.

Hence the shortcomings of one system is easily compensated by treatments derived from another system. Therefore the integration of the systems is not only feasible but ideal. It will fulfil all the criteria of achieving overall health. It can provide tailor made treatment options suited to the individual. It treats the patient as a whole, taking into account every dimension of health.

Paper ID: 87

### TRANSCENDENCE - AN AID TO HOLISTIC INTELLECTUAL IMPROVEMENT

Peri Vishwanatham and  
Karthik Krishnamurthi

InternationalFaculty-TM, TM-  
Siddhi&YogicFlyer, Hyderabad  
periyogitm@gmail.com

**Background:** Eminent philosophers, prominent seers and great maharishis across the planet have always been advocating



about “Transcendence” and its immense values, psychologically and physiologically on different occasions in a bid to alleviate human miseries and for promoting peace and prosperity. Maharishi Mahesh Yogis implied and demonstrated transcendence through Transcendental Meditation (TM) technique.

**Method:** A group of 50 graduate averagely performing students were formed among which 25 volunteers were randomly chosen without any bias and were taught TM technique. These 25 volunteers were asked to practice the method for 20 minutes twice daily- morning and evening.

**Observations:** The performance of TM technique was assessed based on the results in the examinations of the group after the period of 3 months of TM practice. There was a significant improvement in the scores of the 25 students who practiced TM as compared with the group that did not. An improvement in their creativity and mental efficiency was also reported by their teachers.

**Conclusions:** When meditating using TM technique, the ordinary thinking process is “Transcended”. It is replaced by a state of pure consciousness. It provides a state of “Restful Alertness” where there is a decrease of blood flow to brain-stand and thalamus giving complete rest for the mind and body. There is an increase in blood flow to the pre-frontal cortex of the brain leading to alertness. In this state, the meditator achieves perfect stillness, rest, stability, order, creativity, intelligence, intuition and a complete absence of mental boundaries.

Paper ID: 88

## TRANSCENDENCE - REDUCING MUSCLE FATIGUE AND INCREASING THE INTENSITY OF TRAINING PERIOD

Peri Vishwanatham and  
Karthik Krishnamurthi

International Faculty-TM, TM-Siddhi & Yogic Flyer, Hyderabad  
peri.yogitm@gmail.com

**Background:** “Yoga for every athlete” is a book authored by Dr. Aladar Kogler that resulted from more than 20 years of experimentation and experience in the application of yoga in sports. Using examples of his top athletes, he illustrates how Transcendental Meditation (TM) conditions the body for optimal sports training. When meditating using TM technique, the normal behavior of the nervous system is “Transcended” leading to the deactivation of brain-stand giving complete rest to total nervous system, brain and brawn. This rest is referred as “Milieu Interior” which means equilibrium of the inner nervous system. Hence each and every cell repairs itself automatically. This helps in fast reduction of the muscle fatigue and increases the intensity of training period. TM develops a settled, deep, restful state and releases stress.

**Method:** As part of the experiment, Transcendental Meditation (TM) was taught to a group of 20 National and International Ranking Sportsmen chosen from PPBA (Prakash Padukone Badminton Association). These 20 volunteers were asked to practice the method for 20 minutes daily, once in the morning and once in the evening. During the meditation process, the volunteers were asked to sit in any comfortable position with eyes closed and mentally repeat a mantra/sound which was given to them at the time of TM initiation.



**Observations:**The performance of each athlete was assessed based on the results of field activity during practice sessions and also during the competitions that the volunteers took after the period of 3 months. There was a significant improvement in the endurance, they could withstand for longer periods and also they came out of relaxation very quickly. An improvement in their field overall performance was appreciated by their coaches.

**Conclusions:**Sports persons are overwhelmed with effort, suggestions, and control. TM is an effortless, natural technique without any kind of control, suggestions, and concentration. Hence it is a good compensation and supplement to an athlete's program and life.

Paper ID: 89

### YOGA-THROUGH THE MOLECULAR LENS

Dr Jessy Abraham , Dr Mrithunjay Rathore

All India Institute of Medical Sciences,

Raipur

[jessyabraham@aiimsraipur.edu.in](mailto:jessyabraham@aiimsraipur.edu.in)

Patient-centered care (PCC) is a widely used model in the modern healthcare system which involves integration of Complementary and Alternative Medicine (CAM) strategies such as yoga for improving patient health. Yoga is known to modulate neural, endocrine and immune functions at the cellular level through influencing cell cycle control, aging, oxidative stress, apoptosis and several pathways of stress signaling molecules. Yoga seems to affect distinct molecular pathways for maintaining genomic stability in normal and cancer cells. Telomere is region at the tail on the end of DNA strands found in our cells, and an enzyme called telomerase influences the length and activity of the

telomere. Shorter telomeres induce genomic instability and has been implicated in both cancer and aging. Longer telomeres are an indicator of longer cell life, and by extension, longer overall lifespan. Controlled trials have shown that yogic intervention lengthens telomeres and telomerase activity over time in normal cells. Other markers of genomic instability like degree of DNA fragmentation and oxidative DNA damage marker 8-hydroxy-2'- deoxyguanosine, also show dramatic reduction in serum levels following yoga intervention. Similarly, various studies have shown that yoga has the potential to reduce cancer cell survival by modifying the tumor micro-environment through numerous mechanisms including reducing expression of pro-inflammatory cytokines, enhancement of natural killer cell activity and modulating stress and DNA damage in cancerous cells. These results suggest the need for implementation of yoga into modern medical context and therapy.

Paper ID: 91

### ACTIVE MUSIC THERAPY TO REDUCE STRESS AND ENHANCE COGNITIVE FUNCTIONS IN TYPE 2 DIABETES

Indira T Rao, Shantala Hegde,

H.R. Nagendra

S-VYASA, Bangalore

[indiratumuluri@yahoo.in](mailto:indiratumuluri@yahoo.in)

**Background:**Cognitive deficits are reported in diabetes mellitus (DM). Increased stress levels have detrimental effects on the blood sugar levels and cognitive functions in diabetes mellitus type2 (DM2). Non-pharmacological treatments are suggested as complementary for DM2 patients. Previous research has shown that listening to music and participating in music based intervention



can not only reduce hyperglycaemia but also target cognitive functions as well as stress. Active participation in music therapy may be much more beneficial than passive listening.

**Aim:** The aim of this exploratory study was to understand the effect of active participation in music therapy on perceived stress, cortisol, focused attention and working memory.

**Sample:** Three college educated male patients with DM2 (confirmed on HbA1c level) of age 45, 47 and 47 years, comprised the sample.

**Methods:** At baseline and after twenty sessions of music therapy, serum cortisol and perceived stress were measured, Color trails test (1 & 2) and Verbal N-back test (1 & 2) were administered to measure focused attention and working memory. Likert scale of ten points and video interviews were held for assessing the effect of the intervention.

**Results:** Cortisol levels reduced after the therapy. Perceived stress decreased in two cases. Working memory and focused attention showed varying results. Likert scale rating 9.3 and video interviews reported the satisfaction of the participants.

**Conclusion:** Active participation in music therapy has shown promising results in DM2 patients by reducing stress and cortisol and improving focused attention and working memory in varying degrees. Subjectively, participants reported having benefitted from the intervention.

Paper ID: 92

## YOGA AS A MEANS TO STIMULATE ERYTHROPOIESIS: A NOVEL METHOD TO COMBAT ANAEMIA

Amrithavarshini V. S, Kavitha V.,  
Apar A. Saoji  
S-VYASA, Bangalore  
E Mail: dramrithav@gmail.com

Anaemia is one of the most prevalent health problems in the developing countries, having significant morbidity and leading to loss of quality of life. It is predominant among women in the reproductive age group due to loss of blood during menstruation. Psychological stress is also known to reduce the RBC production.

Yoga is an ancient science of life consisting of physical postures (Asana), breathing practices (Pranayama) and meditations (Dhyana). Yogic practices may be beneficial in patients with anaemia through modulation of various physiological mechanisms.

Erythropoiesis or the formation of red blood cells (RBCs) is regulated by a hormone called erythropoietin which is synthesized from kidneys in response to hypoxia. The practice of Pranayama emphasizes intermittent breath holds called Kumbhaka, which may enhance the production of erythropoietin and thereby erythropoiesis. Yoga is known to reduce psychological stress and thereby may aid in erythropoiesis. Yoga practices are also known to regulate the menstrual cycle and thereby may reduce the loss of blood through excessive menstrual bleed. Yoga could also regulate the erythropoiesis by influencing the Growth hormone and Insulin like growth factor (IGF-1) production.

Therefore Yoga practices may be recommended for enhancing erythropoiesis.



Further studies are needed to understand the efficacy of Yoga in aiding erythropoiesis.

Paper ID: 95

### **LIFE NATURAL & INDIAN TRADITIONAL LIFESTYLE: WHAT IS NATUROPATHY MISSING TODAY?**

Shakthivijayan Subramanian,

Achyuthan Eswar and Bhuvaneshwari KJ  
MD Scholar, SDM College of Naturopathy  
and Yogic Sciences, Ujire  
sb.shakthivijayan@gmail.com

“A disease is an excuse for the physician to change a patient’s life”

In our hurry to practice Integrative medicine, have we missed the point of Naturopathy entirely, following reductionist principles of conventional medicine? Naturopathy is a system of preventing and curing disease by living a life close to nature. It has four fundamental pillars - food, mind, lifestyle and environment.

We’ve converted multiple varieties of unpolished rice to mono-variety polished rice, large variety of millets to hybrid wheat, unrefined cold-pressed oils to refined oils & animal fats, unrefined jaggery & raw honey to white sugar & processed honey, seasonal & local fruits & vegetables to imported exotic varieties, grown using chemicals out of season with difficulty. Our food is now poison for land and our bodies, simultaneously responsible for farmer suicides and strokes.

We ate just twice a day until about 300 years back. Breakfast was eaten only by those who required it -farmers, for three months in a year, pregnant women, and children.

Eating when hungry, eating according to hunger, physical exercise, an active

lifestyle, fasting regularly, living in Natural environments - physical contact with the earth, mud and plants, sleeping early and waking up early, living in close-knit families, relaxed lifestyle, breathing fresh air day and night, wearing loose comfortable clothes - all of these were an integral part of common man’s daily life.

The challenge is finding the most effective way to deliver health-giving traditional lifestyle to millions across India, now relentlessly marching towards corporate lifestyles. This paper describes innovative strategies to achieve this.

Paper ID: 96

### **SIMPLIFIED TECHNIQUES FOR INCULCATION OF YOUTH LEADERSHIP IN YOGA**

Dr. B. Islam

Yoga Teacher, KV, Andrews Ganj, New Delhi  
doctorislam@gmail.com

Statistics shows that Yoga practices not reached so far to the 356 million (10-24 year-olds) youth of India and not fitted in the youth events and schools assemblies.

To introduce Yoga on the stages of Youth Organizations, it is time demand that Yoga Practices should not consume much time of morning assembly of institutions and may be fitted and adjusted in provided slot of time, it should suits for mass gatherings, doesn’t requires extra space, smooth place, Yoga Mats, Yoga Dresses, and empty stomach state etc. Moreover the words of Command should be easily understandable and contains the quality to create awareness about yoga in youth.

I undertake these challenges and selected 6MYPs (6 Micro Yoga Practices), developed



Simplified Techniques of them with some outline; words of Command, speed of practice, steps, salient points, limitations and the maximum time consumption and 500 male & Female Volunteers of Scouting were trained.

The practices were found adjustable in youth fitness curriculum. Participants were enjoying the precious feeling of Happiness. At the end of these practices the youth participants reported that their stress relieved, they are recharged, feeling refreshed and also feeling competent to lead 6MYPs and train others.

In my view the experiment achieved the grand success. The experiment became stress reductive, health promoter, character building fun, exciting and joyful Youth activity however there is a lot of scope to develop some other yoga practices in this line for inculcation of Youth involvement and Leadership in Yoga.

Paper ID: 98

### **AN INTEGRAL APPROACH OF YOGA THERAPY ON ALCOHOLIC PATIENTS**

**Dr. K. Krishna Sharma, Chairman,**  
**Dr. Udayakumara K,**  
**Dr. Thirumaleshwara Prasada H**  
Dept. of Human Consciousness and  
Yogic Sciences, Mangalore University,  
Mangalagangothri  
scienceyoga@rediffmail.com

The study entitled "An integral approach of Yoga therapy on alcoholic patients" has been undertaken for 18 alcoholic subjects who were admitted at Dept. of Psychiatry, K.S. Hegde charitable hospital, NITTE University, Derlakatte, Mangalore. The subjects were selected randomly into an experiment and control group. Yogic practices were

systematically introduced and taught to the experimental group for 45 days. Both the groups underwent liver function tests and questionnaire before and after the study. Both control and experimental groups were under medication from the hospital and stayed under protected environment of the hospital. The experimental group had showed a significant improvement in liver function tests and questionnaire. But there were no significant change in control group. This shows that the regular practice of the selected yogic techniques helped to bring down liver problems and improved the activity level in the experimental subjects.

Paper ID: 99

### **IMPROVEMENT OF OESTROGEN LEVEL BY YOGA THERAPY - A PROTO TYPE STUDY**

**Dr. K. Krishna Sharma, Chairman,**  
**Dr. Thirumaleshwara Prasada H,**  
**Dr. Udayakumara K**  
Dept. of Human Consciousness and  
Yogic Sciences, Mangalore University,  
Mangalagangothri  
drkrisharma@rediffmail.com

The proto type study entitled "Improvement of oestrogen level by yoga therapy" has been done on 12 ladies suffering from menstrual problems at Mangalore University Staff quarters, Mangalagangothri. The subjects were equally divided into experimental group and control group. Yogic practices were progressively introduced and taught to the experimental group on 6 days in a week for one month duration. Both the groups underwent test for oestrogen hormone before and after the study. Experimental group has shown statistically significant improvement in oestrogen level. But there were no significant change in control group. The present study



reveals that yoga therapy helps efficiency in managing the menstrual disorders and reducing the symptoms.

Paper ID: 103

## **ASTHMA BATH, A SOLUTION TO ACUTE ATTACKS OF ASTHMA IN NATUROPATHIC OPDS.**

Sriloy M

The School of Yoga and Naturopathic  
Medicine, S-VYASA University, Bangalore

Asthma is a major burden affecting more than 300 million people globally. Though naturopathic medicine have shown promising prognosis there is no concrete evidence supporting its efficacy as the exact mechanisms are still unclear. In this article we have hypothesized a possible mechanism of asthma bath, a naturopathic modality. Broncho-constriction is one of the characteristic features of asthma and main goal is to release this constriction. The improvement in lung functions following asthma bath may be due to (1) the short peripheral vasoconstriction following the treatment as the reaction to the long continuous rubbing and warm water application and (2) because of a sudden splashing of cold water to chest, which caused a peripheral vasoconstriction is always followed by a long vasodilatation in periphery as well as to the vital organs present in the thoracic cavity. The blood is mainly directed towards the vital organ, especially towards the chest because of the cold splash. The sudden splashing of cold water is also potent to induce an adrenalin rush or a sympathetic arousal in the body as the impulses of the cold receptor travel to the sympathetic ganglia of the spinal cord which causes a highly localized response as a stress response. And the same adrenalin will be directed towards the bronchi and bind to the beta-adrenergic

receptor causing a broncho-dilatation. Thus, the particular treatment modality may have a vital role to play at an emergency condition, or as a primary health care practice.

Paper ID: 104

## **PREVENTION & MANAGEMENT OF LIFE-STYLE DISORDERS - AN APPROACH THROUGH YOGA AND AYURVEDA**

Dr. Sujalakshmi M.

Yoga Instructor,  
Bharatiya Vidya Bhavan, Abu Dhabi  
msujalakshmi@gmail.com

According to Vagbhata, the author of *Ashtanga Hrudaya*, the 2 main factors as the cause of any disease (*roga*) are, 1. *Mandaagni* - Insufficient/poor digestive power.

2. *Vegodeeranadharana* - Forceful evacuation or holding of natural urges.

These are the main reasons for life-style disorders too and can be prevented by following a healthy life-style. *Vata*, one among the *Tridoshas*, is responsible for any vital movement in the body, from the simple movement of eyelashes to the complicated labour. Any obstruction in the flow of *Vata*, results in *Vyadhi*. Yoga also emphasizes the importance of Prana- the Vital force.

*Pavanamuktasana*- The gas trapped in the large intestine gets released in this *asana*. The muscular movements in this pose, are similar to squatting pose and can enhance the functions of *Vata*. *Dinacharya* (daily regimen) mentioned in *Ayurveda*, advises a squatting pose to ease defecation. Now the western world also conducts research studies related to 'Squatting Vs Sitting poses', proving the health benefits of a Squatting pose. Diseases like hemorrhoids, Colon cancer, Rectal cancer



etc. are mainly life-style generated. This is an observation about a single function of *Vata*.

**Conclusion:** A combination of Yoga poses, Ayurvedic *Dinacharya* and Dietary regimen - a modified life-style will have key role in the prevention and management of life-style disorders.

Paper ID: 105

### EFFECT OF COLD HIP BATH ON GASTRIC MOTILITY AND CONSTIPATION RELATED SYMPTOMS IN PATIENTS WITH FUNCTIONAL CONSTIPATION: A PILOT STUDY

Deepa Shukla, Raghavendra Rao,  
Babina N.M.

Jindal Nature Cure Institute, Bangalore,  
India  
drshukladeepa@gmail.com

**Background:** Primary or functional constipation is ongoing symptoms for greater than six months not due to any underlying cause or an underlying medical condition. Though various treatment options are available for the management of constipation, evidence for their efficacy and safety are limited.

**Methods:** Subjects were recruited from Medicine & Gastroenterology OPD of MCH, if they satisfied the selection criteria & if they gave consent to participate in the study. A total of 30 subjects were randomly assigned to either an experimental or a control group. The experimental group (16 subjects) was given Cold Hip Bath intervention along with high fibre diet for 14 days. Control group (14 subjects) followed only high fibre diet for 14 days. Assessments were made to the both the groups on day 1 & day 14. The assessments included were CAS, CSS, PAC-QOL & EGG.

Data Analysis was done using Statistical Analysis Software - (SPSS for Windows version 20.0). Significance was determined with  $\alpha = 0.05$  or less.

**Results:** The results suggested that, in intervention group, there was significant reduction in CAS ( $p < 0.001$ ), CSS ( $p < 0.001$ ) & PAC-QOL ( $p = 0.001$ ) scorings compared to control group. There were no much significant changes in EGG, but within the group, in control group there were significant changes in DF ( $p = 0.028$ ) throughout the recording & also in DP ( $p = 0.033$ ) after water load test. In Intervention group, there were significant changes in DP ( $p = 0.026$ ) throughout the recording.

#### Interpretation & conclusion:

It can be concluded from this study that, CHB along with high fibre diet is beneficial to a greater degree in constipation related symptoms compared to only high fibre diet. CHB does not show any significant changes in EGG, so it is not beneficial in increasing gastric motility.

Paper ID: 106

### ROLE OF AYURVEDA IN PREVENTING DIABETIC RETINOPATHY

Dr Champavathi P

PG Scholar, Department of Shalakyta Tantra,  
Government Ayurveda Medical College,  
Bangalore, India

**Background:** Diabetes is fast gaining the status of a potential epidemic in India with more than 62 million diabetic individuals currently diagnosed with the disease. Diabetic retinopathy is the most common form of diabetic eye disease. Diabetic retinopathy usually only affects people who have had diabetes for a long time and can result in blindness.



**Methods:** The risk of developing diabetic retinopathy can be lessened through Ayurveda taking the following precautions:

- Use of Rasayana like shathavari, triphala etc in all diabetic patients at early stage.
- Periodical exposure to kriya kalpas like tarpana, seka etc can help diabetic eye have good blood circulation which avoids ischemia of retinal vessels.
- Following other panchakama procedures like shirodhara, pratimarshanasya, padabyanga etc can also help in relaxing mind.
- Use of netrala drugs like triphala, mudhga etc in regular diet help preventing diabetic retinopathy.

**Results:** With the use of RASAYANA explained in Ayurveda along with pathya apanya and kriya kalpas in diabetic patients can help preventing diabetic retinopathy.

**Conclusion:** As India has more than 62 million diabetic patients and all these people are very much prone to have diabetic retinopathy as its complication. So through Ayurveda it can be managed as well as prevented in a better way as it is rightly said that Prevention is better than cure.

Paper ID: 107

**TEXTUAL BASE OF  
OCCUPATIONAL HEALTH  
HAZARDS OF COMPUTER  
PROFESSION IN YOGA AND  
AAGAMA AND ITS SCIENTIFIC  
IMPLICATIONS - A REVIEW**

M.Venkata Reddy, Rao. G. Nanduri and  
Harry Waters

**Background:** The system of Yoga, Yoga of Aagama and Ayurveda have developed hand in hand in India for thousands of years. The modern world is indebted to ancient Bharat

for this precious gift of yoga and Yoga of Aagama, which are unique in ideology, technology and methodology.

**Researchers - Methods - Materials:** There are number of Researchers on the subject, but few are quoted due to lack of space, Marian Garifin Kel (1998) in Jama, Winston Sequain (1992) in Lancet, in IT Personnel. There are main OHH among IT Profession (1) Electro Stress (2) Computer Vision Syndrome (3) CTS (4) Neck and Shoulder Pain (5) Backache (6) Internet Addict Disorder (7) Hypertension, Obesity and Diabetics.

**Scientific base:** Yoga texts describe diseases in terms of Dhatu Vaisamyia or tridosha theory or Prakruti of Ayurveda. Thangaraj (2015) scientific report in Nature Journal Genome wide analysis correlates ayurvedic prakruti is also equal to yoga.

**Conclusions:** The time has come to aware of negative aspects - other side of the same coin of IT Professionals. There is great need to introduce awareness program to IT users.

Paper ID: 109

**IMPROVEMENT OF PHYSICAL  
AND PHYSIOLOGICAL FITNESS  
OF HEALTHY INDIAN SOLDIERS  
AFTER ONE MONTH YOGIC  
TRAINING**

Anjana Pathak, Sutanu Chakraborty,  
Thinles Chosphe, Mohit Nirwan,  
RN Mishra, Mantu Saha

Exercise Physiology and Yoga Division,  
Defence Institute of Physiology and Allied  
Sciences (DIPAS), Defence Research and  
Development Organization (DRDO),  
Lucknow Road, Timarpur, Delhi - 110054  
anjanapathak6@gmail.com

**Background:** Different experiments have been carried out with sets of yogic practices



to improve physical fitness of the individuals. This study was performed to evaluate the effects of 4 weeks yogic training on physical and physiological fitness of the healthy Indian men.

**Methods:** Seventy healthy volunteers aged 20- 40 years were subjected for this study. They were divided into two groups. One group practiced yoga for one month (N1= 27) while another group (N2 = 26) did not practiced yoga. They were instructed to continue their routine physical training for these days. Some subjects were dropouts as they were absent when the post training data were collected. Weight, hand grip strength (HGS), flexibility, peak expiratory heart rate (PEFR), breath hold time (BHT), resting heart rate (RHR), peak exercise heart rate were measured. Paired-t test was performed between data collected before and after the yogic training.

**Results:** Findings suggest that weight ( $P < 0.001$ ), peak exercise heart rate ( $P < 0.01$ ) decreased significantly following yogic training for one month. Significant increase of hand grip strength of the right hand (RHGS) ( $P < 0.05$ ), flexibility ( $P < 0.001$ ), PEFR ( $P < 0.01$ ), BHT ( $P < 0.001$ ) were observed. The control group showed less reduction of weight (kg) ( $P < 0.001$ ). The increase of flexibility, RHGS, PEFR were also found in control group but the rate of increase is lower than the yoga group.

**Conclusion:** These findings suggest that one month yogic training also improves physical and physiological fitness of healthy Indian men.

Paper ID: 110

## EFFECT OF ONE MONTH YOGIC TRAINING ON BLOOD PRESSURE OF ACTIVE MEN

Thinles Chosphe, Sutanu Chakraborty,  
Anjana Pathak, Mohit Nirwan, RN Mishra,  
Mantu Saha

Exercise Physiology and Yoga Division,  
Defence Institute of Physiology and Allied  
Sciences (DIPAS), Defence Research and  
Development Organization (DRDO),  
Lucknow Road, Timarpur, Delhi  
chosladakh@gmail.com

**Background:** In recent days yoga is very popular as it has beneficial effects to the practitioners. Many studies have been conducted to evaluate the effect of yogic training on different population in India and abroad. This study was done to evaluate the effects of one month yogic training on arterial blood pressure of active Indian men.

**Methods:** Forty active male volunteers of aged between 20 - 35 years were volunteered for this study. They were randomly divided into two groups (Yoga group: N1= 17, Control group: N2= 15). Eight subjects were excluded as they were absent when post yoga data collection was carried out. One month yoga training consists of suksma vyayama, asana and pranayama were imparted daily for one hour by proficient yoga trainer. Resting Heart Rate (RHR), Systolic blood pressure (SBP), Diastolic blood pressure (DBP) and SpO<sub>2</sub> was measured before and after one month yoga training. Mean blood pressure (MP), Pulse Pressure (PP) were calculated from SBP and DBP. Paired t test was performed with all the concerned variables between the data collected pre (Pre Y) and post yoga (PostY) training.

**Results:** RHR ( $P < 0.05$ ), SBP ( $P < 0.05$ ) (PreY:



126.41 ± 18.41 mm Hg, PostY: 117.18 ± 6.64 mm Hg), DBP (P<0.05) (PreY: 78.129 ± 10.51 mm Hg, PostY: 73.65 ± 7.08 mm Hg) and MP (P < 0.05) decreased significantly after one month yogic training whereas the control group did not show significant changes after one month. SpO2 increased nonsignificantly in both the groups.

**Conclusion:** the study revealed that one month yogic training may reduce any elevated blood pressure in active individual as an effective outcome of the yoga package developed by our institute.

Paper ID: 111

### IMMEDIATE EFFECTS OF KAPALBHATI PRANAYAMA ON METABOLIC FUNCTION OF HEALTHY FEMALE INDIVIDUALS

Sutanu Chakraborty, Anjana Pathak,  
Kaushik Halder, Manish Darmora,  
Mantu Saha

Exercise Physiology and Yoga Division,  
Defence Institute of Physiology and Allied  
Sciences (DIPAS), Defence Research and  
Development Organization (DRDO),  
Lucknow Road, Timarpur, Delhi  
c.sutanu07@gmail.com

**Background:** The Kapalbhathi Pranayama is one of the cleansing processes in Hatha Yoga that purify the human body. Researchers studied the effects of Kapalbhathi Pranayama along with the other pranayama's and yoga asanas both in short term and long term basis. This study was conducted to understand the immediate effects of Kapalbhathi Pranayama on metabolic function of healthy female individuals.

**Methods:** Nine healthy female individuals [Age: 24.67 ± 0.5 years (Mean ± SD)] were volunteered for the study. They were

familiarized with the pranayama for two days by a qualified yoga instructor. Different metabolic variables were recorded consecutively for three days using K4b<sup>2</sup>-Cosmed, Srl (5 minutes before the pranayama when subjects were in sitting posture, during 10 minutes of the pranayama session followed by 5 minutes recovery session immediately after the completion of pranayama). Paired t test was performed between the data collected before and immediately after the Kapalbhathi Pranayama.

**Results:** Significant increase of oxygen consumption (VO<sub>2</sub>/kg) (P < 0.01) with significant reduction of respiratory quotient (RQ) (P < 0.001) is observed immediately after the practice of Kapalbhathi Pranayama. Resting energy expenditure (P < 0.05) (EE<sub>kc</sub>) and metabolic equivalent (METS) (P < 0.01), oxygen consumption per heart beat (VO<sub>2</sub>/HR) (P < 0.01) is also increased significantly immediately after the completion of pranayama. The results vary when day wise analysis was performed.

**Conclusion:** Immediate practice of Kapalbhathi Pranayama results better oxygen consumption. It may be helpful for better metabolic function of the individual immediately after its practice.

Paper ID: 112

### EFFECT OF YOGIC PRACTICE ON RESPIRATORY FUNCTION AND MUSCLE STRENGTH OF HEALTHY MIDDLE AGED MEN

Kaushik Halder, Anjana Pathak,  
OS Tomer, Mantu Saha

Defence Institute of Physiology and Allied  
Sciences (DIPAS), Timarpur, Lucknow road,  
Delhi | halderkaushik@gmail.com

**Background:** With advancement of age a progressive decline in respiratory function



and muscular strength have been observed. The present study aimed to evaluate the effect of 3 months yoga practice on respiratory function and muscular strength of healthy middle aged Indian male.

**Methods:** Twenty (n=20) healthy male [age: 47.1±1.9 years and height: 170.1 ± 6.0 cm (M ± SD)] participated in the study. The volunteers were imparted selected Hatha yogic training consisted of prayer, yogic *sukshma* and *sthulavayama*, *suryanamaskar*, *shatkarmas*, *yogasanas*, *pranayamas* and meditation, for a period of 3 months, by a qualified Yoga Teacher for one hour daily. Body weight, resting respiratory rate (RR), breath hold time (BHT), peak expiratory flow rate (PEFR), forced vital capacity (FVC), forced expiratory volume in 1<sup>st</sup> second (FEV<sub>1</sub>), maximum voluntary ventilation (MVV), hand grip strength (HGS; both right & left), back strength (BS) and leg strength (LS) were recorded before and after the yogic training.

**Results:** Three months yogic practices showed significant decrement of body weight and RR (all P < 0.05). Yogic practices recorded significant increment of FEV<sub>1</sub>, right HGS, BS (all P < 0.05) and BHT (P < 0.01). A trend of improvement was observed in PEFR, FVC, MVV, left HGS and LS after the said yoga training.

**Conclusion:** The present study substantiated the beneficial effects of practicing yoga in improvement in respiratory function and muscular strength of healthy middle aged Indian male.

Paper ID: 113

## YOGA FOR SECONDARY INFERTILITY

Kavitha Venkatachalam and  
Sriloy Mohanty

School of Yoga and Naturopathy, S-VYASA,  
Bangalore

Miscarriage or spontaneous loss of a previable pregnancy has become a perilous menace. Miscarriage incidence is estimated in 15-20% of pregnant women, aware of their pregnancy and in 50% pregnant women even before realizing their state of pregnancy. Of the entire miscarriage incidence, 15% has been attributed to poor reproductive conditions. Preliminary human studies and extensive studies on mammalian rodents indicates stress to be the major cause for the 50% of unexplained miscarriage. During pregnancy, the initial five weeks following last menstrual period - the period of placentation - is the most vital period, as the trophoblastic cells are completely dependant on the maternal sources. We speculate that psychological stress during early pregnancy might impact placentation through creating an imbalance in autonomic nervous system; increased glucocorticoid levels; weakened immunity and increased circulatory pro-inflammatory cytokines. Increased levels of circulating cytokines and corticotropin releasing hormone during this period inhibits local progesterone production from luteal cells, thereby causing under activity of regulatory T cells and small cell lymphocytic suppressor cells contributing to rejection of zygote.

Yoga, a mind-body medicine has been proven to combat stress by promoting vagal predominance and alleviate circulatory markers of stress. This presentation overlays the feasibility and possible mechanism of action of Yoga practices in alleviating incidence of early miscarriages.



Paper ID: 114

## YOGA THERAPY FOR PSYCHIATRIC DISORDERS: PATIENTS' PERCEPTION OF CHANGE AND PREDICTORS OF RESPONSE

Sneha Karmani, Shubha Bhat GS,  
Ramajayam Govindaraj, Vinod Kumar,  
Shivarama Varambally, BN Gangadhar  
NIMHANS Integrated Centre for Yoga  
(NICY) - Bangalore  
sneha.karmani@gmail.com

**Background:** Yoga is evolving as an effective therapeutic measure across various psychiatric disorders. We aimed at studying the subjective change perceived by the patients with neuropsychiatric disorders and the predictors for their response to add-on yoga therapy.

**Methods:** This study was conducted at the NIMHANS Integrated Centre for Yoga (NICY) on out-patients and in-patients referred during a 10-month period. The subjects (n=171; males-103, females-68, mean (SD) age-33.24(13.09) were assessed for the primary illness they were referred for. We reviewed the socio-demographic and clinical parameters, and the change perceived by the patients was assessed on a visual analog scale (VAS) with '0' being completely ill and '10' being completely well, after yoga sessions 0, 3, 7, and 11. We have also tested for clinical and socio-demographic predictors for patients' perception of change with add-on yoga therapy.

**Results:** The mean (SD) change in VAS after 0, 3, 7 and 11 sessions were 4.4 (2.5), 5.4 (2.4), 6.3 (2.4), 6.6 (2.3). One way RMANOVA across time showed significant change [F (3, 168) = 47.0, P<0.001, Effect size=0.456] in VAS. Post hoc analysis with Bonferroni correction

showed significant change at all levels. There was no correlation between VAS and socio-demographic/clinical factors.

**Conclusion:** The subjective well-being with add-on yoga therapy is observed irrespective of diagnosis and socio-demographic profile, as early as day three of yoga session and it improves consistently over time. Further studies with robust design in a more homogenous sample are needed to tease out the factors that may predict the outcomes of yoga therapy.

Paper ID: 115

## DEVELOPMENT AND FEASIBILITY OF YOGA BASED INTERVENTION MODULE FOR OCD

Shubha Bhat GS, Shivarama Varambally,  
Sneha Karmani, Ramajayam Govindaraj,  
BN Gangadhar  
NIMHANS Integrated Centre for Yoga  
(NICY), NIMHANS, Bangalore  
shubhags@yahoo.com

**Background:** Some yoga-based practices such as Kundalini Yoga have been found to be useful in the management of obsessive compulsive disorder (OCD). However, other yoga practices have not been thoroughly evaluated as a therapeutic option in the treatment of OCD. In this study, we attempted to formulate a generic yoga-based intervention module for OCD.

**Methods:** A yoga module was designed based on traditional and contemporary yoga literature as well as published studies. The yoga module along with case vignette of an adult patient with OCD was sent to 10 yoga experts for content validation. The experts rated the usefulness of the practices on a scale of 1 - 5 (5-extremely useful). The final version



of the module was pilot-tested on patients (n=10) with OCD, recruited from outpatient & in-patient services of National Institute of Mental Health and Neuro Sciences, Bangalore.

**Results:** Items in the module which were rated  $\geq 3$  by more than 80% of the experts (n=10) were included in the final module. Accordingly 82% (14 of 17 items) of the items in the initial module were retained with modifications in the remaining as suggested by the experts along with patients' inputs and author's experience. The final module was found to be easy to learn and practice by all the 10 patients in a two-week pilot study.

**Conclusion:** A generic comprehensive yoga therapy module for OCD was validated by experts in the field and found feasible in patients. Further clinical validation is warranted to confirm efficacy. If found efficacious, it may be a valuable addition to current treatment approaches for OCD.

Paper ID: 118

## ROLE OF SHIRODHARA IN MENTAL HEALTH

Dr Vidya M Barki

Department of Shalakyia Tantra, GAMC,  
Bengaluru

Today's fast developing world made man mechanical and workaholic. And that is responsible fragmentation of human personality at several levels. Mental health is a level of psychological well-being, or an absence of a mental disorder.

According to World Health Organization (WHO) mental health includes "subjective well-being, perceived self-efficacy, autonomy, competence, intergenerational dependence and self-actualization of one's intellectual

and emotional potential, among others".

In the definition of swastha, prasannatha of mana is indicated last but we should keep in the mind that this is not a least factor. Hence we can understand that swasthata of manas is equally important comparing with shareera swasthata in the ayurveda shastra. To maintain prasannatha of manas several procedures have been explained in our classics and shirodhara is one among them.

Shirodhara is a classical and a well-established ayurvedic procedure of slowly and steadily dripping medicated oil or other medicated liquids on the forehead. This procedure induces a relaxed state of awareness that results in a dynamic psychosomatic balance.

Shirodhara is a deeply nurturing psychospiritual experience that attunes the body/mind towards spontaneous healing.

It is renowned for its ability to release serotonin and encourage a balance of mind body & spirit. It is based on the principle that gentle but constant application of warm oil stimulates healthy blood circulation to the brain. Shirodhara is very beneficial for:-Stress reduction, Headaches/migraines, Insomnia, Anxiety, Depression, Visual difficulties etc. Shirodhara leads to a state of alert calmness and relaxation.

Paper ID: 119

## NEUROHEMODYNAMIC EFFECTS OF YOGA PRACTICE IN HEALTHY VOLUNTEERS: A fNIRS STUDY

Harleen Chhabra, Pooja More,  
Sneha J Karmani, Ramajayam  
Govindaraj, Urvakhsh M Mehta, G  
Venkatasubramanian, Shivarama  
Varambally, B N Gangadhar



Department of Psychiatry,  
NIMHANS, Bangalore  
harleenchhbr1@gmail.com

**Background:** Yoga is a multicomponent practice that includes physical postures, breath regulation techniques, deep relaxation practice and meditation/mindfulness techniques involving attention. Yoga practices have been shown to enhance social cognition. In this study, we examined potential effects on yoga on mirror neuron activation (ventral premotor cortex) using functional Near Infra-red Spectroscopy (fNIRS).

**Methods:** Seventeen adult healthy volunteers underwent one hour of yoga sessions for a period of one month. This yoga module comprised of *asanas* (physical postures), relaxation exercises, *pranayama* (breathing exercises), and chanting meditation. To tap the mirror neuron activation changes brought about by practice of yoga, pre- and post- cognitive task was administered. The task comprised of 30 second videos (dynamic pincer grasp, dynamic control) and a static image of hand and cup. Cerebral hemodynamic changes were acquired with a continuous wave fNIRS system (two wavelengths, bilateral with 5 channels each, sampling frequency 15.6Hz). Optodes were placed at dorsolateral and ventral pre-motor cortex. Data was processed using the nirsLAB software.

**Results:** There was significantly increased activation in Left ventral premotor cortex following yoga in subjects (N=13) that had participated in atleast 10 yoga sessions (t=2.9; p=0.015). No significant change in activation pattern was observed in subjects who participated in less than 10 sessions (N = 4)

**Conclusion:** Observation and imitation of the yoga practices during one month training

may cause changes in the activation pattern of the mirror neurons and is evident after significant number of repetitions. These findings require replication and further systematic evaluation.

Paper ID: 120

### “SARVENDRIYANAM NAYANAM PRADHANAM -AN INTROSPECTION”

Dr. Swati Suvarna, Dr. Sumitra T Gouda  
Department of Shalakyta Tantra,  
GAMC, Bengaluru  
Swatisuvarna92@gmail.com

Eye is highly sensitive organ in the body as a minute dust particle create severe irritation in it.

*“Sarvasya Gatrasya Sirah Pradhanam,  
Sarvendriyanam Nayanam Pradhanam  
Bhavet paneeyanam udakam pradhanam”*

In humans, Siras is considered as Pradhana anga and among the indriyas Nayana is the Pradhana as like Udaka is pradhana among liquids. Because eye works like a camera in which lids as shutter, lens and cornea as focusing system, iris as diaphragm, choroid as darkened interior and retina as light sensitive plate of camera respectively.

So among all the Jnanendriyas, Nayana or Netra is considered as Best or Srestha, as a man without Vision is like an Insect ( Kudya) mentioned in Ayurvedic classics.

Other aspects which helps in deciding Netra as pradhana among jnanendriyas with the consideration of anatomy, physiology, pathology, disease, therapeutics etc will be elaborately discussed in paper presentation.



Paper ID: 121

## LIFE STYLE MANAGEMENT COCERNED TO NETRA

Dr. Swathi P J

Department of Shalakyia Tantra,  
GAMC, Bengaluru

With the advancement of our standards of living our life has become more or less dependent on technology thereby having negative impact on health leading to various life style disorders. With the advancement of medical system we are able to prolong the life span of human society but we are lacking in giving quality of life to the people.

Among all the shadangas of shareera urdhwanga is said to be shreshtha-in which nayana has been given prime importance so protection of eye has got major role for a person to enjoy his life at most.

In today's world due to faulty lifestyle like excessive or improper usage of electronic gadgets, faulty dietary habits, environmental pollution (air), stressful job...etc., diseases are increasing at alarming rate. As these diseases are mainly due to our faulty day to day habits these can be prevented by adopting healthy lifestyle.

Here an attempt has been made to compile major lifestyle disorders like CVS, cataract etc., related to netra and their preventive majors described in various ayurvedic texts.

Paper ID: 122

## NUTRITION AND DIETETICS FOR EYE THROUGH AYURVEDA

Dr Shwetha R

Department of Shalakyia Tantra, GAMC,  
Bengaluru

Human biological system requires diet or

food to provide energy for all life process, growth, repair and maintenance. Anything that is taken for the purpose of nourishment and maintenance of the biological system in the form of solid or liquid is known as Aahara(food). Aahara is very much emphasizes in Ayurveda for the prevention and management of a wide range of disorders.

Aahara has described as one of the Trayopastambha. Use of Hita aahara(wholesome diet) promotes health and longevity and Ahita aahara(unwholesome diet) promotes manifestation of different disorders. Therefore, Aahara is considered as Prana(basis of life).

The principle of dietetics and nutrition in Ayurvedic system of medicine include different classes of Aahara i.e. eating and drinking items, principle of Pathyapathya, discipline of eating (Ashta Aahara Vidhi Visheshayatam, Dvadasha Asana Vidhi etc.), Viruddha Aahara as described by Acharya Charaka and Sushrutha respectively and are very important in daily life for promotion of positive health. Eating balanced diet on a regular basis and staying at ideal weight are critical factors for maintaining emotional and physical well-being.

Good nutrition fuels your body, contributes to healthy eyes. Vitamins and nutrients play an important role in good vision. Our acharays have explained group of drugs for better vision, use of these dravyas in regular diet can help in maintaining good vision.



Paper ID: 124

## ROLE OF TRATAKA YOGIC KRIYA IN NETRA

Dr. Anuja Singh Vand Dr. Sumitra T Gowda

PG scholar, Dept of Shalaky  
Tantra, GAMC, Bengaluru  
anuja.singh.v@gmail.com

**Introduction:** Trataka is one among the Yogic Shat Kriya mentioned by Hata Yoga Pradipika. Trataka means 'to gaze steadily at a fixed point'. Trataka is also called **Yogic gazing**. Gheranda Samhita says there are seven measures for training the body namely - Shodana (Purification), Dridata (Strength), Sthairya (Steady), Dhairya (Calming), Laghava (Lightness), Pratyaksha (Perception), and Nirlipta (Isolation).

There are two types of trataka namely Antaranga and Bahiranga. As per Gheranda Samhita Trataka helps in Netra Roga Vinashyanti (helps in curing eye disorders), Divya Drishti Prajayate and Sambhavi Siddhi (spiritual benefit).

In present scenario where eye has become the most abused organ of the human body due to various factors it has become mandatory to maintain the healthy status of eye by practicing trataka which is primarily aimed at improving optic function and concentration.

**Purpose:** To understand the concept of Trataka and its significance in relation to netra.

**Method:** Conceptual study.

**Conclusion:** It is a simple technique which can be adopted in day to day practice in order to keep vision healthy and thus preventing eye diseases. It channelizes power of mind to the dormant areas of unconsciousness. In this yogic kriya, the functional efficacy of extra ocular and intra ocular muscles are increased

by forcing them to work thus enhancing the functioning of rods and cones through the mechanism of light and dark adaptation.

Paper ID: 126

## EFFECT OF PRANAYAMA AND YOGIKA KRIYA IN MANAGEMENT OF COMMON ENT PROBLEMS

Dr. Gururaj, Dr. Suja K Sreedhar

PG Scholar, Govt. Ayurveda Medical  
College, Bengaluru  
guru7glb@gmail.com

Unhealthy lifestyle modifications, improper dietary habits, environmental pollution, ignorance of people towards personal and social healthcare are leading to many ENT disorders.

It is said in Ayurveda classical treatises that pranavayu resides in murdha (head and neck) hence, any disturbance in the normalcy of prana vayu leads to diseases related to few common ENT diseases. In management of those diseases through Ayurveda along with medicines, controlling the pranavayu by practicing pranayama has given good results.

Kapalabhati, anuloma-viloma pranayama, surya bhedi pranayama, bhastrika pranayama, neti karma etc., can be adopted in management of common ENT disorders like rhinitis, sinusitis, cold, cough, tinnitus, hearing loss, dental problems etc.,



Paper ID: 127

## INTEGRATION OF AYURVEDA AND BIOMEDICINE- EFFORTS OF CENTRAL COUNCIL FOR RESEARCH IN AYURVEDIC SCIENCES AND FURTHER SCOPE

Sulochana Bhat<sup>1</sup>N Srikanth<sup>2</sup>, M.M. Padhi<sup>3</sup>,  
Dr. D. Sudhakar<sup>4</sup>, Prof (Dr.) K.S.Dhiman<sup>5</sup>  
Research Officer (Ay. Scientist 3) & Assistant  
Director (Ay, Scientist 4), Advanced Centre  
for Ayurveda in Mental Health & Neuro  
Sciences, NIMHNS, Bengaluru

**Background:** There is emergence of integrative approach to facilitate affordable, safe and holistic health to all. Due to the active initiatives taken up by the Government of India and other stake holders the reach of Ayurveda has increased along with increasing level of practitioner's and consumer's acceptance. The efforts to co-locate Ayurveda centers along with modern medical facilities across India through programs brought physical proximity of biomedicine and other AYUSH systems of medicine. However, their effectiveness needed to be documented.

**Methods:** To study the feasibility of integrative services two separate projects on Reproductive & Child Health and Osteoarthritis were conducted by Central Council for Research in Ayurvedic Sciences. A survey was also carried out to know the response of practitioners in tertiary care allopathic hospital about integration.

**Results:** The studies reported that the integration benefits the patients and the practitioners are also open for evidence based integration for prevention and management of certain diseases.

**Conclusion:** Need for regulation of Ayurveda, upgrading the skills of Ayurveda practitioners, safety and efficacy of the

medicines, interdisciplinary research, information sharing and coordination between different medical systems of India are identified as essential elements for successful integration. Strategic involvement of AYUSH infrastructure, manpower and evidence based interventions will contribute to the success of health care delivery system.

Paper ID: 128

## HOW IMBALANCES BETWEEN A "SET OF FUNDAMENTAL MERIDIANS" IN BODY, CAUSED MAINLY BY EXTRANEIOUS CHEMICALS IN BLOOD, PRECIPITATES PRESENT-DAY DISORDERS LIKE DIABETES, WHY YOGA SHOULD BE A POWERFUL TOOL IN COMBATING THESE DISORDERS

Aswathy,  
Tamilnadu, India  
yogashva@gmail.com

A Diagram, evolved from previous research in Vedic Sciences, is presented, which shows a New Relationship, hitherto undiscovered, between a Set of Meridians existing in body, which may be called the "Set of Fundamental Meridians" (it is seen that most of these Meridians are Meridians belonging to Pranic Chakras). Based on this Diagram, it is explained that it is the Imbalances between these Meridians --- brought about mainly by Destruction of fragile elements on Cell Membrane, due to presence of extraneous chemicals in blood --- which are directly responsible for most of the "Disorders" occurring in world today, viz. Diabetes, Obesity, Infertility, Autoimmune Disorders, Cancer etc. Most of the Effects of Diabetes are explained using this Diagram, especially how Atherosclerosis in particular occurs. It is also



explained that Attainment of the Yogic State in body (through Meditation, Pranayama, HathaYoga, Japa etc.) --- through necessarily and simultaneously strengthening four of these Fundamental Meridians in body --- will automatically strengthen All these Fundamental Meridians, thus also restoring Balance between these Meridians, this is why Yoga will be a very powerful tool in combating the above Disorders.

Paper ID: 129

### **MUDRA YOGA IN NETRA ROGA**

\*Dr Vidyalakshmi T, Dr Suja K Shreedhar

\*2<sup>nd</sup> year PG Scholar, Dept of Shalakyia  
tantra,GAMC, Bengaluru.

\*\*Professor,Dept of Shalakyia tantra, GAMC,  
Bengaluru.  
vid.aksharam@gmail.com

*Ayurveda* and *mudra (hasta) yoga* are interrelated based on *pancha mahabhoota* concept. The different parts of eye are correlated with *mahabhootas* which are available in our classics.

As we all know that eye is the most important *indriya* and it will have direct exposure towards outer world. So it is having threat from different types of diseases. The pathology may be in eye proper or any other body parts which will indirectly cause eye diseases. Now a days Dry eye syndrome, Diabetic retinopathy, Refractive errors, Cataract are some of the common eye diseases.

Usually *hasta mudras* are practiced while doing *pranayama* or meditation. This *mudra yoga* helps to prevent and cure the diseases which can be considered as supportive therapy. *Jnana, Varuna, Apana, Prana* are some of the *Mudras* which are beneficial in eye diseases. These *mudras* strengthen the *panchatatwa* in *shareera* and thereby it cures the diseases. So,

our Health is in our Hand if we practice *hasta mudra* properly.

Paper ID: 130

### **ROLE OF YOGA ON EYES**

Dr Gurav Gajanand

Department of Shalakyia tantra, GAMC,  
Bengaluru

“The fastest way to bring the mind into concentration is through eyes”

It is said that “face is the index of mind and eyes are the windows of soul” eyes are our only windows for external world.

Human eyes need care and attention. As years passes on, muscles around eyes lose their tone. Eye sight becomes weak and the muscles around the eyes lose their elasticity and become rigid, reducing the power to focus at different distances. In addition tension around the eyes affects the brain causing stress and anxiety.

Eye sight is dramatically improved when the muscles of the eyes are relaxed. There is deep correlation between eyes and mind. It is said that vision occupies 40% of brains capacity. Therefore when eyes are closed relaxation is induced in brain. Eye health corresponds to the level of the relaxation it experiences.

Yoga plays a significant role in promoting eye health. A yoga routine replete with asana, pranayama and mediation helps in achieving peace and tranquillity. Yogic eye exercises strengthens the muscles of the eye and thus help in curing many ailments aft h eyes. Certain eye exercises are known completely rectify eye problems. With yoga one can treat their eyes with care which reflects in good eye health.



Paper ID: 133

## INTEGRATED APPROACH IN REFRACTIVE ERRORS

Ashwitha M

GAMC, Bangalore  
ashwitha1991@gmail.com

Every system of medicine has its own contribution to the society. West is highly developed with vaccines, investigatory procedures, & diagnostic tools. East is well identified with its unique way of approach to patient as well as disease, role of mind & body in health. In present scenario the holistic approach yields man a better way to have healthy life.

Refractive error is a condition where there is a no permanent solution in current ophthalmic practice. Correction of glasses will not help in relieving the condition. Lasik therapy has its own risk and limitations. It is well identified even early due to improved technology. Spectacles act as an helping aid to support his vision, rather than improving his vision.

Ayurveda helps in improving the vision in a natural way. Line of treatment like Nasya, Seka Tarpana, Putapaka, pindi, Rasayana has shown tremendous effect in improving the vision. One can also practice Eye Exercise as said by Bates and also tratoka to maintain the vision. Awareness of Eye education must be created among the people to avoid the bad vision.

One cannot avoid spectacles if he is having any refractive error. Simultaneously if one follows the ayurvedic treatment, it has a remarkable effect in the patient. The power of the lens & asthenopic features can be reduced.

Paper ID: 134

## STUDY OF THE EFFICACY OF VYAYAMA AND YOGA IN DIABETES

Dr. Yogeesha acharya

Dept. of Swasthavritta.SDM College of  
Ayurveda and Hospital, Udupi, Karnataka  
yogeeshadr@gmail.com

**Background:** Diabetes Mellitus is a disease related to the impaired glucose tolerance of the body, insulin functioning is affected. Diabetes Mellitus can be of Type 1 or Type 2 or pancreatic diabetes or gestational diabetes. Type 1 diabetes is caused by No production of insulin and this is very difficult to treat with Yoga. Type 2 diabetes which is caused by life style, stress related diseases can be effectively treated with Yoga.

**Method:** 20 patients of Type 2 diabetes were selected incidentally .The patients were registered and treated as our patients for the present study with the help of Performa prepared for the study. The patients of Type 2 diabetes, belonging to the age group 20-60 years irrespective of the sex, caste, race and socio-economical status, with a BMI 25 and above were selected for the study. The study was undertaken to compare the efficacy of Vyayama and Yoga in the management of Sthoola Madhumeha. The selected patients were assigned randomly into two groups of 20 patients each. The patients were taught to perform the Vyayama (Group A) and yoga (Group B). Same general rules, and diet chart were advised in both groups. The study period was 30 days.

**Result:** The basic concept behind these therapies is to enhance the insulin sensitivity in the target cells, to attain the ideal BMI by gradual reduction of the weight at the rate of 0.5 kg per week as evident from the study, and to maintain the blood glucose level within normal range. Ideal approach to the



disease is by correcting their sedentary life style by education.

**Conclusion:** The Yoga or Vyayama therapy is alone sufficient to manage mild cases of diabetes. The mild to moderate form of exercise and Yoga therapy reduces the body weight by 0.5 kg per week, which is recommended by the physicians. Gradually the tapering of the oral hypoglycemic drug dosage can be achieved.

Paper ID: 135

### **EFFECT OF INTEGRATED YOGA DURING IN VITRO FERTILIZATION (IVF)- A CONTROLLED STUDY**

Dr. Manjusha Nandakumar,

Dr. Divyashree P.S., Dr. Kamini Rao,

Dr. Nagarathna Raghuram

manjusha.ratna@yahoo.com

**Objective:** To evaluate the effect of Yoga on fertility as complimentary therapy in patients undergoing in vitro fertilization (IVF).

**Design:** Prospective interventional matched control two arm design.

**Materials and methods:** Integrated Yoga as per the guidelines of SVYASA was taught to subjects who had registered for IVF treatment for infertility at Milann Infertility center (2014 to 2015). Bengaluru. A matched cohort from the same center who did not do Yoga formed the control group. Two different modules of integrated Yoga were taught: (a) in the month before the induction and before embryo transfer (ET) and (b) after ET.

Chi squared test and independent samples test were used for statistical analysis.

**Results:** Out of 2500 women who registered for treatment at the center for different conditions, there were 450 subjects who underwent IVF treatment between the period

of this study [March 2014 to Nov 2015]. Of these, 324 subjects who consented to undergo yoga were included in the study. Of these 168 registered for yoga program and others 156 did not register due to various reasons. There was no significant difference between the two groups on baseline variables of demography and other outcome measures.

In the yoga group 47.1 % were positive for pregnancy as confirmed by the serum Beta HCG hormone levels while it was 32.1% in the control group( 39.8% in whole group) with significant difference between the two groups(  $p=0.002$   $\chi^2$  test).

Total dosage of Gonadotropin hormone required for induction was lesser in the yoga group ( $P < 0.001$ , independent samples t test). The mean follicle count was higher by 29.74% ( $p < 0.001$ ), mean Oocytes count was higher by 21.62% ( $p < 0.001$ ), and the average matured egg count retrieved was higher by 36.2% ( $p < 0.001$ ) in the Yoga group as compared to the control group.

**Conclusion:** This two arm controlled study has shown that integrated yoga practiced as complimentary before and after ET offers significantly better results in women undergoing IVF for infertility than those undergoing conventional treatment .

Paper ID: 136

### **MECHANISMS RESULTING IN EARLY ONSET OF SLEEP FOLLOWING HOT FOOT IMMERSION: A CONCEPT PAPER**

Arundhati Goley, Suvith V Das,

Sriloy Mohanty, Apar Saoji

The School of Yoga and Naturopathic  
Medicine, S-VYASA University, Bengaluru

Sleep related disorders though frequent are the most under reported and their implications are often neglected. Insomnia being the most



common among sleep disorders have highest incidence in Indian population. Disturbed sleep is associated with day time sleepiness, reduced attention and also identified as a risk factor for diabetes and other cardiovascular disorders. Previous studies have inferred that a decreased core body temperature may play a vital role in early onset of sleep and maintaining healthy sleep pattern. Naturopathy has been reported to give promising results to improve quality as well as early onset of sleep, specially for insomniac. Clinical studies have demonstrated Hot Foot Immersion (HFI) a hydrotherapeutic modality under naturopathy being beneficial to enhance sleep quality, but the exact mechanism for the same remains unclear. In this article we postulate possible mechanism of HFI promoting early onset of sleep. Reduction of core body temperature is one of the characteristic features during the onset of sleep. HFI may reduce the core body temperature by activating warm sensitive neurons (POAH) present in hypothalamus which have connections with supra-chiasmatic nucleus and regulates circadian rhythm of sleep wake cycle. This may activate thermoregulatory system and brings vagal predominance which may be helpful in promoting early onset of sleep, maintenance of deep sleep and reducing number of awakening in insomniac.

Paper ID: 137

## IMPACT OF SUPPLEMENTATION OF IRON RICH BISCUITS ON ANAEMIC TRIBAL ADOLESCENT GIRLS

Bharathi Dhevi, Dr. Bhooma Mani  
S-VYASA Yoga University, Bangalore  
bharathidhevi@gmail.com

**Background/Introduction:** India is a home to a large number of tribes known for their varied

culture and tradition. The *irular* tribes are the ancient tribal group living in the lower slopes of the Western Ghats Mountain spread over Coimbatore district.

**Methodology:** The present study was conducted in nine Government tribal schools situated in this irular tribal areas. Total number of registered tribal adolescent girls in the age group of 13 - 16 years were 615. But only 523 participated in the screening programme. As a part of the screening, clinical examination was carried out for all the 523 adolescent girls for the presence of signs and symptoms of anaemia. The haemoglobin level of all the girls were estimated using Sahli's haemometer method. A questionnaire was developed to collect the details regarding the family size, occupation and income level, details regarding the age of menarche etc. directly from the tribal anaemic adolescent girls.

**Results:** The results of the screening and other nutritional status parameters revealed that all 523 adolescent girls were moderately anaemic. Hence they were supplemented with iron rich biscuits for a period of six months. Nutrition education was also planned for these girls along with their parents, teachers and warden regarding adolescent nutrition and prevention of anaemia among adolescent girls.

**Conclusion:** The observations of the present study was encouraging and exhibited the beneficial effect of iron rich biscuit supplementation coupled with nutrition education in the prevention of anaemia among adolescent girls.



Paper ID: 138

## ROLE OF NADI SHODHANA PRANAYAM IN HYPERTENSIVE RETINOPATHY

Dr. Ratnawwa Nayik and

Dr. Suja K Sreedhar

PG Scholar, dept of shalakyta tantra,

G.A.M.C Bangalore

dr.ratna.drn@gmail.com

Pranayama means control over breath. Prana in Indian philosophy refers to all forms of energy; pranayama breathing has been shown to alter autonomic activity and indicates decrease in basal sympathetic activity. In India prevalence rate of hypertensive retinopathy is 31.9%.

Hypertensive retinopathy represents the ophthalmic findings of end organ damage secondary to arterial hypertension, that are pathologically related to both transient and persistent microvascular damage from elevated blood pressure. Elevation of systemic blood pressure cause both focal and generalized constriction of retinal arterioles mediated by auto regulation, prolonged duration of high blood pressure can be associated with a breakdown of inner blood retinal barrier with extravasations of plasma and RBC's. Retinal haemorrhage, cotton wool spots and retinopathy is considered as one of the indicators of target organ damage. Nadishodhana pranayam rapidly alters cardiopulmonary responses and improves immediate effect on heart rate, systolic and diastolic blood pressure, peak expiratory flow rate. With increased awareness, interest in health and natural remedies, one can prevent the higher incidence of occurrence of hypertensive retinopathy.

Paper ID: 141

## REMEDIAL YOGA MODULE FOR IRRITABLE BOWEL SYNDROME: REPLICATION AND SUSTAINED IMPROVEMENTS

Vijaya Kavuri<sup>1,2\*</sup>, Pooja Selvan<sup>1</sup>, Alireza

Tabesh M.D.<sup>3</sup>, Nagarathna Raghuram

M.D.<sup>2</sup>, and Senthamil R. Selvan Ph.D.<sup>1,2</sup>

<sup>1</sup>Vivekananda Yoga Research Foundation,  
Norwalk, CA, USA;

<sup>2</sup>Swami Vivekananda Yoga University  
(SVYASA), Bangalore, Karnataka, INDIA;

<sup>3</sup>White Memorial Medical Center, Los  
Angeles, CA, USA;

\*PhD scholar, SVYASA, Bangalore,  
Karnataka, INDIA

**Background:** A 12-week Remedial Yoga Module (RYM) randomized controlled trial suggested that RYM is efficacious in improving the symptoms of Irritable Bowel Syndrome (IBS). In this study, we evaluated the outcome of RYM intervention in the Wait List-Yoga (WL-Yoga) group and impact of maintenance intervention for 12 more weeks on patients that completed the 12 weeks of RYM.

**Methods:** The Wait list Control group (WL-Yoga) from our previous 12-week RCT was offered the same RYM practices as was given to Yoga and Combination groups. All patients completing the 12-week RYM intervention from all groups were combined as one group, Follow-up group (n = 28), and were offered an additional 12 weeks of once a week, one hour RYM intervention. IBS-Symptom Severity Scale, IBS-Quality of life, Hospital Anxiety and Depression Scale, Autonomic symptom score, IBS-Global Assessment of Improvement, Medicine and supplement use, Body Mass Index, physical flexibility and autonomic functions were assessed.



**Results:** WL-Yoga group reflected the improvements of IBS symptoms as observed in Yoga and Combination groups. Results of Follow-up group revealed that all the significant improvements observed at Week 12 were sustained at Week 24, with significant further improvements in few assessments; in IBS-SS scale ( $p < 0.01$ ), IBS-GAI ( $p < 0.05$ ), right and left shoulder flexibility ( $p < 0.05$ ), and increased parasympathetic tone.

**Conclusion:** Efficacy of Remedial Yoga Module for IBS is replicable and the improvements were sustained or enhanced with a maintenance intervention. RYM alone or RYM combined with conventional care could be a safe and effective long-term treatment option for IBS patients.

Paper ID: 142

## VIJNANAMAYA KOSHA FROM THE PERSPECTIVE OF SCIENCE

Srinidhi Nayak R\* and Sanjib Patra

\*The School of Yoga and Naturopathic Medicine, S-VYASA Yoga University, Bangalore

**Background:** Every individual has five layers of existence. In Vedanta they are known as Koshas and Vijnanamaya kosha is one among them. It is the fourth layer of our existence, the sheath of our inherent knowledge and wisdom.

**Aim of the study:** The present study is aimed at understanding Vijnanamaya kosha from the perspective of science.

**Scientific understanding about Vijnanamaya Kosha:** Experience plays a crucial role in the formation of intellect. In a very simple term, the vital component of Vijnanamaya kosha is our notion that drives us. It is related to a much unknown part of the Universe. It is like a connecting link between our conscious

and unconscious mind. It has its connection with cosmos which is like a store house of all source of knowledge. The dream that we see is like a vehicle for our Vijnanamaya kosha is to connect the individual consciousness with cosmic life. And that is the reason why many a times dream come true. But in our day to day activity, we overburden our brain with so much of information, dream acts like a soap to wipe out the unrehearsed information.

**Operational tool:** Siddhanta vakya shravana, counselling, Satsang and Self introspection have been the tools for operating Vijnanamaya kosha. Through all these, an individual comes to know about his true self and act accordingly.

**Conclusion:** Through solving life problems, people can attain self-realization and enlightenment and improve their behavioural pattern to act more reasonably and appropriately in the future.

Paper ID: 143

## ANANDAMAYA KOSHA FROM THE PERSPECTIVE OF SCIENCE

Sashiprabha Pandey\* and Sanjib Patra

\*The School of Yoga and Naturopathic Medicine, S-VYASA Yoga University, Bangalore

**Background:** Every individual has five layers of existence. In Vedanta they are known as Koshas and Anandamaya kosha is one among them. It is the fifth and last layer of our existence, the sheath of our bliss and happiness.

**Aim of the study:** The present study is aimed at understanding Anandamaya kosha from the perspective of science.

**Scientific understanding about Vijnanamaya Kosha:** Anandamaya kosha is composed of ananda, or bliss. In the Upanishad, this sheath



is known as the causal body. Anandamaya kosha is the blissful sheath and it is the reflection of our Atman (individual consciousness). With our scientific understanding, ananda is referred as happiness and when we are in the state of happiness, our brain releases many feel good hormonal neurotransmitter viz., endorphin, dopamine, serotonin etc. It has been proved that endorphin is a natural pain reliever whereas dopamine is a mood elevating and serotonin provides mental relaxation.

**Operational tool:** Analyzing the real source of happiness needs to be understood. And that is the reason why doing work without expecting fruits and becoming happy all the time have been the key tools for Anandamaya kosha.

**Conclusion:** Happy people as compared with less happy people tend to have greater immune system functioning, a reduced risk of Diabetes and cardiovascular disorders.

Paper ID: 144

## ANNAMAYA KOSHA FROM THE PERSPECTIVE OF SCIENCE

Indukala\* and Sanjib Patra

\*The School of Yoga and Naturopathic  
Medicine, S-VYASA Yoga University,  
Bangalore  
Indhu.dubba@gmail.com

**Background:** Every individual has five layers of existence. In Vedanta they are known as Koshas and Annamayakosha is one among them. It is the first layer of our existence, the physical body.

**Aim of the study:** The present study is aimed at understanding Annamaya kosha from the perspective of science.

**Scientific understanding about Annamaya Kosha :** According to Ayurveda, Annamaya

kosha or the physical body is formed by Saptadhatus (seven important components). It is also made out of the three basic constituents like vata (air), pitta (bile) & kapha (phlegm) and Karmendriyas (organs of actions) & Jnanendriyas (sense organs). Annamayakosha is often referred as human physical body. According to science, our body is made out of molecules viz., water, protein, carbohydrates (glycogen & glucose), fats, connective tissue and DNA. In terms of tissue, the body has variety of tissue which is composed of cells. Our body has trillions of cells containing large number of atoms and the play of atoms is reflected in the form of various life processes viz., digestion, circulation, respiration, excretion, reproduction etc. Each of the process is dedicated to a system and many systems join together to form a body.

**Operational tool:** Yoga practices such as Asanas (yoga postures) and Kriya are the two key practices that are found to be helpful in culturing the body by producing the massaging effects between the internal organs & manipulating the pressure within the organs and rejuvenate & revitalize them.

**Conclusion:** Asanas and Kriyas are found to be beneficial in the management of diseases as they work at the body level and in addition to this dietary regulation work hand in hand in the management of various diseases.

Paper ID: 145

## MANOMAYA KOSHA FROM THE PERSPECTIVE OF SCIENCE

Bhavit Bansal and Sanjib Patra

The School of Yoga and Naturopathic  
Medicine, S-VYASA, Bangalore  
[bansalbhavit94@gmail.com](mailto:bansalbhavit94@gmail.com)

**Background:** Each individual has five layers of existence just like electromagnetic field or radioactive field. In Vedanta they are



known as Koshas and Manomaya kosha is one among them. It is the third layer of our existence which is composed of mind and it is our consciousness.

**Aim of the study:** The present study is aimed at understanding Manomaya kosha from the perspective of science.

**Scientific understanding about Manomaya Kosha:** Mind is a field of energy by itself but is a field of negative energy. Mind is derived from the literal Sanskrit word 'Manas', which means, one that cognize, perceive and understand and therefore cognition, perception and comprehension have become three basic qualities of mind. Malfunctioning of these three qualities make turbulence and bring speed in the mind. And speed in the mind is the cause for stress. Medical science has understood that stress is the root cause for psychosomatic ailments. Turbulence and speed is transmitted into our Nervous and Endocrine system resulting electrical and chemical changes.

**Operational tool:** The intention of meditation is to empty or calm the mind and hence Dhyana or meditation has been the operational tool for Manomaya kosha. In other words, an individual would be in a position to handle the turbulence or speed by practicing meditation.

**Conclusion:** Through the Antaranga practices viz., Dharana and Dhyana, one can be trained to calm the mind so as to become free from the hazardous effect of stress and thereby leading a healthy lifestyle.

Paper ID: 146

## PRANMAYA KOSHA FROM THE PERSPECTIVE OF SCIENCE

Aniruddha Arya and Sanjib Patra  
The School of Yoga and Naturopathic  
Medicine, S-VYASA Yoga University,  
Bangalore  
[aniruddhabarya@gmail.com](mailto:aniruddhabarya@gmail.com)

**Background:** Each individual has five layers of existence and the layer of subtle energy is one of them. In Vedanta they are known as Koshas and Pranomayakosha is one among these five layers. It is the second layer of our existence which is composed of Prana or Life force, which is a part of cosmic life.

**Aim of the study:** The present study is aimed at understanding Pranomaya kosha from the perspective of science.

**Scientific understanding about Pranomaya Kosha:** Prana is a subtle, inherent and unseen energy and also the force for all kinds of motion. Prana is neither the oxygen made available to our body nor synthesis of ATP and superoxide. It is like the electromagnetic energy giving rise to radiation in which the waves of electrical and magnetic energy are at ninety degrees to each other, resulting in a spiral structure. This kind of structure is noticed around the Chakras. This force is highly influenced by speed of the mind and its effect is noticed in the form of either constriction or dilation of Nadis that carries Prana to the internal organs in our body. Lack or over supply of Prana leads to manifestation of symptoms in the physical body. Probably, in the terminology of Dr. Selye, it is the adaptation energy that every individual does have and this can be correlated as Prana.

**Operational tool:** Prnayama is a technique in which manipulation of breath is involved and it is found to be helpful in expanding



the flow of Prana throughout the body and thereby eradicating various manifestations of symptoms of diseases.

**Conclusion:** In principles every individual is born with certain quantum of Prana and this keeps on fluctuating with the air that we breathe, the food we eat, the thoughts we think, the actions we perform and the life that we lead. Pranayama is a yogic technique found to be like a Panacea for benefiting the diseased organs.

Paper ID:147

### **A CRITICAL ANALYSIS ON THE ACTION OF ASHVINI MUDRA IN HEMORRHOIDS**

**Dr. Kulkarni Sharad**

PG Student, Dept. of Shalya tantra, GAMC, Bengaluru

Since ages there are strong efforts to counter act Hemorrhoids which is a swollen vein or group of veins in the region of anus. Till date few of the interventional surgeries are satisfactory but with post op complications. Efforts to frame a complete treatment for Hemorrhoids are still on. Ashvini mudra is one such mudra which can fill the lacunae in treating Hemorrhoids. This unique reference can be found in Gheranda samhita. It is the mudra involving the anal sphincter muscles which is known to destroy the diseases of guhyaanga which can also be equated to rectum. In this evidence based era it's the need of the hour to highlight on the probable mode of action of this mudra in Hemorrhoids.

Paper ID:148

### **EFFECT OF SHEETALI AND SHEETKARI PRANAYAMAS ON AUTONOMIC AND RESPIRATORY VARIABLES IN PATIENTS WITH HYPERTENSION - A RANDOMIZED CONTROLLED TRIAL**

**\*Kiran Kumar Reddy, \*\*Prashanth Shetty**

\*Assistant Professor, SDMCNYS

\*\*Principal, SDMCNYS

Hypertension is a chronic medical condition affects nearly 1 billion people worldwide and 2/5th of Indian urban adult population. Yoga plays a major role in reduction of blood pressure. In the present study sixty hypertensive subjects aged between 25 to 65 years were recruited and randomly divided into experimental (n=30) and wait list control groups (n=30). The subjects recruited for the experimental group were administered with Sheetali and Sheetkari pranayama for 30 days of duration 20 minutes. Autonomic & respiratory functions were measured before and after 30 days of intervention. Subjects of wait-list control group underwent similar intervention as that of experimental group after the completion of study. Data was visualized for normal distribution and analyzed by using paired sample 't' test with SPSS Version.21 package. There was a significant decrease in the blood pressure, heart rate, and increase in the HF power, NN50 and pNN50 values in experimental group after the practice of Sheetali & Sheetkari pranayamas. Sheetali Sheetkari pranayamas reduces sympathetic tone and shifts symapthovagal balance towards vagal dominance and hence support the claim that these pranayama's can be effectively used in lowering the blood pressure in hypertension.



Paper ID: 151

**INTEGRATED APPROACHES AND  
ACHIVEMENTS OF ADVANCED  
CENTRE FOR AYURVEDA  
IN MENTAL HEALTH AND  
NEUROSCIENCES NIMHANS  
BANGALORE**

Dr. D. Sudhakar<sup>1</sup>, Dr. S.K. Tiwari<sup>2</sup>,  
Dr. H.K.Gupta<sup>3</sup>, Dr. Srinibash Sahoo<sup>4</sup>,  
Dr. Ramana,<sup>5</sup> Dr. Sulochana Bhat <sup>6</sup>

<sup>1</sup>Assistant Director (Ay, Scientist 4),  
NIMHANS, Hosur Road, Bengaluru, India  
acamhns.bengaluru@gmail.com

**Background:** Advanced Centre for Ayurveda in Mental Health and Neurosciences was established Ayurvedic Research Unit at then "All India Institute of Mental Health and Neurosciences (Presently NIMHANS) in November 1959 on the recommendations of Dr. Udapa committee in the view of mainstreaming of Indian Traditional medicine. The Unit was taken over by the presently Central Council for Research in Ayurvedic Sciences (CCRAS), Ministry of AYUSH, Government of India during July 1971 with an aim to provide holistic health care to the patients. Since inception the centre is successfully catering to the needy patients at Out Patient and In Patient level by following integrated approach in collaboration with Allopathic Departments in NIMHANS campus for Neurological and Psychiatric disorders.

**Facilities Available:** Out Patient Department, In Patient Department, Dispensary, Panchkarma Section, Geriatric OPD, Muscular Dystrophy special OPD.

**Intra Mural Projects:** This Unit conducted clinical studies in about 28 Neurological and Psychiatric disorders and outcome of which are published in the form of articles and

monographs. Presently projects on Cognitive Deficit and Generalizes Anxiety Disorder are going on.

**Collaborative projects:** The centre has completed four collaborative studies on Generalized anxiety disorders, Motor weakness due to ischemic stroke, depression and Manasamandata in collaboration with Dept of Neurophysiology and Child Psychiatry.

**Other activities:** Periodic seminars / workshops, telemedicine consultation, outreach activity for Schedule Cast Population through a Sub plan programme, free medical camps for the general public and at old age homes, homes for the mentally challenged children.

Paper ID: 152

**PRACTICE OF YOGA IN STRESS  
MANAGEMENT ACCORDING TO  
ASHTANGA YOGA**

Veerisetty Neeraja<sup>1</sup>, Annapoorna K<sup>2</sup>

<sup>1</sup>Lecturer Yoga Instructor Rri(H),  
<sup>2</sup>gudiwada Selection Grade Department of  
Yoga, Kasturba Medical College, Manipal  
University

Stress is a common condition, an internal state which can be caused by physical demands on the body or by environmental and social situations which evaluated as potentially harmful uncontrollable or exceeding our resource for coping. This stress gives rise to more stress which manifests in the form of psychosomatic symptoms or disorders. A decreasing quality of life, increasing health hazards, social unrest, student unrest which are all different expressions of stress, have shown no trends of decrease. The current mechanistic world view, the matter based approach the increased dependence on



science and technology and associated life style have to undergo basic changes towards embracing a more holistic world view and a healthier and more harmonious life style. Yoga is a science to calm the mind and steady the emotions by overcoming stress and attaining relaxation.

This paper aims at understanding manifestation and management of stress according to Patanjala Yoga Sutra. Sage Patanjali defines yoga as restraining modifications of the mind. Thus yoga is skillful methodological way to calm down the mind. Also is a science, which deals with the body and mind and control of body and mind. Sage Patanjali proposes the techniques of yoga for reducing the stress and its manifestations. For removing these causes and signs and symptoms of stress constant practice of samadhi is explained to develop the capacity to pursue constantly one objective inside within the realm of consciousness. Patanjali explains practice of Ashtanga yoga or limbs of yoga to attain samadhi and mental tranquility.

Paper ID: 153

### **A STUDY TO ASSESS THE EFFECT OF TRATAKA YOGA KRIYA (EYE EXERCISES) AND CAROTENIOD JUICES ON MYOPIA.**

Dr Dara Vinod, Dr V.Sankar Nag  
Vinoddata22@gmail.com

**Background:** The present prospective study on myopia randomised trail compared the efficiency of giving carotenoid juices daily for one group and giving carrot juice with Trataka yoga kriya for another group of myopia patients.

**Methods:** 50 Study participants Inclusion criteria included 15-50 years old, bisexual

with clinical conditions of myopia only. The study was conducted for 2 months of period dividing the participants into two groups. Group 1(n=25) having carotenoid juice 60ml consumption daily and Group 2 (n=25) consumption carotenoid juice (60ml) and regular Trataka eye exercises for 30minutes daily as guided. Pre-test and post-test screening was done by following Snellen scale chart and other computer operating eye test as required.

**Results:** At the end of the 2 months the group-1 have improved the vision by 15% and the group- 2 has a significant result in decreasing the eye sight and increased vision by around 60% and other complications.

**Conclusion:** This study support for the regular practice of Trataka (eye exercises) for 30 minutes and regular consumption of carotenoid juice will increase the eye power and reduce the myopia conditions along with other complications and increase in Quality of life.

Paper Id: 154

### **A COMPARATIVE STUDY OF YOGA, NATUROPATHY & CONVENTIONAL CONSERVATIVE MEDICAL TREATMENT IN THE MANAGEMENT OF LOW BACK PAIN**

Dr.S.Sindh

Post Graduate Scholar

SDM College of Naturopathy and Yogic Sciences

**Introduction:**Low back pain is defined as pain in the lower region of the back, between the last rib and the gluteal fold. There are many previous studies reported which compared effect of yoga and conventional



conservative medicine or naturopathy and conventional conservative medicine, but to the best of our knowledge there is no study conducted to compare the effectiveness of yoga, naturopathy and conventional conservative medicine. Hence the present study is undertaken to create a better protocol for treating low back pain.

**Aim and Objectives:** To compare the effects of naturopathy, yoga and conventional conservative medical treatment for low back pain using the following methods.

- Pain Analogue Scale to measure the severity of pain.
- Oswestry Disability Index for assessing the disability level of back pain.
- Finger tip to floor test (touch) will be used for assessing the lumbar range of motion.
- SF-36 to measure health related quality of life.

**Methods:** In this prospective comparative study, a minimum of 90 eligible participants, 30 each will be recruited to 3 different study groups between 18 to 45 yrs of age were assigned to receive in yoga (*Asana, Pranayama and Relaxation techniques*) naturopathy (neutral spinal bath and partial massage to low back region) and conventional conservative medical treatment (NSAIDS). The measurement were taken on the 1<sup>st</sup> day and on the 10<sup>th</sup> day of the study.

**Results:** Naturopathy group in my study was analyzed, yoga and conventional conservative medical treatment are not analyzed.

Paper ID: 155

## FACILITATING ADOPTION OF YOGIC LIFE STYLE AMONG SCHOOL GOING ADOLESCENTS

Arun Pratap Singh

Department of Psychology, School of Education, MG International Hindi University,  
Wardha, Maharashtra- 442001, India  
jyotiarun13@gmail.com

Adolescent health has become a serious challenge for the researchers, health professionals and policy-makers. It has been widely acknowledged that yoga can be effective in addressing several health concerns in school adolescents. However, the school authorities find the task of persuading adolescents to adopt yoga quite difficult. Against this backdrop, present research paper elaborates key learnings of the researcher in conducting yogic life style intervention at a residential school. In particular, it brings into focus the contextual factors, enablers, and barriers of change in adolescent life style critical to the adoption of yogic life style by school adolescents and presents some recommendations to that end.

Paper ID: 157

## BRAHMARI PRANAYAMA MAY ENHANCE THE DRAINAGE OF METABOLIC END PRODUCTS THROUGH CEREBRAL VESSELS: A HYPOTHESIS

Vishal Bhat, Kiran Hendre

vishal.bhat@live.com

The School of Yoga and Naturopathic Medicine, S-VYASA University, Bengaluru

The strict homeostasis of internal atmosphere of CNS is maintained by the Blood Brain Barrier (BBB) in the cerebral capillaries which



forms the structural and chemical barrier between the brain and systemic circulation. It is composed of extensive tight junction that severely restricts cell permeability. It does not allow exit of waste products very easily and also there is no lymphatic system in brain cells to remove these waste products. Therefore it is essential to increase the permeability of BBB to drain the metabolic end products which usually tend to accumulate into the brain interstitium.

The yogic breathing known as *bhramari* pranayama which is characterized by the production of humming bumble bee sound mimics the vibrato effect induced increased permeability of the BBB which would efficiently drain the accumulated metabolic waste products from the interstitium. The *bhramari* pranayama practiced with the closure of ear dominates bone conducted sound in audition and vibrational effect is felt strongly while in the open ear condition bone conducted sound is getting out through ears weakening the vibration. The vibrato components of the humming sound has a very low frequency range of 3Hz - 8Hz penetrating deeper in the brain through vibro-acoustic effects. Since the brain cannot be administered with the mechanical stretching exercises the *Bhramari* is the best alternative acting as the cranial booster.

Paper ID: 158

## THE EFFECT OF ANTA KUMBHAKA ON LYMPHATIC DRAINAGE

Kiran Hendre, Vishal Bhat

kiranhendreyoga@gmail.com

The School of Yoga and Naturopathic  
Medicine, S-VYASA University, Bengaluru

The vital bodily functions encompassing  
detoxification and defense are accomplished

through the lymphatic system, which is characterized by the unidirectional upward flow of lymph. Fundamentally the two major lymphatic ducts, right lymph duct and thoracic duct eventually drain into the junction of internal jugular vein and subclavian vein on the either sides. The interstitial fluid comprising the substances of higher molecular weight such as proteins returns to the circulation by absorption through the blind ended tubules of lymphatics. The endothelial cells of lymphatic capillaries are arranged in such a way that they form a minute valvular structure sequentially contracting and relaxing to enhance the flow of lymph towards the thoracic region. The lymphatic flow is aided by the contraction of skeletal muscles, diaphragm and intestines along with arterial pulsations adjacent to the lymphatics.

The yogic intervention of antar kumbhaka consists of internal retention of breath following inhalation, can significantly improve the lymph propulsion. The thoracic duct is squeezed on inhalation enforcing the lymph fluid into the subclavian and jugular veins. This creates the partial vacuum in the thoracic duct so that upon exhalation more fluid is pumped from abdominal trunk into the thoracic duct. In antar kumbhaka, the inferior movement of diaphragm creating increased intra-abdominal pressure gives the massaging effect on the visceral lymph nodes and lymphatic vessels endorsing the lymphatic drainage. Since this yogic intervention is self-administered without any assistance can be the best alternative for the manual lymphatic drainage.



Paper ID: 159

**EFFECT OF ONE MONTH YOGIC INTERVENTION ON STRESS, ANXIETY, DEPRESSION, QUALITY OF SLEEP, QUALITY OF LIFE AND VERBAL MEMORY AMONG UNEMPLOYEES- A RANDOMIZED CONTROLLED TRIAL**

Dr. Chethan Kumar,  
BNYS, MD (Yoga Clinical)

**Background:** Unemployment is known to deteriorate the physical and psychological well-being. Quality of life and neuropsychological functions are important factors influencing health outcomes as well as successful returns to work. This study aims to determine the extent to which quality of life and neuropsychological functions correlates with mental health and socio-demographic characteristics in a sample of long term unemployed persons.

**Methods:** 100 unemployed subjects were selected from a population of 507 unemployed attending training program at Rural Development and self-employment training Institute (RUDSETI) Ujire, Belthangady Taluk, Dakshina Kannada into two groups 50 in each group and they were assessed for Quality of life, Anxiety, Depression, Quality of sleep, Stress levels and Verbal memory before and after one month of yogic intervention.

**Results:** Between groups changes assessed using independent t test, showed that one month yogic practices among unemployed individuals show a significant improvement in overall Quality of life ( $p \leq 0.001$ ) and its subscales & Sleep quality ( $p \leq 0.005$ ). Also, a significant reduction in depression ( $p \leq 0.001$ ), anxiety ( $p \leq 0.001$ ) and stress ( $p \leq 0.001$ ) were observed. Memory scores ( $p \leq 0.875$ ) didn't show any significant changes

**Conclusion:** Yogic practices are effective in enhancing the psychological well-being of unemployed individuals.

Paper ID: 160

**INTEGRATING AYURVEDA AND YOGA THERAPY FOR DIABETES MELLITUS II**

Veerisetty Neeraja<sup>1</sup>, Dr. Alekya Bavisetty  
Gudiwada  
neerajayoga@gmail.com

**BACKGROUND:** The relevance of yoga in twenty-first century healthcare has become the subject of global medical research with investigations on its impacts on psychosomatic, metabolic and autoimmune disorders, all of which are present in the disease complex of Type II Diabetes mellitus (T2DM). Although exercise is now recommended as part of conventional care, yoga as an adjuvant to conventional therapy has been shown additional health benefits. Ancient Vedic methodologies on yoga therapy purport that superior benefits occur when yoga is practiced holistically including yogic diet. As an adjunctive treatment, yoga therapy holds potential in addressing the limitations of contemporary diabetic care.

**METHODS:** 67 participants were randomly assigned into the three groups. Group B received training in yoga postures and yogic breathing techniques. Group C received instruction in aerobic exercise. Group A received the same intervention as Group B, in addition they were given yogic dietary recommendations and a weekly diet record sheet. All groups were instructed to practice daily 60-minute intervention for 24 weeks and record on a checklist, with weekly supervision. Hemoglobin A1C (HbA1C), FBS, weight and BP were measured at baseline and 24 weeks.



**RESULTS:** Group A and B showed significant ( $P < 0.05$ ) reductions across all measures, while group C only showed improvement in blood pressure. In addition, Group A showed the better improvement in comparison to the other groups in HbA1C, FBS and weight. These results indicate that yogic diet as an add on to yoga therapy may improve in the treatment of T2DM.

Paper ID: 161

### **IMPACT OF YOGA AND NATUROPATHY LIFESTYLE INTERVENTION ON OBESITY**

Dr. Nandeesh N. S.

Assistant Professor SDMCNYS, Ujire

**Background and Aim of the study:** Obesity is a state of excess adipose tissue mass due to positive energy balance, in the presence of nutritional abundance and a sedentary lifestyle, and influenced importantly by genetic endowment. There is an alarming increase in the incidence and prevalence of obesity and its adverse health effects Worldwide. The possible solution seems to reverse these trends, and help those already obese to adopt a lifestyle that encourages weight loss, including a healthy diet and greater physical activity. To study the impact of yoga and naturopathy based lifestyle intervention, and diet counselling on obese individuals and to evaluate the effect of Yoga and Naturopathy lifestyle intervention in obese individuals, only diet modification and compare with a wait list control group in obese individuals with respect to Body mass Index (BMI), Hip/waist ratio (WHR), Body composition, Change in Quality of life.

**Materials and Methods:** Three groups of 90 obese subjects BMI more than 30 and not exceeding 40 belonging to both the genders

(Males 41 and Females 49) with age groups ranging from 21 to 35 years, 30 subjects in each were recruited for the study. 1<sup>st</sup> group underwent 10 days Yoga and Naturopathy intervention, 2<sup>nd</sup> group Diet counselling and 3<sup>rd</sup> group was wait listed control group. The subjects were assessed for Body Mass Index, Waist/hip ratio, Body fat and Quality of life at the base line and after 10 days.

**Results:** Paired sample t test comparing "Post" with "Pre" values showed significant decrease in all the parameters in Body Mass Index, Waist Hip Ratio, Fat%, Fat Mass, Total Body water%, Basal Metabolic Rate, Degree of Obesity within the experimental groups. One way ANOVA showed significant decrease in BMI in Naturopathy and yoga intervention group.

**Interpretation and conclusion:** Yoga and Naturopathy, which is a drugless therapy and diet counselling, can be effectively used to reduce the problems in obesity individuals besides improving their quality of life.

Paper ID: 162

### **EFFICACY OF YOGA THERAPY IN MODULATION ON HEART RATE VARIABILITY IN SCHIZOPHRENIA**

Asha Vijayan<sup>1</sup>, S. Ramachandra<sup>1</sup>,  
Sneha Karmani<sup>2</sup>, Shivarama Varambally<sup>2</sup>,  
BN Gangadhar<sup>2</sup>, Sathyaprabha TN<sup>3</sup>

<sup>1</sup>Department of Nursing, NIMHANS,  
Bangalore

ashav625@gmail.com

**Background:** Schizophrenia is among the most severe psychiatric disorders. Yoga as an adjuvant therapy has shown improvement in the regulation of neuro-cardiac-autonomic regulation in many neuro-psychiatric disorders. Yoga has also led to improvement



in symptoms of schizophrenia. Measures of heart rate variability are increasingly being employed as diagnostic as well as prognostic indicators. The aim of the present study was to evaluate the effect of yoga on heart rate variability in patients with schizophrenia.

**Subjects and methods:** Patients with schizophrenia (F: M =29:21, mean age 30.78±7.71 years, duration of illness 5.3±0.81 years) were randomly allotted to either Yoga with conventional care (Y) (n=25) or conventional care (Cc) (n=25) groups. Those in the yoga group were taught a specific yoga module with asanas and pranayama (1 hour a day) for 12 sessions over 2 weeks. Fifteen minutes resting lead II electrocardiogram was obtained (AD instruments) under standard conditions and analyzed for time and frequency domain HRV parameters using LabChart software. Paired 't' test was performed to compare the study variables between the 2 groups using SPSS 16.

**Results:** Improved vagal control [HF nu: Y= pre 41.39±3.69 vs post 51.19±3.30 (p=0.005), Cc=30.61±3.53 VS 32.88±3.59, (p=0.329)] with sympathetic suppression [LF nu Y= 39.76±4.66 vs 24.83±4.26 (p=0.001), Cc= 51.32±4.13 VS 47.44±5.46 (p=0.308)] was observed in patients with schizophrenia after yoga intervention. LF/HF ratio was reduced in yoga group and increased in conventional care group, though the differences were not statistically significant [Y= pre 1.04±0.32 vs post 0.93±0.17 (p =0.275) and Cc= pre 2.91±0.56 vs post 3.28±0.46 (p=0.575)]

**Conclusion:** Patients with schizophrenia showed improved heart rate variability with yoga as an adjuvant therapy compared to conventional care. The mechanisms of yoga effects in schizophrenia need to be elucidated further by methodologically sound studies.

Paper ID: 163

## EFFECTIVENESS OF SWEDISH MASSAGE AND NEUTRAL SPINAL BATH IN MANAGEMENT OF LOW BACK PAIN

Dr. S. Sindhu

SDM College of Naturopathy and  
Yogic Sciences

**Introduction:** Low back pain is defined as pain in the lower region of the back, between the last rib and the gluteal fold. There are many previous studies reported in yoga and conventional conservative medicine, but to the best of our knowledge there is no study conducted to find effectiveness of Swedish massage and neutral spinal bath in Management of Low Back Pain. Hence the present study is undertaken to create a better protocol for treating low back pain.

**Aim and Objectives:** To assess the effectiveness of Swedish massage and neutral spinal bath in Management of Low Back Pain using the following methods.

- Pain Analogue Scale to measure the severity of pain.
- Oswestry Disability Index for assessing the disability level of back pain.
- Finger tip to floor test (touch) will be used for assessing the lumbar range of motion.

**Methods:** In this prospective intervention study, a minimum of 30 eligible participants, age groups between 18 to 45 yrs, were assigned to receive naturopathy (neutral spinal bath and partial massage to low back region). The measurement were taken on the 1<sup>st</sup> day and on the 10<sup>th</sup> day of the study.

**Results:** Total of the 30 patients, 33.3% were female and 66.7% Male. And 70% were in the age group of 35-45 yrs, 53.3% were PUC by education, 26.7% were unskilled



by occupation. 43.3% were class II of BG Prasad's. The mean score of pre VAS 6.53 and post VAS 3.47 which shows that there was improvement after intervention, this difference is statistically significant with  $p < 0.001$ , similarly the mean score of pre FIT 28.8 and post FIT 16.07 with  $p < 0.001$ , and mean score of pre ODI 14.8 and post ODI 7.8 with  $p < 0.001$ .

Paper ID: 164

## SOORYA TRATAKA AND REFRACTIVE ERRORS

Sb. Shakthivijayan\*, Sujatha.K.J\*\*,

Prashanth Shetty\*\*\*

\*PG Scholar - SDMCNYS

sb.shakthivijayan@gmail.com

**Background:** Sun has been used from ancient times for healing -*Heliotherapy*. Looking at Sun is tradition like *Sandhyavandhana*, *SuryaTrataka* etc., whose value in the treatment of refractive-errors are not clearly understood.

**Objectives:** The present study was designed to assess changes in refractive status of the eye following soorya trataka for 10-15 minutes daily at sunrise and sunset time for a period of 2 weeks with an established refractive error.

**Methods:** Ophthalmological readings for refractive errors were taken before and after the intervention for both case ( $n=34$ ) and wait-list control group ( $n=33$ ) comprising of male and female medical students of age from 18 - 22 years. Subjects had myopia, astigmatism, astigmatism with myopia and hyperopia.

**Results:** Irrespective of visual error type the changes post 14 day intervention, suggest a promising improvement in visual acuity. Sub set analysis of each of the disorder was not

performed considering less sample size.

Improvement in case group - Right Eye - Sph: 22%, Cyl: 5%, Left Eye- Sph: 25%, Cyl: 19%,

Improvement in Wait-list control Group from baseline value post intervention - Right Eye - Sph: 13%, Cyl: 1%, Left Eye- Sph: 17%, Cyl: 16%.

>25 subjects discontinued the use of spectacles completely as per the ophthalmologist's advice post-intervention. As expected improvements seen for few subjects in wait-list control group before their intervention, due to discontinued spectacle use during case group intervention period.

**Interpretation and Conclusion:** As claimed by other visual training methods, all subjects have subjective improvements, additionally, for the first time, an objective change too. Though only in few, it is demonstrable. Hence we conclude, that Soorya Trataka technique can safely reduce blindness, improve visual performance without artificial optical correction, free of cost, at least for younger adults, in less than 15 days of intervention and we speculate long-term practice could provide better results.

Paper ID: 165

## IMMEDIATE EFFECT OF BHASTRIKA & BHRAMARI PRANAYAMAS ON AUTONOMIC AND RESPIRATORY VARIABLES IN HEALTHY INDIVIDUALS- A RANDOMIZED CONTROLLED TRIAL

Prema Patapanchala, Dr. Prashanth Shetty  
SDMCNYS

**Background and Objectives:** Pranayama is said to be much more important than asanas for keeping a sound health in a sound



body & is becoming acceptable to scientific community. Regular practice of pranayama increases parasympathetic tone, decreases sympathetic activity, improves cardiovascular & respiratory functions, decreases the effect of stress & strain on the body & improves physical & mental health. Different types of Pranayamas (Breathing Exercises) effect on the Autonomic Nervous System. The present study evaluated the immediate effect of Bhastrika & Brahmari pranayamas in healthy individuals.

**Materials & Methods:** Subjects of age 18-25 years who haven't had any form of exposure towards yogic practices for the past 3 months were randomly recruited from the SDM College of Naturopathy & Yogic Sciences, Ujire, Belthangady (Taluk) D.K (District), Karnataka (State). 90 subjects were allocated randomly by using a computer generated randomisation tool into 3 groups of 30 each. Group 1, Group 2 & Group 3 were assigned for the practice of Bhastrika, Brahmari & Breath Awareness respectively. The data was collected at baseline, during & immediately after 5 mins of the practice for each group.

**Results:** A Significant increase in HR, RMSSD, LF, LF/HF ratio in all the three groups during the practice. However, interestingly an increase in HF was observed during Breath Awareness practice. Immediately following the practices, a significant reduction in HR, RMSSD, and HF were observed in all the three groups. However, NN50 increased significantly immediately following the practice as compared to the baseline levels following Bhramari and Breath awareness groups.

**Interpretation & Conclusion:** The short duration of Bhastrika and Bhramari Pranayama practices are good to increase the cardiac tone and Physiological arousal in healthy individuals.

Paper ID: 166

## EFFECT OF HRIDAYA MUDRA ON AUTONOMIC VARIABLES IN HEALTHY VOLUNTEERS: A SELF AS CONTROL TRAIL

Shashi Bhushan Kumar\*, A. Mooventhan<sup>1</sup>,  
NK Manjunath<sup>2</sup>

\*BNYS Intern, School of Naturopathy  
and Yogic Sciences, S-VYASA Univeristy,  
Bengaluru

**Background:** Hridaya mudra (HM) (heart gesture) is one of yogic practice, which was mentioned to divert the flow of prana from hands to heart area and therefore beneficial to the heart. Hence, this study aims at evaluating the effect of HM on autonomic variables such as heart rate (HR), heart rate variability (HRV) and blood pressure (BP) in healthy volunteers.

**Materials and Methods:** Twenty subjects with the mean (Standard deviation) age of 22.70 ( $\pm 5.16$ ) were recruited. They underwent both HM and control sessions in 2-different orders. In order-1 ( $n=10$ ) subjects underwent HM followed by control session, and in order-2 ( $n=10$ ) subjects underwent control followed by HM session. The duration of each session was 30-minutes. Assessments were done before, during and after each intervention. Statistical analysis was performed using SPSS version 16.

**Result:** Result showed a significant reduction in SBP and DBP in within session comparison of both in HM and control sessions. A significant increase in SDNN, RMSSD and NN50 were observed during HM unlike control where significant increase was observed only in NN50. However, there were no significant changes in frequency domains of HRV.

**Conclusion:** Results suggest that HM might



be effective in reducing both SBP and DBP but reductions were observed in control session as well. Since, there was a significant increase in few time-domain variables of HRV during but not after HM, and no significant changes in frequency-domain variables, the result is inconclusive. Hence, further study is essential to warrant the effect of HM on autonomic variables.

Paper ID: 167

### **IN VITRO GENE EXPRESSION STUDIES OF AQP3 GENE IN KERATINOCYTES WITH PURE ALOE VERA FACE WASH.**

**Baidyanath Mishra<sup>1</sup>, Harsha MR<sup>1</sup>,  
Chaithra CS<sup>1</sup> and Vivekananda Ramana<sup>2</sup>**

<sup>1</sup> Research & Development Center ,  
InnoVision Healthcare Ltd. No. P 6(B), 1<sup>st</sup>  
floor, 1<sup>st</sup> cross, 1<sup>st</sup> stage, Peenya Industrial  
Estate, Bengaluru  
dr.mishra@innovisionhealth.com

**Background:** Aquaporin-3 (AQP3) is the most abundant and important membrane protein that facilitates water transport in and out of keratinocytes and thus possessing a very crucial role of maintaining stable water levels in our skin. Given the significance of hydration and moisturization in skin health and appearance, cosmetic and health care companies have a reason to focus upon the activity or presence (expression) of aquaporins, especially AQP3 stimulatory personal care products. Aloe vera has been widely used in ayurvedic and herbal cosmetic industries for its skin rejuvenating, soothing and moisturizing (hydrating) activities. The goal of this study was to evaluate Aloe vera based polyherbal face wash for its stimulatory effect on AQP3 gene expression.

**Methods:** HaCat (Human Keratinocyte) cell

line was used as an *in vitro* model to evaluate the stimulatory effect of the test substance on AQP3 gene.

**Results:** Results showed that the test substances at concentrations of 350 and 700 µg/ml up-regulated the expression of AQP3 levels by 0.15 and 0.04 folds, respectively, in comparison to the basal levels of AQP3 mRNA.

**Conclusion:** This study demonstrates that the test product has the ability to enhance skin hydration by stimulating skin specific AQP3 gene, thereby providing insight into the molecular mechanisms by which this product could reduce the effects of skin dryness.

Paper ID: 168

### **A STUDY TO ASSESS THE EFFECT OF SPECIFIED ASANAS AND CARICA PAPAYA RELIEVING CONSTIPATION.**

**Mr. Naga Chaitanya P<sup>1</sup>**  
Chaitanyanaga9@gmail.com

**Background:** The present prospective study on APD (constipation). Now a days APD (constipation) is the main cause for the many types of diseases like CAD, Hypertension, Joint Problems, Psycho somatic diseases. APD contains flatulence, indigestion and constipation. Carica Papaya contains fibres and anti-oxidants which relieve stress and constipation.

**Methods:** 300 Study participants Inclusion criteria included 15-50 years old, bisexual with clinical conditions of APD. The study was conducted for 2 months of period dividing the participants into two groups. Group 1 (n=150) having group of asanas for 30 minutes daily and Group 2 (n=25) group of asanas for 30 minutes daily and also consumption carica



papaya regularly as guided. Pre-test and post-test screening was done by prescribed Questioner.

**Results:** At the end of the 2 months the group-1 have relieved by 65% and the group- 2 has a significant result in decreasing the condition by around 90% and other complications.

**Conclusion:** This study support for the regular practice of specific asanas for 30 minutes and regular consumption of carica papaya will increase the digestive power and reduce the APD conditions along with other complications by increase the Quality of life.

Paper ID: 169

### EFFECT OF *TAI-CHONG* (*LIVER-3*) ON AUTONOMIC VARIABLES IN HYPERTENSION: A RANDOMIZED PLACEBO CONTROLLED TRIAL

Sharvari Rao,\* A. Mooventhan,  
NK Manjunath<sup>2</sup>

\*BNYS Intern, School of Naturopathy  
and Yogic Sciences, S-VYASA Univeristy,  
Bengaluru

**Background:** The most potent weapon of traditional Chinese medicine is acupuncture. *Tai-chong* or *Liver-3* is one of the acupuncture points which was shown to reduce the blood pressure in hypertensive subjects in combination with other points. To the best of our knowledge there are no studies reported the effect of *Liv-3* alone on autonomic variables. Hence, this study aims at evaluating the effect of *Liv-3* on heart rate (HR), heart rate variability (HRV) and blood pressure (BP) in healthy volunteers.

**Materials and Methods:** Nineteen subjects with the mean age of 25.58-years were recruited and underwent *Liv-3* or placebo

acupuncture sessions in 2-different orders. In order-1 (n=10) subjects underwent *Liv-3* followed by placebo session, and in order-2 (n=9) subjects underwent placebo followed by *Liv-3* session. The duration of each session was 30-minutes. Assessments were done before, during and after each intervention. Statistical analysis was performed using SPSS version 16.

**Result:** Result showed a significant reduction in systolic blood pressure (SBP) in *Liv-3* session compared to placebo session; and a significant increase in RRI along with significant reduction in HR in placebo compared to *Liv-3* session. Within group analysis showed significant reduction in SBP, DBP, HR along with significant increase in RRI both in *Liv-3* and placebo sessions. Both *Liv-3* and placebo sessions did not influence frequency-domain of HRV spectrum.

**Conclusion:** Result of this study suggests that though *Liv-3* is effective in reducing the SBP compared to placebo it does not have effect in influencing heart rate variability in healthy volunteers.

Paper ID: 170

### EFFECT OF HOT ARM AND FOOT BATH ON AUTONOMIC VARIABLES IN HEALTHY VOLUNTEERS: A SELF AS CONTROL TRIAL

Samruddhi Vyas,\* A. Mooventhan,  
NK Manjunath<sup>2</sup>

\*BNYS Intern, School of Naturopathy  
and Yogic Sciences, S-VYASA University,  
Bengaluru

**Background:** Hot arm and foot bath (HAFB) is one of the hydrotherapy treatments mentioned to produce peripheral vasodilation. Studies on full immersion were shown improve



cardio-pulmonary variables. To the best of our knowledge, there are no studies reported the effect of HAFB on autonomic variables. Hence, this study aims at evaluating the effect of HAFB on heart rate (HR), heart rate variability (HRV) and blood pressure (BP) in healthy volunteers.

**Materials and Methods:** Sixteen subjects with the mean age of 23.81-years were recruited and underwent HAFB and control sessions in 2-different orders. In order-1 (n=8) subjects underwent HAFB followed by control session, and in order-2 (n=8) subjects underwent control followed by HAFB session. The duration of each session was 20-minutes. Assessments were done before, during and after each intervention. Statistical analysis was performed using SPSS version 16.

**Result:** Result showed a significant increase in RRI and decrease in HR during control session compared to HAFB. However, a significant decrease in LFHF ratio was observed after HAFB compared to control session. Within session analysis showed a significant decrease in SBP, DBP, NN50, and pNN50 after HAFB; and significant reduction in RRI with significant increase in HR during and after HAFB unlike control session; significant increase in SDNN and STDHR during control session unlike HAFB session.

**Conclusion:** Result suggests that though HAFB increases HR and reduces RRI, NN50, and pNN50 it could reduced systolic and diastolic blood pressure and also in improved symptho-vagal balance. Further studies are essential to warrant this effect.

Paper ID: 171

## EFFECT OF FRESH COCONUT IN A BALANCED DIET BASED ON YOGIC PRINCIPLES ON HEMOGLOBIN LEVELS IN HEALTHY ADULTS, A RANDOMISED COMPARATIVE STUDY

Nagashree. R. Shankar<sup>1</sup>, N. K. Manjunath <sup>2</sup>  
and H. R. Nagendra <sup>3</sup>

<sup>1</sup>Co-investigator, SVYASA, Bangalore, India  
gauriokkam@gmail.com

**Background:** India is one of the countries with the largest prevalence of anaemia. Fresh coconut is rich in iron. We found no studies addressing this important clinical question if consumption of fresh coconut can impact haemoglobin levels in healthy adults.

**Objective:** To investigate whether daily consumption of fresh coconut in a standardize Yoga based balanced diet impacts haemoglobin levels in healthy adults.

**Methodology:Setting:** Prashanti Kutiram, SVYASA University, Jigani, Bangalore.

**Participants:** 80 Normal healthy volunteers, both male and female. In age group of 18 to 40 years.

**Design:** Selected subjects were randomly allocated to one of the two groups (1) Yoga based balanced diet + 100g fresh coconut per day **or** (2) Yoga based balanced diet + 45g ground nuts & 22ml ground nut oil per day. Subjects were given 3 meals and a snack per day for a period of 90 days, along with their specified interventions. They were assessed on day 1 and day 90 to evaluate the changes in haemoglobin levels through a photometer called HemoCue, which tests the Hb concentration using a single drop of blood.



**Results:** There was highly significant improvement ( $p < 0.001$ ) in the levels of haemoglobin in both the groups, but, the magnitude of change in coconut group was more compared to groundnut group.

**Conclusion:** Consumption of fresh coconut everyday will increase haemoglobin levels in normal adults and may be a simple & cost efficient source to help alleviate iron deficiency anaemia.

Paper ID: 172

## TECHNOLOGY AIDS IN YOGA INDUSTRY

Kamalesh Vikramasimhan,  
Mahendra Nawander,

Subramanian Lakshminarayanan, Shashi PG  
Yantravision Software Pvt Ltd

**Background:** The enormous knowledge of science of yoga has been proven to be effective experientially and scientifically. Though it is proven to be effective wellness tool, there hasn't been enough efforts to bring in technology solutions into yoga. As an analogy let's consider ubiquitous treadmill. Someone who would like to get into fitness most likely uses treadmill as it sets the rhythm, avoids burnout, quantifies practise etc. Yoga in spite of ancient origin, still lacks treadmill equivalent. Fusing this science of yoga with state of art engineering will go a long way in making yoga accessible, utilitarian and would serve as landmark in opening up yoga in health care industry.

**Technology:** We have developed computer vision based practice aid for yoga. This is a nonintrusive software based system which can track person's body and limb motion through live video feeds captured through camera, would give real time feedback to practitioner, qualify and quantify practise

and make available end of session reports. The technology has been developed in platform agnostic manner so that it can be run in devices of various form factors like laptop, tablet etc. State of art computer vision algorithms were developed and packed into a usable interface so that people can practise and experience yoga in profound manner.

**Applications:** The technology developed has many applications like,

- To strength distance education curriculum in yoga
- Independent practise aid for individuals
- Prescription services for doctors to prescribe yoga
- Making yoga instructors efficient by having very effective review.

Paper ID: 173

## EFFECT OF YOGA ON PRODUCTIVITY AND HEALTH OF BUTTON FACTORY WORKERS: SINGLE ARM OPEN LABEL STUDY

Dr. Sneha<sup>1</sup>, & Dr. Rajesh SK.

<sup>1</sup>Swami Vivekananda Yoga Anusandhana  
Samsthana, Bangalore  
[snehabhansu@gmail.com](mailto:snehabhansu@gmail.com)

<sup>2</sup>Head-PhD programs, Swami Vivekananda  
Yoga Anusandhana Samsthana, Bangalore.

**Background:** The button factory workers are prone to a range of occupational risk factors that greatly affect their health and productivity. There is an immediate need to implement worksite health programs for the mutual benefit of the employers and employees.

**Methods:** A single arm open label study was conducted on 70 button factory workers. The mean age was 31.6 ( $\pm 9.24$ ). The changes in



Productivity, Hand Dexterity, Fatigue, and Satisfaction with life and Pain scores for back pain and neck pain were assessed after one month yoga intervention.

**Results:** The production order ratio reached optimum level and the error rate reduced. Significant changes were seen in all the other outcome variables ( $p < 0.05$ )

**Conclusion:** Yoga is an effective tool to improve productivity and health of button factory workers. Long term interventions will further confirm the findings of the study.

Paper ID: 174

### IMMEDIATE HYPOGLYCAEMIC EFFECT OF TWO SELECTIVE HYDROTHERAPEUTIC PROCEDURES IN NON INSULIN DEPENDENT PATIENTS OF DIABETES MELLITUS

Sujatha Dinesh<sup>1</sup> & Gangadhara Varma B R  
Division of Natural Therapeutics, 1 S.D.M  
College of Naturopathy and Yogic Sciences, 2  
Ujire - 574240 Karnataka (India)

**Background and Objectives:** Non-Insulin Dependent Diabetes Mellitus (NIDDM) is a costly, complex and chronic disease that is expected to increase in prevalence in the coming decades. Recent population based studies shows the prevalence of NIDDM in south India to be 12.4% in Bengaluru in 2001, 16.6% in Hyderabad in 2001, 14.3% in Chennai in 2006 and 19.6% in Ernakulum in 2006. Complementary and Alternative Medicine (CAM) modalities are found to be effective in the management of NIDDM. Hydrotherapy is a part of CAM, used in the management of NIDDM. Hence, the present study is planned to evaluate which of the hydrotherapeutic treatments has the best immediate hypoglycaemic effect between

Gastrohepatic pack and Neutral douche in NIDDM patients.

**Methods:** The patients were selected from S.D.M. Yoga and Nature cure Hospital, Shanthivana, Dharmastala, Karnataka. They were randomly divided into two groups. According to the order in which they were recruited, they were allotted alternatively into two groups. Group-1: The Gastrohepatic pack group of 20 patients and Group-2: The Neutral douche group of 20 patients. Patients were assessed on day 1 and day 2 during which they received Gastrohepatic pack and Neutral douche respectively.

**Results:** The results have shown statistically significant changes in fasting blood glucose levels in Gastrohepatic pack subjects ( $p = 0.02$ ) and postprandial blood glucose levels in Neutral douche subjects ( $p = 0.03$ ) after the intervention period.

**Conclusion:** The present study suggests that Neutral douche and Gastrohepatic pack can play a major role in lowering the raised blood glucose levels in patients with NIDDM. Gastrohepatic pack is relatively better for lowering the blood glucose levels as compared to Neutral douche.

Paper ID: 175

### LIVER OPENS TO EYES: THE POSSIBLE BIOCHEMICAL MECHANISMS INVOLVED WITH THE CONCEPT OF TRADITIONAL CHINESE MEDICINE

Bhuvanewari K.J., Sonu V

The School of Yoga and Naturopathic  
Medicine, S-VYASA University, Bengaluru  
bhukjbns@gmail.com

Liver is one of the most important Zang (solid) organs in Traditional Chinese Medicine (TCM). Each organ has its specific functions



and opens to a particular sense organ. Liver, in this regard, opens in the eyes. According to TCM, Liver controls the vision and movement of eyes. So health of the liver may be seen through the eyes, in other words, "face is the index of our mind where eyes are the mirror of our liver health".

When we clinically diagnosed few individuals with TCM diagnosis of pulse, tongue and five elements, we noticed that their vision problems (myopia/hypermotropia) were related to the liver disorders at some point of their lives. The objective of this study is to find out the possible mechanism of how the Liver Qi affects the eyes and vision.

We could relate the possible links between liver and eye through analysis of metabolism of Lecithin retinol acyltransferase, Beta Carotene and G Protein Receptor. Scientific exploration will be required to establish these links providing concrete scientific evidence.

Paper ID: 176

### EFFECT OF INTEGRATED YOGA ON STRESS, ANXIETY AND HEART RATE VARIABILITY IN FIRST YEAR NURSING STUDENTS

Patil.N.I<sup>1</sup>, Karthiyane Kuty<sup>2</sup>,  
Sumitra.S<sup>2</sup>, Patil D.B.<sup>3</sup>

<sup>1</sup>Department of Integrative Medicine, Sri Devaraj Urs University Kolar, Karnataka

**Background:** Nursing students are exposed to various stresses in academics and clinics. Yoga is an ancient Indian science, has positive impact physical, mental, social and spiritual aspects. The regular practice of yoga is reported to improve cardiovascular fitness.

**Methods:** 60 students were included in the study based on inclusion criteria after obtaining informed consent. 30 students each were allotted to study and control group

after randomization. They were assessed using STAI, PSS and HRV at baseline and after one month. Study group intervened with Yoga intervention which comprises of Loosening exercises, Suryanamaskara, Kapahalabhati, Nadisuddi pranayama and Relaxation Technique, performed for 45mins /5 days/ week. Statistical analysis (Paired t test and Independent t test) were done using SPSS software package version 16.

**Results:** The mean age of the subjects was  $18.16 \pm 0.45$  years. There was a significant decrease in anxiety with yoga intervention. Analysis of heart rate variability revealed that SDNN was significantly higher after practice of yoga. Parasympathetic markers such as RMSSD were significantly higher after intervention. In the frequency domain parameters the LF power spectrum and LF/HF ratio were significantly reduced after one month practice of yoga.

**Conclusion:** Integrated Yoga, significantly decreased state anxiety, perceived stress and improved heart rate variability with a shift towards parasympathetic dominance in first year nursing students compared to control. However, trait anxiety not showed significant improvement.

Paper ID: 177

### COMPARATIVE CLINICAL STUDY OF VACHADI LEPA & MRUTTIKA LEPA IN MUKHADUSHIKA (ACNE VULGARIS)

Dr. Sandeep Sagare

Assistant Professor, Dept. of Swasthavritta,  
KLE University's Shri BMK Ayurveda  
Mahavidyalaya, Belagavi.  
[sandeepsagare@gmail.com](mailto:sandeepsagare@gmail.com)

**Introduction:** Face reflects the personality. Face is affected by certain anomalies in adolescent age. *Mukhadooshika* is a commonest



condition leads to non-attractive, permanent disfigurement of face, which may result in inferiority complex and sometimes isolation in the social life. It is type of NCD.

The painful eruptions packed with mucopurulent discharge (*Meda*), appears like thorns of *Shalmali* affecting face of adolescents known as *Mukhadooshika*.

Various *Mukha Lepas* are explained in different classics and proved its effectiveness.

**Plan of the Study:** This study was undertaken to evaluate the efficacy of the *Vachadi Lepa* and *Mrittika Lepa* in *Mukhadooshika*.

#### **Aims and Objective of the study**

- To study the effect of *Mritika Lepa* (Mud pack) in relieving the symptoms of *Mukhadooshika*.
- To compare the effect of *Vachadi Lepa* and *Mritika Lepa* (black mud) in *Mukhadooshika* management.

**Materials and methods:** 30 patients were selected and equally divided into 2 groups i.e. *Mrittika Lepa* group (MLG) and *Vachadi Lepa* group (VLG). In both the groups apply particular *Lepa* in the morning hours daily for a period of 15 days. Follow-up was advised for a period of 2 months.

**Observation:** Observations were made based on various parameters like existing Acnes, oiliness – tenderness of skin, changes in scar marks, number and size of acne.

**Discussion and conclusion:** Literary study, clinical study, observations and results will be discussed. Promising results will be presented with authentic pre & post-test record documentation.

Paper ID: 178

## **EFFECT OF ONE WEEK INTEGRATED YOGA PROGRAM ON DEPRESSION USING IMPLICIT AND EXPLICIT MEASURES.**

<sup>1</sup>Amitanshu Kumar & Dr. Judu Ilavarsu

<sup>1</sup> M.Sc. (Yoga Therapy) Student, Swami  
Vivekananda Yoga Ansunadhana  
Samsthana, Bangalore

**Background:** Depression has a negative impact on all aspects of an individual's life. Integrated Approach of Yoga Therapy is known to have a beneficial effect on a range of depressive symptoms. Attempt to understand the effect of Yoga on emotional regulation using implicit and explicit measures in depressed individuals were not made earlier. This information is important to assess stability of an intervention.

**Materials and Methods:** In a one-week residential yoga program depressive participants (n=32) were assessed on Implicit Association Test, Emotional Stroop Test, Emotional Regulation Questionnaire (ERQ), and Hospital Anxiety and Depression Scale (HADS). This Yoga group was also cross-sectionally compared with a healthy group (n=26).

**Results:** The mean age of yoga group and healthy group was 27.72±6.28 and 21.46±3.46 respectively. Significant improvement was observed only in HADS (p < 0.05). Improvements were seen in all other variables but it was not statically significant. Only explicit domain improved significantly whereas implicit domain was not influenced much indicating that strength of this yoga program needs to be strengthened further to see changes in implicit measures.

**Conclusions:** One week IAYT is effective in



reducing severity of depressive symptoms. But a longer duration study will be required to assert long lasting changes in implicit domain.

Paper ID: 180

## EFFECT OF MUD PACK TO EYE ON PSYCHOLOGICAL VARIABLES ON COLLEGE STUDENT

Reshma P. Jogdand , Dr. Mooventhan,  
Dr. Manjunath N.K

The School of Yoga and Naturopathic  
Medicine,  
S-VYASA University, Bangalore  
[reshma.bnys@gmail.com](mailto:reshma.bnys@gmail.com)

**Background:** Mud pack to eye was previously shown to very good positive effect on psychological variables specially anxiety.

**Method:** Fifty normal healthy volunteers (both male and female; group average age 17-21 years) were recruited for the study. They were divided into two groups viz., mud pack group and wet eye pack group. Intervention was given for seventeen days, every day 30 min. assessments were done before and after the intervention. STAI-1 (trait anxiety inventory), STAI-2 (trait anxiety inventory), P TQ, PANAS, Mindfulness questionnaires were used.

**Result:** In Mud pack group there is significant change in PANAS negative score, PTQ, mindfulness.

In wet pack group there is no significant change in mindfulness and STAI-1,2

Both mud pack group and wet pack group there is no significant improvement in STAI.

PANAS positive score also did not improve in both mud pack group and wet pack group.

**Conclusion:** PANAS negative score, PTQ, mindfulness has significant changes in mud eye pack group

Paper ID: 183

## RHEUMATOID ARTHRITIS-MANAGEMENT WITHIN NATURE

Sivaraman S

[sivaramanselvasekar@gmail.com](mailto:sivaramanselvasekar@gmail.com)

Arthritis is an inflammation of synovial joints of the body and is one of the most common of all disabling diseases afflicting an estimated one out of ten people. It is a severe crippling and rapidly progressive form of joint degeneration. In the science of yoga arthritis is not considered to be the disease of itself, but as one symptom of widespread metabolic and pranic malfunctions which begins early in a person's life. It is a multifactor causation disease. Hence the exact aetiology remains unknown in majority cases. In view of natural system disease arises as a result of accumulation of morbid matter. The accumulation of foreign substance in joint spaces makes immune system to send the WBC there to wage a violent inflammatory reaction against them. It is also believed that it can be triggered by severe emotional shock. The joint cavity lined with delicate synovial membrane which secretes the fluid to lubricate the joint. If circulation of 'PRANA' in a joint is blocked, the supply of blood becomes sluggish leads to degeneration itself. RA an autoimmune inflammatory disease with evidence of reaction to large protein molecule, in turn stimulates the immune system to produce antibodies which cross-react with connective tissues and cause inflammation. The yogic therapy for RA includes the series of asanas, pranayamas, meditation, diet, heat and massage. Hence multi therapy module to manage the most threatening disease which



licks the joints but bites the whole heart.

Paper ID 184

### **BIOLOGICAL AND THERAPEUTIC ACTIVITIES AND ANTI-CANCER PROPERTIES OF CURCUMIN**

**R Anusia Rani**

Sivaraj Naturopathy and Yoga Medical  
College, Salem, Tamilnadu  
anusiyabnys@gmail.com

Curcumin (diferuloylmethane) is a polyphenol derived from the *Curcuma longa* plant. Curcumin has been used extensively in Ayurvedic medicine, as it is nontoxic and exhibits a variety of therapeutic properties, including antioxidant, analgesic, anti-inflammatory and antiseptic activities. Recently, certain studies have indicated that Curcumin may exert anticancer effects in a variety of biological pathways involved in mutagenesis, apoptosis, tumorigenesis, cell cycle regulation and metastasis. The present study reviewed previous studies in the literature, which support the therapeutic activity of curcumin in cancer. In addition, the present study elucidated a number of the challenges concerning the use of curcumin as an adjuvant chemotherapeutic agent. All the studies reviewed herein suggest that curcumin is able to exert anti-inflammatory, antplatelet, antioxidative, hepatoprotective and antitumor activities, particularly against cancers of the liver, skin, pancreas, prostate, ovary, lung and head neck, as well as having a positive effect in the treatment of arthritis.

Paper ID: 185

### **ACTION OF POMEGRANATE ON DIABETES**

**Deepalakshmi S, Kavitha P**

Sivaraj Naturopathy and  
Yoga Medical College, Salem

Pomegranate, *Punica granatum* of the family *Punicaceae* has anti-inflammatory, anti-oxidant, anti-obesity & anti-tumoral properties. Thus leading to an increased popularity as a functional food & nutraceutical source. It is divided into three parts-seeds, peel, juice all of which seen to have medicinal benefits. Many beneficial effects are related to the presence of ellagic acid, ellagitannins, punicic acid, flavonoids, estrogenic flavonols, which seem to its most therapeutically beneficial components. Promising results have been obtained for the treatment of certain diseases including obesity, insulin resistance, intestinal inflammation, cancer. Diabetic patients treated with 250ml of pomegranate juice(peel) per day for 12 weeks have significantly shown reduction in blood sugar level.

Paper ID: 186

### **ACTION OF CARICA PAPAYA ON BREAK-BONE FEVER**

**Malathi R**

Sivaraj Naturopathy And  
Yoga Medical College, Salem.  
malathi1330@gmail.com

The main objective of this study is to investigate the potential of *Carica papaya* leaves extract against dengue fever bitten by carrier mosquitoes. Through the phytochemicals especially quadracetin present in papaya leaves (alkaloids, flavonoids, cysteine compounds), we analyse the anti-dengue



activities of extracts from *Carica papaya* by using bio-informatic tools. The patient with dengue infection have thrombocytopenia, leucocytopenia, etc. were treated with the extracts of papaya leaves. *Carica papaya* leaf juice of 25 ml twice daily with conventional line of management for a period of 8 days shows remarkable improvement in the subjective symptoms.

Paper ID: 187

### ACUPUNCTURE FOR POLY CYSTIC OVARIAN SYNDROME WITH INSULIN RESISTANCE

Madhan Raj G, Jhivyaa B A

Sivaraj Naturopathy and Yoga Medical  
College, Salem, Tamilnadu  
Jhivyaaa@gmail.com

Hyperinsulinaemia and insulin resistance are key features of polycystic ovarian syndrome. The effect of five weeks of acupuncture treatment has been investigated in a completed prospective pilot trial and acupuncture with electrical stimulation applied to insulin-resistant rats with dihydrotestosterone - induced PCOS was shown to improve insulin sensitivity. Therefore we now aim to conduct a prospective study to evaluate whether using the same acupuncture treatment protocol given over a long period of time (6 months) than in the previous trial will improve insulin sensitivity in women with PCOS and IR. Our hypothesis is that acupuncture with combined manual and low frequency electrical stimulation of the needles will improve insulin sensitivity in women with PCOS and IR.

Paper ID: 188

### EYE WASH FOR EYE HEALTH

M. Sathya Joicy, K.Sinarita,

Sivaraj Naturopathy and Yoga Medical  
College, Salem, Tamilnadu.  
deepabnys72@gmail.com

The eye wash practice consists of an apparatus for irrigating the eyes after strain or exposure to dust or debris. It is the best and simplest way to protect your eyes. At first it feels strange to do, but few days later it become as normal as cleansing your teeth. One should do the Eye wash for 3 times a day i.e. Morning, Evening, and Night. For the eyewash one needs Eye wash cup or a small bowl and purified water. Make sure that the Eye wash cup is clean and the water should not contain any dusts or impurities, as it may irritate the eyes and cause problem.

In the practice one have to immerse his/her eyes in the cup or bowl. First keep your Left eye for 5 minutes and then the Right. Open your eyelids wide and rotate eyeball to thoroughly wash the eye. The regular practice of Eye wash cools the eye and also the body. It improves the blood circulation to the Eyes. It helps relax and relieve the stress in the eyes. It also helps to relieve the irritation, stinging, discomfort, itching in the eyes by removing the foreign materials, and air pollutants. The eye washing is said to be more helpful for people working in the computers, those who are watching television, working in the dust areas, riding vehicles, working in the overnight, using phones during night time.



Paper ID: 189

## ACUTE APPENDICITIS: A CASE STUDY

J.P. Ezhilarasi & R. Anjugam

BNYS-3<sup>rd</sup> Year

Sivaraj Naturopathy & Yoga Medical  
College, Salem

Acute appendicitis is a rapidly processing inflammation of a small part of large intestine called "Appendix". It is a pouch like structure located in the right iliac quadrant of the anterior abdomen. In acute appendicitis, the appendix swells and begins to fill with rapidly growing bacteria and pus. Pain in the right iliac quadrant, Vomiting and diarrhea, Tenderness, Chills Bloating, Constipation, Loss of appetite, Nausea.

Severe abdominal stabbing pain in the right side, since 2 days; Vomiting since 1 days.

She was admitted in allopathy hospital and investigated with abdominal ultrasonography, which shows the positive result of inflammation with extra growth of appendix (2mm). Then the doctor suggested her for surgery immediately. With the suggestion of her relatives, she was admitted in "SIVARAJ NAUROPATHY AND YOGA HOSPITAL".

**Treatment:** Hydro therapy and mud therapy, Juice fasting with satvik diet for 10 days. After treatment, she was sent to take USG and they observed decreased inflammation. Again she continued the naturopathy treatment for 45 days, Shows the negative result of appendicitis and its size.

Paper ID: 191

## GEAR UP THE GENIUS [THROUGH THE PRACTICE OF SUPER BRAIN YOGA]

Sivaraman S

Sivaraj Naturopathy and Yoga Medical  
College, Salem, Tamil Nadu

Sivaramanselvasekar@gmail.com

As teacher we train our brain to learn new skill. As learner we are responsible for keeping our brain in good working order. The human brain is a most important organ which is considered as BEST MACHINE in the universe that controls all activities. Our brain is constantly evolving, that happens individually which is unique to the brain. "SUPER BRAIN YOGA [SBY]" is a simple fast way to balance and energize our brain. This technique is popularly called as "THOPPUKARANAM" in Tamilnadu that is practiced in front of Lord Ganesha as their tradition. It is done by holding the right earlobe with left hand and left earlobe with right hand, gently squat down to sitting position with arms above and come up. During the practice hold your tongue to the root of mouth [KHECHARI] that completes the circuit of energy meridians and open Eustachian tube allowing energy to move up. It is scientifically validated method that will energize our brain and enhance its sharpness and clarity by increasing the ALPHA waves. It is based on the principle of "SUBTLE ENERGY AND EAR ACCUPRESSURE" basically it allows energy from lower chakra [Mooladhara] to move up to crown [SHASRARA] which is known as "KUNDALINI". It stimulates the important nadis and inner nerve current help to internalize the awareness for meditation. It had positive effect on AUTISM and ADHD. Continuous practice of SBY shows significant improvement in visual motor speed, eye hand



coordination, social skill and interaction and increased the self-control . It is one of the home remedy for knee ailments and enhance the function of reproductive organs.

It is the gesture of expression of humility that all souls are the children in eyes of GOD. Prolong practice of this exercise makes the practitioner in general, smarter and psychologically fit and functional through synchronization of two hemispheres of brain.

Paper ID: 192

### ***PCOS - MANAGEMENT WITH HOLISTIC APPROACH***

Theebika S

Sivaraj Naturopathy And Yoga Medical  
College, Salem, Tamil Nadu  
stheebika@gmail.com

Poly Cystic Ovarian Syndrome (PCOS) is a more prevalent, complex endocrine disorder affecting 4 -12% of women in their reproductive age. This cause 75% of infertility in female. This is due to the accumulation of foreign matters in the ANNAMAYAKOSHA and MANAMAYAKOSHA .The common manifestation are Poly cystic ovaries, Chronic Anovulation, Hirsutism, Acne, Depression, Infertility ,Obesity, Hyperinsulinemia, Hyperandrogenism leading to irregular menstrual cycle. This occurs due to imbalance in the koshas and there is a blockage of the APANA VAYU which is responsible for excretion of wastes from urinary, excretory, and reproductive organs.

The management of this kosha with the GLYCYRRHIZAGLABRA (Licorice) and with addition yoga therapy of shakthi bandhasana, pranayama ,dhyana and with some dietary compliments ,hydrotherapeutic measures which releases the energy block in

the Apana vayu ,rejuvenate the organs and aids in fertility.

Paper ID: 193

### **DRUGLESS MANAGEMENT FOR INFERTILITY**

P. Nivetha

Sivaraj Naturopathy And Yoga Medical  
College, Salem, Tamilnadu.  
nivethapandy4@gmail.com

INFERTILITY is a disorder in which there is a failure of sexual and reproductive behaviours due to physiological, anatomical or psychological reasons.

These behaviour are influenced by hormones particularly the levels of androgens and testosterone in male, estrogens and progesterons in females. Hence it stands as a disease of metabolic dysfunction with multifactorial, unknown aetiology.

In Naturopathic view the accumulation of morbid matter causes the disease. So , the management lies within the elimination of that morbid matter, the elimination of morbid matter includes multitherapy managements which includes the correction of the ANNAMAYA & MANONMAYA KOSHA.

First we find out the reasons of Infertility & then the correction of the downward displacement of Nabhi and balances the Nadis and Chakras especially the MOOLADHARA chakra by the asanas like Dhanurasana , vajrasana , pawanamuthanasana, sarvangasana, sirshasana.

We can treat the infertility with the mudras and bandas like sakthibandhas and also the pranayamas, Diet therapy and Hydrotherapy like cold hip bath and sitz(friction)bath.

Infertility also treated by the Accupuncture and meditation also the MASSAGE given on



the low back for the duration of 15 minutes in morning and evening session

Paper ID: 194

### **“MASSAGE” - A HOLISTIC CURE FOR NEPHROLITHIASIS**

M. Nandhini Mohan

Sivaraj Naturopathy and  
Yoga Medical College, Salem  
drnandhinimohanbnys@gmail.com

Renal calculi (nephrolithiasis) may ensue from either dearrangements of urine biochemistries or anatomic abnormalities of kidneys and urinary tract. Influence of calcium content of water intake of fruits, vegetables and other food factors increase the rate of renal calculi. **FIRST LEVEL SCREENING** is performed by routine in order to assess urinary supersaturation with stone forming salts and excretion of dietary related metabolites in urine. The overall probability of forming calculi varies in different parts of the world. The risk of developing nephrolithiasis in normal adult appear to be 1-5% in Asia and higher rate in Saudi Arabia(20.1%)

According to Recent studies Kidney stones can pass spontaneously and doesnot need surgical treatment .It primarily depends on the size of the stone. Based on previous studies of renal calculi patients, the size criteria of 5mm or less is generally felt to predict a reasonable chance(50-70%) for spontaneous passage. Stones that are more distal(closer to the bladder)are more likely to pass than stones that are more proximal(closer to the kidneys).The decision to allow a stone to pass spontaneously will also take in account the amount of pain the patient is experiencing ,the possibility of infection and other factors. Typically,

a period of 4-6weeks is allowed to give stones a chance to pass. Massage therapy are now more commonly being given to the patients experiencing an active stone episode. This therapy can improve the chance of successful passage of a stone and decrease the pain associated with a stone episode and then decrease the time required for passage. In our study we treated 22 renal calculi patients of both sexes by massage therapy .In 5<sup>th</sup> week we were surprised to see the results obtained through the harmless massage therapy ,when compared to other system in renal calculi patients.

Paper ID: 195

### **A COMPARITIVE CLINICAL STUDY OF HYPOLIPIDEMIC EFFICACY OF AMLA(*EMBLICA OFFICINALIS*) WITH SIMVASTATIN**

Sunithalakshmi J

Sivaraj Naturopathy and  
Yoga Medical College,Salem, Tamilnadu  
sunithaammu1995@gmail.com

To evaluate the efficacy of amla in patients with type -2 hyperlipidemia and compare its hypolipidemic effects with those of simvastatin. Type-2 hyperlipidemic patients of both sexes with plasma total cholesterol and low density lipoprotein level more than 240 mg and 130 mg respectively were selected for the trial. The patients were treated with amla and simvastatin capsule. Blood sample were analysed for various biochemical parameters and the values of total cholesterol, low density lipoprotein, high density lipo-protein and very low density lipoprotein were measured. Treatment with amla produced significant reduction of Total cholesterol, Low density lipoprotein, Very low density lipoprotein and



significant increase in HDL levels. Similarly simvastatin produced significant reduction however beneficial effect was more marked in receiving amla.

Paper ID: 196

### ROLE OF YOGA PRACTICES IN REGULATING SLEEP ARCHITECTURE: A COMPARATIVE STUDY

Dr. Sureshababu V, Dr. Ragavendrasamy B,  
Dr. Manjunath N.K.  
Swami Vivekananda Yoga Anusandhana  
Samsthana, Bengaluru  
sureshababunys@gmail.com

**Background:** Sleep is an integral part of human health and life and is crucial for learning, performance and physical mental health. Yoga as a treatment module have been shown to have significant results in sleep disturbances in OA related Insomnia. A remarkable degree of problems associated with sleeping and poor sleep quality have been observed in university students of many western countries, however to our knowledge, the data regarding sleep pattern and habits among the Indian students are limited.

**Aim & Objective:** To understand How effective is Yoga practice in influencing sleep and What aspects of sleep cycle are being regulated by Yoga practices.

**Material and Method:** Thirty subjects (N =30 ; age range 18-28) were divided into the yoga group (n = 15) and the control group (n = 15). We have used matched pair Control Design. The study was designed with an objective to understand the role of Yoga practices in regulating Sleep architecture in healthy long term practitioners Yoga group received 5 hours of yoga for 1 year and the control

group didn't receive any yoga sessions. Polysomnography was done for 2 consecutive nights.

**Results:**The results suggested that, in yoga group, there was significant reduction in sleep onset latency ( $p < 0.03$ ), N3 latency ( $p < 0.23$ ), WASO ( $p < 0.04$ ), and increase in slow-wave sleep (SWS) duration ( $p < 0.05$ ), REM duration ( $p < 0.13$ ) compared to control group. In the yoga group, the percentage of SWS is significantly higher ( $p < 0.05$ ) when compared to that of control group.

**Conclusions:** Practicing yoga regularly appears to improve the objective and subjective quality of sleep on the following night.

Paper ID: 197

### EFFECTIVENESS OF STANDARIZED YOGIC PRACTICES ON REDUCING ABDOMINAL CIRCUMFERENCE AMONG MEDICAL STUDENTS- A RANDOMIZED CONTROLLED TRIAL

B T Chidananda Murthy, Renjish M,  
Venkateswari K, Vijaraghavan N,  
Sharan G, Aannsmol V, Priyanka , Rebika  
Principal & CMO, JSS Institute of  
Naturopathy& Yogic sciences, Coimbatore

**Background:** In Modern days abdominal obesity is a main problem in young people due to lack of physical activity and poor food habits. Regular practice of yoga will help to reduce the abdominal circumference of the individual by utilization of stored adipose tissue and brings strength, flexibility to the individual.

**Materials and Methods:** The study was conducted on basis of randomized controlled trial and participants were recruited.



Randomly 60-80 Female's students from age between 18±20 were selected after general physical examination among 60 subject 45 were experimental group and 15 were in control group .Regular yogic practice were given to them for 45 days.

**Result:** The result showed that after doing yogic practice for 25 days there is decrease in the abdominal circumference were an average of about 8.9 cm and by the end of the 45 days of Yogic practice an average of 14.9 cm reduction in abdominal circumference is significantly shown in both the groups.

**Conclusion:** The present study reveals that yogic therapy helps to reduce the abdominal circumference and improve the tonicity of abdominal muscle of regular practices. Hence; Yoga therapy would yield more results if it is carried out for longer duration.

Paper ID: 199

### **EFFECT OF INTEGRATED YOGIC PRACTICES ON BODY COMPOSITION, SERUM LIPID PROFILE AND OXIDATIVE STRESS STATUS IN OBESE ADULTS**

**Balakrishna Shetty<sup>1</sup>, Geetha B Shetty<sup>2</sup>,  
Manjula Shantaram<sup>3</sup>**

<sup>1</sup>Assistant Professor, Department of  
Biochemistry, SDM College of Naturopathy  
and Yogic Sciences, Ujire, Karnataka

**Background/Objectives:** Obesity is a chronic disease of multifactorial origin and can be defined as an increase in the accumulation of body fat. A major cause of obesity was found to be improper lifestyle and stress leading to excessive lipid peroxidation, indicating increased production of reactive oxygen species(ROS), generating oxidative stress. Yogic practices have shown beneficial effects on oxidative stress states of type II Diabetes.

Hence, the present study was undertaken to find out the effect of integrated yogic practices on BMI, serum lipid profile & oxidative stress in obese individuals.

**Materials and Methods:**A total of 30 subjects (group average age, 27.9±2.6) were selected for the study for a single group pre-post trial. The changes in anthropometric measurements, body composition, serum lipid profile and MDA level was estimated before and after three months of yoga therapy.

**Results:** The data obtained was verified for normal distribution and analyzed using paired sample 't' test with SPSS (Version 20.0) package. There was a significant changes in the body weight (p=0.001), BMI (p=0.001), waist circumference (p=0.05), hip circumference (p=0.001), HDL cholesterol (p=0.001), LDL/HDL Cholesterol (p=0.001), and MDA (p=0.05) after yoga when compared to that before the yogic practices.

**Conclusion:**The study demonstrate the efficacy of yogic practices on BMI, lipid profile & oxidative stress marker in patients with obesity and suggest that yogic practices may have therapeutic and protective effects on diabetes mellitus by decreasing serum lipid profile & oxidative stress.

Paper ID: 200

### **COMPARATIVE STUDY OF INFLUENCE OF YAJÑA AND YOGĀSANA ON STRESS LEVEL AS MEASURED BY ELECTRON PHOTONIC IMAGING (EPI) TECHNIQUE**

**Dr. Sushrutha S.**

SVYASA, Bangalore

**Background:** Vedic literature makes injunction of Yajña extensively as one of the *Karmas* to achieve the intended goal by performing a



set of activities, maintaining synchrony with creation. Various Yajñas have been explained for removal of diseases. Electro Photonic Imaging (EPI) technique, a specially designed instrument is used to measure human stress level based on the autonomic nervous system activity. The present study is designed to explore the influence of Yajña on normal healthy individuals' stress level.

**Aim:** To compare the influence of Yajña and Yogāsana sessions on stress level using Activation coefficient as measured by EPI.

**Settings and Design:** In a self as active control study, 18 participants underwent one hour yoga session on the first day and Yajña session on the next day. Data were taken before and after the session of the respective event. The subjects of study were participants of YIC (Yoga Instructor Course) from different places in India who have recently gone through one month of Yoga Instructor Course at Praśānti Kutiram.

**Methods and Material:** In the study participants had one hour Yoga session and on the next day, they took part in Saraswati Yajña for one hour and ten minutes. On each day, EPI data were taken before and after the session of each event. These are the two interventions in the study.

**Statistical analysis used:** Paired sample t-test was used for analysis.

**Results:** Within group differences showed significant change observed in Activation coefficient ( $p < .021$ ) of EPI parameter in Yajña session indicating decreased stress level after Yajña session.

**Conclusions:** Yajña brings about a larger decrease in stress level compared to Yogāsana session. The effects of Yajña which were observed could be because of the use of medicinal plants and procedure involved in

Yajña. So Yajña can be performed not only as a traditional practice but also as therapy for effective stress management.

Paper ID: 202

## EFFICACY OF YOGIC LIFE STYLE MODIFICATION IN NON-INSULIN DEPENDENT DIABETES MELLITUS PATIENTS.

Asem Jayanti, Gulraj Kalsi Kohli

Department of Yogic Science and

Human Consciousness,

Department of Food Science and Nutrition,  
Maharashi Dayanand Saraswati University,

Ajmer, Rajasthan, India

The prevalence of diabetes is increasing worldwide. It is now generally believed that diabetes is a lifestyle disease, and in the meantime yogic system of intervention has come forward with a firm commitment that if the old lifestyle that has caused the disease is changed to a new one it can be cured. Three yogic lifestyle modules i.e. Yoga and Diet-based Lifestyle modification Program (YDLSP), Exercise and Diet based Lifestyle modification Program (EDLSP), and Yoga, Diet and Exercise-based Lifestyle modification Program (YDELSP) were developed and the comparative efficacy of the three yogic lifestyle modules to intervene the diabetes patients of non-insulin diabetes mellitus (Type-II diabetes) were studied. 60 female diabetic subjects all within the age range of 30-60 years were selected by random sampling from three private clinics (jurisdiction: Ajmer, Rajasthan, India). The patient status was exclusive of having cardiovascular problem, retinopathy, end-stage kidney and liver disease, interfering with diet-therapy and exercise as identified by the doctors. The subjects were divided into three groups, each consisting of 20 members in



three mean age-groups i.e.  $47.6 \pm 8.27$ ,  $51.5 \pm 6.43$  and  $52 \pm 6.71$ , and they were respectively categorized as Group-A (YDLSP), Group-B (EDLSP) and Group-C (YDELSP). Eleven parameters i.e. Body weight (kg.), *Guna* score by G-Inventory scale (*Sattvic*, *Rajasic* and *Tamasic*), Systolic Blood Pressure (SBP), Diastolic Blood Pressure (DBP), Body Mass Index (BMI), Pulse Rate (PR), Respiratory Rate (RR), Breath Holding Time (BHT), Fasting Blood Sugar (FBS), Post Prandial Blood Sugar (PPBS), and Triceps Skin Fold (TSF) were taken for measuring the efficacy of the three intervention programs. Diet was milk-based Veggie. Exercise was aerobic, twice a week. Yogic practices were composed of primary and advanced organ-specific *asanas*, four times a week. Duration was 75 days in 6 sessions including session-1 as 0-day. Three parameters i.e., weight, BMI and TSF were studied on percentage basis and the *Guna* parameter was measured exclusively by using G-inventory scale. The remaining seven i.e. SBP, DBP, PR, RR, BHT, FBS and PPBS were analyzed statistically using t-test. The result showed that YDELSP was most efficacious among the three modules, followed by YDLSP and EDLSP. Module YDELSP scored the highest *Guna* scale [*sattva guna* ( $22.4 \pm 2.30$ ), lowest *Tamasic guna* ( $0.05 \pm 0.22$ )], and the highest percentage scores in both BMI (22.22%) and TSF (7.69%), among the three lifestyle modules. There was statistically non-significant efficacy of module YDLSP over YDELSP in two parameters viz. FBS (t value = 0.64, p value = NS), and PPBS (t value = 0.64, p value = NS). YDELSP however scored more percentage value than YDLSP in FBS and PPBS. On making an overall assessment of all the 11 parameters, it was found that module YDELSP was found most efficacious in 5 parameters viz. *Guna* Score, BMI, TSF, FBS, PPBS. Module YDLSP stood

second by scoring in three parameters viz. RR, PR, BHT. Module EDLSP stood third by scoring highest in one parameter viz. Body weight. Two other parameters viz. SBP and DBP were found functioning at a similar level between YDLSP and YDELSP.

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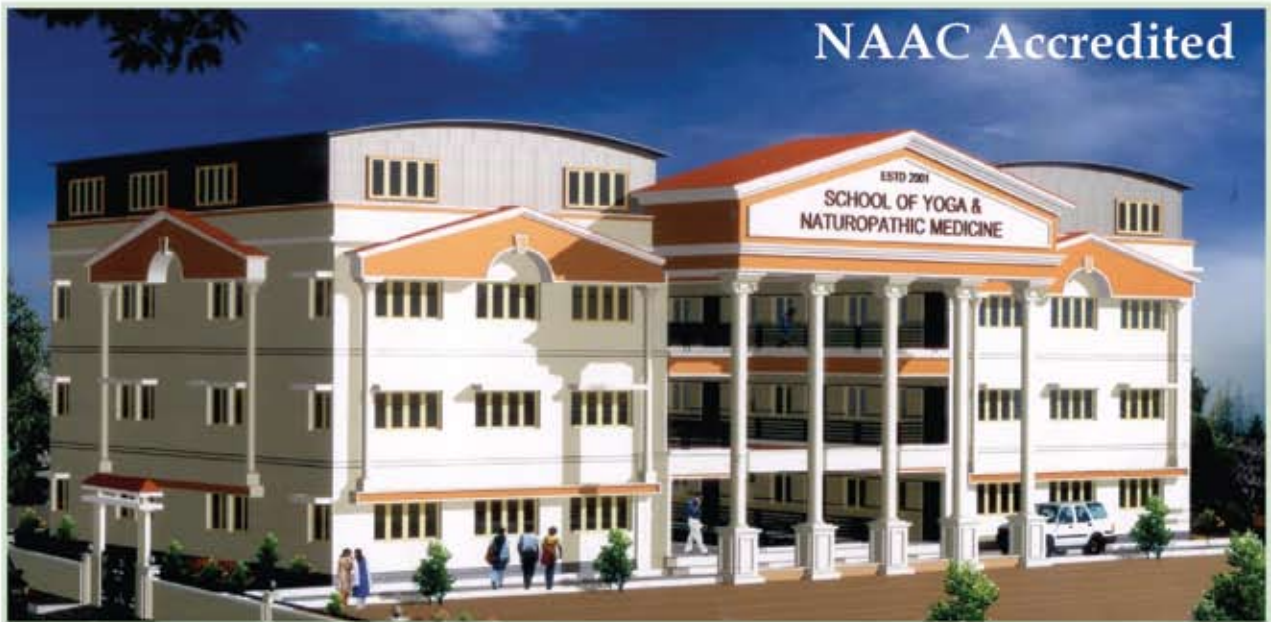
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## Achievements:

- MoUs with about 43 Universities and Research Centers around the world.
- Trained nearly 50,000 Yoga Teachers in India and Abroad.
- VYASA has spread in 56 cities in India and 36 Countries across the Globe.
- Major Research collaboration with 10 Organizations.
- Major Research International collaborations with 16 Organizations.
- Approval of 12B Status by UGC on 2014

## Recognitions:

- Cognitive Science Initiative Research, Dept. Science of Technology, Govt. of India (DST-CSI)
- 'Center for Advanced Research in Yoga and Neurophysiology' (ICMR CAR Y&N) recognized by the Indian Council of Medical Research, New Delhi for the period 2007-2012.
- 'Deemed to be University', as declared by the Ministry of Human Resource Development, Government of India, New Delhi, through the University Grants Commission (No. F. 9-45/2001. U.3).
- 'DST-FIST' sponsored department i.e., Dept. of Science and Technology, Govt. of India Fund for Improvement of Science and Technology Infrastructure in Universities and Higher Educational Institutions (No. SR/FST/LSI-142/2000)
- One of the four premier Yoga Institutes in the country as recognized by the University Grants Commission (DD NO. F.B-1/1993)
- 'Center of Excellence' recognized by the Department of AYUSH, Ministry of Health and Family Welfare, Govt. of India, New Delhi.
- 'Scientific and Industrial Research Organization (SIRO), as certified by the Department of Scientific and Industrial Research, Ministry of Science and Technology, Govt. of India, New Delhi (No. 14/43/1988-TU-V).

## Accomplishments:

- Scientific Journal of S-VYASA - International Journal of Yoga (IJOY) - the first yoga journal indexed in PubMed.
- More than 300 Research Publications in National and International peer reviewed indexed Scientific Journals.
- 29 candidates have completed PhD.
- Conducted 20 International Conferences on Yoga Research and its Applications.
- Received Research Developmental Grant from Department of AYUSH, Govt. of Karnataka, India





Vivekananda Yoga Anusandhana Samsthana, (VYASA in short, translated as Vivekananda Yoga Research Foundation) was established in the year 1984 with a vision of making yoga as a socially relevant science. Following the path breaking work in evaluating the therapeutic use of yoga in the management of bronchial asthma, the institution was recognized as a Scientific & Industrial Research Organization (SIRO) from the Department of Scientific & Industrial Research, Ministry of Science & Technology, Government of India in the year 1988. The scientific accomplishments thereafter and the disciplined education based on the science and philosophy of yoga resulted in receiving University affiliations from Bangalore University's Faculty of Sciences. Since then VYASA has been offering Doctoral programs in yoga & allied sciences to qualified students. The quality of education imparted at VYASA earned it the recognition as a Deemed-to-be University (status of an independent University) by the Ministry of Human Resource Development, Government of India in the year 2002. The same year the university was renamed as Swami Vivekananda Yoga Anusandhana Samsthana, (S-VYASA).

The Govt. of India, Ministry of Health & Family Welfare, Department of AYUSH has accorded the status of Center of Excellence in Yoga for S-VYASA. And also S-VYASA has been designated as ICMR Center for Advanced Research in Yoga and Neurophysiology (ICMR CAR Y & N; 2007-2012).

## 1. Recognitions

- Scientific and Industrial Research Organization (SIRO) - 1988
- Deemed to be University, MHRD, Govt. of India - 2002
- ICMR Center for Advanced Research in Yoga and Neurophysiology [ICMR CAR Y & N] - 2007-2012
- DST-CSI - 2011-2013
- Center for Excellence in Yoga by Dept. of AYUSH - 2011

## 2. Accomplishments

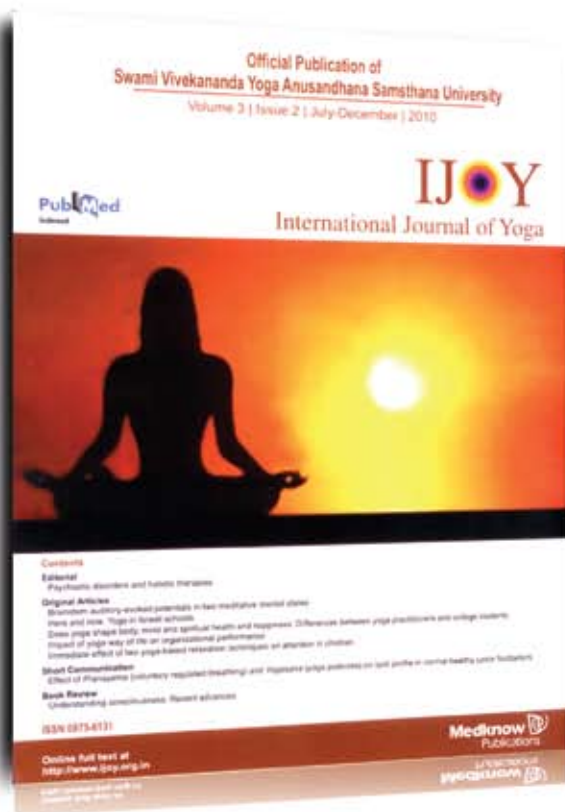
- International Journal of Yoga (IJOY) - the first yoga journal in PubMed
- More than 450 Research Publications in national and international journals
- 25 candidates have completed Ph.D.
- Conducted 20 International Conferences
- DST - FIST supported Lab

## 3. Major Areas of Research

- Physiological effects of yoga practices
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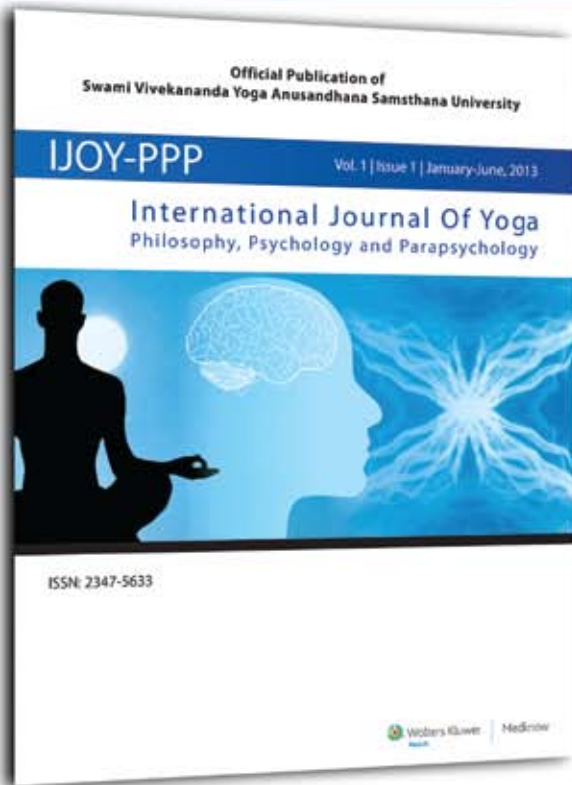
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**Mangaluru:** The Higher Education Review in its December 2015 issue has named Sahyadri College of Engineering and Management as the Engineering College of the Year 2015 for the positive impact that the college has made on society and education fraternity. This is another feather in the cap for the college.

The review is a yearly listing that showcases the best engineering colleges. An expert team consisting of HR managers and educators evaluated hundreds of nominations to come up with a comprehensive set of engineering colleges in the country that have performed well in parameters such as infrastructure, faculty, industry interaction, innovative programmes, research and placements. The college is certified by ISO 9001:2008 and accredited by International Accreditation Organization (IAO). The motto of the institute is project and research-based learning and grooming entrepreneurial culture by fostering holistic development of students.

The college exposes its students to the industry through weekly invited talks by scientists, CEOs, COOs, industrialists, Internships and value added courses.



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- Students are trained in Yogic Way of Life with Natural & wholesome food.
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### Prof. Dr. B. T. CHIDANANDA MURTHY, PRINCIPAL & CMO,

Founder Principal, SDM BNYS College, Karnataka, Ex-CMO & Principal,

Jindal Naturecure Institute, Bangalore, Director (Rtd), CCRYN and NIN, AYUSH, Govt. of India.

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शीघ्र उत्पादन के लिए अत्याधुनिक रिग माउण्टेड प्लेटफॉर्म आरएस-12

खोज के लिए साहस | श्रेष्ठता के लिए ज्ञान | उत्कृष्टता के लिए तकनीक



22.264 एमएमटी कच्चे तेल  
का उत्पादन - 7 वर्षों में सर्वाधिक

विश्व के सर्वोत्तम में से एक 1.38 का आरक्षित  
प्रतिस्थापन अनुपात (आरआरआर)

वित्तीय वर्ष 13-14 में 14 खोजों की तुलना में  
वित्तीय वर्ष 14-15 के दौरान 22 नई खोजें

'फोर्च्यून-विश्व की सबसे प्रशंसित कम्पनियाँ-2014'  
की सूची में चयनित एकमात्र भारतीय ऊर्जा कंपनी

ईएंडपी कम्पनियों में प्लेट्स द्वारा  
विश्व में तीसरा स्थान प्राप्त

तेल तथा गैस संचालन कम्पनियों में  
फोर्ब्स ग्लोबल 2000 सूची-2015 द्वारा  
विश्व में 18वां स्थान प्राप्त

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अनुगामी कम्पनियाँ



संयुक्त चयन

एरोसिस्टम



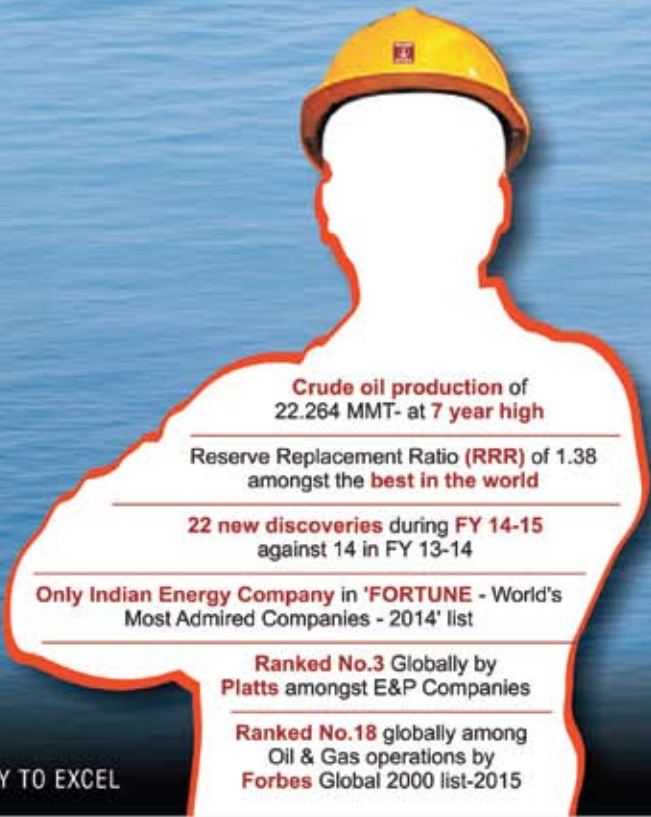
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Recognized by Department of AYUSH, Government of Karnataka

Managed by SDME Society (R) Ujire & Shanthivana Trust (R) Dharmasthala

President : **Dr. D.Veerendra Heggade**, Dharmadhikari, Sri Kshetra Dharmasthala

## Salient Features

- India's premiere college of Naturopathy & Yogic Sciences.
- 500 bedded teaching hospital in two places -Shanthivana Dharmasthala & Soukyavana Pareeka Manipal.
- First college of Naturopathy & Yogic Sciences which offers BNYS, MD & Doctoral courses.
- Proud to have students from all over India & four countries.
- College offering highest intake of students both in UG & PG courses in the country.
- Teaching hospitals attracting patients from India & Abroad.
- Institution is having MOU with Govt of India & Govt of Karnataka to manage 10 out patient Yoga & Nature Cure Centers in 10 district of Karnataka (PPP Model).
- MOU with Wonk Wong Digital University South Korea.
- Institution is training more than 3 lakhs school children in Yoga & Moral Education over 9 districts of Karnataka every year.
- Institution achieved Gunnies World Record in Yoga, Rajyothsava Award from Govt of Karnataka & Jindal Excellence Award from Sitaram Jindal Foundation New Delhi.

## For further details

### Principal & Chief Medical Officer

SDM College of Naturopathy &  
Yogic Sciences & Hospital, Ujire  
Belthangady Taluk, D.K, Karnataka, India  
Phone No: College- 08256 236188,236343,  
Hospital: 08256 – 277177, 277066, 267102  
Fax: 08256 – 236844, 267101  
Website: [www.naturecure.org.in/www.sdmbnys.in](http://www.naturecure.org.in/www.sdmbnys.in)  
Email: [sdmcnys@gmail.com](mailto:sdmcnys@gmail.com) / [shanthivana@shridharmasthala.org](mailto:shanthivana@shridharmasthala.org)

### Chief Medical Officer

Sri. D.M. Yoga & Naturopathy Hospital  
Soukyavana Pareeka, Manipal,  
Phone No: 0820-2544206,2545025,3209207  
Website: [www.naturecurepareeka.com](http://www.naturecurepareeka.com)  
Email: [pareeka@shridharmasthala.org](mailto:pareeka@shridharmasthala.org)

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7. SDM Ayurveda Pharmacy, Udupi
8. SDM Ayurveda College, Hassan
9. SDM Ayurveda Hospital, Hassan
10. SDM Ayurveda Hospital, Mangalore
11. SDM Ayurveda Hospital (OPD Unit), Chickmagalur
12. SDM College of Naturopathy & Yogic Sciences, Ujire
13. SDM Engineering College, Dharwad
14. SDM Institute of Technology, Ujire
15. SDM Technical Institute (Polytechnic), Ujire
16. SDM Dental College, Dharwad
17. SDM Dental Hospital, Dharwad
18. SDM College of Physiotherapy, Dharwad
19. SDM Medical College, Dharwad
20. SDM Medical Hospital, Dharwad
21. SDM College of Nursing, Dharwad
22. SDM College of Education, Ujire
23. SDM Institute for Management Development, Mysore
24. SDM Law College, Mangalore
25. SDM Business Management College, Mangalore
26. SDM Industrial Training Institute, Venur
27. SDM Industrial Training Institute, Samse
28. SDM ITI For Women, Ujire
29. SDM Institute of Ayurveda & Hospital, Bangalore

## Primary & High Schools

30. SDM Secondary School, Ujire
31. Sri Manjunatheshwara High School, Dharmasthala
32. SDM High School, Belal
33. SDM High School, Perinje
34. SDM English Medium Primary School, Ujire
35. SDM English Medium School, (C.B.S.E.), Ujire
36. SDM English Medium High School, Ujire
37. SDM Higher Primary School, Ujire
38. SDM English Medium Higher Primary School, Ujire
39. SDM English Medium School, Belthangady
40. Sri Manjunatha Swamy Higher Primary School, Dharmasthala
41. Sri Manjunatheshwara English Medium School, Dharmasthala
42. SDM Higher Primary School, Pudevettu
43. SDM Higher Primary School, Mayyadi
44. SDM Mangalajyothi Integrated School, Vamanjoor
45. Kanchana Venkatasubrahmanyam Memorial High School, Kanchana
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47. Rural Development and Self-Employment Institute (RUDSETI), Ujire
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50. Middle Level Training Centre (MLTC), Ujire
51. Nethravathi Handicraft Training Centre, Ujire
52. SDM Sports Club, Ujire.

## SDM Publication Trust (R.), Ujire

53. Manjushri Printers, Ujire
54. Manjuvani Kannada Monthly Magazine, Ujire
55. SDM Pusthaka Prakashana Male, Ujire



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