3.1 ***KEYNOTE ADDRESS***

YOGA IN HEALTH AND DISEASE

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ABSTRACT

To date large number of publications are available studying various aspects of yoga in health and disease. Self-rated hostility and depression (Schmaling et al. 1997) and higher degree of frustrating situations in their life (Berezin et al. 1997) were found to be associated with decreased pulmonary function, blood immunoglobulin levels and clinical state of the disease. Khalsa et al (1996) tried the efficacy of a specific yoga breathing pattern on 8 subjects with obsessive compulsive disorder with significant improvement on OCD, as measured by anxiety and global severity indices. Several other studies (Sahay et al 1986, Jain et al 1993) have shown the beneficial effects of yoga in NIDDM through reduction in hyperglycemia and the need for oral hypoglycemic agents. Role of yoga in mechanical back pain, carpel tunnel syndrome, cervical spondylosis, fibromyalgia and chronic pain have been studied by many workers. The role of yoga in rehabilitation, promotion of positive health at physical, mental, emotional and spiritual levels have been reviewed by my colleague by Dr. Malathi in the session on other applications of yoga.

The modern medical system has replaced almost all the traditional systems of medicine in different parts of this globe because of its rational basis. It has proved itself most effective in saving man from the fatal hands of contagious andinfectious diseases. However, rapidly increasing incidence of stress related ailments is posing a great challenge to the modern medical system . It is here that Yoga appears to make a vital contribution to the modern medical system.

CONCEPT OF HEALTH AND YOGA

According to the World Health Organisation (WHO), the state of Health is defined as a state of complete physical, mental and social well being and not merely an absence of disease or infirmity. WHO also suggests a fourth dimension i.e. "spiritual well being". It is clear from this definition that health and ill-health are not two discrete entities as commonly understood but it is conceived as a continuous function indicating the state of well being In the diagram (fig 1), the lower quadrant, 'health', represents what we normally designate as 'sickness'. Below this level, man acts instinctively and is akin to an animal. The first quadrant, the region marked as 'normal man', indicates the state of normal health. As he moves along the line further up, he becomes healthier, featured by many dormant faculties expressing more vividly. This is shown as the region of'superman'. In this stage, the limitations of normal man, namely, the strong urges of thirst, hunger, fear and sex are reduced greatly and are fully under control. According to the concept of Sri Aurobindo, the new faculties of deeper perceptions of the world beyond the five senses emerge in this phase of superhuman existence. Further, growth leads man to unfold the deeper layers of consciousness and widen the spectrum of his knowledge to move towards divinity or perfection. Yoga is a systematic conscious process for accelerating the growth of a human being from his animal level towards the ultimate state of divinity (Swami Vivekananda). It is a systematic methodology for an all-round personality

development i.e. physical, mental, intellectual, emotional and spiritual components of man. Thus, Yoga in its general methodology for the growth of man towards divine heights includes techniques useful for therapeutic applications in making man healthier.

According to the tradition of Yoga and Upanishads, man has five bodies or kosas (sheaths) which is graphically represented in fig 2. The first and the grossest, the physical body, is called "Annamaya kosa". The next subtler body is the Pranamaya kosa featured by the predominance of prana, the life principle. Controversies apart, Kirlian photography triggered the interest of a large number of scientists and technologists all over the world. The scientific study of the Human Aura by Tart, delineates the following aspects of the human aura; the physical aura, psychological aura, psychical aura and the projected aura. Manomaya Kosa or the psychical body is responsible for the functions of mind, namely perception, analysis, memory and also the emotions. The Vijnanamaya kosa characterised by discrimination and a capacity to judge, is aimed at channelising human behavior towards perfect health, in tune with nature. In the Anandamaya state, man is established in perfect harmony and balance of all his faculties and is featured by total mastery, bliss and freedom from fear.

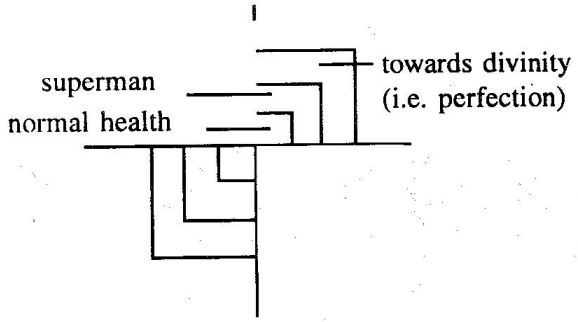

Fig 1

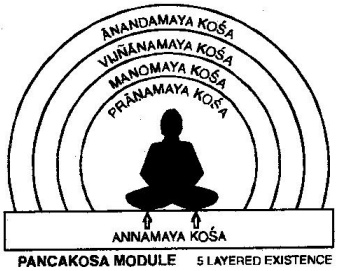

Fig 2

YOGIC CONCEPT OF ILLNESSES

The root cause of Stress induced ailments is the imbalance at the Manomaya Kosa. Amplified likes and dislikes at the manomaya kosa results in distressful emotional surges called 'Aadhi'. The life style gets disturbed because of long standing uncontrolled surges of stressful reactions like intense desire (Kama), anger (Krodha), fear (Bhaya), jealousy (Matsarya) etc., These agitations cause violent fluctuations in the flow of prana in the 'nadis' which are said to be the channels distributed all over the body through their branching system. Each and every cell in the body, the components of annamaya kosa, requires right quota of its pranic energy to carry on its biochemical processes in an efficient way. The example is that of uninterrupted power supply necessary for every electrical gadget in right quantities. Just as these equipments would fail if there is any irregularity in the power supply, human organ systems fail to function if they do not get the right quantum of prana. Thus the disturbances in the Manomaya kosa percolate into physical body (Annamaya Kosa) through disturbed prana flows. Hence the management of these stress induced ailments should correct imbalances at all these levels (physical, prana and mind) and help the patient establish himself in his Vijnanamaya and Anandamaya Kosa which is the state of freedom from illness. Hence Yoga techniques are offered at all these levels, to correct the imbalances through a set of yoga practices which we have termed as Integrated approach of yoga therapy (IAYT). The following are the practices, to correct the problem at various levels:

Annamaya Kosa: Kriyas (Traditional voluntary internal cleansing techniques), Yogasanas (body postures) and Savasana (Relaxation posture),
Pranamaya Kosa: Five types of systematic regulated slow deep breathing practices with or without breath holding, called Pranayama.
Manomaya Kosa: Meditation (Dharana and Dhyana) and devotional session (Bhakti yoga),
Vijnanamaya Kosa: Understanding the nature of ones problems in the light of Indian thinking through self analysis (Jnana yoga),
Anandamaya Kosa: Practice joy under all circumstances (Karma yoga). Try to touch the inner core of one self in solitude and establish in the experience that Ananda is the basic fabric of this universe including the self.

SCIENTIFIC RESEARCH ON MEDICAL APPLICATIONS OF YOGA

To date large number of publications are available studying various aspects of yoga in health and disease. Let us look at these under two major categories namely (a) application of yoga in disease including rehabilitation and (b) in promotion of positive health at physical, mental, social and spiritual levels.

YOGA IN STRESS RELATED DISEASES

The increasing awareness that many of the common psychiatric and psychosomatic problems have stress as the basic underlying factor, has led to many studies trying to apply techniques of stress management in these ailments with encouraging results. 'Yoga', which is an experiential science provides a systematic methodology with its firm roots in a holistic philosophy which is in total harmony with nature. This science is the offshoot of thousands of years of internal research by Indian sages.

YOGA IN RESPIRATORY ALLERGIES

There are several publications to demonstrate the role of emotions in asthma and also to validate the efficacy of different yoga practices in bronchial asthma. Some are well designed controlled studies whereas many of the earlier studies were observations on uncontrolled groups. Negative emotions and psychosocial pathology are found to be related to severe asthma (Friedman, 1984; Carswell, 1985; Carson and Schauer, 1992). Miller et al (1994) demonstrated that sadness was associated with greater heart rate variability and instability of oxygen saturation compared with happiness. There was mixed results for mixed happiness and sadness. Self-rated hostility and depression (Schmaling et al. 1997) and higher degree of frustrating situations in their life (Berezin et al. 1997) were found to be associated with decreased pulmonary function, blood immunoglobulin levels and clinical state of the disease. Alexander (1972) demonstrated the effect of systematic relaxation on flow rate in asthmatic children in whom emotional factors were prominent. Wilson et al (1975) evaluated 21 asthmatics after the practice of TM for 6 months with crossover at 3 months, indicating that transcendental meditation is an useful adjunct in treating asthma. Goyeche (1982) published his work on the integrated yoga approach to asthma with beneficial results. Singh et al (1990) studied 18 subjects with mild bronchial asthma after 2 weeks of practice of yogic pranayama by the use of a breathing device called pink city lung exerciser (PCL). Slow mouth breathing through this device simulates yogic pranayama with a ratio of 1:2 between inhalation and exhalation. This was compared with breathing through a placebo device. In this randomised, double blind, crossover placebo controlled study they observed greater degree of improvement in PCL group than the

control group on FEV1, PEFR, symptom score and inhaler usage. Fluge et al (1994) in a controlled study on 36 asthmatics followed up for 4 months concluded that breathing exercises had an additive effect when used in combination with Albuterol inhalation therapy. Vedanthan et al (1998) studied the effect of yoga practices on 17 students in the age group of 19-52 years in an university set up. Daily symptom score, medication score, AM and PM PEFR, weekly questionnaires and lung functions were measured. The subjects in yoga group reported significant degree of relaxation, positive attitude and tendency for lesser usage of inhalers.

YOGA IN ANXIETY NEUROSIS

Various yoga practices such as asanas, meditation, pranayama, savasana are now recognised as relaxation techniques comparable to many behavioral modification techniques like biofeedback and progressive muscular relaxation based on the famous work of Wallace (1970) who showed that the practice of Transcendental Meditation (TM) brings about signs of overall psychophysiological relaxation. Anxiety neurosis recognized as an exaggerated form of stress response with sympathetic hyperreactivity, could therefore benefit through any one of these relaxation therapies. (Udupa, 1972; Rapp et al. 1984), Norton & Johnson (1983), DeLuca & Holborn (1984), Tarrier & Main (1986) have demonstrated the comparative efficacy of different types of muscle relaxation therapies (taped instructions or applied relaxations) in different types of anxiety of both cognitive and somatic type such as snake phobia, nail biting, hair pulling, panic attacks as well as general anxiety. Tyrer et al (1988) in their randomised control study on 210 subjects demonstrated that self help group fared better than the diazepam group and consumed less psychotropic drugs. Further Rabat et al (1992) showed the effect of mindful meditation to reduce stress, anxiety, depression, panic and also the panic of agrophobia. Gagne (1990) compared the effect of therapeutic touch & relaxation and concluded that they could be palliative adjuncts in anxiety. Khalsa et al (1996) tried the efficacy of a specific yoga breathing pattern in 8 subjects with obsessive compulsive disorder with significant improvement on OCD, as measured by anxiety and global severity indices. Crisan (1988) observed reduction in scores on Max Hamilton's a anxiety scale, general health questionnaire, heart rate, urinary level of VMA and a rise in galvanic skin resistance in 19 patients with generalised anxiety neurosis after 8 weeks of pranayama practice.

YOGA IN DIABETES

In both IDDM and NIDDM physiologically demanding stressful situations like infection, pregnancy etc. are known to increase the demand for insulin. Similarly emotional stresses also contribute to the irregular control of diabetes. Relaxation therapies using biofeedback or taped instructions have been reported to be useful in better control of diabetes (Me grady et al. 1991). Jobson et al (1991) in a well planned controlled study showed that although there was demonstrable physiological rest (reduced muscle activity and skin resistance) the progressive relaxation training and biofeedback given once a week did not help in improving diabetic control in 20 patients with type II diabetes. Monro et al (1992) carried out a controlled trial on 21 subjects with NIDDM. Fasting blood glucose and glycosylated haemoglobin reduced significantly ($p<0.05$) in the group of 11 who practised the integrated programme of yoga as compared to a matched control group of 10 who did not practice yoga. Several other studies (Sahay et al 1986, Jain et al 1993) have shown the beneficial effects of yoga in NIDDM through reduction in hyperglycemia and the need for oral hypoglycemic agents. Rice et al (1992) observed increased peripheral blood circulation in lower extremities as measured through toe temperature and blood volume pulse in 40 diabetes in the age range of 17 to 73 years after biofeedback assisted relaxation training.

YOGA IN HYPERTENSION

As early as nineteen thirties Swami Kuvalayananda of Kaivalyadhama started studying the effects of yogic practices on blood pressure, heart rate etc, in yogis. Datey and his coworkers (1969) showed the beneficial effect of savasana in mild hypertensives who were not taking medication. Patel (1973,75) has shown the beneficial effects of savasana in hypertension in her year long follow-up control study. In an open study comprising 23 hypertensive patients Sachdeva et al (1994) observed reduction in systolic blood pressure from 134.5 ± 16.01 to 125.1 ± 9.60mm of Hg and diastolic blood pressure from 88.5 ± 9.42 to 81.62 ± 6.48mm of Hg respectively after 2 months of yogic life style change.

Talukdar (1994) noted statistically significant changes in cell membrane enzymes after yoga practices in hypertensives. 10 to 12 weeks of practising certain yogasanas increased serum HDL levels and caused a trend of reduction in serum cholesterol, triglycerides, LDL and VLDL (Bhaskaracharyulu et al, 1996). Though its beneficial role in mild hypertension has been demonstrated, more in-depth study is required to document the effect of different forms of yoga on patients with moderate and severe hypertension and also the mechanisms have to be worked out through studying autonomic status, renin-angiotensin mechanism and platelet aggregation etc.

YOGA IN CORONARY HEART DISEASE

Coronary heart disease being one of the major killers of mankind even today, the role of life style modification to take care of all the risk factors to prevent CHD cannot be overlooked. Greenwood et al (1996) reviewed the literature and showed that both social support and life stresses influence the incidence and mortality of coronary heart disease, the latter more so than the former. The emotion support had the largest effect. Orth Gomer et al (1997) analysed the heart rate variability from a bolter record during transient myocardial ischeamia and observed suppression of the efferent vagal activity and suggested that this vagal blockage may be a forerunner to onset of ischaemia. Winneberg (1997) found positive correlation between collagen induced platelet aggregation and outwardly expressed anger as measured by anger expression scale. The work of Ornish et al has become a major land mark on this path of preventive cardiology. Gould, Ornish and coworkers (1995) studied the changes in myocardial perfusion by positron emission tomography (PET) after 5 years of intense risk factor modification. The experimental group of 20 followed a programme of very low fat vegetarian diet, mild to moderate exercise, stress management and group support. The abnormalities on rest-dipyridamol PET abnormalities of ventricular perfusion showed significant change in the experimental group (-5.1 ± 4.8% normalised counts) while the control group who continued under family physicians care with antianginal therapy had worsening of size, severity of PET abnormalities (10.3 * 5.6%). Although there was a significant degree of improvement observed in the percent diameter stenosis on coronary angiography in the experimental group as compared to control group, greater degree of changes were observed in ventricular perfusion and the measurement of area of LV with less than 60% activity in PET.

YOGA IN RHEUMATOID ARTHRITIS

Stress could be a major triggering or aggravating factor for the autoimmune inflammation in rheumatoid arthritis has been understood. Haslock (1994) reported the beneficial effect on grip strength and Stanford health assessment questionnaire disability index in 10 severe rheumatoid

arthritis subjects, as compared to 10 matched controls who participated in a programme of IAYT. Role of yoga in mechanical back pain, carpel tunnel syndrome, cervical spondylosis, fibromyalgia and chronic pain have been studied by many workers.

YOGA IN REHABILITATION

Yoga practices have been tried in the rehabilitation of various socially disadvantaged groups like inmates of jails, drug abusers, alcoholics, congenitally blind, mentally retarded and children from community (remand) homes. In all these socially disadvantaged groups, either due to repressed anger or depression or anxiety, a heightened state of mental arousal could be a common underlying factor, that can interfere with their efficiency in any new learning for better living or for improved performance.

YOGA IN COMMUNITY HOMES

Children in community homes although physically normal were socially and emotionally traumatized (Ahvenainen, et al 1990) Significantly higher level of sympathetic arousal as seen by heart rate, respiratory rate, skin resistance was seen in community home girls in Bangalore compared to regular school children (Telles, Naveen & coworkers 1997). In a comparative study, we (Narendran & Raghuraj, 1997; Raghuraj & Telles 1997) showed significant reduction in breath rate, skin resistance, performance on muscle power, dexterity skill and visual perception in the yoga group compared to the group practising games in 14 pairs of girls in the age group 12-16 years, from a community home.

YOGA FOR THE BLIND

Naveen et al (1996) on repeated recording of middle latency auditory evoked potentials (AEPMLR) demonstrated that the information processing in the auditory pathways was much better in the congenitally blind than normally sighted children showing better sensitivity in hearing enabling them to use echoes to perceive spatial position. Greater anxiety and higher heart rates were noted in the blind compared to matched normal children (Ollendick et al. 1985 & Wycherley 1970).

YOGA FOR MENTALLY RETARDED

Special education for the mentally retarded has now been well streamlined and these children are getting integrated into general education. Yoga has been tried out as an adjunct in education of children with mental retardation, learning disabilities and attention deficit hyper activity syndromes. Krishnamacharya yoga mandiram (1983) documented and reported subjective improvements and also described the practices of yoga adopted for these children. We (Uma et al 1989), in our matched control study
on 90 retarded children practising IAYT for one hour daily for one academic year as an adjunct to the standard techniques of special education have shown significant improvement in IQ (Binet Kamat's test) and social adaptation (Vineland social maturity scale) in addition to improvement in locomotor skills (Siguine form board) in those with mild and moderate degree of retardation. Improved attention span after IAYT may be the mechanism that promotes learning.

YOGA FOR PSYCHOSIS AND CHEMICAL ABUSE

There are several reports of the use of TM in the rehabilitation of drug abusers and alcoholics (Shafi, 1974; Brautigam, 1972; Benson et al. 1972). We observed the beneficial effect of IAYT in the rehabilitation of schizophrenics (Telles, 1997) in a long stay home.

YOGA FOR PROMOTION OF POSITIVE HEALTH

Application of yoga for the first component (absence of disease) of the WHO definition of health has been highlighted. Let us now look at the other components namely promotion of positive health at the physical, mental, social and spiritual level.

YOGA FOR POSITIVE PHYSICAL HEALTH

Positive health at physical level includes normalcy of body mass index (Height weight ratio), flexibility of joints, supple but strong muscles, skill in motor performance, resistance in infections and tolerance to environmental variations.

Large number of studies were reported by the TM group demonstrating improved physical health measured by motor and perceptual ability, athletic performance and reaction time (Shaw & Kole, 1971), and also by better performance of perceptual motor tasks (Karene, 1971). Six months of yogic asanas was shown to increase hip and shoulder flexibility in the middle-aged men whereas physical exercises had no such effect (Ray et al. 1983).

YOGA IN PHYSICAL EDUCATION

Nayar et al. (1975) demonstrated improvement in cardiorespiratory functions in NBA cadets trained in yogic practice as compared to those undergoing physical training, The body flexibility and the muscular efficiency improved after six months of yogic training (Ray et al. 1986). The improvement in muscular efficiency was reflected as an increase in endurance time probably due to alternate recruitment of motor units. Telles et al (1993) studied 40 senior physical education school teachers who were doing diverse physical activities for 8.9 ± 5.8 years after 3 months of integrated yoga programme. There was a significant increase in PFR (6%),,FEV1 (16%), FVC (18%), breath holding time (40%) and a significant reduction in heart rate, respiratory rate, blood pressure, body weight and the number of errors made in the steadiness test reduced significantly. The galvanic skin resistance increased reflecting reduction in sympathetic tone.

YOGA AND IMMUNE SYSTEM

Psychological stress is thought to undermine host resistance to infection through neuroendocrine mediator changes in immune competence. 236 preschool children in the age group of 3 to 5 years, were studied by Boyce et al (1995). They compared the effect of laboratory stress of performing developmentally challenging task with two measures of environmental stress at the child care center and assessed the cardiovascular reactivity, incidence of respiratory illnesses, CD4, CDS & CD19 cell counts, lymphocyte mitogenesis and antibody response to pneumococcal vaccine. They showed that the incidence of illness was related to an interaction of child care stress and mean arterial pressure reactivity (measure of psychobiologic reactivity to stress). They also observed an interaction between stressful life events and CD19 reactivity during stress of entering school. Klemons (1972) in their controlled clinical study assessed the degree of gingival inflammation (GI) in 46 TM meditators compared with 26 non meditators. Improvement of GI was noted in 74% of the meditators Vs 15% in non meditators. Practice of IAYT by patients with open tuberculosis in a sanatorium through controlled studies showed faster recovery in their general health, X-ray changes and sputum positivity. Allergies, autoimmunity and cancer are other immune system disorders where the role of yoga has been experimented upon.

YOGA FOR POSITIVE MENTAL HEALTH

A positive mental health would be achieved by sharpening of perception of information arriving to the brain through all our special senses, better analytical faculty (IQ), sharper memory and on the

overall improvement in personality characteristics. Emotions being the major component of human behavior, mastery over the upsurges of emotion is considered as the sign of better health rather than just a sharpening of emotions. The capacity to replace instinctual violent emotions like anger or fear by soft emotions like love, sympathy, peace and contentment indicates higher levels of emotional health.

YOGA FOR PERCEPTION

Meditation has been described as a training in awareness, which when kept over long periods produces definite changes in perception, attention and cognition (Brown, 1977). Significant changes were reported in the visual perception of advanced meditators, who were able to distinguish subtle differences in color and shade. They were more perceptually sensitive to detect shorter light flashes and required a shorter interval to differentiate between successive flashes correctly (Brown et al. 1980,1984). It has also been shown that processing of sensory information at the thalamic level is facilitated during the practice of pranayama (Telles et al. 1992) and meditation (Telles & Desiraju, 1993). These two practices, along with IAYT were found to bring about an improvement in hand steadiness in college students following 10 days of
practice (Telles et al. 1993). This improvement was believed to be due to improved eye-hand coordination, better attention, concentration and relaxation.

We (Telles et al 1995) tested the visual discrimination in two groups of 18 college students (age 17-22 years) each, by their ability to detect intermittent light of fixed luminance at varying frequencies on a Critical Flicker Fusion apparatus. The initial values were 37.6±0.7 and 37.9±0.6 which changed to 42.6±1.6 ($p<0.01$) and 36.4 ± 0.7 ($p<0.5$) in Yoga and control groups respectively demonstrating sharper perceptual ability after yoga. In another study (Ramanavani 1997) in adults (25 to 39 years), we observed that the improvement in Critical Flicker Fusion in yoga group occurred after 20 days of yoga instead of 10 days unlike in children where the changes were demonstrable within 10 days.

It has been shown that training in focusing the gaze on the stimulus reduces the optical illusion by 79% (Hochberg 1984). The degree of illusion was measured on Muller Lyer apparatus where the lines although of equal length, appear unequal due to the two different types of arrows drawn at both ends of the line (<—>), the close ended (<—>) or open ended (<—>). There was a 86% reduction (Tukey test, $p<0.001$) in degree of illusion in the group of 30 subjects after 30 days of integrated yoga practice where as the control group did not show significant change (Telles et al. 1997).

YOGA FOR LEARNING AND INTELLIGENCE

Shecter (1975) showed significantly greater improvement on measures of creativity (match problem test), Intellectual performance (Raven progressive matrices) and personality (Jackson personality inventory) with a reduction in their anxiety (Lickert scaled questionnaire) after practice of transcendental meditation (4 days) and science of creative intelligence (14 weeks) Program in 60 high school students. Collier (1973) and Heaton et al (1974) demonstrated the improvement in performance and achievement in university students after transcendental meditation. In 1989 we (Uma et al) demonstrated the role of integrated approach of yoga in improving IQ in special children.

YOGA IN MEMORY

Improved information processing at thalamo-cortical pathway, better attention, concentration and emotional stability forms the basis for better registration and retrieval. Abrams (1972) showed a direct relationship between transcendental meditation, quicker acquisition and higher recall performance in 14 subjects. Effect of breathing through a particular nostril on selective memory

test for 'right' (spatial) and 'left' (verbal) brain functions (Telles et al 1997) were studied. 108 school children with an age range of 10 to 17 years were randomly arranged to 4 groups. Each group practiced a specific yoga breathing technique namely (a) right nostril breathing (SAV), (b) left nostril breathing (CAV), (c) alternate nostril breathing (NS), (d) breath awareness without manipulation of nostrils. Yoga training caused an increase in verbal and spatial memory scores within 10 days. For all groups there appeared to be more marked improvement in right brain functioning. A marginal difference was obtained between the scores of the SAV and the CAV groups, suggesting an ipsilateral beneficial effect.

YOGA FOR EMOTIONAL STABILITY

Modern day living style in laden with the ill effects of stress. Stress according to yoga is an uncontrolled surge of emotions like intense desire, anger, anxiety etc. When the stress is prolonged, the person loses his capacity to come out of the clutches of the loop of intensely heightened activity that shows up as imbalances in the function of the autonomic nervous system. This shows up as generalised complaints like anxiety, fatigue, addictions etc. or as localised problems (asthma). Role of yoga to reduce the force and speed of these violent surges of emotions has been validated by many workers through psychophysiological studies.

In early 1970's, the epoch making study of Wallace (1970) showed that the practice of Transcendental Meditation brings about a unique "hypometabolic physiologic wakeful state" with overall signs of psychophysiological relaxation. A study from DIPAS (Delhi) showed that six months training in asanas (physical postures), pranayama (breathing practices), and meditation brought about definite physiological changes in normal volunteers, viz. an increase in orthostatic tolerance and an overall shift in the autonomic equilibrium towards parasympathodominance, as was shown during Transcendental Meditation (Selvamurthy et al. 1983). Further studies (Telles et al 1995) on OM meditation showed significant reduction in heart rate with an increase in cutaneous peripheral vascular resistance which is a sign of increased mental alertness even while physiologically relaxed. Telles et al (1994) published their interesting observation that breathing exclusively through right nostril (Surya anuloma viloma) showed a 37% increase in basal oxygen consumption, as compared 18% and 24% increase after alternate nostril (nadi suddhi) or left nostril (Chandra anuloma viloma) breathing. This suggested that breathing through right or left nostril breathing may have activating or relaxing effect on the sympathetic nervous system. This was supported (Telles 1997) by changes in systolic blood pressure and digit pulse volume suggesting the sympathetic stimulating effect of right nostril breathing.

YOGA FOR SOCIAL HEALTH

Better adaptability when exposed to varying sociocultural situations is an important faculty which is generally measured through various personality tests. According to yoga the most important parameter of positive social health is "Tatsukha Sukhitwam" which means joy in the joy of others. Movement from selfishness to selflessness is considered as the measure of growth of social health. At the negative spectrum of the social health one could consider antisocial behaviors like crimes, accidents etc. that show up because of increasing degree of selfishness with total lack of social awareness and civic sense.

In 1976 Borland et al. published their interesting paper on "Maharshi effect" wherein they demonstrated a sudden downward shift in the trend of increasing crime rate when about 1% of the city population had begun the TM technique. A comparison of 11 US cities with population over 25, 000 with 0.97% or more of their population practising TM with 11 matched control cities showed that the mean change in crime rate from 1972-1973 among the control cities had increased by 8.3% as compared to a decrease of 8.2% in cities with 1% meditators, the difference being statistically

significant.

YOGA FOR SPIRITUAL HEALTH

Texts on Yoga and Upanishads describe the criteria of spiritual health as self awareness of one's natural state of contentment. The joy or happiness is independent of any external agency. Such a person's activities are not motivated by the need for material gains of money, name or fame and they function in the society totally in tune with cosmic order charecterised by simplicity, truthfulness and confidence. This is a state of eternal bliss and contentment, undisturbed by the ups and downs of the life.

The nearest measure of such a state described by the modern psychologists could be that of "self actualization". Many studies were conducted on transcendental meditators to show improved scores on self actualization values, spontaneity, self regard, self acceptance, synergy, acceptance of aggression, capacity for intimate contact in meditation as compared to non meditators (Hielle 1974, Davis et al. 1984 and Nidich et al. 1973). This was measured by Shostrom's personal orientation inventory of self actualization.

Triguna questionnaire which is based on Satva, Rajas, and Tamas type of personality described in Bhagavad Gita and other Indian texts may prove to be a good tool for measuring the spiritual growth of the individual. Studies on higher states of consciousness (Orme Johnson 1976), new theories in physics defining consciousness as the base of all being (Goswami 1993), research in ESP, telepathy, rebirth and Psychoneuroimmunology are all opening up newer avenues of understanding of the subtler aspect of positive health, which were not in the perview of science until recently.

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3.2 ***INVITED TALKS***

SPIRITUAL DIMENSION OF HEALTH

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ABSTRACT
It is good that humanity has rejected the narrow view of health, as merely the absence of ill-health or disease just as Life is not merely the absence of death. Life, in fact is much larger than death. Rightly, it has been said that health is not everything, but everything without health is nothing. This state has been mentioned as 'Cit-Ananda'by ancient Indians. Health was defined as 'A state of complete physical, mental and social-being and not merely the absence of disease or infirmity'. Health, therefore, should be considered as the key for the achievement of the goal of life and not merely a tool to satisfy the desires of man.

No matter which way we look at health, all the great religious philoosphies identify the final goal of life either as attainment of emancipation, liberation from the cycle of life and death. Nirvana, salvation of Final Beatitude or something similar. All, one way or the other mean something similar. This state is described wherein all desires, egos, pain and pleasure cease to exist and where one's soul is engulfed in a supreme bliss of the highest pleasure. This state has been mentioned as 'cit ananda' by ancient Indians. This was, thus, a state of extreme well-being.
The ancient dawns of human knowledge have left with us their witness to this constant aspiration: "Today we see a humanity satiated but not satisfied by victorious analysis of the externalities of nature, preparing to return to its primeval longing. The earliest formula of wisdom promises to be its last God, Light, Freedom, Immortality". Health, therefore, should be considered as the key for the achievement of the goal of life and not merely a tool to satisfy the carnal desires of man.
Seventh of April of 1948 was a red-letter day for the humanity, because on that day, the Constitution of the World Health Organization came into force and a momentum was given to human history, to go ahead with a universal joint movement for the achievement of health of the mankind. Health was defined as "a state of complete physical, mental and social-being and not merely the absence of disease or infirmity".
It is significant to note that the definition of health confined to only three dimensions of physical, mental and social. Spiritual health was conspicuous by its not being mentioned at that time.

CONSIDERATION OF SPIRITUAL HEALTH BY WHO
This proposition took the form of a resolution on the spiritual dimension of health at the Thirty-sixth World Health Assembly in 1983. There could indeed be a spiritual dimension of man, but could there be a spiritual dimension in health care programme? The matter of defining the spiritual dimension of health was referred again to the Executive Board.
Based on further deliberations in the Executive Board, the Thirty-seventh World Health Assembly adopted a resolution to the effect that spiritual dimension should be added to the scope of health. It may be recalled that at the World Health Assembly in 1974, Member States of the World Health Organization adopted a resolution emphasizing the need to explore the role of psychosocial factors affecting health and human development.
It was decided to initiate programs concerning the role of psychosocial factors and their influence on health in general, and mental health in particular, and on the part that these factors play in the functioning of health services (WHA 27.53). Two years later, in 1976, the World Health Assembly resolved to apply existing knowledge in the psychosocial field to improve health care, particularly for those most in need; to develop methods so that relevant psychosocial information is made available to health planners; and to acquire new knowledge on which health action can be based (WHA 29.21).

The milestone towards a new definition of health was created in 1978, when, on the initiative of the Indian representative in the Executive Board of WHO, it was proposed that the definition of health be enlarged to cover spiritual well-being, in addition to the physical, mental and social well-being. Finally, at the Thirty-sixth World Health Assembly, held in Geneva in 1983, a number of countries proposed a resolution concerning the spiritual dimension of health in Committee 'A' of the Assembly, which ran as follows :

"The Thirty-sixth World Health Assembly, pursuant to the objective of WHO spelt out its Constitution, namely the attainment by all peoples of the highest possible level of health;
Considering that a spiritual dimension is implicit in such a concept of health;
Recognizing the major importance of the spiritual dimension in providing the best possible health care to the peoples:
1. Affirms the importance of spiritual dimension in providing health care to peoples;
2. Requests the Director-General to take the spiritual dimension into consideration in the preparation and development of primary health care programs aimed at the attainment of the goal of health for all, by the year 2000."

Whether there could be a spiritual dimension in health care programme, he was not sure. Based on further deliberations in the Executive Board, the Thirty-seventh World Health Assembly adopted a resolution (WHA 37.13) to the effect that spiritual dimension should be added to the scope of health. The resolution contains an affirmation that ennobling ideas have not only stimulated worldwide action for health, but have also given to health an added spiritual dimension.

THE THIRTY-SEVENTH WORLD HEALTH ASSEMBLY

Having considered the Director-General's report on the spiritual dimension in the Global Strategy for Health for All by the year 2000 and the recommendation of the Executive Board, thereon contained in resolution EB73.R3;
Understanding the spiritual dimension to imply a phenomenon that is not material in nature but belongs to the realm of ideas, beliefs, values and ethics that have arisen in the minds and conscience of human beings, particularly ennobling ideas;
1. Thanks to the Director-General for his report and the Executive Board for its recommendation;
2. Concurs with the reflections contained in the report;
3. Notes that ennobling ideas have given rise to health ideals, which have led to a practical strategy towards 'health for all', that aims at attaining a goal that has both a material and nonmaterial component;
4. Recognizes that if the material component of the strategy can be provided to people, the nonmaterial or spiritual one is something that has to arise within people and communities in keeping with their social and cultural patterns;
5. Considers that the realization of the health ideals that form the moral basis of the goal of health for all, by the year 2000, will itself contribute to people's feelings of well-being.
6. Recognizes that the spiritual dimension plays a great role in motivating people's achievement in all aspects of life;
7. Affirms that ennobling ideas have not only stimulated worldwide action for health but have also given to health, as defined in WHO'S Constitution, an added spiritual dimension;
8. Invites Member States to consider including in their strategies for health for all, a spiritual dimension, as defined in this resolution, in accordance with their social and cultural patterns.

In response to the above. Regional Director, SEAR requested the writer to prepare a paper which is annexed (see Annexure).

In concluding para, it sums up thus: There has been commendable research work to determine a relation between consciousness and awareness, utilizing the animal model to fit in with the human

being. Neither the study of physics nor chemistry, or its interpretation into the life sciences, can explain this phenomenon and that is the reason why it has been said that only man himself can be the real basis of the study of man. This can be achieved only be "self awareness", as Schuhmacher calls it, or "self-realisation", as Sri Aurobindo puts it. For this, it is necessary for man to transcend beyond the physical, mental and social parameters and deal with the qualitative values of life; the 'spiritual aspect, - "Factor X", which convincingly differentiates a human being from an animal.

ETYMOLOGY OF THE WORD HEALTH'

The word "health" appears to have derived from the Sanskrit word "swasth". This word is made up of two parts, "swa" and "asth". "Swa" means self and "asth" means existence. Thus, when an individual is capable of existing by oneself, without being dependent on any one, he is considered swasth or in health. With the passage of time and as the language spread further west, as "Sindh" became "Sind", then "Hind" and later "Ind" on account of the phonetic differences in the Middle East where "SA" is often pronounced as "HA" "Swasth" became "Health". In this context, health should also represent a state in which one is fully capable of existing by oneself; and does not have to depend upon other external support.

EVOLUTIONARY PHASES OF MANKIND

From inert matter to vital, from vital to mental and from mental to still higher planes, are the stages perceived by seers, as stages of evolution.

".t is also recognized that each stage has its own evolutionary force and consciousness. It is important to conceive that as physical is something that responds to physical forces and has in itself a physical consciousness, vital is something that responds to vital or bioforces and has in itself a vital consciousness; mind is therefore that which responds to mental forces and has its own consciousness. Similarly, "spiritual" as a part of cosmic existence will respond to cosmic forces and will have its own cosmic consciousness. It should be appreciated that diverse forces play positive and negative roles in enhancing and maintaining good health or inducing ill health. The spiritual dimension of health, focuses and addresses this aspect of health.

SPIRITUAL HEALTH AS A PART OF INTEGRAL HEALTH

Holistic approach or integral approach, therefore, assumes great importance.

The aim of healthy living cannot be divorced from the general aim of nature in us. To do that would be to place man as a phenomenon apart from nature, leading to an inevitable conflict between him and the forces of nature, both tangible and intangible. If we carefully observe, we shall find that through aeons nature has been toiling to find forms more and more fit to manifest higher and higher levels of energy substance. Finally, in a fully developed man, the body becomes capable of experiencing and expressing forces of knowledge, as thought forms and higher aesthetics. The previous faculties not only undergo a sublimating change but also partly lose their capacity proper to a lower form of body. Animals have a spontaneous capacity to heal the body. In man, this faculty is half lost but then man gains a new capacity - that of modifying, if not fully determining the course of physical processes and ailments. In general, the gist of both these emerging lines of evidence is to show that in man the mental energy and substance can manipulate the physical substance in a way, as to alter, govern and even determine its processes. "A logical conclusion of this evolutionary hypothesis of our body is that this body is that this body will go on evolving under the pressure of this urge. Under the pressure of evolutionary forces, nature enters into rapid experiments, like the formation and dissolution of links and the emerging of intermediate species.

A sick body or a sick mind or a sick soul, cannot exist in isolation. The concept to true and total health will therefore depend upon body and mind and soul harmony and equilibrium of body, mind

and soul.

UNDERSTANDING 'SPIRIT OR 'SOUL'

Before we deliberate in any detail about spiritual health, it is essential that we deal with "spirit" and "spiritual" in larger detail. "Spirit" and "Spiritual" have been described in the dictionaries as follows: Chamber's - Twentieth Century Dictionary describes it as: "Vital principle; the principle of thought; the soul; a disembodies soul, an incorporeal being, ghost" and "Spiritual" as "pertaining to spirit incorporeal ecclesiastical etc." When we talk of body-mind-soul complex, an often asked question is - what is the necessity of bringing in soul when everything can be explained by mind itself such as, morality, ethics etc. Can all the higher qualities and attributes be included into human mind itself? Human brain is considered as the organ of the body, responsible for its mental attributes. The principle of reincarnation, therefore, is inherent in itself and the-almighty God is the regulator of all souls; although each soul is independent to whatever "karma" or action, it wishes to perform. The third view of the interrelationships of body, mind and soul, came up in the form of the theory of "all pervading consciousness", a view propounded and dealt extensively by Sri Aurobindo. In the Aurobindan philosophy, all pervading "consciousness" is the sheet(6) anchor of the understanding of the very existence. For Aristotle, mind was "noys intellect", the only part of the soul to survive death. There is thus a lot in common with what mind has been described and the soul or the spirit. "Spirit" is higher or deeper than "mind". It is the "soul" that governs the mind and its actions are manifested through the medium of our body, which is composed of matter. According to Upnishads which explain Vedas, spirit comes from the higher spirit or as they call the Atman, comes from Paramatman and therefore, it is part and parcel of the highest spirit and yet is not the same. This "spirit" or consciousness" even resides in the matter in unmanisfested form and as life or vital "consciousness" enters into the matter and gives it life. This forms the base for the mental consciousness, which forms the base for supramental consciousness and it is perceived that in further evolutionary phase, it will form the base for universal, cosmic or highest consciousness to become one with the supreme spirit from which it originated. This has been called the "cycle of soul".

Let us consider as to what we understand as the anatomical basis of consciousness. Reptilian brain - consisting of life-sustaining activities such as breathing, eating, self-protection, mating etc. Mammalian brain - one above plus complex emotional behaviour. Human cortex - one and two above plus "reasoning brain".

It is almost impossible to say with confidence, as to where mind or spirit resides, but one of the views is that it resides in the cortex of the brain and forms the basis of consciousness. Aurobindo describes various levels of consciousness - what happens to the spirit? The Soul, the Atman, the Psychic self, the innermost awareness?

It is perhaps best to reiterate certain basic principles of eschotology as defined by the Vedas and expanded by rishis in Brahmanas and Upanishads, in the post-Vedic era.

1. There is only one single entity, "superconsciousness", known as God by various names. Each name describes a particular aspect or quality. He is responsible for the creationof the universe and the seat of all pervading power, energy and holder of all" souls" and imparts to each soul fruits of its Karma or actions.

2 Each individual man, animal, plant and all living matter contain its own Soul and consciousness.

3. "Matter" "soul" and "God" have neither beginning nor end.

4. "Soul" is independent in the performance of its "karma" or actions and reaps the results of such "Karma".

5. The aim of life every individual is fourfold - the attainment of Dharma, Artha, Kama and Moksha - by following the path of rightousness to acquire material wealth, satisfy desires and finally achieve

emancipation and get rid of the cycle of birth and death.
Spirit is thus the highest level of mind. As per Sri Aurobindo, "matter" has its own consciousness not perceived by us and it becomes the base for vital or life consciousness and in its yet to be manifested state, it will become the base of overmind and supermind and in its highest level during the process of evolution, will become the base for the highest plane of cosmic consciousness, which we may call Godhead.

SPIRITUAL HEALTH - ILL HEALTH

So far what we have discussed perhaps raises more questions than what can be conveniently answered. Some of the issues which need be focussed are as follows:
1. Can mind, and therefore, mental health, or ill-health be separated from spiritual health or ill-health? Thus, what are the manifestations of spiritual health?
2. As when mind is affected, leading to signs and symptoms of ill-health, similarly can "spirit" be also affected leading to symptoms and signs?
3. Can preventive measures be undertaken to improve spiritual health; what about the rehabilitation of persons with spiritual ill-health?
4. If mankind or humankind is continuously evolving into a higher and deeper superstate or consciousness, in what way spiritual health or higher levels of consciousness can come to play with the spiritual levels.
5. Can 'spiritual' health be generalised at a community level or should it be only considered at an individual level?
6. Can we consider various human organizations, institutions such as schools, colleges, governments etc. in terms of spiritual health?
7. How can one monitor or measure the level of spiritual health or, for that matter integral health, as discussed earlier.
8. What type of futuristic human being is expected to evolve? Can we individually or collectively participate actively in this drama of human evolution? What type of teaching, training and educational institutions would be developed today, to give an impetus and direction so that the human being evolves into a Divine man and not into a devilish monster, who will destroy himself and his environment altogether?
9. What role international institutions like UNICEF, WHO and UN bodies need to play today for a better tomorrow and the day after to usher an accelerated evolution in the right direction?
10. Let us deal with these issues as an approach rather than as answers. We cannot consider any single dimension of health in isolation. Each aspect of health always influences the other. As a matter of fact, there is no human activity either individual or collective, which does not have some effect upon health. Health percolates through all our activities.
If physical health influences mental health and mental health social health and vice versa, spiritual health will similarly be affected. If the collective spiritual health of a society is good, its individual health will also be better. And thus, the integral model of health achieves great importance.
Dr. Kapoor in his deliberations mentioned the following characteristics (symptoms and signs) of a spiritually ill person:-
(a) He is greedy. He is willing to take from the others what does not belong to him.
Not only from fellow men but also from nature. The bigger the implements he possesses, more quickly does he divide and degrade the environment of its vegetation and all animal forms of life. It does not mater to him if the life process itself stopped as long as the cross-sectional speck that he is getting his fill.
(b) He is violent. In his greed, he is willing to hurt, maim or kill. The bigger the greed, the bigger the violence and tendency to kill becomes bigger than him. It does not matter if it takes his life, as well.

Thus, the craze for acquiring more and more lethal weapons of war and destruction.
(c) He is afraid to loose what he has. He therefore protects himself so closely that the inputs which help the living system continuously above must be maintained at all costs. Often he becomes alienated, withdrawn and is unable to give or receive love.
(d) He always doubts. Does not believe in any one. Has no confidence, either in himself or in others. He is truly isolated in paid and pathos.
(e) He has intense desires, is in anger, is intensely 'attached' and when he is so involved, he loses perception of the 'self.
What we must realise is that what is true for an individual, is equally applicable to a community, an institution or a state.
In the light of the above manifestations of spiritual ill-health, we can identify a number of parameters as indicate of good spiritual health of an individual, institution, community or state. Some of these are as under:
(a) No. of crimes (b) No. of violent acts (c) Denudation of nature (d) Pollutions (e) Differential mortality and morbidity in a society
(f) Terrorism, battles, war (g) Differential distribution of wealth - prevalence of poverty and sectarian affluence; (h) Animal welfare and biodiversity.
These are but negative parameters of spiritual health. We can, on the similar lines, create positive indicators such as:
(a) Universal love and care of the sick and aged, in a society (b) Distribution of national wealth (c) Nutrition and Education (d) Shelter and clothing
(e) Coming together in the event of natural disasters (f) Faith and temper conducive to acts of bravery (g) Better quality of life itself, both of an individual and the society (h) Interdependence in the community. Joint action against adversities.
It is thus realised that spirituality cannot and should be perceived in isolation. It is an integral part of the total health and it percolates through all types of health. And yet, we can make a conducive environment for a person or a society to achieve the highest levels of spiritual health, such as
(a) Environment for learning, teaching and performing and appreciating art and literature, which really enrich our minds and souls.
(b) Training of people in Yoga, aesthetics, social interaction and meditations.
(c) Beautification of the environment.
(d) Avoidance of all types of pollution, land, water, air and not in the least noise pollution.
(e) Creation of centres for spiritual retreats.
Earlier, we mentioned that what is in the cosmos is also found within an individual. On similar lines, what is true for the health of an individual, is true also for an Institution and any other organization unit of people, such as a State or a country or even the world as a whole.

STRATEGIES FOR ENHANCING SPIRITUAL HEALTH

In order to achieve the highest level of human health, we have to create new institutions or reorient the existing ones so that they can meet the needs of tomorrow and the day after and be part of that unique human evolutionary process, which will enable the man of today to become the divine human being of tomorrow.
UN and its agencies, such as UNICEF and WHO, will have to orient themselves and become more effective in the realization of its aim and goal of ushering in the universal peace, prosperity, good health and education.
At man's level, some of the strategies that need to be followed are as under:
(a) Awareness that inculcation of spiritual health is the basis of good social, mental and physical health.

(b) This has to be inculcated through all educational systems, right from early childhood and therefore parents must be made aware of the need and importance of spiritual health.
(c) Biologists, psychologists and sociologists should emphasize that "man" is being evolved. He has aim and goal and its achievement is of primary importance. He has to be prepared to receive the highest consciousness unto him and he must become an active partner in the evolutionary process.
(d) The teaching of meditations, asanas, pranayama and other yoga exercises which are essential for all, throughout the life.
(e) Health care should be in the hands of those who are well versed in spiritual dimension of health.
(f) Health must be taught as a "dynamic equilibrium" and balance in all its dimensions - spiritual, social, mental and physical.
(g) Centres of spiritual (dimension) "Health" should be created, supported, and they should be integrated into general education. These should undertake research and developmental activities conducive to the furtherance of "spiritual health".
(h) Work, wisdom and experiences of ancient rishis, seers and mystics should be appropriately recorded and not be confined to only a few individuals but should be adopted for the common good of mankind.
(i) India, from time immemorial, has been a country which has given to the universe the highest form of wisdom through its Vedas, Upnishads, Brahmanas, Aurveda etc. India should take up the central role of the development of an international "spiritual grid" for coordinating spiritual activities and information dissemination. One such institution has been started at Pondichery the abode of Sri Aurobindo, one of the greatest philosopher of modern time, where "studying and understanding health in depth in all its dimensions, with a new and total awareness of the human being, so as to build a universal movement towards the realization of integral health by the Human Kind" has been started. This is aptly named after him, and is named as "Sri Aurobindo International Institute for Integral Health and Research". It is the good fortune of the writer to have been associated with the institution from its very inception.

LOOKING FORWARD

Before we conclude, it is better that we reiterate the story of human evolution and surmise on the future evolution of mankind.
According to Indian mythology, there are ten incarnations of Lord Vishnu. This aptly describes the various stages of the human evolutions in a story form, which are highly symbolic. The series starts with matsya (fish) which denotes the life originating in water. The next is kurma (Tortoise). Life tries to enter the 'Land'. Next is varah (Boar) which is symbolic of a new manifestation of vital force - gearing the earth and digging into it. The next is Narasimha (man lion) which is symbolic of half animal half human. The next is Parashuram (the axe man) which denotes the earliest of human being with a stone "axe" for his survival and the use of a tool for his protection; however, still violent in a violent world full of huge animals. The next is Lord Rama who truly reflects a genuine human being full of ethics, morality and capacity to conquer his own emotions.
Next is Lord Krishna and his brother Balaram. Their symbols are chakra and a plough which denote dominion of agriculture and the wheel of power with ability to govern and destroy all that is evil.
Next is Lord Buddha, who chalks out a way to achieve "Nirvana" on realization of the deeper self, who reiterates that the cycle of birth and death, can come to an end by achieving this Nirvana through enlightened soul. What an excellent concept of things? The last of the incarnations is said to be Kalki, who has yet to manifest; who will put an end to all barbaric elements in man and will lead humanity towards the glorious path of spiritual realization. This tenth incarnation is promised but has not yet been manifested. However, when we look around us and see that man is making endeavors to put an end to barbarism in different forms, and is organising himself in various ways

but with similar aims, we can safely assume that our Kalki has already been born in the hearts and souls of mankind and that future will see that man does achieve - his goal and aim for which he has been evolved from the lowest to the highest form of life.
We started our theme with quotation from Sri Aurobindo as Man's 7 aspirations. Based on his teaching we can summarize the various evolutionary phases of man
as:
1. Physical man 2. The vital man 3. The mental man 4. Psychic man; and finally 5. Spiritual man.
Different aspects of the phases have been beautifully described in poetic form by Norman C. Dowscott from Sri Aurobindo Ashram, Pondichery and are reproduced
here:

PHYSICAL MAN
Labour with longing,
Labour with might,
Labour all daytime,
sleep deep in the night,
Plough the green valleys
and scatter the seed,
Climb the Red mountain,
feel proud of the deed,
Fear not thy longing,
ask and demand - The beast of the
fields are thine to command.
Call on the elements,
Conjure the fire,

Master thy nature, conquer desire, Then when thy labours have
fashioned a man,
fashioned the best, that labouring can, Break all forms that upheld it, the ritual facade, The appearance that man and
society made;
Break the yoke of your ploughing -earth's
prison bars; lift your eyes to the sun and the
beckoning stars.

MENTAL MAN
To know, is to be- unalarmed, unafraid, unashamed
To know is to be- fearless in darkness, faithful in doubt and more substinate than
desire
I would recapture experience through the memory of my mind
Capture the form of the Formless, analyse class and kind.
I would arrange and assemble feelings and thoughts that abound
Into their place - the senses must rise to a higher ground,
I would enquire and discover where true energy lies,
Discover the truth of the world and why an eagle flies:
I would search for the reason of colour, light and sound
Whether they truly exist or only in sense are found
1 would seek the meaning in Matter, its elements I would unfold

I would search the secrets of Nature to find the Alchemist's gold. I would fashion
new
ways and new methods and organise. Time and Space. I would believe in a God
above
when I meet him face to face,
I would seek for the truth and the purpose in Matter, Life and Mind,
And I would rather challenge creation than remain a mortal blind
But lastly, I would truly know myself, the truth of I, the symbol of my birth, This secret sense of immortality that is in me and in this blessed earth.

VITAL MAN

I live in a world of action and strife
the warrior fighting for his life
Wars and battles rage in my breast - Untamed is the conflict and the unrest
And yet I see a vast beauty around
The flight of the birds, the wonder of sound. The green of the grasses, the high blue of
the sky, the dawn of the sunset that says, "I am I" the power which runs through the blood in my veins
The threat of the thunder, the voice that remains. The thrill of energy out of desire-The knowledge that I am born of the Fire. Deep in my darkness, grim passions arise, Yet will I offer them up to the skies. I will use my power to climb the sleep way and mount up to that glorious Summit of Day.

PSYCHIC MAN

My hearts rose up within me, like the dawn of day, And everything around me was a means of say :
Fire flowering into flame, sweet, blessed earth, waters sacred name,
and Air's Name and Air's new birth - Manifest the bliss that would be born wonderous Sun oh happy smiling morn!

SPIRITUAL MAN

To be, in its essence, is to be at peace, in silence, at rest in action
In love with Life and Nature and God
I bow to the rising Dawn, and the new day's beginning with a great joy in the heart!
I bow to all these wonders of the earth! My lord is the creator
I adore the sun and the moon and the stars and my hearth is aflame!
I faint not for His strength is with me and His energy sustains the worlds.
I grieve not thought he sufferings of the world I have known - His peace is upon
me.
I rejoice for the Wisdom of the Lord is with me as I breathe His name. I enter in
the secret of my being that the true self may emerge - Oh great unfolding Love!
I venture out, in the cosmic worlds. To widen the reaches of my mind - vast is the knowledge Thou wouldst show to me
I aspire, above the Powers beyond, that they may here descent into this labouring earth

SUPREME IS THY ENERGY 'OH' LORD

1 manifest the truth of Thy Joy! ,
1 manifest the knowledge of Thy Bliss!

1 manifest the power of Thy Delight!
We conclude here with the ardent hope that this article will be able to stimulate the reader to become an active comrade and a participant in the pursuit of human "True happiness" the Chidananda which is the ultimate goal of both ' Life' and 'Health'.

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—ANNEXURE —
BACKGROUND DOCUMENT PREPARED BY DR D.B. BISHT FOR CONSIDERATION BY THE EXECUTIVE BOARD AND WHO CONSEQUENT TO EB.74.R3

It is rightly said that health may not be everything, but everything without health, is nothing. The Constitution of the World Health Organization defines health as a "state of complete physical, mental and social well-being, not merely the absence of disease or infirmity". It is necessary, therefore, for health to be perceived in a more human perspective subjectively involving the qualitative values of life. Ignoring the semantics of the word, it can generally be conceded that there is "something" that makes us human beings, and hence, differentiating us from a pack of wolves. Perhaps only then would it be possible to achieve the near perfect health as a state of complete well being. Health can only be considered as a means to achieve the highest goal of life itself, and to consider health itself as a goal, is quite ambiguous in the evolution of human development. Achievement of "health" on the contrary should be the means to create a group of human beings with all humane qualities. Thus, as life can only manifest out of a material base and the mind out of a life base, so the spiritual can only manifest itself on a mental base or as a thinking of the mind. The question for us is: How are we preparing ourselves to facilitate the emergence of this spiritual man? This factor is of paramount importance. Blaise Pascal had said: "Man wishes to be happy and only exists to be happy and cannot wish not to be happy? Using traditional wisdom, we can arrive at a reassuringly plain answer: Man's happiness is to more 'higher'; to develop his 'highest' faculties.

In his analysis of this concept, E.F. Schuhmacher has summarised the four levels of being as:
Mineral = m
Plant = m +x

Animal = m+x+y
Man = m+x+y+z
Where m = inanimate matter
x = life force (unexplained)
y = consciousness
z = self-awareness
x, y and z are invisible; only m is visible.
There has been commendable research work to determine a relation between consciousness and awareness, utilizing the animal model to fit in with the human being. Neither the study of physics nor chemistry, or its interpretation into the life sciences, can explain this phenomenon and that is the reason why it has been said that only man himself can be the real basis of the study of man. This can be achieved only be "self awareness", as Schuhmacher calls it, or "self-realisation", as Sri Aurobindo puts it. For this, it is necessary for man to transcend beyond the physical, mental and social parameters and deal with the qualitative values of life; the 'spiritual aspect,- "Factor X", which convincingly differentiates a human being from
an animal.

HINDUISM AND QUALITY OF LIFE

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ABSTRACT
The edifice of Hindu life is to be truthful and loving to do the right. The foundation for this is knowledge - knowledge of world, knowledge of self and knowledge of God. The goal or the aim is to achieve full perfection of the self or liberation from bondages to merge with the Divine ultimately. The process involves the transformation of wordly life (animal life) to human and then to divine life. There cannot be any shortcut. Just as the physical discipline to maintain healthy body is essential, the moral values forms an indispensable preliminaries to maintain a good quality of life. The first two fundamental stages described by Patanjali in his Astanga yoga are Yama and Niyama. Yama is mostly negative, consists of (a) Non-injury (Ahimsa), the others include truthfulness, sincerity in thought word and deed.

"He whose mind is undisturbed in the midst of sorrows and amid pleasures is free from desire; from whom liking and fear and wrath have passed away, is the sage of settled understanding. Who in all things is without affection though visited by this good or that evil and neither hates nor rejoices his intelligence sits firmly founded in wisdom" - says Bhagavadgita.

HINDUISM

The study to understand the human being in a comprehensive way, including health and well being is as old as history itself. Hinduism, which is really the Sanatana Dharma, has given importance to understand the man as a whole and in relation to cosmos. It is difficult to define Hinduism. It is all comprehensive, Hinduism is very much individualised, unlike organised or institutionalised religions with dogmas. In addition, religious living in Hinduism is a blend of philosophy (theoretical, intellectual, reasoning) and practical experience. The Indian philosophy is dominated by synthetic

tradition which is essential to the spirit and method of Indian philosophy. True religion comprehends all religions; hence the famous Sanskrit saying "God is one but men call him by many names". Hinduism is evolved or derived from individual experiences and from spoken out truths by seers and sages. These experiences are attainable by every individual being. A distinctive feature is that while it remains utterly loyal to the central eternal
truths, it admits the need for new dogmas and rituals to suit the changing conditions. The two great epics - Ramayana and Mahabharata form the basis for the practical knowledge of truth and righteousness. The eternal truths are propounded in S Shastras, where as Smiritis deal with the changing patterns. Hinduism is fundamentally a way of life. The personal experience of practicing the eternal truths is not only the central factor, but the single fact that counts for a Hindu. The fundamental, eternal truths of Hinduism are :
(1) Immannence of God - i.e. in nature, nothing exists without Him. He runs through all beings, as well as the whole of this universe as a thread in the necklace. This indicates underlying unity in the midst of diversity.
(2) Essential divinity of man. Every human being is potentially divine and the natural evolution is to manifest this divinity.
(3) Oneness of God: There is only one supreme God who manifests in different forms, names and ways. Though different gods in different forms are worshipped, it is well understood that all are same.
(4) The Divinity of Soul: Each individual being is a part (Amsa) of divine and is capable of transforming oneself into the divine being.
(5) Unity of existence: There is no being whether moving or unmoving, that can exist without God and nothing happens without His will. This is the basis of Hindu life.
(6) Harmony of religions: Hinduism believes that the fundamental truths are eternal and universal in character. Therefore all religions have the same fundamental truths, though approaches differ. So there is no proselytization.

TENETS OF HINDUISM

a. God is one and exists both with and without form.
b. God manifests in different forms with the underlying unity amidst diversity.
c. He is all pervading. Nothing exists without Him and runs through life like a thread in fabric.
d. Nothing happens without His will or grace - virtue or vice,
e. Man is potentially divine and natural evolution is to manifest this potentiality,
f. Man's aim in life is to make oneself divine, g. Each individual is a transmigration of his past life (reincarnation) along with his tendencies (Samskaras); and each has his own Swabhava (nature or personality),
h. Spiritual progress made in one life is not lost and the ending of one stage will be the starting point in new life.
i. Depending on the Swabhava (personality), one adopts his own field of action (Swadharma) and chooses a spiritual path.
j. Diversity of taste and capacity has to be accepted as an ineffaceable fact of nature and has to be provided for.

HINDU CONCEPT OF BODY AND MIND

According to Isopanisad, man consists of
(i) Gross or physical body
(ii) Subtle body or Antahkarana (Sukshma Sarlra) consisting of intellect (buddhi),
mind (Manas), ego (ahankara) and ten sense organs (five for perception and five

for action),
(iii) Causal body (Karana Sarira): This is the body of acquired and inherited tendencies, while
(ivj The Atman (Soul) is the spectator of these bodies, a conscious existence through and apart from them and without which life does not exist. It is a self luminous source of energy and power for all activities in the world. Therefore one has to rise above the body consciousness by refusing to recognize the body as Atman. A Hindu believes that Atman can be a friend or an enemy.
Gita : Let a man lift himself up by his own self; Let him not depress himself; for he himself is his friend and he himself is his enemy. "To him who has conquered himself by himself, his own self is a friend, but to him who has not conquered himself, his own self is hostile like an external enemy". As a result of this understanding, man qualitatively learns to know himself and master himself, and he himself becomes steadfast, searches within himself for his failures and sufferings, develops an attitude of fortitude. Further Atman is the same in all. This is the concept of unity among diversity. Gita states "to see self (Atman) in all and all in the self ". This will enable the individual to perceive all beings as himself, brings in harmony and balance, leads to sharing of joy and sorrow with all, lack of hatred or jealousy towards anyone. The understanding of eternity of Atman and the transient nature of the body makes the person accept death with grace and subdues the fear of dying.

THE SCIENCE OF LIFE

The Atman has triple status. These are (a) Lower Self - mutable, temporary and mobile (b) Higher self - immutable, immobile unit of the divine being and (c) Supreme Self- both of the above and even greater than both together. Sri Krishna declares in Gita: "The individual soul is myself, in the creation it is a partial manifestation of Me (mamiva amsah) and it possesses all my powers, it is witness, giver of sanction, upholder, knower, Lord. It descends into the lower nature (self) and thinks itself bound by action, so to enjoy the lower being; it can draw back and know itself as the possible immobile purusha (Higher self) free from all action ".
The lower self consists of the physical body and subtle body. The working mind is influenced by (a) three gunas (qualities) - Sattva, Rajas and Tamas; and (b) Six passions - namely lust (Kama), anger (Krodha) avarice (Lobha) delusion (Moha) pride (Mada) and envy (Matsarya). The above three gunas are equivalent to wind (Vata), bile (Pitta) and Phlegm (Kapha) of Ayurvedic system of medicine and called as
Doshas. Harmony of these three is the basis for good health. The higher self is the source of light, energy, reflection of which is seen in lower self, as Prakriti. All objects in the world are created by various combinations of the basic concrete elements (Pancabhutas) - ether, air, water, fire and earth. Each of these five forms the base of one of the five subtle properties of energy viz. sound, touch, form, taste and smell, which determines the way in which the mind perceives the objects. This forms the objective aspects of the world while the subtle and causal bodies forms the subjective aspects.
All life, all works are a transaction between the subjective and objective aspects of human experience. This interrelationship is complex and has to be fully understood, and the quality of life depends very much on the understanding of this fundamental interrelationship. It is only when both subjective and objective conditions are integrated in some way that there can be improved quality of day to day living.
(a) The Gunas may be defined as, Tamas-natures power of nascence, Rajas-power of active seeking, enlightened by desire and impulsion, Sattva-power of illuminated clarity, harmony and joy. The six passions which exist in every individual, but in varying degrees, some are dominating and others are subdued. Sri Krishna declares "It is desire (Kama) it is wrath (Krodha) born of the energy of Rajas, all devouring, all sinful; that, know thou, is the foe here.

(b) The enemy of the whole world is desire or lust, from which all the evil comes to living beings. When obstructed by some cause desire is transformed into wrath. The senses, the mind, and reason are said to be the seat of desires. Therefore it is essential to restrain the senses and control the mind.

LIBERATION FROM PASSIONS

Gita repeatedly stresses the need to be freed from selfish desire, wrath, fera and attraction. For this we have to learn to bear their shocks which can not be done without exposing ourselves to their cause. Three steps or means are advocated to overcome these passions :

(a) Titiksa or Stoic Equality - making character its pivot, founds itself upon self-mastery by austere endurance.

(b) Udasinata or Philosophic Equality - is the happier, and serener, prefers self-mastery by knowledge, by detachment, by a high intellectual indifference seated above the disturbances to which our nature is prone.

(c) Religious or Christian Equality - which is the perpetual kneeling or a prostrate resignation and submission to the will of God. Knowledge of Gunas and passions enable the individual develop stoic self discipline of endurance with serenity; eliminate selfish desires, slay egoism, not to envy others, to be equanimous, to be content with what obtains without repulsion or attachment and to restrain senses. This also helps to transcend the duality of good and bad, pain and pleasure, sorrow and happiness - they are related to Gunas and not self.

VALUES OF LIFE

The edifice of Hindu life is to be truthful and loving to do the right. The foundation for this is knowledge - knowledge of world, knowledge of self and knowledge of God. The goal or the aim is to achieve full perfection of the self or liberation from bondages to merge with the Divine ultimately. The process involves the transformation of wordly life (animal life) to human and then to divine life. There cannot be any shortcut.

1. Means and Methods

The means and methods prescribed by Hinduism to achieve the above include the development of physical, mental, intellectual, moral and intutitional aspects of life. Importance of healthy body and healthy mind has been repeatedly stressed in all the paths. The physical body of man is to be treated as a temple with all sacredness and also an important vehicle to carry man from imperfection to perfection. Quality of life cannot be improved unless the body is strong and healthy. Methods prescribed are:

(i) Regular yogic exercises : Even the involuntary functions of body such as heart rate, B.P etc. can be voluntarily regulated. The essential aspect is to do regular exercises, asanas (postures) etc. in a fully relaxed manner and importantly to concentrate on what one is doing. Regular breathing exercises are a must. There is a relationship between breathing and actions of mind. A restless mind can be gradually made calm by breathing exercises. The well developed technique of Pranayama one type of breathing exercise - has been shown to be very effective.

(ii) Habits: The common habits of taking food, sleeping, cleaning of the body, wearing clean clothes are discussed in Hinduism in detail. Gita "To him whose food and recreation are moderate, whose exertion in action is moderate, whose sleep and waking are moderate, to him accrues yoga which is destructive of pain". One of the common injunction is to avoid all forms of excessive indulgence in his habits and particularly taking alcohol and sex. This regulated, disciplined habits will improve the quality of life.

(iii) Food : Great importance is given to the type of food one takes and also to the mood (mental

attitude) while taking food. Hinduism stresses the point that food taken has direct effect on the rnind. The same analogy is extended to all sensory inputs, such as sight, hearing, touch and smell. They do influence the qualities of the individual and character is moulded accordingly.

2. Religiousness of Hinduism

(i) Consists of daily prayers, rituals (Acharas) and worship of God.
(ii) Provides different approaches - worship any form though rituals, devotional songs, namajapa (repetition of name of God or Mantra), or piligrimage, and results are assured accordingly.
(iii) Encourages everybody however heinous. These methods provide quantitatively a great solace and comfort, particularly when one is in distress or unwell, induces self confidence, enhances faith and trust in himself and in God. This routine can bring discipline in life.

3. Moral and ethical values

(a) Moral Values

(i) Just as the physical discipline to maintain healthy body is essential, the moral values forms an indispensable preliminaries to maintain a good quality of life. The first two fundamental stages described by Patanjali in his Astanga yoga are Yama and Niyama. Yama is mostly negative, consists of (a) Non-injury (Ahimsa),
(ii) Truthfulness or sincerity of thought and word (Satya),
(iii) Honesty or abstention from misappropriating others property (Asteya),
(iv) Celibacy (Brahmacharya)
(v) Not hoarding of possessions (Aparigraha).
(vi) Niyama : It is cultivation of virtues. It consists of (a) purity (Saucha) (b) Contentment (Santosha) (c) Fortitude (Tapas) (d) Study of scriptures or acquisition of real knowledge (Swadhyaya) (e) Devotion to God or dedicating all one's deeds to Him (Ishwara - Pranidhana or surrender). Thus the regulation and control of moral life; a strict purity of both body and mind; Truthfulness in deed, words and thought; abstinence from cruelty, stealth and sensual pleasures in thought as well as in deed, form the basic virtues to be followed by every one.

(b) Ethical values

Ethics in Hinduism is derived from certain spiritual concepts. It forms the foundation of the spiritual life. Hindu ethics differs from modern scientific ethics which is largely influenced by biology, and whatever is conductive to the continuous survival of a particular individual or species is considered good for it. It also differs from utilitarian ethics which is concerned mainly with the society. Hindu ethics is mainly subjective or personal. The purpose is to eliminate the mental impurities such as greed, egoism, cruelty, ruthlessness. Ethical disciplines are prescribed according to the stage and state of each person. Hinduism has given more importance to personal or subjective ethics than social ethics. The reasons are :
(i) If individuals are virtuous social welfare will follow as a matter of fact.
(ii) The general moral tone in Hinduism is that every one is expected to do his appropriate duties, which includes rendering help to one's less fortunate fellow beings. The spiritual help is of more enduring value than material help. Spiritual knowledge, by following the subjective or personal ethics can easily bear the physical pain and privations, with calmness and patience
(iii) Lastly, the Hindu philosophers believe that the sum total of physical happiness and suffering remain constant. The chief components of subjective ethics are (a) austerity (b) self-control
(iv) renunciation
(v) non-attachment
(vi) concentration. Austerity helps an individual to curb impulses for inordinate enjoyment of physical comforts and acquisition of intense thinking preceding creative work; making an individual

indifferent about his/her personal comforts or discomforts. Self-control means guiding one's senses choose the right objects by discrimination, determination and develop dispassion.
The objective ethics is a means to an end. The purpose being to help the members of the society to rid themselves of self centredness. Among the social virtues, hospitality, courtesy, duties to the family and community for social welfare are stressed. The ethical life in Hinduism emphasizes on leading a simple life, not to be greedy, to be charitable, compassionate, gentle, pious, conductive to the welfare of others, provide succor to the distressed, be of service to all and to bear no ill-will towards others.

PURUSARTHAS

The affirmative attitude of Hinduism towards life has been emphasised by its recognition of four legitimate and basic desires - the first three being Dharma (righteousness) Artha (wealth) Kama (Sense pleasure) are secular in the realm of wordly welfare (Abhudaya) and fourthly Moksha (Liberation from bondage or communion with God which is perfection (Nisreyasa).
The fulfillment of Abhyudaya paves the way for Nisreyasa. Though Dharma is the basis, both Artha and Kama are legitimate. The acquisition and possession of wealth are indispensable in the world. Money must be earned and all efforts should follow Dharma. The Kama - enjoyment of sense - pleasure covers a vast area, including conjugal love, appreciation of art, music, poetry, beauty etc. Life becomes drab and gray unless one cultivates aesthetic sensitivity. But sense pleasures, if not pursued according to Dharma, degenerate into sensuality.
Dharma : The key to the individual and social ethics of Hinduism is the conception of dharma. The word signifies the law of inner growth by which a person is supported in his/her present state of evolution and is shown the way to future development. Dharma determines an individuals proper attitude towards the outer world and governs the mental and physical reactions in a given situation. It is the code of honour.
Various lists of the general duties are found in scriptures. Manu Smriti reckons that the following ten injunctions are sufficient to attain the highest perfection. They are (1) contentment (2) forbearance (3) gentleness (4) respect for other's property
(5) cleanliness (6) self-control (7) knowledge (8) philosophic wisdom (9) veacity (10) patience. Another list given by Yajnavalkya contain the same except for philosophic wisdom, but includes nonviolence. If these are negative and self-regarding, they generally point to the rights of others as their correlatives. The great emphasis placed on negative virtues only means that self-denial is the very soul of morality. "Their neglect is sure to lead to a lapse" observes Manu, "even if one practices the positive virtues with scrupulous care".
Purusarthas underscore the importance of health and wealth to be acquired in a righteous way. It insists to follow one's own duty and not to give up obligatory functions, to keep the motives high. Personal vagaries are checked, personal desires are restrained. The above ten injunctions makes a person to lead a high quality of life.
Stages of life : Life, in Hinduism, is regarded as a journey to the shrine of truth. It is divided into four stages. Each stage has its own aspirations, responsibilities, obligations and code of conduct. If these are not fulfilled, the quality of life suffers and may end up as a miserable failure.
The first stage is called Brahmacharya and starts after childhood. It is a period of training and study, as a preparation for future life. The individual has to cultivate the mind. He/She is trained not to swerve from truth and Dharma; never to indulge in slothfulness, nor seek luxury, not to neglect personal welfare and their obligations to family and society. The second stage is householder (Grihasta) after marriage. It is a period of training and study, as a preparation for future life. The

Hindu ideal emphasises the individual and the social aspects of the institution of marriage. Hinduism recognises the inevitable; irreducible peculiarities between any two individuals; tastes and tempers, ideals and interests. The private or individual interests and inclinations are to be subordinated to a larger common ideal which can bind together the most unlike individuals. Sensual love is to be sublimated into self-forgetful devotion and pure love. He should be ambitious, be a support to the homeless and the destitute and always hospitable. This ideal life of a householder is one in which artha and kama are harmonised with Dharma. The third stage is retreat from wordly life (Vanaprastha) arises when the responsibilities of home are handed over to their children. The main purpose is to devote full time to the studies of scriptures and meditate on the higher spiritual problems. Silence and solitude are preferred. To be in constant remembrance of God and eliminate all other thoughts. The fourth stage is renunciation (Sanyasa), when an individual renounces the world and embraces the monastic life and turns away from the vanities of the world devoting himself to the cultivation of God consciousness. In a journey through the four stages of life, a Hindu learns progressive, self-control and non-attachment to the transitory world, and inculcate righteousness, responsibilities and accountability.

THEORY OF KARMA

Each life with all its pains and pleasures is the necessary result of the past lives and becomes in its turn the cause through its own activities for future births 'What you sow, so you reap'. Each one realises that whatever happens it is their own making and no one else is responsible. Every action leads to two results - (a) direct observable result (Phala) of pain or pleasure and (b) establishes a disposition (Samskara), tendency to repeat the same deed. These tendencies are both acquired and hereditary, carried forward from previous births. The direct result cannot be escaped; but the tendencies can be changed or modified. Motive of any action is either selfish or unselfish. Selfish motives may be for wealth, name, fame or power. If work done for the sake of work, even without a motive to go to heaven that becomes unselfish. 'That which is selfish is immoral and that which is unselfish is moral' says Swami Vivekananda. 'To work we have the rights, but not the fruits thereof. Understanding of this theory makes the person responsible and accountable for everything in life. When misfortune befalls no one is blamed. Such individuals are free from bitterness even in misery. It provides better scope to live rightly and do good for their own furtherance. Misfortunes and suffering ennobles them to mould their character. They realise misery is a greater teacher than happiness and accept both pleasant and unpleasant as their own making and try to transcend the dualities of pain and pleasure.

FAITH (SRADDHA)

The action controlled by Sastras is an outcome of intellectual, ethical, aesthetic and religious culture. This is the outcome of experience and wisdom. Faith or Sraddha is the acceptance and will to believe and realise this greater rule of Sastra. The religion, the ethical law and cultural idea in which one develops faith, defines one's nature, work and an idea of relative right, or perfection, in proportion to one's sincerity and completeness of faith. This sraddha or faith is the basis for all types of living. Gita says "He obtains wisdom who is full of faith, who is devoted to it, and who has subdued the senses. Having obtained wisdom, he attains the supreme peace". The next verse in the Gita, says the ignorant, the faithless and one of doubting self is ruined. Sri Ramakrishna says "Once a person has faith, he has achieved everything. There is nothing greater than faith".

ROLE OF SANKALPA, SRADDHA AND SAMARPANA

Sankalpa - is the intelligent will and commitment. Sri Aurobindo defines the yoga of intelligent will as " to act with right intelligence, and therefore, a right will, fixed in the one, aware of the one self in all and acting out of its equal serenity, not running about in different directions under thousand impulses of our superficial self. Gita says there are two types of intelligence in the human being. The first is concentrated, poised, one homogeneous, directed singly towards the truth; unity is its character, concentrated fixity is its very being. In the other there is no single will, no unified intelligence, but only an endless number of ideas in pursuit
of the desires. The first is the right will and the second is the wrong will. So man has to work with the right intelligence will and have full commitment to whatever one does. This is Sankalpa. When an individual operates at this level the individual will be deeply involved, with all the responsibility and accountability. One becomes more creative and promising. But this should always be associated with the attitude of surrender and Shraddha, if not it will result in tension or despair.

Sraddha (Faith) : The importance of faith in maintaining high quality of life is stressed. Faith will make the individual develop intense interest in life and help to create an order within. Anything done without faith will lead to chaos and failure. But if one has full faith, one works hard with sincerity, and even the difficulties or sorrows that ensue are considered as Prasada (gift) from God.
Samarpana (Surrender) : This is giving up the whole self to the Divine, with full devotion and consideration of all our acts. But if the Surrender is not associated with the commitment to work, they may be restful, but, unless one is highly evolved spiritually when no work needs to be done, one may fall into Tamasic nature. Therefore, to lead a quality life of a high level, one should have the intelligent will (Sankalpa) the attitude of Surrender (Samarpana) and work with all faith (Sraddha).

QUALITIES OF A LIBERATED HINDU

With the realisation that the will of the supreme inspires in the cosmos and the human soul is only a channel of his power :
(a) no personal hopes and hence remains as part of cosmos.
(b) does not seize on things as his personal belongings,
(c) Covets nothing,
(d) Jealous of none and no personal enemies
(e) Whatever comes he takes without repulsion or attachment
(f) What goes from him he allows to depart from him without repenting or grief or a sense of loss
(g) Free from reaction to passion and sin
(h) Wrath and hatred become foreign to him
(i) Remains in a perfect state of inner joy and peace
(j) Depends on nothing in the world
(k) Remains beyond dualities (Dvandvatita) of promise and blame, honour and
dishonour, sin and virtue - a state of equality and (1) Always acting for the good of others.

SUMMARY

To sum up the quality of life depends largely on the mind which controls the body. The mind needs to be kept in peace or equipoise at all times by the use of one's intelligence (Buddhi) which is higher than the mind itself. When the impurities of the mind are eliminated by discrimination, dispassion and renunciation the person will be in a state of psychological equipoise (Sthitapragna) with constant intellectual alertness and emotional stability and will be at peace with self and others.

LIVE ENERGY RESONANCE THERAPY
(LERT)

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ABSTRACT

Slow paced walking on polished pebbled garden path, cakra exercises, Dhanya puja, Cetana crystal meditation, auric diagnosis, cetana music etc., in the first phase of LER will help the healee's capabilities to appreciate vibrational energy resonance upto the resonance frequency of sunlight. In the second phase of LER Therapy, the patient is prepared to accept vibrational frequencies upto 10100 times the vibrational frequency of sunlight through various steps like magneto therapy. The Third Phase consists of fusion of the organising field energy and thought field energy of healer and healee. The patient now gets energy resonance of 10m times the vibrational energy of sunlight, which is the cosmic live energy. The cetana energy can be transferred to a glass of distilled water by the healer which then becomes LERT fluid. This fluid can be taken by the patients to effect of their ailments.

The subject of my talk today is Random Thoughts on Medicare of the 21st century. The advances in the field of physics especially in the post Einsteinian Era of high energy particle physics and the advances in the field of molecular biology, genetic engineering cloning with recombinant DNA, all point to one thing that the universe is only energy and that whatever matter is there, is only frozen particularized energy. So man, animal, plant ,every thing is only energy-frozen particles of energy. Man is the most evolved of the three as he has evident mind and latent soul but my presumption is that all the three - the physical body, etheric mind and spiritual soul are only energy waves of different vibrational frequencies and resonances. Thus Energy medicine will become the scientific Holistic Medicine from the 21st century onwards. In other words from 21st Century, health will be based on subtle energy principles and interventions involving body-mind-soul trio against the background of the new paradigm shift of Echofeminism, social ecology and deep ecology and spirituality interpreted in the most advanced physical and biological sciences. This Holistic approach will put an end to NYD cases which today constitute more than 15% of all hospital admissions (and curiously these undiagnosed NYD cases also get treatment) and will give humane considerations, spiritual love and care in the management of terminal cases. Mind you, there will be no incurable cases then. They will then scoff at the present day modern medicine man for his emphasis on disease rather than health. The advances in physical and biological sciences have ushered in the Einsteinean Era of energy medicine which is far away forwards from the 1800 AD Newtonian - Descartes ping pong atom theory of matter as the ultimate end to which the modern medicine man clings on with great religious fanatic favour characteristic of the materialistic scientism.
I think now I have to take a little digression into a few of the latest advances in physics. Newton the great physicist, by 1800 AD, established the atom theory of matter. The atom is then described as the ultimate indestructable particle and matter is constituted by these atoms which are like ping-pong balls joining together in various permutations and combinations to form molecules which join together to form tissues, organs and the organism. So man is what he is, and what be has, in height, weight, wealth, education, socio-economic-political status. This was the basis of development of

human civilization in the 19th and 20th century and it is a really marvellous development in every field of human existence - medicine, science, arts, economics, sociology, education and even politics. But science went ahead with farther discoveries and proved that atom is not the final end of matter and that it can also be broken down to its components- neutrons, electrons, positrons and the breaking of atom was associated with release of tremendous energy etc. So a holy integration of body, mind and soul will become the basis of scientific medicare of the 21st century. This is holistic medicine and we have advanced very much in this field through our spiritually oriented Cetana Cikitsa with live vibrational resonance energy.

If we study physics side by side with physiology we will find that there is a gradual evolution towards holistic medicine. The 1800 model of Newtonian Descartes Ping-Pong atom theory of matter with all attendant materialistic scientism tells us that every biological phenomenon can be understood on the basis of the sequence equation Function ⟷ Structure ⟷ Chemistry. This view is even now held by almost all, in the field of modern medicine. Any dysfunction of an organism is due to structural defects in the organism which is from some chemical or biochemical imbalance. At least a few eminent scientists and medical men have already started thinking of the possibility of some deeper level vibrational energy structure for every organism including man. Scientists have proved the close links between chemical fields and EM fields. Researches into Neurosciences have shown that application of small electric currents between specific brain points produce behavioral changes similar to those seen with some Psychotropic and Psychedelic drugs. Minute DC currents applied to WBC produce regeneration while larger currents induce degeneration. This phenomenon is used by orthopedicians to enhance fracture healing. Thus EM fields
have an effective role in cell metabolism. Then the above equations gets structured to include the added element of EMfields. Function ⟷ Structure ⟷ Biochemistry ⟷ EM ⟷ Field energy. This is the science behind the Wolfs law of bone healing after/ fractures. Fibres and collagen are both piezoelectric so an electrostatic field is produced with specific orientation and polarity. This electrostatic field with its micro currents causes redistribution of both ions and colloids in the surrounding tissue fluids to affect bones. The second equation also is defective in that it ignores the mental factor. There is a close link between the conscious mind and the universal mind to both structure and function. Mind can control various autonomic body functions like pain. Mind can repair body. Mind can get brain tissue in general and hypothalamic-limbic system in particular synthesize whatever is needed for the body even if it has to involve transmutation process. Certain chemicals influence mental states just as certain Mental states influence chemical states. So now you have to add this mental subtle energy field also to the equation which will read Function ⟷ Structure Chemistry EM fields ⟷ Subtle energy fields. This is the equation best suited at the cellular level and at each step you get support from the factor on the right. Any imbalance in any of these will disrupt homeostasis. So there is need for an early warning system some electrical devices to monitor bioelectric system (Now we do not have equipments to measure the subtle energy system) (Volts Dermadron is an electromagnetic equipment that can select remedies to correct the imbalance. Motoyama's AMI machine Squid, Kirlian gun are attempts to measure subtle energy fields.) The addition of subtle energy fields to the above equation makes it read as : Positive space/time entropy domain ⟷ Physical chemistry ⟷ EM energy fields subtle energy fields ⟷ ME energy fields ⟷ Etheric Chemistry Negative space-time entropy domain ⟷ Functions ⟷ positive space-time entropy domain. You see two different levels of chemistry, physical and etheric and two different kinds of energy fields EMR and MER operate in two different space - time entropy domains.

There is a growing interest in Holistic medicine in the West as people clamor for nontoxic treatments. Emphasis on disease rather than on health had split apart allopathic and Ayurveda systems of medicare. Significant bioenergetic principles emerge to develop the Einsteinian medicine and smash the Newtonian medicine.

Recent trends in medicine reveal that modern physicians have begun to deal with finer and finer forms of energy vibrations for both diagnosis and treatment. The X-ray, U.S.S, C.T. Scan , M.R.I, the Radiation therapy are all convincing proof of a Continuing Paradigm shift towards recognition of the subtle nature of our mind and body and the need for subtle approach to therapy. You don't kill flies with shotguns nor do you manipulate electrons from an atom with hammers. Modern scientific medicine is comparable to shot guns and hammers when you view it from the subtle energy cure for ailments - many human maladies can't be fixed with our current shot gun drugs and hammer-surgery. You have to go up to finer and finer vibrational frequencies in the lighter cosmic reaches of energy where consciousness and physical body fuse together, mind and matter fuse together, where time loses

its linearity. Only those healers who have alarmed cosmic level can heal and the energy medicine will become the scientific holistic medicine of the 21st century. In other words 21st century health will be based on the subtle energy Principles and interventions involving mind-body-soul, environment and spirituality. This will be the holistic approach which can provide a new-hope for many a NYD cases, so called incurable illness, and the terminal illness. The doctors at the end of the 21st century will look back with scorn at the doctors of the 20th century for their barbaric, unscientific, brutal, inhuman and their crude ways of diagnosis and treatment.

We have to know a little more of the advances in Physics to understand the Tiller-Einstein model of Positive - Negative space/time entropy. It is based on Einstien's theory of relativity equation S = MC2 But this is not the entire expression and is modified by the proportionality constant called Einstein Lorenz transformation which is the relative factor to describe different parameters of measurements of time, length, breadth, mass. All will vary with velocity. Enstiein's theory tells us that the energy contained in a particle is equal to its mass- this is a tremendous amount of energy and the world had experienced with real agony, this truth in the atom bombs over Hiroshima & Nagasaki. From Einstein equation further studies led to the understanding of the multi diamentional nature of the universe. Einstein suggested that matter and energy are interconvertable - sub atomic matter is only condensed frozen particularized energy. This has lead to Einstein-Lorzen transformation which states that if you accelerate a particle up to the speed of light its kinetic energy increases to KE = 1/2 MV2 where V=Velocity, M= Mass.

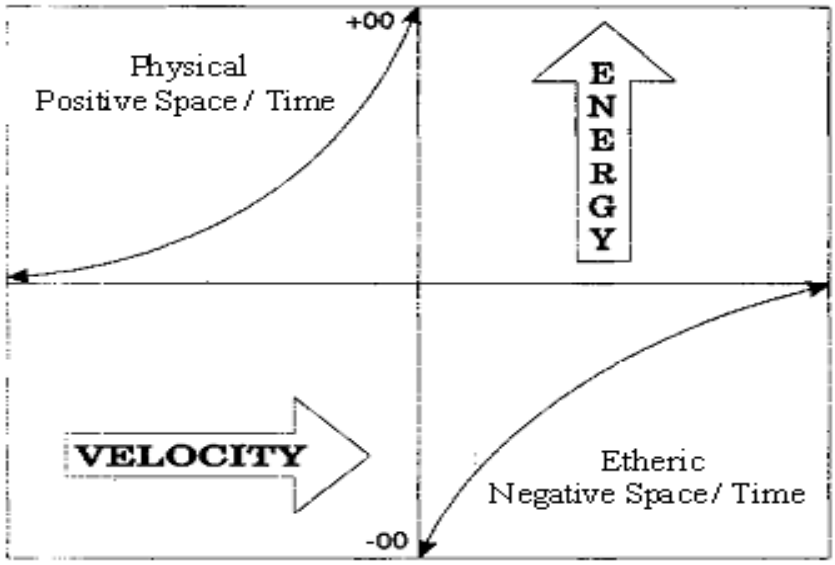
It was thought that it was physically impossible to accelerate particle beyond the speed of light which Einstein stipulated as the ultimate speed.

There is thus exponential relationship between matter and energy at the velocity of the speed of light. It was thought that you cannot accelerate the matter beyond the speed of light as the solutions to problems there after leads to the imaginary number of square root of -1. You don't like imaginary numbers in physics, so better set your maximum velocity limits to the speed of sun light. Then Mathematicians like Charles Muses came up with the concept of Hyper -numbers for the numbers in the category of square root of -1. This has helped to explain subtle energy phenomena of the inter actions of living systems and to explain the electromagnetic, magnetoelectric and quantum theories. This concept will help us to understand Einstein-Lorentz transformation better.

POSITIVE - NEGATIVE SPACE / TIME MODEL

This model tells you of the energy of a particle relative to its velocity from zero to speed of light and beyond. Dr. Tiller calls the domain within the speed of light as domain of positive space/time entropy and physical space-time Universe where particles, exist only up to the maximum vibrations

of the speed of light. The domain beyond the speed of light is the domain of negative space /time entropy or negative space time universe. This concept of Dr. Tiller is confirmed with the discovery of particles known as tachyons which exist only at speeds exceeding speed of sunlight. Tachyons have very special properties. If in positive space/time domain matter is associated with forces of electromagnetic radiation, in the negative space time domain it is associated with magnetism and magneto-electric radiation. The physical atom has particles which are charged as positive, negative or neutral. It conceives that magnetic monopolize particles magnetically charged either north or south can exist in nature in the tachyon realm and sadly enough we do not have any equipment which can measure it.



All superluminal velocities are in the negative space/time entropy domain:and negative space/time particles should have negative mass, and negative space/time matter would have properties of negative entropy. Entropy is tendency for disorder in a system, greater the entropy greater the disorder. Matter in the physical universe is in the positive entropy with greater disorder leading to disintegration .

The only exception is living system which can integrate various items of food into complex Proteins, Carbohydrates, fats and their conjugates. So man is in the;domain of negative entropy till he dies when the body moves over to the positive domain, as is seen by the disintegration of body after death. So Cetana is associated with negative entropy character. If Cetana is in the negative entropy domain then all the Auric bodies are also in the negative entropy domain. This is the reason why the first layer of the Auric body - the etheric body, has a cell to cell representation of the physical body and the blue print upon which the physical body is built up. Like wise the Ketheric template of the seventh layer Auric body is the blue print for the etheric body.

The negative space-time matter is magnetic in nature. The studies comparing the effects of magnetized water and LERT fluid shows that both have similar effects. This magnetic field is only a part of the broad spectrum of energetic vibfatibnal frequencies in the domain of negative entropy which are different from the conventional magnetic field as is demonstrated with the use of the latest measuring device, the Squid. The healing hand has magnetic activity of 13000 gauss, which has 26000 times more power than earth's magnetic field (0.5 gauss).

Now permit me to introduce Energy vibrational resonance therapy which we have named Cetana Therapy through live energy resonance. This LER Therapy we feel will be the struggle to find as the ultimate in self preservation and preservation of every thing on this earth - through religion,

through spirituality and through a revolutionary Paradigm shift of ecofeminism, social ecology and Deep ecology. If the atom bomb power wins the effects of decimating every thing on this earth will be far more disastrous than what earth had witnessed during the end of Atlantis civilization at the fag end of Treta Yuga. For the latter to win, spirituality should accept the garb of most modern science, cast aside superstitions, religious, racial and cultural fundamentalism and egoism. When this is translated into the health care field, you have to cast aside a lot of the present medical science which are based on Newtonian - Descartes materialism and go deeper and forwards through Einstein, Miller, Bohr, Bolim and other Nobel prize winners to reach the Vedic Science of India. A peep into the scientific aspect of Indian Spirituality through the spectacles of health and illness during the last quarter of a century at the Sanjivini Holistic Health Farm and Indian Institute of Research and Applications in Indology has brought out what we firmly believe as the ultimate in Medicare System. We have named this as Chetana Chikitsa or Live Energy Resonance Therapy (LERT).

The Sanskrit word Cetana has a much wider connotation than Prana, which is confined only to the apparently living beings of this Universe. Cetana is the force which is the subatomic tremendous power pervading the universe and permeating every thing living and nonliving. Meditation and Research into the available literature of Pre-Vedic, Vedic and Post-Vedic times have helped us to formulate in a scientific way the concept of energy medicine and we have incorporated the various steps of realization of this concept in our Cetana Cikitsa which is now attracting the attention of the entire world.

In the treatment with every form of therapy, the fundamental and most cardinal part is the proper understanding and cooperation between the healer and the healee. This is especially so in LERT of Cetana Therapy which thus has two main components:

(1)The meaning therapy of Intentionality by the patient where by under the guidance of the healer the patient raises his level of appreciation of vibrational resonance frequencies to the upper limit of Positive Entropy Domain (the vibrational frequency of the speed of sunlight) and

(2) Other is the Being therapy of Assistance whereby the healer raises his energy appreciation level to the negative entropy domain, beyond the limits of positive entropy domain and transfers healing energy frequencies to the patient to cure his ailments. We have developed a phased programme to achieve this, which I will briefly enumerate here.

At Brahma Muhurtam (4 AM) the healer and healee wake up to the sound of conch shell and seeing OM in the light of oil lamp. After morning routine and drinking

Cetana Tea and Herbal health tonic they go through (1) The polished pebbled garden path to Punyavana to receive electromagnetic and green negative ion energy from the garden plants and the trees of punyavana; Then they go to the Cetana and Yoga - Homa halls to do (2) Recharging exercises (3) Cakral exercises (4) Meditation exercises (5) Kalari Smruthi. Then they take part in (6) Namo therapy, (7) Homa therapy and (8) Dhanya Puja for transfer of cosmic energy by the healer to the healee. (9) This is followed by Cetana Pranayama (10) Cetana meditation and relaxation (11) Then Cetana crystal meditation (12) This is followed by a slow paced walk on the polished pebbled pathway, in the green tunnel to stimulate the reflex Marma points on the sole of the feet and to get the negative ion-energy brought down by the green tunnel of flowering creepers. (13) The next is the stimulation of marma points by medicated herbal powder (Udvarthanam) and epsom bath, jet bath, splash bath , Steam bath and shower bath. (14) This is followed by Satwik vegetarian breakfast of live green Salad, Idli, Satwik Saambar and fruits. (15) After breakfast the patient goes to the Cetana hall and energizes himself in front of the lighted oil lamp. (16) Then his aura is swept clean by the energized hands of the healer who cleans up the Cakras with the help of Camphor. (17) The healer now makes an auric diagnosis of the healee's illness. He probes into childhood trauma, and the relevant past births of the healee. Then he inducts energy into depleted Cakras and drains extra

energy from congested Cakras. (18) Thus the healee is given preliminary energy from Cetana Induction, Cetana Music and Color appropriate to his ailment, electrical equipments to transmit 9 volt electricity into the healee to get rid of lurking slow virus particles and parasites , flower energy with appropriate flowers, tuning fork energy, argon energy etc. These steps in the first phase of LERT will help the healee's capability to appreciate vibrational energy resonance up to the resonance frequency of sunlight. This is EMR phase of LERT. (19) Now the patient goes to the second phase of/ LERT. The intention here is to prepare him to accept vibrational frequencies up to 10100 times the vibrational frequency of sunlight. This is done by magneto therapy where 2000 to 4000 G magnetic power is used to induct energy. This will transfer energy of 1010 times the vibrational resonance of sunlight. This is the MER phase of LERT. The third phase of LERT consists in fusion of the organizing field energy and thought field energy of healer and healee. This is O.T. fusion. (20) Now the healer gives Sakti therapy to the Sakti and Brahma Sarira of the healee. (21) This can transfer energy vibrations 1020 to 10100 times the vibrational frequency of sunlight. (22) The final phase is giving the LERT fluid 5 ml each for each of the affected Cakra and organ of the healee chanting the appropriate mantras. The patient now gets energy resonance of 10100 times the vibrational energy of sunlight, which is the cosmic live energy.

The LERT fluid is prepared during Dhanya Puja. Details of Dhanya Puja are given here. This incorporates flower energy, Crystal grid energy, Gem energy, Color energy, Sunlight energy, Pyramid energy, the Ultra Sonic Vibrational energy of mantras and last and most important the thought energy of the energized healer transferred into it from his Ajna Cakra through his Palm Cakras, when he holds the glass of energized distilled water in his both Palms.

This supercharged LERT fluid can cure any ailment from common ailments to allergic and auto immune disorders, congenital and hereditary disorders, mental ailments and cancer. Even Aids patients who have not damaged their etheric body by previous therapy can be helped by LERT.

The main ritual through which we achieve the LERT is Dhanya Puja. This was a ritual commonly practiced during the Atlantis civilization about 150000 Years back - a civilization completely lost today. Here in the six corners of the Sat-Kona Yantra (the star of David pattern) with in a square, different pattern in Pancaloha are placed to absorb the Cosmic Energy which is augmented with the help of quartz crystals and appropriate flowers and coloured gems. In the centre of Sat-Kona are placed Nirapara made of mature Jackfruit tree, ornamented with brass rings filled with paddy. In the centre on the surface of the paddy is placed in a small Nazhi made of mature bamboo, germinated paddy. In this are placed patterns of Ganesa in Quartz crystal and a quartz crystal lotus containing a small gold Ganesa, Om in Ivory, a crystal gem and small quartz crystal. In the Nirapara in front of the Nazhi are placed a big amethyst crystal with two quartz crystals on either side, on which are placed two Ruby Gems. In front of it are placed the big conglomeration of crystals and a spherical crystal with Navaratna embedded in a gold ring. Near the conglomeration of crystals is the sacrificial brass vessel (kindi) on which is placed gold plate decorated with the Navaratnas. These at the centre act as the focal point of crystal energy grid. The cosmic energy collected by the patterns at the various comers in the Sat-Kona is augmented and directed to the focal crystals at the centre. There the energy level reaches to the level of 10100 of sunlight frequencies and will energize the person to this energy level who does Cetana Pranayama, Cetana Meditation and Crystal Meditation. This tremendous cosmic energy is transferred through the central quartz lotus crystal in the germinating Paddy Nazhi to the patient's Ajna Cakras chanting the Surya Gayatri Mantra.

Om Bhaskaraya vidmahe
Om Dyutikaraya dhimahi
Om Tannoadityah prachodayah
Om Japakusuma Sankasam

Om Kasupayam Mahadyutim
Om Tamo rim Sarvapapajnam
Om Pranatosmi Divakaram

This is LERT - The Live Energy Resonance Therapy or the ultimate medicine through Cetana Therapy. This energy can be transferred to a glass of distilled water by the healer who conducts the Dhanya Puja by holding the glass of water in his both palms and chanting the specific Mantra. This then becomes LERT fluid, which can be taken by the patients to effect cure of their ailments.

EFFECTS OF YOGA IN THE AIRSICKNESS MANAGEMENT

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ABSTRACT
Airsickness results in wastage of flying time, effort and cost of training, hence, it is a great concern to authorities responsible for Flying Training Establishments. A number of non-pharmacopeal methods have been developed around the world for the management of airsickness, however, these methods were not quite successful. Author discussed this problem with many experts and visiting Flying Training Establishments and developed a hypothesis that possible yoga, relaxation and behaviour therapy could be effective in airsickness management. Hence, the present study was undertaken. The behaviour therapy, along with certain selected yogic exercises, is effective in the management of airsickness and this method seems to be one of the most cost-effective and less time consuming method of airsickness management. The method of treatment suggested by this study has been accepted by Indian Air Force for rehabilitating airsickness cases with the aim of relighting them as quickly as possible.

CORONARY ARTHEROSCLEROTIC REVERSAL POTENTIAL OF YOGA LIFE STYLE INTERVENTION

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ABSTRACT
It is not very clear if lifestyle modification has any role in control of symptoms, progression of coronary lesions and prognosis in patients with advanced obstructive coronary artery disease. At the end of 1 year, the yoga groups showed significant improvement in number of anginal episodes. Yoga

lifestyle intervention is beneficial in improving the symptoms and excercise capacity, lowering weight and serum lipid levels. It also retards the progression of coronary artheroscleros is in patients with severe coronary disease and reduces revascularisation procedures.

A number of studies have documented that a change in lifestyle chiefly consisting of dietary modifications, physical excersises and stress relaxation techniques results in reduction of cardiac events in patients with coronary artery disease (CAD). How¬ever, there is a paucity of studies to determine whether lifestyle modification can result in regression of the coronary atherosclerotic plaques. Ornish et al observed a regression of coronary aterosclerotic obstruction by strict, lifestyle intervention. However the coronary stenoses were mild (40% and 43% diameter stenosis in treatement and control groups respectively) and the diet prescribed in their study was also very stringent, with only 5 mg of cholestrol allowed per day. It is likely that such strict control of diet may not be practical for most patients. The present study was designed to assess the effects of strict but 'user friendly' intervention using yoga lifestyle methods (with strict control of risk factors) on the angiographic severity of artherosclerotic obstructions in patients with advanced CAD (>70% luminal daimeter stenosis in at least 1 vessel). The effects on symptoms, excercise capacity serum lipids and cardiovascular events were also analysed.

AIMS AND OBJECTIVES

The objective of this study was to determine whether user-friendly yogic lifestyle intervention program (including yogic exercises, dietary management, moderate aerobic exercise and stress management) with control of other risk factors can reverse the arthesclerotic obstructions in patients known to have coronary artery disease.

MATERIALS AND METHODS

Forty-two male patients (mean age 51.0 + 9.5 range 32-72 years) with angiographically proven CAD were included in this prospective, randomised, controlled trial. At baseline detailed clinical assesment, serum lipid profile, treadmill excercise testing using modified Bruce protocol and coronary arteriography were performed. Patients in the control group (n= 21) were managed on conventional medical theraphy (with cintrol of risk factors, AHA step 1 diet, moderate aerobic exertion), while those in the yoga group (n=21) were advised strict lifestyle modifications and yogic excercises as detailed below. The medications for angina were continued. No patient was receiving lipiud-lowering drugs. The patients were followed for 1 year with regular assessments. At the end of 1 year, the patients again underwent detailed clinical assesement, serum lipd profile, treadmill excercise test and repeat coronary arteriography. Coronary arteriography was analysed quantitatively using the caliper method. All arteriograms were analysed by two independent blinded (blind- folded) observers. For coronary angiography the effect on individual lesions was compared in 2 groups. Ethical clearance was obtained from the institutional ethics committee and all patients gave informed consent to take part in the study.

THE BASELINE CHARACTERISTICS OF THE PATIENT POPULATION

Most patients were in NYHA functional class II (52% patients) or class III (41%). The patients in both groups had eleveated mean total and low density lipoprotein cholestrol. The study was conducted before the results of major in coronary artery disease were published and none of the patients were on lipid lowering therapy. All patients had at least 1 mm ST segment depression during exercise testing.

KEY WORDS

Kayotsarg = Relaxation exercise to prepare the body and mind for
meditation. Pranayama = Breathing exercise
Asanas = Yogic postures for stretch relaxation by performing asanas. The muslces are toned up, joints become flexible, body and the mind becomes lighter.
Preksa Meditation = Seeing deeply within. This is the search of the self. The Samskrit equivelant of the term meditation is Dhyana
Anuvrat and Anupreksa = Reflextion of the moral values being followed.
Stress Management - Relaxation, breathing exercises and preksa meditation
Coronary arteriography showed majority (81%) of patients to be having triple vessel disease.

YOGA LIFESTYLE INTERVENTION PROGRAM

After inclusion in the yoga group, patients, alongwith their spouses, spent 4 days at a yoga residential centre, where they underwent training in various yogic life¬style techniques. The yogic lifestyle intervention program consisted of yogic life style method and stress management:

YOGIC LIFESTYLE METHODS

1. Health rejuvenating exercises: a set of movements for improving the general tone of the body and to improve co-ordination
2. Relaxation exercise : a method of complete relaxation to prepare the body and mind for meditation (= Kayotsarg).
3. Breathing exercises (= Pranayama)
4. Yogic postures for stretch relaxation (= Asanas)
5. Seeing deeply within (= Preksa meditation)
6. Reflection on moral values (= Anuvrat and Anupreksa)

STRESS MANAGEMENT

-Dietary control
-Moderate aerobic exercises.

Patients visited the yoga centre every fortnight for monitoring and evaluation. The compliance as reported by the patients themselves and by spouse, was recorded. In addition, the patients were followed every month in cardiac clinic of the hospital for clinical examinations and investigations.

DIETARY CONTROL

Patients were advised to take a low fat diet (mostly poly or mono unsaturated diet providing 15% of calories), low cholestrol (50% mg/d), high carbohydrate (mostly com¬plex, providing 65% of calories) diet. Patients were also encouraged to have high soluble fibre diets (>50 gm/d) consisting of vegetable and fruits, oat bran, soyabeans, gram and other beans. They were also prescribed 15gm psyllium husk (almost entirely fibre) daily. In addition, the diet advised was rich in antioxidants (carrots for beta-carotene, fruits for vitamin C, nuts like almonds and walnuts for Vitamin E and flavonoids from onions, coloured fruits and vegetables). Illustrative recipes and menus with known nutritional values were provided to avoid monotony.
The compliance of patients was assessed in a quantitative manner using a standard questionnaire and the score could range from 0 to 100.

AN EVALUATION OF YOGA AS A THERAPY FOR CERTAIN AILMENTS

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ABSTRACT
More and more people today are concerned about their health and well being. Dissatisfied with modern medicine, patients are turning to alternative and complementary therapies. On gathering in formation pertaining to the clinical symptoms and case history and after establishing rapport, the therapy was given. Based on this physio-psychological constitution and reported symptoms, each patient was given individualised Yoga Training once a week for a period of three months. Each course designed consisted of asanas and pranayama which were modified and adapted to suit individual needs. The perennial philosophy of yoga is so broad that it can accomodate within its range, people of all backgrounds, tastes and temperaments.

STRESS AND GENES

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ABSTRACT
The blue print of life is now known through DNA. Basically we believe there are 70,000 proteins that are responsible for life process. The food we take in is oxidized in the body is metabolizing the body. Energy is stored and utilized. Information present in the DNA has to be decoded. It is decoded in the form of proteins. All of us have 99.99 % identical DNA. But why do we look different ? This is because the way genes express is very individualistic, depending on the micro or macro environ¬ment. This DNA has information blocks and there are about 3 billion such blocks. They have got to be arranged in a perticular order which is called sequence. This information of how genes are differentially expressed has been uncovered by science and the credit goes to it.

What has modern genetics achieved? Where genetic will be found inadequate, of course it is going to be a biased presentation. Very briefly let me explain what genetics have achieved in few decades. We now know the blue print of life basically. It is the DNA. This DNA has information blocks. 3 billion information blocks have to be arranged in a particular order, what we call it a sequence and once the sequence is known we know what information is present in this DNA. It is basically the life process is encoded in this DNA and this information has to be decoded. How it is decoded ? It is decoded in the form of proteins.

The genes has to be 70000 genes + or - 10%, 20% it really doesn't matter. Basically we believe there are 70000 proteins approximately that are responsible for life processes. When we say life process for example - the food we take is oxidized in the body is metabolizing the body, energy is stored and the energy is utilised. All these are enzymatic processes involving proteins for which information is present in the DNA. Every aspect of life the physical exercise we do, the behavioural aspects

everything today is codified or at least one believes it is codified in these 70000 genes. That's why I said we basically understand the blue print of life that all the information for all the activities of life including the behavioural characters are encoded in this genes. And what had really happened in two decades is that we are able to manipulate death, birth, (increase in life expectancy) Ex - birth of Dolly, is the sheep born out of a cell of two female sheep. One cell was taken from one sheep and the other cell was put into the X cell of other sheep after removing the nucleus of the cell and full blown sheep was born when of course exactly was identical to the sheep which donated the nucleus. It is an exciting operation because we believe that mammals have lost toty potency unlike plants because they are able to re-programme an adult cell, like a liver cell. This has given rise to the idea of clone in human beings.

Theoretically it is possible but technically we do not know as yet. When cloned physically it may be different that is because the behaviour depends on the sum total of information we all have plus how this information we all have plus how this information is modulated and expressed. All of us have 99.99% identical DNA. But why do we look different? Even we do not look alike except for identical twins. This is because the way genes express is very individualistic, depending on the micro environment, macro environment. What do I mean by expression? Again in terms of proteins some proteins are made, some proteins are not made, some proteins are made for sometime and shut off and this pattern of 70000 proteins varies from individual to individual. That's why we are all different.

Not because the information content is different the information content is similar, that's the reason why a primordial cell for example which is formed by the fusion of egg and sperm, how does it differentiate giving the brain, giving the liver, the heart? The information content is same as that of the liver, heart or brain, but there has been a process by which this got differentiated into different lineages as we called it. Because again the pattern of expression of genes is different the lineage that takes you to the brain, the lineage that takes you to liver, the lineage that takes you to heart is different, the pattern of expression is different. But where we get stuck is what is the Que what is the trigger that makes it to express differently. We may say this hormone, that hormone but what is the primary one that really is responsible to cause this differential lineages to takes place. This kind of tremendous progress that has been achieved, we have to give credit to science that this information of how genes are differentially expressed, what is the difference between a normal cell and a cancer cell. We understand a great deal about this and the applications have really become possible to clone the genes by knowing the sequence of gene and once we know about it, it may be possible to find out why some persons are susceptive to infectious disease etc. Genetic disorders - there are 5000 disorders where the genes are mutated like sickle cell anemia, thalasemia, dushen muscular dystrophy. And today we know at least 75 genetics disorders exactly. What is the exact molecular defect that has taken place, and this information helps you to diagnose, the diagnosis has undergone a revolution from infectious diseases to genetic disorders. You have today powerful diagnostic procedures, and this concept of Gene therapy has come. Now there is a hope that a normal gene can replace a defective gene, it is called gene therapy. It is at an experimental level. The modern genetics have pushed gene knowledge into mind-boggling levels. Now we know what happens in aging why anybody ages and how you can prevent aging cells called apeptosis. Cells are programmed to die. So there is a tremendous knowledge that is built up.

If you look at questions like, the origin of species, origin of universe, origin of life we really see that it is a matter of debate. It is not like today's perception like which gene is mutated, which gene is expressed, which gene is not, but that kind of finality, I cannot talk about the origin of life. What is the present perception of origin of life? There are certain gases - may be nitrogen, oxygen, hydrogen and carbon and there was an electric ark and then all these condensed and we have primitive molecules amonia, hydrocynic acids. And condensed to form aminoacids, and aminoacids

formed proteins and these purine pyremidienes formed nucleic acids and it was enclosed in a membrane and that is the primitive cells. The question is when did the cell start living? All the above can be created like amino acids, proteins, artificial membranes, crystals we can make it form, grow, destroy but it does not have life.
What is it that makes the 'LIVING' in these things? If we study the Darwin's theory, he says there were few organisms like this and life was breathed into this. Then comes the question of what is it that life was breathed into this? I am not very sure if science will ever be able to catch up this kind of questions. Like when does actually the process of living start.? Can it be defined in terms of molecular biology, biochemistry, in terms of physics? The same problem you have for the origin of species as Darwin's is the sequential evolution we call it.
There are also alternative theories of evolution. There are people who believe Darwin is not right. There are arguments that this primordial pond, where all these gene assembly took place and may be it is not just few cells, may be it is complex cells which were already existing in it.
Even the genetic mutations and evolution is not adequate to give the answer to the origin of species. It is only an argument. A frog can give birth to a frog so on so forth. Suffice to say but some of the theories are not absolute. Even the origin of universe one talks of big bang credibility, there are also people who do not believe that. The question is before big bang what was it, how things existed who is responsible for that kind of things? So whether you take origin of species, origin of life or origin of universe, science can go up to a point and end up with a situation where you are not able to explain the situation and this is not undermining science, science has a place in evolution. So you feel that somewhere somebody or even you can call it nature, are regulating the things, somebody has programmed this DNA and he must be a super scientist that may be GOD.

REJUVENATING THE AGED WITH SELF PROGRAM

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ABSTRACT
It is now accepted that the life style change suggested by Dean Ornish Programme for Reversing Heart Disease (DORH), although may not reverse heart disease in every individual case, it can halt the progress of the disease. Yoga techniques which provide better self awareness and relaxation may offer additional benefits when incorporated into DORH. To study whether addition of a SELF Program of yoga to DORH Programme could give any additional benefit in patients with heart disease.

3.3 **ORAL PRESENTATIONS**

YOGA - MEDITATION AND HEALTH

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ABSTRACT

*Since last four and half years I have been interested in energy radiations and their effects on living beings and found that thought and energy are behind any system of healing through any system of medicine. The major causes of chronic diseases are; exposure to non-ionising radiation (NIR) and Emotions Measurement of energy radiations have revealed many interesting results. The objectives behind the study were: * Role of NIR in causation of chronic illnesses, * To find out techniques to neutralise the negative effects of NIR on human system, To measure total energy level of people, places and objects. Yoga practices of asana and pranayama can only help temporarily unless accompanied by life style modification by Yama and Niyama, cultivation of noble qualities like love, compassion forgiveness and Manava sfva and only this can have long lasting healing power.*

Yoga has been interpreted in various ways by various people and practiced by different people in different ways. The real meaning of Yoga as per Upanishads and Patanjali is "THE CONTROL OF THOUGHT WAVES IN THE MIND". It means removal of all negative thoughts and emotions, acquire positive thoughts and emotions. By practicing Dharana, Dhyana and Samadhi you will be able to realise divinity and liberation and self realization. So, all the future research on Yoga should be concentrated on methods to remove negative emotions and thoughts and develop methods to teach positive emotions and thoughts. I have so far not come across any scriptural literature on Yoga where healing is supposed to occur by Yoga practices, though a lot of Yoga practitioners use Yoga for healing. Excellent results can be obtained in healing, the quality of life of the individual, happiness, etc.. All the 20 Upanishads which talk about Yoga and meditation and Patanjali do not talk of Mantras in meditation and healing. Automatically healing, liberation, realisation, happiness, spirituality will come. How many people have become spiritual of the millions of the people meditating and practicing Yoga ? Neither the Upanishads nor Yoga Sutras talk about any healing of any disease due to any Yogic methods. I measured the energy levels of 10 yoga practitioners at three Yoga centers at Visakhapatnam three years back. As the students were practicing prayer, pranayama, and Meditation for 35 to 40 minutes, I measured the initial energy levels of people. When meditation ended the negative energy level slowly increased to +8,000, +9,000 and 12,000. I can interpret all scriptural practices, rituals etc. social, superstitions, Pujas, Yajnas, mantras recitation, scientifically by energy measurements. Of all the food items next to cow's milk product turmeric has highest positive energy level. I can teach people dowsing. The scriptures never talked of any healing benefits from Yoga and Meditation but they only mention spiritual power can be obtained by Yoga and Meditation.

PATANJALI ASHTANGAYOGA

1) Yama - Abstention from harming other, falsehood, theft, incontinence and greed. 2)Niyama - Purity, contentment, mortification, study and devotion to God.	Mental Exercises for removing Negative Qualities and Emotions
3) Asana	Physically

4) Pranayama	improves
5) Pratyahara	Health
6) Dharana	Spiritual
7) Dhyana	Self realisation or liberations,
8) Samadhi	Siddhis etc.,

The 358 research papers on TM/TM Siddhi show slight improvement, or reduction in condition of the diseases like B.P, Diabetes etc., slight increase in performance of physical, physiological, neurological factors.

WHAT IS HEALTH ?

Good health helps people to achieve their goals and enjoy Life to full.

Thought gets converted into energy and heals people. All the therapies cure the disease or the symptoms of the disease but not the cause of any chronic disease.

Since I have some simple methods not only to neutralise the negativity acquired by people but also increase the Vital energy to that of great Saints, I started using these methods of neutralising and energising people to improve their health. Those without emotions got cured.

I found out various causes (20) for many chronic disease like Diabetes, B.P., Cancer, AIDS, Asthma etc., all the therapies cure the disease or the symptoms of the disease but not the real causes of the disease.

The major cause are: 1. Exposure to non-ionising radiations (NIR) 2. Emotions 3. Disti.

Unless the exposure to NIR is neutralized and if possible energized, no chronic disease can be permanently cured.

Apparently in the Vedic period people lived happily, and were healthy because of the high positive energy level they used to acquire during Yajfias. Now a days, high energy level is produced during the Yajna (in both the place and people) but as soon as the fire is extinguished, the energy level disappears at the place and from the people. Since Yajfias did not solve my mass energisation problem, I thought Yoga and meditation may help. The second floor of my house is having extremely high positive energy level, probably the highest energy level at any place that I have so far visited and measured.

LET ME PRESENT A FEW FACTS

1. 20 Pranic healers sitting in my place for about 21 to 22 hours acquired high positive energy. Their Sahasrara Cakra and other Cakras expanded to 3 feet their AURAs increased 18 to 20 feet and they are still retaining these energy levels after 8 months.

2. One T.M. Siddhi Student who can fly after Siddhi Meditation. In his college he could fly 22 times after 50 minutes of TM/TM Siddhi Meditation and had to rest for 45 minutes to come back to normal. His energy level slowly peaked to 2800 units when started flying. Two hours after the jump, he lost the energy he acquired, during meditation his energy level increased to 10,000 units, he flew 42 times and after 6 minutes of rest he came back to normal, fully fresh and energetic, with his Sahasrara Cakra expanding to 3 feet and his AURA about 15 feet which he is still retaining after 4 months.

Then practice noble qualities like Love, Compassion, Forgiveness etc., simply by practicing Manava Seva and noble qualities like Love, Compassion, forgiveness etc., people have acquired some amount of spirituality and gained some vital energy, without doing any Yoga, Meditation, Pooja etc., I have confirmed this after checking about 20 people who arc absolutely ignorant of any meditation system. Manava Seva and Noble qualities will lead to self realization. Siddhasana,

Padmasana are required for prolonged Meditation. Meditation is considered to be stilling the mind.

BENEFITS OF MEDITATION

During meditation the Energy level increases and if it is retained, a number of benefits occur - Some such changes are:

1. Metabolic Changes
2. Electro Physiological Changes
3. Health
4. Improvement in Motor, Perceptual ability and Athletic Performance
5. Intelligence, Learning and Academic performance improves
6. Development of personality
7. Biochemical and Cardiovascular changes
8. Quality of life and productivity
9. Increased creativity
10. Increased energy and dynamism
11. Freedom from stress
12. Increased resistance to disease
13. A number of other benefits.

METHODS TRIED TO NEUTRALIZE PEOPLE

1. Yoga - Meditation
2. Yantras - Sri Cakra and other powerful geometric patterns etc.,
3. Mantras - Gayatri, Visnu, Lalita Sahasranamas etc.,
4. Yajfias / Homas - I have found only at 5 places out of the 182 there was positive energy which remained even today.
5. Music - Certain type of Music and dance produce lot of positive vibrations. Some type of music produce very strong negative vibrations. In most of the cases the energy produced by music does not remain in people and places.
6. Recitation of - GIta, Ramayana, Mahabharata, Vedas etc., Holy Bible, Holy scriptures Koran and other religious scriptures of any religion.
7. Exposing to very strong positive radiations like the radiations in my house and some temples which are very highly positive.

You are all aware of emotions can be a major cause for chronic diseases. You are not aware that non-ionising radiations are the most important primary cause for any chronic disease including Cancer and AIDS. Another important cause you are not aware is Evil Thought, Evil Eye (Disti/Nazar), of others going upto black magic, causing some chronic diseases, I have so far treated 50 people with different chronic diseases, some time unexplained, some times with pains all over the body, without clinical test not showing any diseases, who are effected only by Disti (Evil Thought) All the medical records show that all clinical tests show nothing is wrong but they suffer for years. By removing Disti all of them got cured whose only cause is Disti in a very short time.

SAMADHI

Realisation, Liberation or truth is nothing but to realise you are divine (God), Every child is born divine. Their Sahasrara Chakra is open upto 8 years when Upanayanam is performed to boost the lost energy. Every one is divine which we are not told or we can understand.

To carry out research to make people continue their divinity is my aim in life. I promised Sankaracharya of Kanchi that I will make every man a saint physically, mentally and spiritually and every house a temple. The methods are very inexpensive, simple and takes very little time, within

less than a minute. I can help a great deal if any one wants to conduct research on this aspect.

T M SIDDHI

By making Samyama concentration, meditation and absorption (Dharana, Dhyana and Samadhi) on the relation between the body and the ether or by acquiring through meditation the lightness of cotton fiber, the Yogi can fly through the air. Through mastering of Samyana, on different aspects, various powers can be obtained.

RESEARCH ON YOGA AND MEDITATION

Any type of meditation, Yoga Nidra, Silva mind control. Asanas, Pranayama, Kriyas, Bandhas (not mentioned in Yoga texts). Many people get healed due to faith. Placebo effect, Suggestions and Auto suggestion, I have earned out lot of research on faith and miraculous healing. From the study of 358 scientific research papers on TM/TM Siddhi I found that most of the healing was only reduction in problems but not a total cure or permanent cure. Mostly people who regularly practice yoga show better results but not total cure.

METABOLIC CHANGES DURING YOGA PRACTICE - A REVIEW

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ABSTRACT

The vital role played by yoga i.e. physical fitness, fitness related to health, skill and performance has assumed tremendous importance in recent times. A review, of research papers on yoga practices, physical exercises and its relation to metabolic changes is conducted at Vivekananda Kendra Yoga Research Foundation, Jigani, Bangalore. The goal of the review was to establish a comprehensive literature review and provide a rationale for future research concerning metabolic changes during yoga practice. Computer searches were conducted using medline, pubmed, along with library search, and review of published journals and standard textbooks.

An elaborate list of energy expenditure pattern of various physical activities is available but little documented for yogic exercises. Reviews are not large and need extensive research coverage. There is lack of replicated studies which will confirm the methods results. Evidences suggest yoga as a mind/ body approach which has very vast application.

The vital role played by yoga i.e. physical fitness, fitness related to health, skill and performance has assumed tremendous importance in recent times. The life style changes leading to positive energy balances has been the causative factor for many of the metabolic disorders like hypertension, diabetes malites, cardio vascular diseases and obesity and related problems. Yoga, which is a time-tested method, has shown great positive influence on physical, mental, psychological, social and spiritual personalities of a person. With the above in background various research works have been undertaken to measure the changes that takes place during yoga practice. The measurement of metabolic changes is one of them.

METABOLISM

It is a process by which nutrition material of the food we take is built into (anabolism) and broken-down to give energy (catabolism). The expenditure of energy is measured in terms of K Cal by respiratory quotient (RQ = CO2/O2).

MEASUREMENT OF METABOLIC RATE

Concern for physical activity levels was shown as early as 1900 by Mr. Hitscok, who observed that physical fitness level in school children was below normal. In 1922, American Physical Education Association came out with a physical fitness index. Thereafter a lot of physical fitness tests and measurements have been developed to assess physical fitness.

The modern day procedure includes height/weight ratio, skin fold thickness, chest measurement, body composition table, blood pressure assessment, cable tension meter, ergometer, treadmill, brain function tests, stress tests, Co2 expulsion, O2 uptake etc.

RESEARCH REVIEW

Some of the major research works have been highlighted here. Though it is not exhaustive it does provide us with a glimpse into the type of research done at various centers on yoga meditation and pranayama etc.

PUBLISHED RESEARCH WORK

1. **Toor S** (1996) in a study "comparative effect of ten weeks modified strength training on aerobic and anaerobic capacity" conducted concludes that the strength training has improved aerobic and anaerobic capacity significantly.
2. **Beta TK, Rajapurkar MV** (1990) in their study "somoto type as an indicator to the performance ability ....." concludes that there was significant correlation
between the somoto type scores and the mean performance of asanas and endomorphic physique have lower performance in selected asanas.
3. **Kalidasan R et al** (1998) in their study "influence of training with and without selected yogic practices ....." concludes that the performance of the boys who
had training with yogic practices was better in technical skills and performances than those of other groups.
4. **Telles S et al** (1991) in their study "oxygen consumption during pranayamic type of very slow rate breathing" showed that Kumbhak pranayamic breathing caused a statistically significant increase (52%) in oxygen consumption (and metabolic rate) compared to the prepranayamic baseline period of breathing and the different types of pranayamic breathing may lead to different types of oxygen consumption and metabolic rate
5. **Helaine M Alessio and Eileen R Blasi** in their research "physical activity - a natural antioxidant booster and its effect on health and life span" concludes that the physical activity appears to enhance antioxidants in proportion to the exercises is due to oxidation stress.
6. **Pratap V, Berrettini WH, Smith C** (1978) in their study on 'Arterial blood gases in pranayama practice' concluded that Pranayama is a yogic breathing practice which is known experimentally to produce a profound calming effect on the mind.
7. **Keller s, Seraganian P** (1984) in their study 'Physical fitness level and autonomic reactivity to psychological stress' explored the influence of aerobic fitness level on autonomic reactivity to psychological stress in their studies.
8. **Raju PS et al** (1986) in their study on 'Effect of yoga on exercise tolerance in
normal healthy volunteers' selected 12 normal healthy volunteers. The volunteers were taught only pranayama and later on yogasanas were added. Minute ventilation and oxygen consumption were

estimated before and during the test. Post exercise blood lactate was elevated significantly during initial and phase-I but not in phase-II. There was significant reduction of minute ventilation and oxygen consumption only in males in phase-I and II at the time when the volunteers reached their 80% of the predicted heart rate. Female volunteers were able to go to higher loads of exercise in phase I and II.

9. **Blumenthal JA et al** (1991) in their study "Long-term effects of exercise on psychological functioning in older men and women" determined the psychological, behavioral, and cognitive changes associated with up to 14 months of aerobic exercise training. Results indicated that subjects experienced a 10-15% improvement in aerobic capacity.

10. **Balasubramanian B,** Pansare MS (1991) in their study "Effect of yoga on aerobic and anaerobic power of muscles" inferred that aerobic power (VO2 max) and anaerobic power were estimated in medical students before and after 6 weeks of yoga training. A significant increase in aerobic power and a significant decrease in anaerobic power was observed. This may be due to conversion of some of the Fast Twitch(FT) muscle fibres into Slow Twitch fibres (ST) during yoga training.

11. **Rai L, Ram K**(1993) in their study "Energy expenditure and ventilatory responses during Virasana - a yogic standing posture" studied the energy expenditure and ventilatory responses to yogic standing posture of Virasana on 10 healthy men. The parameter used were minute ventilation, respiratory frequency (RF) tidal volume, oxygen consumption, carbon dioxide eliminaiton, respiratory exchange ratio, heart frequency, oxygen pulse, ventilatory equivalent, multiple of resting (VO2) and metabolic cost.

12. **Brea TK, Rajapurkar MV** (1993) in their study "body composition, cardiovascular endurance and anaerobic power of yogic practitioner" revealed that a significant improvement in ideal body weight, body density, cardiovascular endurance and anaerobic power was observed as a result of yoga training and did not show significant change in body fat, skeletal diameter and body circumferences.

13. **Schell FJ et al** (1994) in their study "Physiological and psychological effects of hatayoga exercises in healthy women" measured heart, blood pressure, harmones cartisol, prolactin and growth harmones and certain psychological parameters in a yoga practicing group of young females. There was no difference in the group concerning endocrine parameters and blood pressure. The course of heart rate was significantly different.

14. **Rai L, Ram K et al** (1994) in their study "energy expenditure and ventilatory responses during siddhasana - a yogic seated posture" observed various cardioventilatory responses and found out that the posture was characterised by greater minute ventilation, larger tidal volume, higher oxygen consumption, greater carbon dioxide elimination, higher heart frequency and greater oxygen pulse. The observation suggests that siddhasana is a mild type of exercise and may have its applications in conditions of low cardiorespiratory reserves especially in individuals in whom heavy exercises are contra indicated.

DISCUSSIONS AND CONCLUSION

The above establishes the role played by yoga in fitness, fitness in relation to health, skill and performance. Though this study was done in small groups the results are significant and more research need to be done in yogic exercises and its effect on physical, emotional and spiritual dimensions and the therapeutic applications.

There is vast scope for research in this field and as the benefits of yoga unravels itself the awareness will increase. Yoga can be taken up for intense research and applied for betterment of day to day life. Yoga is a mind/body approach, which has very vast application.

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EFFECT OF SELECTED YOGIC PRACTICES ON MENSTRUAL DISCOMFORTS

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ABSTRACT

Introduction: Stress is known to be an important factor that could be responsible for menstrual problems in teenaged girls. The abonormality could be corrected if yoga can reduce the stress levels. The present study was undertaken to study this effect.

Aim: To study the effect of yoga practices on menstrual discomfort in teenaged girls.

Methods: The procedure of the selected Asanas. Pranayama and Kriyas was explained with demonstration to the subjects. The questionnaire was answered by the subjects before and after the training period.

Subject: For this study 40 female students who had been facing menstrual discomfort were selected from the Maheshwari Kanya School, Amravati, Maharashtra, India. Their age was from 13 to 17 years. Selection of subjects was done through personal interviews and they were put into two groups according to their menstruation dates.

YOGA FOR CONTROL OF DIABETES

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ABSTRACT
Diabetes is a chronic metabolic disorder caused by malfunction of the pancreas. It can cause complications affecting various organs of our body. Obesity, unhealthy diet, sedentary life style and also lack of awareness of our body are resulting in sharp increase in diabetes. An attempt is made to examine the benefits of yoga for control of diabetes in a graded programme of yogabhyas over a duration of 75 days. Chronic diabetics in the age group of 40-50 yrs participated in this programme. Though the aim of the programme was to control diabetes, the asanas were chosen to bring about an over all improvement in health, which in turn helps in controlling diabetes. Significant improvement in self confidence, feeling of relaxation and calmness, efficiency and stamina were observed. In conclusion it could be stated that this programme has been reasonably successful towards the influence of yoga on diabetes.

Diabetes is a chronic metabolic disorder caused by malfunction of the pancreas. Diabetes, if not controlled can cause many complications affecting the eyes, kidneys, heart, brain and feet. Obesity, unhealthy diets and sedentary life style are brining about a sharp increase in diabetes prevalence. India is estimated to have the largest number of diabetic patients in the world and the number is growing. Lack of education, unbalanced diet and poor awareness about primary health care are the root causes for many a disease in our country and diabetes is no exception. It is rather surprising that at the end of the 20th century, awareness about diseases is minimal even among the so called literates. In fact, knowing about certain diseases is treated as 'taboo'. Modern world is re-discovering a number of holistic ways of living known to our ancestors for controlling different diseases and the present day practitioners of modern medicine are recognizing and appreciating the alternate pathways to control, if not completely cure, many diseases. Yoga stands first among these pathways. Yoga itself is an education. It creates an awareness about the body. Yoga leads to physical and mental health. Yoga teaches to attain and maintain a healthy condition of body, mind and spirit. Yoga practices help to solve health problems. Due to innumerable benefits, it is

understood that yoga could help to control, if not completely cure, many diseases including diabetes. In view of this, a project work, consisting of a carefully graded programme of yogabhyas was undertaken to help the chronic diabetics in the age group of 40-50 years for a duration of 75 days. Primarily they were taught certain asanas, pranayamas, relaxation techniques, mudra and bandha. The outcome of this project work and the effect of yoga on the participants are descried in this paper.

ROLE OF YOGA IN CONTROLLING DIABETES

Diet, physical activity and mental tranquility are the cornerstones of diabetic management. No disease requires as much attention to diet (Ahara) as diabetes. Yoga advocates a light satvik vegetarian diet because it believes in the ancient yogic maxim, "as is your food, so is your mind". As such there is no restriction on the type of food for a diabetic. He/she can eat almost any food that other people normally eat provided the food is balanced and within the permissible caloric limits. The daily requirement should be well distributed between the different meals. In the Yoga Plan for Health, Ahara (food), Vicara (thought) and Vihara (recreation) go hand in hand.

Yoga, indeed, works wonders with weight, the bugbear of diabetics. It helps overweights to reduce, under-weights to put on and normal weights to maintain their weight, this is not the only benefit. Yoga wards off heart disease and circulatory risks to which diabetics are easy targets by stepping up blood circulation and lowering cholestrol and triglyceride levels. Yoga is the best detressor. It relieves emotional tension and stress which trigger diabetes, and accounts for swings in blood sugar levels. Yoga lowers blood sugar by increasing the number of insulin receptors and increases glucose uptake by the muscles, thus lowering glucose blood levels.

YOGA PRACTICES

The word "Yoga" derived from the Samskrit verb "Yuj' which means 'to join' or union of Atma and Parmatma i.e. with the supreme reality. We can also say that it is the union of mind and body. Hata Yoga is a branch of the Yoga which necessarily starts from the body. It is body-mind-spirit path towards samadhi. The full yogic technique of Astanga Yoga helps to develop the body, mind and psychic potencies to achieve a mind-body balance which cushions us against the stresses and strains of modern living. It helps us to become an oasis of calm in the turbulent sea of today's existence.

In the current project controlling of diabetes through yoga has been evaluated on diabetic patients who undertook the yoga classes for a duration of two and half months. It consisted of fifty sittings of 45 minutes duration. One of the areas was stress management. There were 10 participants (Smales and 2 females) in the age group of 40 to 50 years. All of them are diabetics, having case history of 2 to 5 years. Before starting the yogic practices, the participants were sent for general medical check up for height, weight, blood pressure, pulse rate (PR), urine, sugar, fasting, blood sugar, post-prandial blood sugar (PPBS), blood cholesterol, haemoglobin etc. This was repeated after completion of the classes (two and a half months) to examine the possible benefits accrued.

A carefully graded programme of asanas conditioning or meditative asanas, cultural asanas, simple pranayamas and mudras, was chosen. Each and every asana was demonstrated and participants were helped to learn and practise these asanas. Daily programme used to start with Prarthana and Omkara chanting followed by loosening exercises, various asanas and pranayama. The asanas taught were:

1. Sukhasana,
2. Savasana

3. Vajrasana,
4. Majrasana A and B,
5. Tripada Majrasana,
6. Savasana Marga Suddhi
7. Pavana Muktasana with Asvini Mudra,
8. Sulabha Bhujangasana,
9. Sulabha Dhanurasana,
10.Vakrasana,
11. Sulabha Matsyendrasana,
12. Gomukhasana,
13. Nadi Suddhi Pranayama,
14. Suryanuloma Pranayama,
15.Trikonasana,
16. Sulabha Makarasana,
17. Parvatasana,
18. Bhramari Pranayama,
19. Parivartita Cakrasana,
20. Viparita Karani Mudra,
21. Nishpandabhava,
22. Sarvangasana,
23. Savasana,
24. Uiiayi Pranayama.
25. Jihva Bandha and
26. Simha Mudra.

The programme used to end with relaxation by Savasana for a duration of 10 minutes. Participants were advised to practise this programme on Saturdays and Sundays on their own. In addition to this initial course of Yogabhyas, the participants were advised to practise one or more of the following " Yogic Suddhi Kriyas" i.e Yogic cleansing processes once in a month: (l)Vaman Dhauti and (2) Laghu Shankha Prakshalana. Participants were advised to practice Ushappan (drinking 2 glasses of water early in the morning) and a 40 minutes of relaxed walk. At the end of the training, general medical check up to all the participants was done.

RESULTS AND OBSERVATIONS

The reports indicate that almost all participants have got the benefit. As is seen, the extent of benefit varied from a small fraction to very high success. All the participants felt a sense of well being with relief from symptoms like tiredness, frequent urination, tension, headache, constipation and indigestion. A few of them got a feeling of exhilaration, lightness and suppleness of body. It is found that good diet practices along with the yogabhyas could help in bringing down the blood sugar levels. It could be concluded that this programme has been reasonably successful towards the influence of yoga on controlling the diabetes.

MANAGEMENT OF DIABETES MELLITUS (NIDDM) BY NATUROPATHY AND YOGA

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ABSTRACT

Nowadays alternative medicine is gaining importance in treating human ailments. Naturopathy and Yoga are two very important ancient alternative drugless systems of treatment.

Patients were given 1 hour of yogic treatment including yogasanas, pranayama and meditation. Along with this, nature cure treatments like partial messages to the abdomen, cold hip bath and other eliminative treatments were also given.

Yogic exercises and nature cure treatments helped in increasing the homeostasis of sugar in the human body, where as pranayama and meditation helped to reduce the stress. By these means, all patients got significant improvement.

Naturopathy treats the diseases of a person by stimulating the human curative power through natural dieting, right way of living and different baths and yoga is found to be very good remedy for stress induced disorders like Diabetes, Bronchial Asthma, Hypertension etc.

METHOD

Subject were the inpatients from SDM Yoga and Nature Cure Hospital admitted for 3 weeks. Study was explained to the patients. Number of patients was 25, out of which 6 were females of age group 30-60 yrs.

On admission all of them were on, hypoglycemic drugs and they were assessed for both subjective and objective parameters like pulse-rate, blood pressure and lab investigations like blood sugar level, urine sugar level, cholesterol, Blood urea were recorded. Patients were subjected to strict diet regime like morning 7.00 am Bitter guard juice (300 ml) 11.30 am 200G boiled vegetables, 2 Chapatis and 1 glass of buttermilk, (300 ml) along with which a spoon of methi powder was added. At 2.30 pm they were given a glass of lemon juice (300 ml). At Night around 7.00 pm the same diet was given.

Patients were advised to practise yogic practices for one and a half hours, like yogasanas, pranayama and meditation, in the morning-Patients were asked to take naturopathic treatments mainly partial massage to abdomen, cold hip baths with friction and other eliminative treatments. By observing the vital data and blood sugar level, drugs were slowly tapered and finally stopped. At the time of discharge, the patients' vital data and blood sugar level were once again recorded.

STATISTICAL ANALYSIS

There is no difference in the average level of blood sugar before and after treatment, that means are equal symbolically (M1=M2). Before treatment implies use of drugs, after treatment implies no drugs,Varuate Xbi ; observed values after treatment (no drugs) Variate Xai ; observed values after treatment (use of drugs)

Difference di- Xai-Xbi

= O1-24 25-6 1 35 114 43 82 8

n = 25, 41 24 26 -9 62 60 125 88 115 30

25 15 107 158 1 17

Mean of di = d = 44.730769

Standard deviatic n of di = = 47.059339

Observed ratio T= n -1 d = 25x44.730769/47.059339 = 4.7525921

This follows + distn with n-1 dif

Test procedure suggests that reject Ho if T> tx n-1 such that P(T> txn-l)=X
By interpolating table value (theoritical) at 1% level of significance is 2.485
Observed value =4.7525921
Table value=2.485
Observed value >table value
Hence reject Ho
Alternatively accept Hence M2<M1
The average level of blood sugar without drugs is less than the average level of blood sugar with drugs.
Hence yogic and naturopathy treatment is more effective in bringing down level of blood sugar in the management of diabetes mellitus.

RESULT

There was a significant improvement in all the 25 cases, even though the drugs are stopped completely.
Blood sugar level was normal. This pilot study clearly shows that yoga and naturopathy treatments and diet definitely show a new life for diabetics.

DISCUSSION

Natural methods of treatments and yogasanas well help glucose receptors to absorb more and more glucose and abdominal massages and yogasanas, massages specially stimulate the pancreas in to the production of insulin.
Pranayama and meditation will help reduce the stress. The diet which contains more fibres will reduce polyphagia by delaying the gastric emptying.
Hypoglycemia agents like methi, Naulkol Juice, Bitterguord juice act as hypoglcemic drugs which will reduce the blood sugar by enhancing the consumption.

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EFFECT OF IAYT ON STRESS INDUCED AILMENTS

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ABSTRACT

Yoga is becoming popular in Japan. Stress and stress related ailments are increasing as life

expectancy has increased due to decreased infant mortality. The first major cause of death in Japan is cancer, followed by heart disease. The medical expenses are increasing. In 1995 health insurance expenses were about 2,15,000 yens per person per year (collected as taxes). Yoga and yoga therapy classes are popular in Japan. 80% of particapants are ladies. This work is carried out in partial fulfilment of the nonresidential yoga therapy instructors course in Japan conduted at Yoga Niketan by VK YOGAS. Integrated approach of yoga therapy has beneficial effects. In Japan with very high level of stress at all ages, yoga can be a great boon to prevent problems of stress.

This research has been done by Yoga Therapists who received the certificate of YTIC on VK YOGAS in Japan. In 1994, this YTIC was held on in Japan, we invited Yoga teacher who is Sri Dharmaprakash N M from VK YOGAS. 33 people have got certification until now.

As you know, Japan is small-island around the sea on East Side Asia. In these days, the higher-growth of the Japanese economy has made remarkable advances. Electronics, Automobile industry etc. are keeping high quality level in the world.

But people are suffering from so much stress. As VK YOGAS sound the alarm, stress induced ailments are increasing alarmingly, There is increasing interest in their own health, and how to reduce stress. That is why Ayurveda, Yoga therapy, other alternative therapy also receive much attention.

In the first place, I may tell you about the social of Japan. (OHP Sheet No.l) The population of Japan is 120000000. Population composition is 0-14, 15.1%, 15-64 69.3 %, 64 over, 15.6 %. The average life span of Japanese is more than 75 years old Gents, Ladies 83.59%. This reason is to decrease an infant mortality rate, to not always increase long life persons. Family size is 2.79 persons. The family structure is almost parents and two children.

Life style (OHP Sheet NO. 2)

Smoking rate Gents : 58.8% Ladies : 15.2%

Drinking 63,978,000 53.3%

Sleeping hours about 7.5-8 hours

10 G 8.18 L 8.06

20 G 7.47 L 7.41

30 G 7.34 L 7.20

40 G 7.36 L 7.04

50 G 7.43 L 7.16

60 G 8.08 L 7.44

70 G 8.57 L 8.46

Working average 7.5 hours (but this data is only total average. Some people are working much more.)

Back pain, Shoulder pain, Arthritis is complained by 283.3 persons out of 1000 numbers. And in Hospital 285.4 persons put of 1000 complain of Hypertension, Back pain, shoulder pain.

So, the life is stressful. Almost people, businessmen, but also babies, children, aged women feel much stress everywhere at company, school, home etc.

They understand the reason that stress more often bring about many diseases, but it is difficult to changing their own life style in the present circumstances.

The data shows the ranking of course of death is 34 years old - 54 years old: 1st cancer, more than 54 years old 1st apoplectic ictus, 2nd cancer, and 3rd heart disease. Accordingly, Almost Japanese people die in cancer, apoplectic ictus, or heart disease.

And in medical facility, there is much high level of medical technology hospitals. But It may be always crowded, they are to wait for 3 hours then they can get 3 minuets treatment, They are not satisfied and afraid of side effect of medicines, but on the other hand they are depending on

medicines also.
In 1995, the health insurance of medical expenses is about \27,000,000,000,000, (In Japan medical expense should be paid about 70% -80% according to health insurance system by government) for each person \215000 for one year. This is collected as other tax.
Now, in Japan yoga classes are spread widely and slowly. The general yoga classes usually are performed once weekly, each for one and half hour for the most part, we don't have residential facilities like Prashanti kuteeram. About 80% of participants are Ladies and almost of them have problems to shoulder pain, back pain, climacteric disorder, irregularity of menstruation and hypertension etc. Some yoga therapists are taking special yoga class for mentally handicaped people old aged in welfare facilities and nursing home for ages. The acknowledgment of the efficiency of yoga therapy rise step by step.
As mentioned earlier, there are much stress induced diseases, gastro intestinal injury, hypertension, back and knee pain and irregularity of menstruation are typical.

THE RESEARCH OF HYPERTENSION

Then, I introduce the report of result of IAYT for hypertension.
Aim : To search for effective of
IAYT for hypertension
Method : Nonresidential, weekly once, About 90 minuets, To encourage practice at home every day
Duration: 3 months
Numbers : Male - 5 persons; Female - 32 persons Ratio of Age
in forties 3 persons, In fifties 13 persons, In sixties 16 persons In seventies 5 persons, 27 persons take medicine

MAIN TECHNIQUES

1. HAND IN AND OUT BREATHING
2. TRIKONASANA BREATHING «
3. HEAD FRONT AND BACK BREATHING
4. SASANKASANA BREATHING
5. BHUJANGASANA BREATHING
6. SALABHASANA BREATHING
7. MAKARASANA
8. PADA SANCALANA WITH BREATHING
9. SHOULDER ROTATION
10. Q.R.T.
11. CHANDRANULOMA VILOMA
12. NADI SUDDHI PRANAYAMA
13. D.R.T + PET + Cyclic Meditation.

COUNSELING (Contents & Advice)

1. Explanation of hypertension disease,
2. Differences between Western medicine and Yoga therapy approach
3. Importance of relaxation
4. Putting on a diet, to reduce weight, to take balance nutrition
5. Improving life style-No smoking, No alcohol, No much sugar & salt
6. To take care of own body, (avoid overwork, lack of sleep) Yoga therapist become good adviser for them to consult with trouble of life

RESULT

After 3 months
Reduced blood pressure normal value- 20 persons 54%

Reduced blood pressure border value -7 persons 19% .
No changing blood pressure -7 persons 19%
Increased blood pressure -3 persons 8%
Reduced medication- 3 persons 8%
Reduced Heart rate- 35 persons 95%
Increased Heart rate -2 person 5%
Ratio of Heart rate -50-60/min Spersons, 61-70/min 12 persons 71-80/min 12persons, 81-90/min 3 persons

CONCRETE CHANGING OF SYMPTOMS

B female 62 years old, She is a beginner still doing yoga for 6 months, she lives with husband only. Before 3 years she has been operated on removal of cholecyst, (10 years back also, she has her nose operated on for sinusitis, now her nose is not so bad).

From about that time blood pressure has started to increase. She retired as insurance saleswoman 27 years back. Mainly her work is to keep housework only, but suddenly her heart pounds and sometimes her chest feels tight. She is afraid of terror of death; it looks as if she died. She can not stand and not sleep well in spite of tired. She is always thinking about misfortunes and feeling so lonely at home alone. One day she got a panic and visited her friend's house, at that time her friend advised her to do practice yoga. She tends toward neurosis, and an affable person, but she always telling about herself "I am timid."

The therapist started treatment weekly once for 2 hours. Special technique for hypertension, asana for neck ankle joints, strength for muscle of back and abdominal muscle, nadhisudhi pranayama, QRT etc. were given to her.

In counseling, she has said "I am afraid that it looks as if I may die too because of two persons suicide around me". She was in bad health and felt loneliness, uneasy for the future, and spiritless for facing new things. She kept irregular hour and many often goes out. She seems to be pessimistic and depression. The yoga therapist has given advises to lead a well-regulated life to refrain outing and remove stains of nostril with sesame oil as her nose was stuffed. She has been feeling about death and growing old but she has become cheerful after hearing about concept of yoga. The therapist has added some other advice to avoid over eating in her nose bad condition and to take moderate amount of hot milk in spite of midnight snack or eating between sweet meals, because she has taken cold milk so much after eating. And as she had

sweet meals, because she has taken cold milk so much after eating. And as she had a hurried meal, the therapist recommend to chew her food well, to fix her bed time and time to get up. The therapist has told patient should have very regular habits calmly.

About medication, She has taken antihyperse-nsitive "zestril (2nc 201)" one tablet every morning and tranquilizer and somnifacient also in case of panic not usually.

RECORDS

03-12 BP 153/86 HR 95 RR 19 BHT 22 WT 52
Sometimes she was flustered, as she cannot follow instruction 10-12 BP 144/84 HR 86 RR 17 BHT-WT 52
Very often breathing through her mouth as her nose stuffed up.
17-12 BP 144/78 HR 81 RR 14 BHT-WT 53 ,;,
She felt out of sorts for less sleep. Showed signs of fatigue. 14-01 BP 147/78 HR 81 RR 14 BHT-WT 53
Stuffed nose. Getting a cold, feel heaviness,
BP is little higher than usual. 18-01 BP 137/89 HR 79 RR 18 BHT-WT 53
After yoga, she feels so good for her nose smoothly. , ;

28-01 BP 141/76 HR 86 RR 10 BHT 40 WT 53
Shoulders are stiff, the hack is hard.
After stopping breath, She feel bad because of her head swam.
I was telling "Take it easy" 11-02 BP 132/82 HR 83 RR 15 BHT-WT 52
She has forgotten to take medicine but BP is normal value.
She recognized " There is no need to take medicine for me." •
18-02 BP 137/76 HR 78 RR 12 BHT-WT 51.5
She flung herself into yoga practice with determination.
While doing Asana, she keeps with awareness.
She said "Asana can be nicely, my nose does not stuff' .
25-02 BP 129/66 HR 82 RR 10 BHT-WT 51.5 ,
It seems to 'be relaxed. She' got confidence as BP is stabilized without taking medicine. She refused to take medicine from doctor. Doctor gave her
permission to stop Medicine. But as she feel a little uneasy, in case of panic she has accepted Tranquilizer and somnifacient only.
04-03 BP 137/81 HR 79 RR 13 BHT 30 WT 50.5
She said "Last night I could not sleep well because of thinking many things". I told her to stop taking a nap with patience, but she was sleeping while DRT.
11-03 BP 138/78 HR 81 RR 9 BHT 45 WT 50
BHT increases. RR less. 18-03 BP 132/76 HR 74 RR 13 BHT 45 WT 50
BP is less. (First time 153 / 86) Mind has steadied. But not perfectly, we will continue to practice in doing very good savaasana, she will sleep more nicely.
RESULT

	Before	After
BP	153/86	132/76
HR	95	74
RR	19	10
BHT	22	45
WT	52kg	50kg

Medication - - - - - - - Stop - Mind is calm.
As this case shows, it was a very good chance. The beginner also can recognize that efficacy of yoga therapy and gain confidence for her future or her life, she was taking advantage of that which is in spite of forgetting to take medicine but BP has become normal. She could be convinced by herself, and put into practice.
As she has direct experience, she was dealing with her problem positively, so that it was accepted as being beyond doubt what she can get good result.?
And we can find out that it is important not only to practice special technique, pranayama but also counseling. According to I.A.Y.T. In this case, patient could recognize most important thing to enrich her life, what is more, as a result they can make a relationship of mutual trust, it effects make themselves felt.
This therapist says "I wish her growth and would be sharing each other's joys or pains which are to train oneself for getting an ideal life habit according to their personality. So that I also owe my growth entirely to the patient. She never mean to force patient as teacher. A good relationship may produce very useful result. It is overriding importance that we try to improve personality of

therapist themselves."
The other hand, it rack our brain that how to continue special technique at home. If they are quite their class very well, but that takes a back seat to jobs, playing, habits etc.
I introduce that a therapist flung oneself into this problem with determination.

She is taking yoga class for handicap people and old ages. She wants to continue for them to practice little by little at home, so she made the home work "Yoga Calendar".

The first one :	A5 sheetto see, and check	This is so small that is why it is difficult space also small. Only good body condition people can do.
The second one:	A4 sheet / for one month	One or two persons can do it at home,
The third one:	A4 sheet / for one week	People to do nicely provoked other persons more. As most of them can not check by of themselves, they can do by obtaining the cooperation of other family members.
The fourth one:	A4 sheet /forone week + Name space	To increase doing practice people by writing own name by themselves or stuff. Or family because it produces to become conscious of doing for themselves.

She calls out each person as looking and checking their home work calendar. She keeps constant consideration for them , and she had opportunities to talk with them one by one as long as possible before doing practice. And she talked about efficiency of Y oga Therapy. To be done is a small thing, but it is content enough for handicap people and old age people.

CONCLUSION
As you know old age people or bedridden persons also can perform yoga practice. If they cannot move their body, they try to move it mentally. As the days go by, patients do find their voice increase, and they can do loud voice gradually. Many thinks of as effort have brought yoga therapy spread widely more and more in Japan.
In fact, from now on there are many old aged in Japan. The care of old aged is a serious problem
In education also it is important thing what is health and how to talk students about that.
In 1995 17-Jan. at Kobe city Japan, we have an extraordinary earthquake, which called Hanshin daisinsai. Most of the sufferers are tormented by severe fear and stress even now. As an oral report some persons who are not able to sleep at night attended yoga class. It takes a long time to go to class from their shelter. As they remembered D.R.T. at yoga class, finally they could have slept every day. After a disaster also Yoga therapy was of practical use, then it relaxed their mind and body.
Many Yoga therapists feel big theme to balancing mind and body to start with, and so they feel that how does human being live in our life through activities of Yoga
therapy.

CLINICAL YOGA TECHNIQUES IN THE MANAGEMENT OF CHRONIC HEMIPLEGIA PATIENTS - A STUDY

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ABSTRACT
Nowadays the rehabilitation of Hemiplegia patients is being done mainly through physio-therapy techniques, such as Bobath N euro-Development Techniques (NDT) and Brunnstroem Rood's technique, and Proprioceptive Neuro-Muscular Facilitation (PNF) concepts. A four week NDT rehabilitation programme has shown significant improvement in stance duration, weight acceptance, push-off of both legs, and stance duration symmetry, although the functional performance of the patients did not improve considerably. At some stage or other, many hemiplegia patients in Kerala approach Ayurvedic system of Medicine for supplementary benefits. Special Keralite Pancakarma Therapy (KPT, Ayurvedic Purification techniques) is popularly believed to be effective in the management of chronic hemiplegia.
Expansion of internal awareness has an effect on many inhibitions in hemiplegics. Clinical Yoga may help to open up some of the motor areas which are kept idle due to lack of stimulation. The improvement in feeding and dressing ability reflects improvement in fine movement capability.

As an effort to develop an effective clinical Yoga method in the management of Chronic hemiplegia, a preliminary clinical study was conducted in 8 subjects for 3 Weeks. Selected clinical Yoga techniques like Pranayama, Sukshma Vyayama, Pranic Energisation Techniques were practiced as a group. Data collected using Edinburgh Prognostic Scale and Barthel ADL index before and after the treatment were compared. Analysis of results is encouraging. Remarkable changes are shown in fine movements. A detailed comparative study with proper control is essential, which will be an ample contribution in the rehabilitation of Hemiplegia patients.

Nowadays the rehabilitation of Hemiplegia patients is being done mainly through physiotherapy techniques, such as Bobath Neuro Development Techniques (NDT) and the Brunnstroem, Rood, and proprioceptive neuro muscular facilitation (PNF)
concepts1. A study conducted during the 4 week NDT rehabilitation programme, showed significant improvement in stance duration, weight acceptance, push-off both legs, and stance duration symmetry. However, the functional performance of the patients did not improve considerably2. At same stage or other, most of the hemiplegia patients in Kerala approach Ayurvedic system of Medicine for supplementary benefits. Special Keralite Panchakarma therapy (Ayurvedic Purification techniques) is popularly believed to be effective in the management of chronic hemiplegia3. However, a proper scientific evaluation is yet to be conducted to prove its efficacy. With available

management techniques the prognosis of chronic hemiplegia is not much encouraging.
During some Yoga practices, it has been observed that under altered state of consciousness, hemiplegia patients could raise their hands beyond the level upto, which they used to raise normally. This may be due to the removal of inhibitions over the unaffected area of the brain. In acute attack of stroke, generally every person becomes"'completely immobile. Then they gradually recover and start movement to reach maximum level in 3-6 months. In some case this recovery is not complete. This is due to lack of awareness. Understanding of minute levels of damage may help the patient to improve the use of the affected limp (some more). Since yoga being a science to expand internal awareness a set of clinical yoga techniques (Yoga techniques designed for treatment of diseases) were tried in hemiplegia patients. This study is conducted to test the effectiveness of the clinical yoga techniques to improve the quality of the life of hemiplegia patients.

SUBJECTS AND METHODS

The study was conducted at Clinical Yoga Research Institute, Kottakkal. A total of 8 male patients were selected and admitted in Vaidyaratnam P.S.Varier Ayurveda College Hospital as inpatients for the study. The patients belonged to an age group from 22 to 64 years. The duration of ailment ranged from 11 months to 84 months, out of them 3 were left side affected and 5 right side affected. The following criteria were confirmed on these patients. (I) Hemiplegia with more than six months duration (II) Patients having the capacity to sit erect (III) Patients who have no severe cognitive and communication impairment. (IV) Patients who are able to control urine and bowel. All the patients were admitted in the same period and clinical yoga training were given for 3 weeks as a group practice. Daily two hours training were given during the treatment period. They underwent Pranayama4, Sukshma Vyayama5, Pranic Energisation Technique6 practices. The therapy was performed by experienced therapist. In pranayama all the three cooling pranayama i.e., Sitkari, Sitali, Sadanta were avoided. 'A'kara, 'U'kara, 'M'kara chanting were introduced at the end. The patient affected with left side were asked to perform suryanuloma pranayama and right side affected person were instructed to practice chandranuloma pranayama.
During Sukshma Vyayama practice advice was given to close the eyes and imagine that both the sides are moving simultaneously. After an initiation assistance was given to complete the movement on each of the affected joint. After performing the exercise, instructions were given to observe themselves the minute changes so as to increase the awareness.
In Pranic Energisation Technique, slight modifications were made. As the patients were unable to

perform Namaskara Mudra, they were asked to press their unaffected palm against the chest.

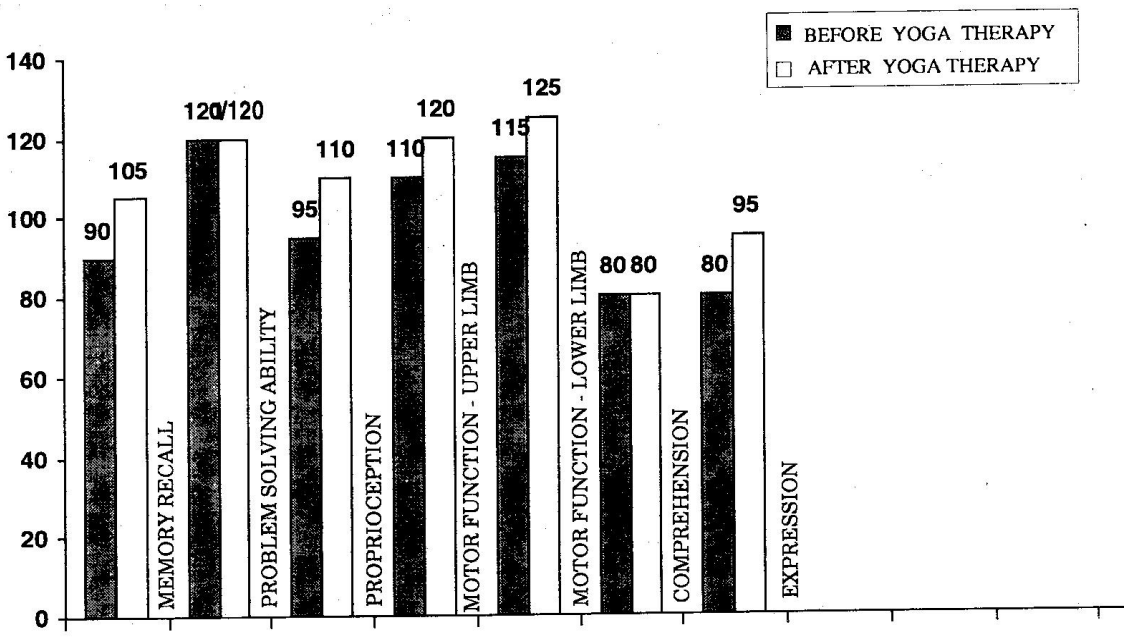

Fig.1. Comparison of the total score of Edinburgh Prognostic Scale

DATA COLLECTION

Patients were investigated before and after a 3-week inpatient treatment. Two major scales were used as evaluation criteria i.e., (I) Edinburgh Prognostic Scale7 (II) Barthel ADL index6

RESULTS

Comparison of data collected before and after the study shows improvement in memory recall, proprioception motor function in both limbs and in expression. (Fig. 1) Results of Barthel index score indicate noticeable changes in activity of Daily Living. (Fig. 2) More changes were achieved in memory recall, proprioception, dressing and feeding.

DISCUSSION AND CONCLUSION

The analysis of results showed that the expansion of internal awareness have an effect on many inhibition of hemiplegia. Clinical Yoga helps to open up some of the motor areas which are kept idle due to lack of stimulation. The improvement in the feeding and dressing ability showed an increase in the fine movement capability.

Some of the patients were not able to involve properly in the practice due to their inability to understand the instructions properly because of the educational backwardness. Even though the study was conducted in a small group of subjects, some of the observations have proved to be of significance. A detailed study has to be conducted in a big sample. A comparison with physiotherapy techniques and Ayurvedic techniques will be relevant. In a well designed controlled study psychological aspects also can be included.

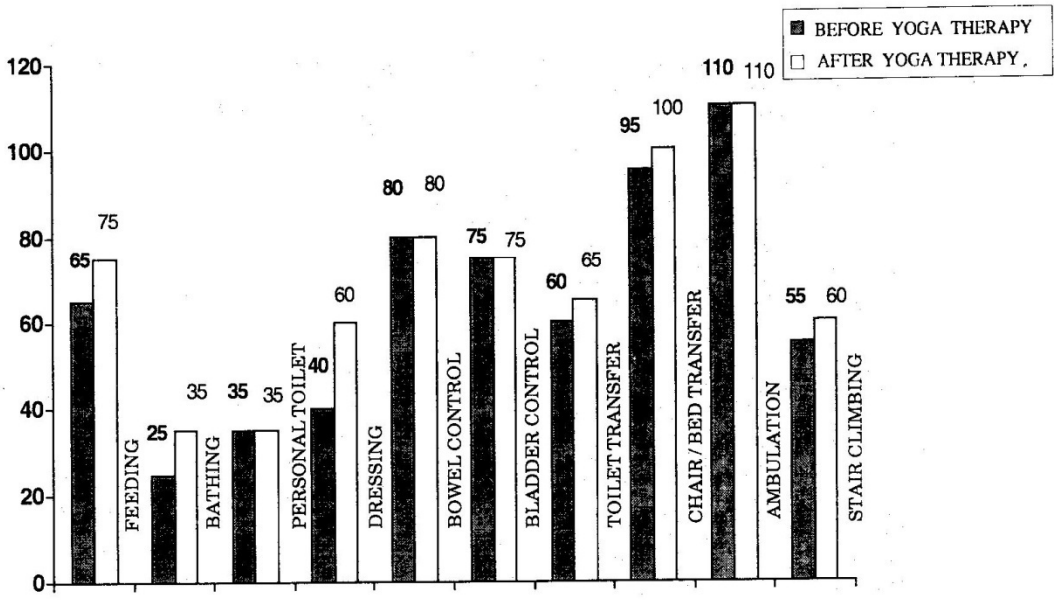

Fig.2. Comparison of the total score of Barthel ADL Index results

ACKNOWLEDGMENTS

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EFFECT OF YOGA IN INTRAUTERINE GROWTH RETARDED PREGNANCY - A STUDY

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ABSTRACT
IntraUterine Growth Retarded Pregnancy (IUGR) is growth restriction of the baby inside the uterus. With respect to gestational age a new born may be preterm, term or post term. With respect to size and weight, the baby may be normally grown or is less than normal. The low birth weight (LEW) baby, may be due to pre term delivery or due to failure of gorwth. These babies are prone to severe short term and long term complications. Hence it is essential that this condition should be prevented. The result and the conclusion of this study has given enormous encouragement to conduct a bigger study with many more scientific parameters.

We now stand on the threshold of another quantum leap in perinatal care. Our ability to diagnose and evaluate maternal and foetal pathology has progressed to the point whether foetal therapy and early treatment of newborn is possible.
Stress in teh mother, adversely affects the growth and development of the baby. It also gives rise to various psychosomatic disorders like asthma, migrane, gastric ulcers, hyperthyroidism, back pain, hyperemesis and bleeding. Most harmful complications are, 'Pregnancy induced Hypertension' (PIH) and 'Pregnancy induced Diabetes' (PID) with their associated sequelae like, convulsions, abortion, pre term labour and eclampsia.
Foetal growth will be markedly affected leading to IUGR (Intra uterine growth restriction) with all its complications like birth asphyxia, brain haemorrhage, hypoglycemia, hypocalcemia and congenital abnormalities. They also suffer from long term sequelae like cerebral dysfunction, hyperactivity, short attention span, learning and speech difficulties, behaviour and personality problems. It is extremely important to minimize physical, intellectual and emotional injury to both mother and child during the reproductive process.
Previously it was thought that IUGR is solely related to mother's poor physical conditions; but now it is clearly established that next to medical risks, high stress in the mother is a very important factor.
Yoga, as a therapeutic modality is now fast advancing as an effective tool in many physical and psychosomatic disorders. Enough proof is available of the beneficial effects of yoga practices on the mind and body.
Definition of IUGR: It is growth restriction of the baby inside the uterus. With respect to gestational age a new born may be preterm, term or post term. With respect to size and weight, the baby may be normally grown or is less than normal. The low birth weight (LEW) baby, may be due to pre term delivery or due to failure of growth.

COMPLICATIONS OF IUGR
Immediate complications
* Birth asphyxia
* Brain haemorrhage
* Hypoglycemia
* Hypocalcaemia
* Congenital abnormalities

Long term Sequelae
* Minimal cerebral dysfunction
* Hyperactivity
* Short attention span
* Learning difficulties
* Speech defects
* Behavioural and personality problems

CAUSES OF IUGR

Maternal
1. Vascular disease
2. Chronic renal disease
3. Mal nutrition

Foetal
1. Foetal infections
2. Chromosomal abnormalities
3. Congenital malformations

MATERIALS AND METHHODS

Twenty five women with IUGR, diagnosed by clinical tools and ultrasound measurements, were given yoga practices. They continued allopathic treatment as well. Data of twenty five IUGR cases treated with only allopathic treatment were collected retrospectively and taken as control group. They were matched for age of the mother, parity, and gestational age. Complete data was available in eighteen cases of yoga and twenty five cases of control group.
Duration of practice: Two hours per week for fourteen to sixteen weeks till delivery.

ANETENATAL DIAGNOSTIC TOOLS

1. Ultrasound studies
2. Doppler ultrasound studies
3. Non stress test
4. Contraction stress test
5. Foetal biophysical profile
6. Biochemical/Hormonal studies
* Predicts IUGR, PIH, before clinical onset.
* Foetal parameters and abnormalities visualised
* Blood flow to the utero-placental circulation is visualised

HOW YOGA ACTS IN PREGNANCY

1. Enhances placental blood supply
2. Gives better oxygenation to the mother as well as the foetus
3. Improves the immune system
4. Improves muscular performance and efficiency, specially of the pelvic and abdominal muscles.
5. Tilts the autonomic function towards parasympathetic dominance
6. Promotes endocrine changes which improves the ability to cope up with stress
7. Has profound effect on hypertension and diabetes.
8. Increases efficiency of lung functions.
9. Lowers basal metabolic rate. 10. Gives enormous mental relaxation and tranquility.

Foetal brain starts functioning much before it completes its growth and development. Hence it is absolutely essential to give the urborn child a calm, serene healthy uterine and external environment.

YOGA PRACTICES

Intrated basic set of practices were given, cautions and contra indications were explained. The periodic progress is given in the table below:

Clinical Data

Parameters	**Age rangeYoga Group**	**Control Group**
No. of cases	18	25
Average age	23 years	24 years
Age range	20-29 years	17-30 yrs
Gravida 1	11	15
Gravida 2	3	5
Gravida 3	2	3
Gravida 4	2	2
Bad Obstetric		
History	1	1
Diabetes	2	2
Hypertension	2	2

Data Analysis

Parameters Birth weight	**Yoga Group**		**Control Group**	
	Mean 2535	SD 392.3	Mean 2332	SD 293.3
	NO of cases	%	No of cases	%
Birth comlications	Nil	Nil	2	8
Abnormal delivery	1	5.5%	4	16%
Breech Caesarian section	3	16.6%	13	52%
Normal delivery	14	77.7%	8	32%
Psychological scores	16	90%	4	16%
Mean duration of pregnancy (in weeks)	39.6		37.9	

RESULTS

Abnormal deliveries were less in yoga group that is,

1. Cesarian section by 36%
2. Breech delivery by 10.5%
3. Birth complications by 8%

Normal deliveries were significantly more in yoga group by 45%

4. Birth weight improved by 203grams.
5. Mean duration of pregnancy improved by 1.4 weeks
6. Psychological scores were significantly positive in yoga group by 74%

CONCLUSION

It is clear that there is significant improvement in the birth outcome asseen by the,

1. Increase in the weight of the at birth
2. In enhancing the duration of pregnancy till terms
3. Achieving normal delivery, and
4. Preventing ceasarian sections.

Most important of all is that they could relax very well physically and mentally.

PRANIC HEALING A GLIMPSE INTO BIOFIELD THERAPY

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ABSTRACT

Pranic healing is an art and science with a consciously directed process of absorption, modulation transfer of bio-energy from the sorroundings and projection on the desired part of the patient, so as to relieve the patient of the physical and/or psychological disorders. It is a non-touch form of healing. It uses prana, the vital energy to heal oneself and others. The diseased energy is removed from the patient's energy body and transforing it to the effected parts with the use of hands. It is possible for one to heal and/or prevent physical and psychological ailments.

Bio-field practitioners have a holistic focus. The word medicine and meditation both come from the same root word, meaning "to take care" Medicine takes care of the human body. Meditation takes care of the human soul. Pranic healing deals with the human bio-energy field which is the connecting link between the human body and soul.

Pranic healing is an art and science with a growing following, a consciously directed process of absorption, modulation & transfer of bio-energy from the surroundings and projection on the desired part of the patient, so as to relieve him/her of the physical and/or psychological disorders. It is a non-touch form of healing which uses vital energy (Prana) to heal one's self and others, near or afar (Sui 1998). Healing is accomplished by removing diseased energy from the patient's energy body and transferring energy to the affected areas with the use of the hands. By balancing the energy level in the energy body, one can heal prevent physical and psychological ailments.

Pranic Healing is an ancient method of treatment which originated in the Orient. Its present form is the result of several years of research conducted by Master Choa Kok Sui (World Pranic Healing Foundation) who perfected the ancient practice and its application to modern day health problems. The earliest Eastern references to Energy Healing are in the ancient Indian scripture, Taittiriya

Upanisad and in the Chinese Huang Ti Nei Ching Su Wen between 2,500 and 5,000 years ago. Extensive use of energy healing is evident in many ancient civilizations including Egyptian, Greek, Indian, European and Japanese. Prana is an Indian (Samskrita) word which means vital energy that keeps the body alive and healthy. The human body is known io have two aspects: a visible physical body that we can see and touch and an invisible body which is called the etheric body, the bio-plasmic body or the energy body. This energy field is known by different names such as Prana, Chi, Qi, and the Bio- plasmic body in different mytological scriptures. In Japanese, it is known as 'ki' or the breath of life.

Pram'c Healing is based on two fundamental principles - the principle of self-recovery and the principle of life force.

The principle of self-recovery means that in general, the body is capable of healing itself and can recover within a few days. The healing process can be accelerated by increasing the life force in the affected parts and on the entire body. The rate of healing is increased substantially when Pranic energy is applied to the affected part of the body.

Authors conversant with the use of energy based therapy consider health and disease to be closely associated to the existence and pattern of a subtle, invisible energy field that surrounds all living organisms. In the human body, this energy is described to have focal centers of origin/control at several anatomic locations, most of which are along the midline and in close approximation to nerve plexi. These are called 'Cakras'. In this century, the scientific liasis of energy therapy is being explored in more and more depth at an increasing pace.

Various instruments have been developed to document the existence of the energy field and its different properties. Kirlian used a special technique to photograph the energy field (Kirlian photography).

A versatile gas discharge emission visualization (GDV) camera has recently been devised by Dr. Korotkov (St. Petersberg Technical University, Russia 1998). This instrument based on Kirlian effect. It documents and analyzes the bio-energy field from the fingertips after exposure to high frequency, high voltage current. Using the principle of acupuncture meridians, Korotkov et al have developed a method of interpreting the changes in fingertip aura, to determine organ and behavioral function in health and disease. With training, it is possible for a therapist to examine this energy field and alter it so as to achieve balance or the normative pattern, which in turn results in resolution of physical health problems. (Sui, 1983)

Empiric use of Pranic Healing has been found to be beneficial in multiple disorders including symptomatic relief of pain, fever and diarrhoea acute and chronic infections; episodic disorders such as asthma and migraine; arthritis; hypertension; wound healing; and emotional problems. Pranic Healing has been used mostly as a complementary therapy to conventional or allopathic therapy. However, sometimes we have used it as the sole therapy, with benefit.

3.4 ***POSTER PRESENTATIONS***

EFFECTS OF AGNISARA KRIYA

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ABSTRACT

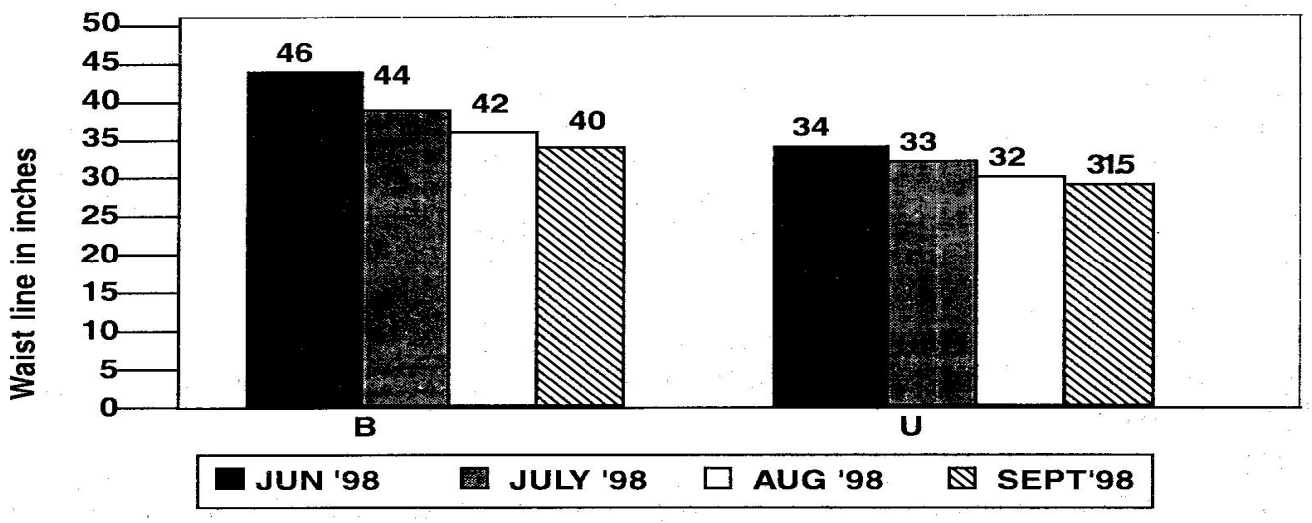
There are no better means than the yogic system of purification to keep the body clean and healthy. Six types of yoga, purification practices called Satkriyas, help to maintain them in the balanced form. They are Neti, Dhauti Nouli, Basti, Kapalabhati and Trataka. Agnisara Dhauti or fire purification as it is described in Gheranda Samhita is also called by different names like Vahnisara Antar Dhauti, Uddiyana Kriya etc. Agnisara kriya is said to help in releiving gastric trouble. It also helps in reduction of waistline there by helping obesity people. The claims of Gheranda Samhita are validated by demonstration of significant reduction in waist line.

There are no better means than the yogic system of purification to keep the body clean and healthy. Our body has 3 basic properties viz., Vata, Pitta and Kapha. If these three are present in the body in the balanced form, the body remains pure and disease free.
Six types of Yogic purification practices called "Satkriyas" help to maintain them in the balanced form. Our present day habit of consuming unnatural food and leading a sedentary life-style is the cause of several body disorders through the accumulation of impurities in the body. To remove these impurities "Satkriyas" are prescribed. They are Neti, Dhauti, Nauli, Basti, Kapalabhati and Trataka. There are different types of Dhauti like Vamana Dhauti, Danda Dhauti, Vastra Dhauti, Agnisare Dhauti etc.
Agnisare Dhauti or fire purification as it is described in Gheranda Samhita is also called by different names like Vahnisara Antar Dhauti, Uddiyana Kriya etc. Agnisare Kriya is the basis for practicing Uddiyana Bandha and the king of Kriyas called Nauli Kriya.

METHOD
Place your hand on your knees and stand on your feet keeping them one foot apart. Bend slightly at the knees and stoop forward. Inhale deeply. While exhaling, pull the stomach back towards the spine. Again, while inhaling, let the stomach come back to its original position. Repeat this process for about 10 times in the beginning and increase gradually. After completing the practice, stand up straight and relax
completely. This is done by rubbing the stomach gently with the right hand palm in the clockwise direction (Pradakshina Hasta) and with the left hand palm in the anti clock wise direction (Apradakshina Hasta).
In Gheranda Samhita, it is described as fire process . This gives success in the practice of yoga. It cures all the diseases of the stomach.
In Hatayoga Pradipika, it is said that cough, asthma, enlargement of the spleen, leprosy and diseases of the stomach are cured by Dhauti Karma.

EFFECTS
Agnisara Kriya is helpful to persons suffering from gastric trouble. Increased waistline is a common problem faced by many persons in the society. It leads to obesity, which is the root cause of all diseases. Practicing Agnisara regularly reduces the waistline of the sadhaka and hence prevents obesity. This kriya should be practiced preferably in the mornings on an empty stomach after evacuating the bowels. This kriya is also helpful to persons suffering from constipation, weight gain etc.

RESULTS
Case 1 : Sri U aged 32 years reduced his waistline from 34 inches to 31.5 inches
after he started practising Agnisara Kriya regularly.
Case 2 : Sri B aged 61 years reduced his waistline by 6 inches in 4 months after he started practising this kriya. The above results can be illustrated with a histogram:



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EASILY ACCESSIBLE SALVATION YOGA PRACTICE

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ABSTRACT

Author discusses about salvation as a stage where one does not get involved in the emotions and attachments. This is achieved through easy yoga practice of Sandyashram tradition. Salvation is not achieved after death but it is the amalgamation of one's Somatic Consciousness with the Cosmic Consciousness. During the process one travels through the 'Chromosphere', 'Photosphere' and ultimately enters the 'Cosmosphere' which is the penultimate stage of salvation. Then he enters 'Absolute Absence' which is also the state of'Salvation'.

The Vedic Philosophers have accepted the cycle of birth and death. A human life is packed with more miseries and few moments of happiness. As the person wanted to get rid of this cycle, he found out the way-out and outcome of this way is called 'SALVATION' which is the point of no return.

The central idea behind this is the acceptance of cosmos which is infinite in all directions and fully packed with Cosmic Potential Energy having the sense of being present which is called as 'COSMIC CONSCIOUSNESS'.

According to Astrophysicists, there was a big explosion in this Cosmic Potential Energy. This potential energy gave rise to Kinetic Energy and finally to Matter. (Refer to Einstehien Equation E=MC2). This is the process of expansion. After expansion, the contraction process starts; and

Matter amalgamates in the Cosmic Potential Energy. Further, the Cosmic Potential Energy dissolves in the absolute absence. These two processes are continuously going on since the time unknown. During the expansion process, the Cosmic consciousness gets coating of energy-consciousness and Matter consciousness one over the other and together gets a general name as 'Somatic Consciousness'. Somatic consciousness is wonderful human mind, which enjoys happiness and suffers from miseries too.
Physical contraction, after the completion of physical expansion takes a very long time. Human mind can follow the contraction from matter consciousness to cosmic consciousness and then to ABSOLUTE ABSENCE' by dissolving the human mind-cell
into absolute absence with a less time taking process. Here, absence is not the antonym of presence. This is 'SALVATION'.
The "EASY" Yoga student, first enjoys the chromosphere, where he sees to display of rainbow colors. He then goes to 'LACTOSPHERE' and finds himself amidst a bright fog. Further, he enters 'PHOTOSPHERE' and gets in the realm of very bright sunlight. After this he goes to 'COSMOSPHERE', which gives the experience of ocean of bright glittering golden light. Here he gets rid of worries, anxieties and emotions. This is the penultimate stage of 'SALVATION'. During Meditation, he is a silent witness of things happening in his mind and around.
These steps resemble with the great Indian philosophy known as the Vedanta.
1. I am that
2. Everything is that
3. Whatever is present will be absent after some time. Present and absent both will be dissolved in space.
4. Space will be dissolved in the cosmos leaving behind the sense of being omnipresent.
For complete free state of mind he must go in the state of absolute absence, which is ultimate stage of 'SALVATION'. A person enjoys a mind with balanced views, without any prejudices, a true feeling of equality which loves friends and foes in the same manner; a compassionate like a rational human being.

CONCLUSION
As per 'EASY-YOG' practice of SANDHYASRAM tradition. SALVATION is not the achievement to be achieved after death. But my Yog-Student can enjoy SALVATION in this birth only in their day-to-day life. In the penultimate stage of Salvation, the student does not get involved in the emotions, thoughts about the lust for life, expectations and the normal attachments of the human beings. Student's Somatic Consciousness gets amalgamated with Cosmic consciousness.

PSYCHONEUROIMMUNOLOGY AND INTERVENTION STRATEGIES - A REVIEW

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ABSTRACT
A recognition of the interactions between the nervous, endocrine and immune systems and their clinical and bioregulatory implications has spawned the exciting field of psychoneuroimmunology. Traditional immunologic theory has held that the immune system

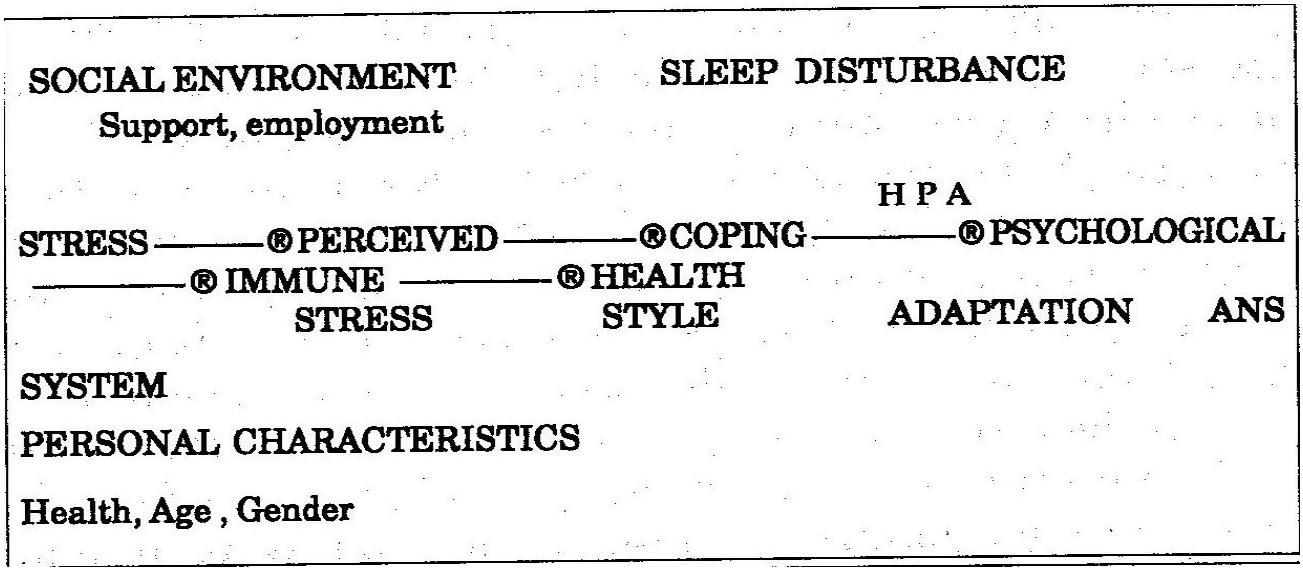
operates in a reflex like manner, with the central nervous system playing little, if any role in modulation of immune functions. Numerous summaries of clinical and experimental observations challenge this view and suggest that psychological and emotional factors may profoundly alter resistance to disease in general and WBC function in particular. Studies examining the effects of psychosocial factors and stress on a variety of immune measures have revealed central nervous system mediated change in immune functions that can alter the health status. Central nervous system is capable of detecting alterations in immune responses and subsequent to detection is able to initiate a change in immune response upon reexposure to the conditioned stimulus. As the immune system is influenced by CNS factors, it is a potential mediator of psychosomatic phenomena. Despite the existence of a vast literature supporting the role of psychological factors in the onset and exacerbation of psychosomatic disease; many of these studies are unclear and still others are correlational with little evidence of cause- effect relationship between mental events and immune system.

Stress is defined as the physiological, psychological and behavioral response of an individual seeking to adapt and adjust to both internal and external pressures (stressors). The responses elicited by stress ; cognitive (eg. emotional distress) or noncognitive (eg. immune insults such as infection) appear to have multiple functions. Not surprisingly therefore the pattern of responses is dependent on the nature of stress, its intensity, duration (acute, chronic, intermittent) hosts nutritional and immunological status, ethnicity, age, socioeconomic conditions and genetic makeup. In acute stress there is secretion of glucocorticoids and physiological arousal following the stressful episode which is essentially a tailing off response to dampen the stress. It is only when the stress becomes chronic or intermittent with persisting stressful stimuli and maladaptive coping life styles that the body's homeostatic mechanism gets disturbed and leads to immunological hyperactivity (allergies), hypoactivity (cancer) and immune aberrations (autoimmune diseases).

ROLEOFCNSIN IMMUNE MODULATION

Various hypothetical models have been put forth over the decades enumerating the various pathways by which stress influences the immune system. The stress induced immune dysfunction model proposed by Irwin. M is illustrated in the fig.l. This model predicts that various stressors and buffers in the social environment will act through individual adaptation to produce biological changes in endocrine and immune systems that can result in illness. Cortical and limbic system (nucleus and centres in hypothalamus, medulla, pons and midbrain) are involved in altered immune responses to stressors, behavioural conditioning and psychosocial factors. These are the sites that respond to administration of cytokines, immunization by altered neuronal activity and monoamine metabolism. These areas have high density of glucocorticoid receptors which regulate the balance of neuroendocrine and autonomic outflow. A Typical neuronal circuitry concerning the organisation of central mechanisms has been proposed by Sawchenko. All the visceral and sensory inputs relayed to

the Nucleus of Solitary tract, paraventricular nucleus and central nucleus of amygloid complex lead to fall out of specific neurotransmitters like epinephrine, neuropeptide, enkephalin, galanin etc. which stimulate various neighbouring nucleii and various centres and cause release of corticotrophin releasing factor, vasopressin and oxytocin stimulating the anterior pituitary and posterior pituitary or directly activating the autonomic nervous system.
The autonomic and neural connections consisting of two chains for sympathetic and parasympathetic connect the brain stem to spinalchord and target organs (cardiac muscle, smooth muscle, exocrine glands and cells of the immune system).
Signalling between the nervous and immune system occurs bi-directionally via chemical mediators such as hormones, cytokines, neurotransmitters, neuropeptides and receptors present on the target cells of both systems. Signalling molecules provide integrated responses between neurons and lymphocytes. Thus lymphocytes act as"Sensory organs" converting information from contact with pathogens to useful endocrine signals mediated by release of cytokines which influence the brain (Blalock J.E. et al 1984). Various studies on animal models have corraborated the evidence of CNS influence on the immune system such as removal of pituitary gland or denervation of nervous communica tions produce striking changes in the lymphoid tissue morphology and immune system.



STRESS AND ITS EFFECTS ON THE IMMUNE SYSTEM

In particular there has been a growing interest in how stress with its accompanying influences on autonomic, endocrine, psychological and behavioral responses may effect the functioning of the immune system with wide ranging implications for the pathophysiology and treatment of disease. There are many studies supported by anecdotal evidence about increased stress and susceptibility to infectious disease. Retrospective studies reveal that stressful life events increase the risk of contracting upper respiratory tract infections and studies on latent Herpes

virus infection suggest that disease episodes follow emotional distress.

The immune system is gifted with the memory for recognising "self from nonself' just like the higher centres of CNS. The immune system is also gifted with specificity also termed adaptive immune responses carried out principally by the T lymphocytes which recognise and bind to foreign antigens by virtue of receptors on their surface formed in the early stages of their differentiation and proliferation when they first come in contact with the antigen. The critical step in mounting effective immune response against an infectious organism is the bringing together of antigen ,the antigen presenting cell and the lymphocyte with the correct receptor specify in an environment which is condusive for clonal expansion of lymphocyte count. The probability of this specify and contact is influenced by a variety of factors which when altered by stress reduces the efficiency of immune response.

Stress is known to suppress the immune system by the release of stress hormones like cortisol , adrenaline etc. and by sympathetic activation causing release of catecholamines through peripheral nerve endings or directly into the circulation through adrenal glands. They effect the immune system by:

1. Altering the migrating characteristics of leukocytes

Physiological changes of cortisol levels influence leukocyte trafficking in cohesion with circardian rhythm. Peak numbers of T & B lymphocytes occur at night when cortisol levels are lowest and lower numbers in the morning when it is highest. There's found to be rapid loss of lymphocytes from circulation on administration of hydrocortisone. Sympathetic stimulation causing vasoconstriction of the vessels and affecting migration and immune surveillance.

2. Altering cell growth, proliferation and differentiation

Glucocorticoids extend both positive and negative influences on cell growth de-pending on their concentrations. They suppress proliferation and differentiation of lymphocytes and Natural Killer cells by inhibiting release of cytokines and growth factors. They are known to induce apoptic events causing cell death and useful in preventing autoimmunity and activating of oncogenes. Stimulation of sympathetic causes release of granulocytes from the marrow indicating that haemopoieses and granulopoieses is responsive to neuronal signals.

3. Alterations in the release of cytokines and neuro peptides

Glucocorticoids suppress the release of these soluble mediators and exert the irant-inflammatory and immunosuppressive effects. Sympathetic activation suppresses the cellular immune response but activates antibody production. .

Majority of stress response to situational changes are homeostatic and adaptive. However where coping appears to be compromised , pituitary-adrenal activation occurs simultaneously to deal with the situation. Long term over activity in these networks in association with a defect in endogenous opoid control (dynorphin) may be associated with severe psychopathology as in depressive illness and chronic anxiety state. There is no steady homeostatic state in the body since most of the physiological changes are oscillatory ,it is the abnormal oscillatory states created by stress which influence the changes in immune system and lead to disease.

INTERVENTION STRATEGIES IN PSYCHONEUROIMMUNOLOGY (PNI)

The intervention strategies in PNI mainly focus on stress management evolving appropriate coping mechanisms like relaxation training, imageries, meditation , isometric exercise and pranayama .The autonomic nervous system acts as a neural matrix coupling states of mind with metabolism and immune system. Various studies indicate that lateralised cerebral states may correlate with lateralised expression in the immune system (Stein .M 1985). During the past three decades research studies suggest connection between imagery/emotions and improved physical functioning have been available (Klopfer, 1957; Simonton et al, 1978; Cousins ,1976). There have been clinical confirmations that this relationship applies to all bodily systems .including the immune system (Achterberg,& Lawlis 1981,Borysenko ,1987). Various studies on healthy subjects with guided imagery following training in neutrophills was significantly co-related ($p<0.5$) with adherance function of neutrophils . Exercises are also known to profoundly influence the changes in immune system. However an effective imagery requires a strong belief on the subject to influence the immune system, knowledge of specific functions and anatomy of the cells ,vividness of the image, awareness of functions being altered and depth of relaxation. Most of the studies have concentrated on the immunological changes initiated by psychological factors in pathological states but have not strived to apply nonpharmacological interventions described above in mediating a change in immune modulation.

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3.5 ***CASE PRESENTATIONS***

INSOMNIA

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ABSTRACT
Sleep is a boon as well as a curse to human beings. A healthy adult needs at least 6 hours of sound sleep per day preferably during the night. For some, 3 hours of sound sleep may be sufficient to carryout normal work. There are many reasons for lack of sleep. One important reason for insomania may be mental stress. Two cases of insomnia in our centre were cured by administering yoga therapy which included dieting, nature cure techniques, asanas, Pranayamas, Dhyana and Savasana.

Sleep is a boon as well as a curse to the human being. A healthy adult needs sound sleep of at least six hours per day preferably during night for three hours. For some, three hours of sound sleep may be sufficient to carry out normal work. Intellectual and aged people require five hours of sleep. Hard working people need eight hours of sleep, but sleep is an essential factor for all, to be healthy and strong.
Insomnia means lack of sleep . Although this is mostly observed in aged people, it is not uncommon among yougsters. If a student gets sleep as soon as he takes a book, then sleep becomes a curse.

CAUSE FOR INSOMNIA
There are many reasons for lack of sleep, so one cannot come to the conclusion that any particular reason is the cause of insomnia. Among many reasons the most important may be mental. For some lack of money for some others the expenditure and for yet others, how to safegaurd the money? Where to deposit, how to invade Income Tax, danger from thieves and robbers. Another important reason is lack of good excercise to the mind and body, lack of good circulation of Vyana Vayu through the body. Last but not the least may be consumption of drugs, liquors and smoking.

KINDS OF INSOMNIA
Though there are many types of insomnia, two types are worth noting: people murmur during sleep, which is named as somniloquism. Another type of insomnia is somnambulism in which people resort to all kinds of activities like walking, talking, taking bath etc. All disorders of insomnia can be controlled by the practice of yoga.

YOGA THERAPY
Yogasana : Janusirshasana, Parvatasana I and II, Paschimottanasana, Parvatasana, Utthanasana, Sarvangasana and Prasarita padotthanasana. Each should be performed for two minutes.
Pranayamas : Nadishodhana Pranayama, Bhastrika Pranayama, Bhramari Pranayama, Shanmukhi mudra. Dhyana for five minutes. Savasana for 5 minutes.
Diet (Pathya) : Diet also plays an important role to cure insomnia, sattvic food, sweet curd, pulses, butter milk and two to three liters of water per day.
Apathya: Avoid late meals during the night, avoid to go to bed soon after consuming food, less food during night, Citrus fruits, spicy foods, salt and pickles.
Prakriti Cikitse : Walk a mile after night food, neither too fast nor too slow. Before you go to bed, drink a tumbler of luke warm water and sit in a chair keeping the legs in tolerably hot water for ten minutes and listen to music during that period. After meditation for three minutes, go to sleep. You will get sound sleep for 5 to 6 hours.

RESULTS

Case 1 : Sri Ravindranath, 35 years was suffering from Insomnia. He was getting sleep only for two hours during the whole night. After practice of yoga as given above for 10 days, he was able to sleep for eight hours during night. Now he complains of getting more than required sleep!

Case 2 : Sri Vijaynath Shenoy 72 years old used to sit and spend the whole night observing how his children and grandchildren were sleeping. After practice of yoga for two months, he started getting sound sleep.

WONDERS OF YOGA THERAPY ACHIEVED IN OUR CENTRE

Obesity and Overweight: Mrs. Salima Ali, 45 years, mother of 10 children reduced her weight from 80 to 70 kgs. Mr. Basava Aradhya, 62 years reduced his belly by 12 cms.

Headache and Sinusitis : Dr. Pallav Chatterji, MBBS, MD 30 years old got rid of his disorders by Yoga therapy. He also got complete relief by Suthraneti.

Diabetes : Sri Basava Aradhya, 62 years. His blood sugar level was brought down from 345 to 90.

Height: Sri Amith Rai, 15 years, height improved from 154 to 174 cms.

Ulcer : Sri MS Patil, Advocate 32 years, whose date was fixed for operation of D. ulcer but got rid of the ulcer completely in one and a half months.

Heart Diseases : Mr. Sharma, 62 years, a retired engineer, who was suffering from heart disease, has shown improvement in a fortnight and he was able to drive his car for 50 kms.

Arthiritis : Mr. S. Krishnappa, 80 years old was suffering from pain in the knee joints for the last 10 years. After 15 days of practice, he was completely cured and stopped medicine. Now he is 88 years old and doesn't have any complaint and he is working as a purohit, actively

Hunchback : Mr. K.P. Pramod, 17 years old 165 cms has hunchback. After regular practice of yoga he was set right.

Blood Pressure : Dr. Shankaran MBBS. DCH whose blood pressure was 150/110. It was reduced to 120/80 in one month.

EFFICACY OF YOGA IN CORONARY ARTERY DISEASES

Dr T A Ramanujachar, Dr M S Krishna Murthy, Sri K R Muralidhar

Ramamani lyengar Memorial Yoga Institute, Pune Chief Advisor: Yogacharya Dr BKS lyengar

ABSTRACT

Ischemic Heart Disease is one of the common problems of the elderly, especially in those who are diabetic. A number of studies have been pointing to the role of yoga as an adjunct in its management. The aim is to evaluate the role of yoga therapy in an advanced case of ischemic heart disease, when commenced in immediate post infarction period. Yoga Therapy is a very useful mode of therapy even in immediate post acute phase of IHD and may delay or postpone or avoid the need for surgery if done routinely under good supervision.

The incidence of CAD (Coronary Artery Disease) is on the, increase alarmingly worldwide; more so in the western hemisphere. It has pervaded 'The oriental population because of the adoption of the western style of living. In U.S.A. it is the 2nd commnest cause of death next to cancer. This has

caused a lot of socio-economic problems. In the last two decades this has necessitated a number of invasive treatment regimens like PTCA (Percutaneous Transluminal Coronary Angiography) and CABG (Coronary Artery Bypass Graft) which are out of reach for even the upper middle class. Secondly, it is not the final cure - is inadequate, temporising than healing, does not address the underlying cause. This is prone for recurrence. In this context the introduction of yoga therapy is gaining ground, as an alternative mode of treatment. It not only improves or corrects the coronary pathology, but also improves the overall physical, mental and spiritual well-being of the patient. It is not only curing but healing. This regimen is of negligable and easily affordable. This case report is being presented in this Conference with the sole purpose of impressing upon the medical faculty and enthusiasts the efficacy of yoga therapy in CAD as a cheap alternative to the prohibitively costly and invasive procedures.

CASE REPORT

Mr 'K' 74 years old male presented to us with history of having been treated for recent inferior wall infarction with hypothyroidism reputed local private hospital
from 11.7.98 to 20.7.98 with thrombolytic agents (thrombokinase and hepharin) along with dilatiazem, isosarbide mononitrite, metaprolol ecosprin etc. He had two episodes of post infarct angina on 16.7.98 and 20.7.98 inspite of the treatment. He was shifted to a cardiac care centre for further evaluation, underwent coronary angiogram and Echo etc.

CORONARY ANGIO REVEALED - Triple Vessel CAD
LAD - 80% - 90% stenosis in two tandem long segments.
80% - 90% stenosis in proximal segment, osteal stenosis 20-30%.
Minor plaques in mid segments.
50% -60% in distal segments.
Long stenosis at the apex.

CIRCUMFLEX: Non dominant with 30% stenosis in mid segments.
R.C.A: 95% ulcered proximal stenosis in the mid segment and 50% distal stenosis.
L.V. ANGIO: Normal systolic and diastolic dimensions. Mild posterobasal inferior hypokinasia.
EJECTION FRACTION: 60%, No M.R. No Clots
DOPLER STUDIES: L.V. Mild posterbasal hypokinasia, good L.V. function, L.V. Diastolic dysfunction. Otherwise normal.
Other Studies: Like EGG changes and enzyme studies were consistent with A.M.I. Lipid profile was within normal limits.
Border Protinurea.
He was Advised: CABG with grafts to LAD, DI, OM, PD. Patient refused surgery and opted for Yoga Therapy with medical line of management.
He was started on Yoga Therapy on first week of August, 1998 as per the protocol of Dr. BKS lyengar along with life style modification. The asanas are as follows :
1. Savasana on heart bed - 5 minutes
2. Sukhasana with opening of chest with the help of a wooden block
3. Suptabaddha Konasana - 5 minutes
4. Purvothanasana - 5 Minutes
5. Viparita Dandasana - 5 Minutes
6. Setubandha Sarvangasana - 5 Minutes
7. Viparita Karani - 5 Minutes
S. Sarapanjarasana - 5 Minutes

9. Savasana with spinal bolster - 10 Minutes

All these postures are all modified by Dr B K S lyengar using various kinds of props devised by him. He was advised a low, fat, vegetarian diet; (Of, course he is a strict vegetarian) with plenty of fresh vegetables and fruits. We did not insist on any type of meditation. He was advised regular walks within his limitation, (with his effort tolerance). Within 3 weeks the patient showed both subjective and objective improvements like frequency and duration and intensity of angina reduced, effort tolerance increased. He could walk two kms. without-pain, climb 3
flights of stairs and lost 5 kgs. of weight (69 to 64kgs.), he was looking more bright and agile. E.C.G. began to improve after 7 weeks and kept on improving slowly. His antianginal and other drugs were gradually reduced in dosage starting from 12th week onwards. Now he can walk 3 kms. and is attending to his normal work.

Echocardiographically there was a significant improvement in ejection fraction from 60% to 70%A, and found disappearance of significantly noted posterior wall hypokinasia found in immediate post infarction period.

DISCUSSION

Stress has been accepted as one of the leading factors in the causation of CAD. Other risk factors like high cholesterol, obesity, atherosterosis high blood pressure, smoking, lack of exercise is only half of the story. Blakenhorn et. al. of University of California, School of Medicine; Helsinki Studies; Lipid Research Clinic; National' Heart, Lung and Blood Institute of U.S.A. have proved that there is no stastically significant reduction in the incidence of CAD and mortality by using cholesterol reducing drugs, and marginally reducing the fat intake from 40% - 30% on the other hand Dean Ornishes, studies have proved that by adopting a low fat (15%) vegetarian diet containing complex carbohydrates; stress management by yoga, abstinance from smoking, cutting down on/stopping alcoholic beverages can increase the coronary arterial blood flow even upto 270% without cholesterol lowering drugs. Their dosage of drugs like antianginal, antihypertensive, antiplatelet, have been gradually tampered and eventually withdrawn, flanchands of AIMS, New Delhi has conducted controlled, randomised prospective study on 42 angiographically proved patients similar to that of Dean Ornishes. After one year he has shown excellent results.

Yoga which is a complete way of life rather than merely some asanas may produce changes in the neurohumoral system and bring about harmony between the body and the mind. K N Udupa of E.H.U. has shown that yoga acts on the autonomic nervous system resulting in the production or regulating the beneficial neurohumors. Re.cent investigations have shown that there are a number of neuropeptides which influences the brain cells to produce emotions. Brain also communicates with immune system through neuropeptides. Macrophages are called wandering synspses carrying and releasing neuropeptides throughout the body. Perhaps this may have beneficial effects on the pathology of the CAD. Further research is needed in the direction to unravel the mysterious way that yoga helps to cure and heal. Perhaps there is truth in what Aristotle had said 'the centre of thoughts (emotions) lies in the heart and brain helps to cool the body'.

Our studies on Mr. K. has shown results consistent with Dean Ornishes and Manchanda's study. In conclusion yoga and a comprehensive life style change may prevent /reverse the CAD. It may prove an alternative to prohibitively costly invasive procedures like PTCA and CABC and adjuvant to medical management. It may prevent unwanted complications resulting from the invasive procedures. It may change the scenario and its management in future.

PHYSIOTHERAPY AND YOGA THERAPY FOR OSTEO- ARTHRITIS

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ABSTRACT
Osteo-arthrosis is the general complaint of old age especially in females after menopause. To reduce pain and restore mobility, a combination of physiotherapy and yoga practices including meditation, deep breathing and a few asanas has been tried for 15 days.
5 women (aged between 33 to 45 years) underwent two weeks of yoga program. All of them had ankle pain, 4 had shoulder pain, 4 had knee pain and one had elbow pain. In the first week they were taught breathing exercise and physiotherapy exercise.
In the second week they learnt 5 asanas in addition to the first week practices. At the end of the second week there was reduction in pain in all 5 of them, 90% in two, 75% in one and 50% in two women. The Yoga technique has reduced the tension and anxiety in patients while the asanas introduced after the reduction of pain and swelling have restored the mobility of joints to a remarkable extent.

Administration of both Physiotherapy and Yoga Therapy gives an interesting result in case of osteoarthirities. Osteo-arthirities are of two types. They are:
1st type : Which affects one joint generally a large joint as hop or shoulder and a disease of old age. The exact cause probably an injury.
2nd type : Beginning in late middle age, attacks first in hands and spreading to other joints. It probably attacks the hands because these joints have been so much used in course of life. This type is common in women than in men and often begins at the menopause.
Both forms are due to fault of metabolism and not bacterial infection. There may be a hereditary defect in the articular cartilage.

PATHOLOGY

In this type of arthirities, cartilage is first attacked and becomes hyperaemic and fibrous. The soft structures round the joint next become involved. Scheamie degeneration taking place in the ligaments. Later, Synorial membrane becomes inflamed. Sometimes, parts of these fringes break off, forming loose bodies in the joint.

SYMPTOMS

In the first type, the disease comes on gradually. One of the large joints - hip, knee or shoulder being generally the first to suffer and other joints involved later. The local symptoms are chronic inflammation, swelling and joint may become much enlarged owing to the formation of Osteophytes. Pain and aching are felt in the affected joint, worse when the limb is kept constantly at rest, creaking in the joint is always present. In the polyarticular form, the small joints of the hands are first attacked and may spread to other joints.

TREATMENT

The aims of the treatment are: 1) To reduce pain 2) To restore mobility 3) To avoid contractures
Application of heat improves circulation in and around the joints which reduces the pain. For deep seated joints like hip, spine, shoulder, short-wave diathermy will probably give the best result. Parafin and wax - both are also very useful for smaller joints.
To restore mobility, strong forced passive movements and to improve strength, pulley exercises are

more useful.
In case of knee : (i) knees-up pulling, (ii) high sitting lift 1-2 kg of weights to improve strength at knee joint. For shoulder joint, pendulum exercise will help a lot.
Diet: (1) One glass of warm water with one spoon honey (2) Avoid oily foodstuff.
Meditation and breathing exercise: Deep breathing exercise followed by meditation will help to decrease the tension.
Yoga Therapy : Once the pain is reduced, simple yogasanas are advised.
1st week:
1) Svastikasana
2) Ardhacakrasana
3) Ardhakaticakrasana
4) Makarasana / Bhujangasana
5) Anuloma - Viloma pranayama
6) Meditation / Supta Visrantiasana
2nd week:
1) Svastikasana
2) Ardhacakrasana or Ardhakaticakrasana
3) Makara / Bhujanga & Salabhasanas
4) Pavana Muktasana or Cakrasana
5) Setubandhasana
6) Anuloma / Viloma Pranayama
7) Nadisodhana Pranayama
8) Meditation / Visrantiasana

Special Instructions: 1) To avoid sitting in on place for more than half an hour 2) To walk 100 steps daily after supper.
Following are the tables showing how physiotherapy and yoga therapy helped in treating Osteoarthirities.

FIRST WEEK

Name	Age	Complaints	Results
Mrs. Shantala	43	Shoulder Pain, Ankle joint pain	50% Relief of pain
Mrs. Girijamma	35	Knee joint pain	No change
Ms. Lakshmi G	33	Elbow, Knee & Ankle joint pain	75% Relief of pain
Mrs. Kumuda	40	Shoulder Joint pain	Pain reduced
Mrs. Shanta	45	Knee and Ankle joint pain	50% Relief of Pain

SECOND WEEK

Name	Age	Complaints	Results
Mrs. Shantala	43	Shoulder Pain, Ankle joint pain	90% Relief of pain
Mrs. Girijamma	35	Knee joint pain	50% improved

Ms. Lakshmi G	33	Elbow, Knee & Ankle joint pain	90% improvement
Mrs. Kumuda	40	Shoulder joint pain	50% relief
Mrs. Shanta	45	Knee and Ankle joint pain	75% Relief

ROLE OF YOGA THERAPY IN PEPTIC ULCER
A CASE STUDY

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ABSTRACT
This is a case where patient was suffering from an acute peptic ulcer. He was looked after first by physician and next he was asked to go to a surgeon. The surgeon warned him that if he did not undergo surgeory he could only survive for not more than 6 months. It was a challenge to the patient. The patient was none other than the author himself.
Harmful items from the regular diet were stopped. Spices, condements severely sour and oily food were restrained. Heavily pungent food, potato, pulses, tamarind, rumex etc. were kept away from consumption to avoid hyperacidity. Yoga therapy was administered with pranayama, meditation and yoga nidra. Along with this about 36 yogasanas were pressed into practice. The problems faced were gradually minimised and at the end there was a feeling of having completely cured and healed. Twnety three years have passed since then. The doctor's warning of a death bell has neither made a sound nor the patient suffers from any sign or symptom of the disease.

I was detected as acidity patient during 1976. I suffered from acute acidity with all the usual sympotms like chest burning, vomitting sensation, indigestion, followed by frequently recurring heavy Mouth Ulcers and hyperacidity making me quite restless and feverish. I was admitted in a renouned hospital at Ahmednagar and treated by a famous Physician. Then the case was referred to a popular surgeon, he diagnosed it as a severe peptic ulcer and warned me that if you do not undergo surgery you can never survive for more than six months. I wasquite afraid of surgery and death as well. Still I accepted his challenge.
So I studied my own physiology and observed the harmful items from my regular diet and stopped taking food items like spices and condiments, severely sour and oily food, heavily pungent food, potato, pulses, tamarind, rumex etc. to avoid the hyperacidity but there was little use.
Simultaneously I completed my N.D and yoga course at Pune (M.S). I started regular yoga therapy along with Pranayama, meditation and Yoganidra. I used to do about 36 asanas in four postures. After 6 months of regular yoga, the acidity gradually subsided. It was a miracle, made by yoga therapy. After one year Abdominal pains subsided, digestion improved, registivity improved, gradually weakness had been minimised, spiritual power increased and subsequently I felt that there is no illness at all. years passed by and still there was no recurrence of the Pepitc Ulceration, which was found completely healed and cured.
Now twenty three years have passed after the doctor's warning there is no trouble, any sign or symptom of peptic Ulcer.
Through my experience of last 20 years of yoga, I am of the opinion now that these hopeful results may be due to integrated effect of all the asanas together, which I practiced regularly during last 20

years.
My regular schedule included Warm up movements of legs, hands and neck. Followed by :
1) Utthana padasana 2) Pavanamukta asana 3) Asvini mudra 4) Noukasana 5) Viparitakarani 6) Sarvangasana 7) Halasana 8) Matsyasana 9) Savasana 10) Bhujangasana 11) Salabhasana 12) Dhanurasana 13) Hanumanasana 14) Makarasana 15) Agnisara 16) Simhamudra 17) Yogamudra in Vajrasana 18) Suptavajrasana 19) Ustrasana 20) Yogamudra in Padmasana 21)Vakrasana 22) Ardha matsyendrasana 23) Udarakarsana 24) Cakrasana 25) Katicakrasana 26) Tadasana 27) Vrkshasana.
After completion of yoga I used to practice some pranayamas like 1) Deep breathing 2) Fast breathing 3) Sitali 4) Anuloma viloma 5) Bhramari 6) Aurhkar 7) Yoganidra.
This peculiar yoga therapy was preceded and followed by prayers and slight meditations, which was found quite effective tonic for the tranquality of mind.
Occasional Sankha Prakshalana and Vaman were also found useful for this purpose.
In addition to good effect of pranayama, prayers and meditation, some of the asanas, and mudras were found more effective than others. The more effective one's are 1) Simhamudra 2) Yogamudra 3) Kapalabhati 4) Agnisara 5) Aurhkar 6) Dhanurasana 7) Bhujangasana 8) Salabhasana 9) Jalandarabandha 10) Yoganidra and others which were found more useful for peptic region. Thus conclusively it may be stated that overall Yoga therapy was found quite effective for curing peptic Ulcers, mouth Ulcers or Ulcers in any part of the alimentary canal.