

2.0 LITRARY RESAERCH ON THE TRADITIONAL TEXTS IN THE AREA OF LIFESTYLE DISORDERS AND LIFESTYLE RECOMMENDATIONS.

2.1 BACKGROUND AND SCOPE

'Lifestyle is the perception of a particular person or entire society towards life and it is the way people live, think and behave' (Tiwari & Pandey, 2013). Life style involves various components such as the dietary practices, physical activities, learning and understanding things, mental processes associated with knowledge, as well as those pertaining to culture and environment (Tiwari & Pandey, 2013). Urbanization and lifestyle changes in the recent years have resulted in an epidemic shift from the infectious diseases to the lifestyle disorders. As a consequence, incidences of anxiety, depression, hypertension diabetes mellitus and the coronary artery diseases have increased. The uniqueness of the Indian concept of lifestyle could fetch us an answer for various challenges being faced in the present day world.

2.2 SUMMARY OF EARLIER WORKS ON INDIAN PERCEPTION OF LIFESTYLE

The uniqueness of the Indian concept of lifestyle is that it is based on the principles of 'dharma ' (the righteous way to work) and 'karma' (action) (Tiwari & Pandey, 2013). The Indian social structure has witnessed harmonious regulation of life demarcated into the four stages (āśrama) -“brahmacary” (studentship); “grhast” (householder); “vānaprasta” (forest dweller); “sannyāsa” (ascetic) depending upon physical, psychological, familial, social and spiritual needs, intended to prepare for a life, believed to span for 100years. The āyurveda concepts of 'svāstyā vṛtti' (positive health), as advocated by suśṛta are based on 'dinacarya (daily routine), 'ṛtucary' (seasonal routine), āhāra (diet), and

vyāyāma (exercise). patañjaliadvocates lifestyle involving the following eight-fold path of Yoga “yama” (self control) with five rules, i.e., non-violence, truthfulness, not stealing, chastity and the avoidance of greed; (2) “niyama” (observance) through purity, contentment, austerity, study of Vedas and devotion of God; (3) “āsana” (posture) (4) “prāṇāyāma” (control of the breath) (5) “pratyāhāra” (restraint) (6) “dhāraṇa” (steadying of the mind) (7) “dhyāna” (Meditation) and (8) “samādi” (deep meditation). (Trivedi, 2000) manusmṛti (The laws of Manu) enumerates the lifestyle recommendations as follows-

गृहस्थस् तु यथा पश्येद् वली-पलितम् आत्मनः । अपत्यस्य-एव च-अपत्यं तदा-अरण्यं समाश्रयेत् ॥म स्मृ । ६ ।२ ॥

*gṛhasthas tu yathā paśyed valī-palitam ātmanaḥ |
apatyasya-eva ca-apatyaṇi tadā-aranyaṇi samāśrayet | ma smṛ | | 6 | 2 | |*

When so ever a householder gets to see wrinkles on his body, white hair on his head, and has his grandchildren, he should resort to the forest. manusmṛti: Chapter 6 Hymn 2.

स्वाध्याये नित्ययुक्तः स्याद् दान्तो मैत्रः समाहितः । दाता नित्यम् अनाताता सर्वभूतानुकम्पकः ॥म स्मृ । ६ ।८ ॥

*svādhyāye nityayuktaḥ syād dānto maitraḥ samāhitaḥ | dātā nityam anātātā sarvabhūtānukampakaḥ | |
ma smṛ | | 6 | 8 | |*

He should be engaged in regular study, control his senses, keep friendly behavior with everyone, and have a tranquil mind. He must give charity, should not accept gifts from others, and have mercy on all living beings manusmṛti: Chapter 6 Hymn 8.

वनेषु च विहृत्य-एवं तृ तीयं भागम् आयुषः । चतुर्थम् आयुषो भागं त्यक्त्वा सङ्गान् परिव्रजेत् ॥म स्मृ । ६ ।३३ ॥

*ivaneṣu ca vihṛtya-evaṇ tṛ tīyaṇi bhāgam āyuṣaḥ | caturtham āyuṣo bhāgaṇi tyakv saṅgān
parivrajat | | ma smṛ | 6 | 33 | |*

After spending the third portion of one's life in the forest, the fourth portion of life should be

spent as a sannyāsi, by surrendering all attachments (for the world). manusmṛti: Chapter 6

Hymn 33

अध्यात्म-रतिर् आसीनो नि-अपेक्षो नि-अमिषः । आतोमना-एव सहायेन सुखार्थी विचरेद् इह ॥ ॥म स्मृ । ६।४९॥
*adhyātma-ratir āsīno ni-apekṣo ni-amīṣaḥ | ātomanā-eva sahāyena sukhārthī vicared iha | | ma
smṛ | 6 | 49 | |*

Delighting in meditation on the Supreme, independence from others, giving up all desires,
with only the Self as companion, seeking supreme bliss, shall live like sannyāsi.

manusmṛti: Chapter 6 Hymn 49

'mahābhārata' as well as 'arthaśāstra' by kauṭilya views the second half of one's life,
'vānaprasta' and 'sannyāsa' as neutral phase with respect to the individual as well as
community. This phase is supposed to deal with introspection and self research without any
social obligation and with an intention of achievement of the ultimate goal of life.
Knowledge of one's specific roles during different stages of life was crucial for the mental
health of the individual with no room for psychogenic mental-health problems.

2.3 AIM AND OBJECTIVES

Aim:

To understand the concept of lifestyle according to upaniśad, yoga, ayurveda, and other
traditional Indian texts.

Objectives:

- To review the concepts of lifestyle as documented in the traditional Indian texts.
- To relate the present day lifestyle disorders to these concepts
- To extract the lifestyle recommendations as stated in the traditional Indian texts

- To implement these recommendations in the patient care.

2.4 MATERIALS AND METHODS

2.4.1 VEDIC SOURCES AND CLASSICAL YOGIC TEXTS INCLUDED

- aṣṭāṅgahṛdaya saṁhitā
- patañjali yoga sūtra
- taitreya upaniśad

The concept of health and disease according to the āyurveda texts and the lifestyle recommendations

The Indian health science āyurveda deals with every aspect of life. It has mainly two aims i.e. protection and promotion of health and secondly cure from the diseases. According to āyurveda, health is termed ‘svāstyā’ meaning ‘establishing in one’s own self’ referring to perfect spiritual health as the highest level of health. The process of maintaining this state of health (svasta) is by achieving a dynamic state of physiological balance at physical level and blissful existence at mental level (Bhishagratna June 30, 2006). An unhealthy lifestyle, including our habits, the food we eat and our thoughts, can lead to loss of physiological balance or homeostasis. At some point, the body reacts by developing a disease, determined by a predisposition or weakness towards a particular disease bearing factor. caraka saṁhitā emphasizes on maintenance of positive health, which include proper diet, sleep, rest, active habit, regular exercise etc. aṣṭāṅgahṛdaya, the third major treatise on ayurveda, written by vāghbhaṭa around the 7th century (AD 500) predominantly based on the teachings of caraka

and suśrta saṁhita gives its own views on different topics. It contains information regarding the two schools of āyurveda, namely the school of surgery and the school of physicians. The author quotes caraka, suśrta, bhela, nimi, kaśyapa, dhanvantari and other earlier authors and their works; the chief source, however, is aśṭhāṅga samagra. aṣṭāṅgahṛdaya saṁhitā is a systematized text of human illnesses. aṣṭāṅgahṛdaya focuses more on the physiological aspect of the body rather than the spiritual aspects of it.

In the first chapter of aṣṭāṅgahṛdaya, आयुष्कामीयं (āyushkāmiyam) “Desire for long life”, there is a mention of the Purpose of life and that, one should concentrate on having a long life.

आयुः कामायमानेन धर्मार्थ सुखसाधनम् ।
āyuhḥ kāmāyamānena dharmārtha sukhasādhanam |

- 1). dharma – following the path of righteousness
- 2). artha – earning money in a legal way
- 3). kāma– fulfilling our desires
- 4). mokṣa – achieving Salvation.

आयुर्वेदोपदेशेषु विधेयःपरमादरः ॥ अ ह १२ ॥
āyurvedopadeśeṣu vidheyaparamādarah | | a hṛ | 1 | 2 | |

The science of ayurveda, explains how to achieve this purpose, for the enquiry of which ‘obedience’ (videya) is the most important quality.

The ayurveda texts gives references to the anatomy and patho-physiology pertaining to the cardio-vascular system. The suśrta saṁhitā describes the characteristics of the heart as below:

पुण्डरीकेण सहशं हृदयं स्यादधोमुखम् ।

जाग्रतस्तदिकसति स्वपतश्च निमीलति ॥३१॥

puṇḍarīkeṇa sahaśaṁ hṛdayaṁ syādadhomukham |
jāgratastadikasati svapataś ca nimīlati | |

सुश्रुतसंहिता शारीरस्थान4th Chapter

Meaning, the heart is similar to an inverted lotus. It blossoms when a person is awake and closes as a person sleeps. (Dhalnacharya, n.d.)

caraka saṁhita is one of the oldest ayurveda literatures in the world. The caraka saṁhita gives the synonyms and importance of the heart in the following verse:

अर्थे दश महामूलाः समासक्ता महाफलाः ।

महच्चार्थश्च हृदयं पर्यायैरुच्यते बुधैः ॥३॥

arthe daśa mahāmūlāḥ samāsaktā mahāphalāḥ |
mahaccārthaśca hṛdayaṁ paryāyairucyate budhaiḥ | | 3 | |

There are ten vessels of great biological importance attached to the heart. The synonyms of heart are 'mahat', 'artha' and 'hṛdaya' . (Sharma & Bhagawan, 1991)

Heart, the seat of par-excellence (oojas):

यद्धि तत् स्पर्शविज्ञानं धारि तत्तत्र संश्रितम् ॥६॥

तत् परस्यौजसः स्थानं तत्र चैतन्यसंग्रहः ।

हृदयं महदर्थश्च तस्माद्दत्तं चिकित्सकैः ॥७॥

yaddhi tat sparśavijñānaṁ dhāri tattatra saṁśritam | | 6 | |
tat parasyaujasaḥ sthānaṁ tatra caitanyasaṅgrahaḥ |
hṛdayaṁ mahadarthaśca tasmāddatam cikitsakaiḥ | | 7 | |

The heart is indispensable for all the normal mental and physical activities because of the entire sense perception representing animation depends on the heart. The heart is substratum of the oojas par-excellence and it is also the controller of the mind. (Sharma & Bhagawan,

1991)

suśrta saṁhita identifies two serious diseases in ancient time that is obesity and diabetes. The sedentary people were suffering more from these two diseases. In the present day world, the prevalence of these ailments has become a subject of serious deliberation since they are supposed to be the major risk factors for various other lifestyle diseases including that pertaining to the heart. suśrta mentioned that obesity and diabetes can be prevented through vyāyāma (exercise). suśrta saṁhita believed that vyāyāma (exercise) can help in prevention of diseases caused by the elevation in the kapha humor that is influenced by inactivity and excessive consumption food and fluid in daily life. suśrta describes the various cardiac diseases, their causes, clinical features, and the remedial measures to be taken.

vāṭikā disease of the heart:

शोकोपवासव्यायामरूस्शशुशकाल्पभोजनौ ।

वायुरविष्य हृदयम् जनयत्युत्तमाम् रुजम् ॥ ३० ॥

*śookoopavāsavyāyāmarūsśaśuśkālpabhoojanau
vāyuraviśya hrudayam janayatyuttamām rujam | |*

वेपथुर्वेष्टनं स्तम्भः प्रमो हःशून्यता दरः

हृदि वातातुरे रूपं जीर्णे चात्यथविदना ॥ ३१ ॥

*vepathurveṣṭanani stambhaḥ pramoo haḥśūnyatā darāḥ
hrudi vātātūre rūpaṁ jīrṇe cātyarthavedanā | |*

By grief, fasting, excessive exercise, intake of unctuous, dry and inadequate quantity of food, the vāta gets vitiated and affects the heart resulting in excruciating pain, trembling, cramps,

stiffness, unconsciousness, sedation of emptiness, bewilderment and severe pain after the digestion of food. (Sharma & Bhagawan, 1991)

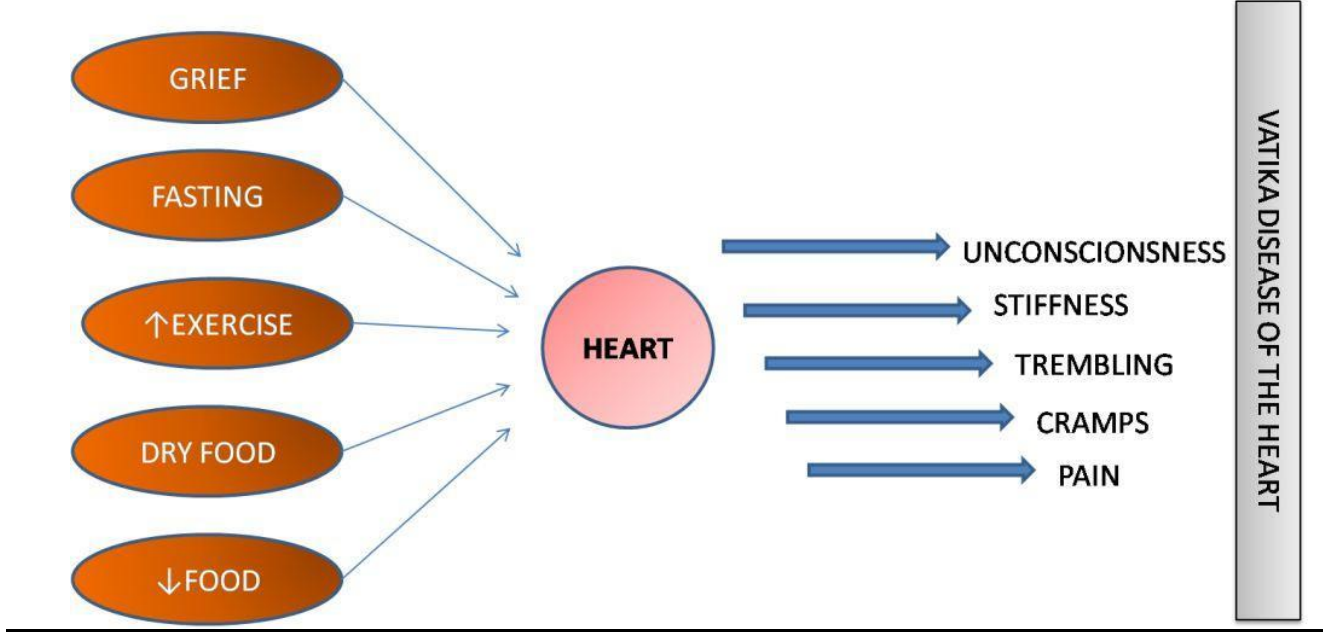


Figure 2. The events resulting in the vatika disease of the heart

kaphaja disease of heart:

अत्यादानं गुरुस्निग्धमचिन्तनमचेष्टनम् ।
निद्रासुखं चाभ्यधिकं कफहृद्रोगकारणम् ॥ ३४ ॥
atyādānaṁ gurusniग्धmacintanamaceṣṭanam |
nidrāsukhaṁ cābhyadhikaṁ kaphahṛdrogakāraṇam | |
हृदयं कफहृद्रोगे सुप्तं स्तिमितभारिकम् ।
तन्द्रारुचिपरीतस्यभवत्यश्माव्रुतं यथा ॥ ३५ ॥
hrudayaṁ kaphahṛdroge suptam stinitabhārikam |
tandrāruciparītasabhavatyāśmāvṛutaṁ yathā | |

Excessive intake of food, heavy and unctuous food, inadequate mental exercise, sedentary

habits and excessive sleep are the causes of kaphaja type of heart diseases. The symptoms are bradycardia, stiffness and heaviness of the heart, drowsiness and anorexia. The patient feels as if he is loaded with a stone. (Sharma & Bhagawan, 1991)

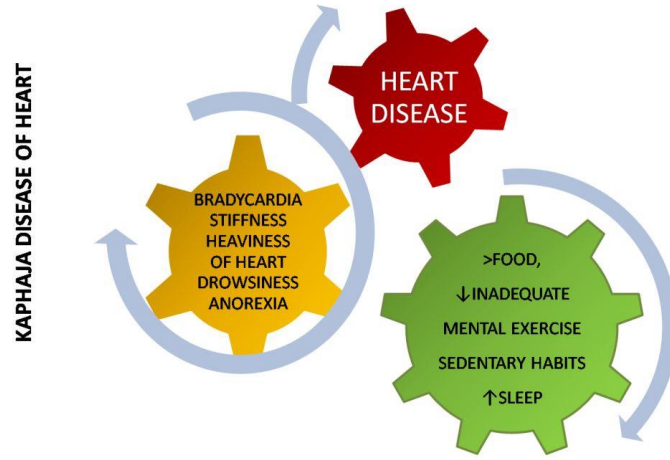


Figure 3. Etiology and clinical features of kaphaja disease of heart

Even a small injury to the heart results in fainting. Any serious injury to it leads to death.

(Sharma & Bhagawan, 1991)

प्रतिष्ठर्थं हि भावानामेषां हृदयमिष्यते ।
गोपानसीनागारकर्णिकेवार्थचिन्तकैः ॥५॥
तस्योपघातान्मूर्च्छायं भेदान्मरणम्रुच्चति ।
pratiṣṭharthani hi bhāvānāmeṣāni hṛdayamiṣyate ।
gopānasīnāgāarakarṇikevārthacintakaiḥ ॥ 5 ॥
tasyopaghātānmūrcchāyaṁ bhedānmaraṇanruccati ।

According to the proponents of ayurveda, health related problems are caused due to a disruption of balance in our nutritional intake. Food with low levels of 'prāṇa' (life energy) should be avoided.

The causes of health and disease has been mentioned as

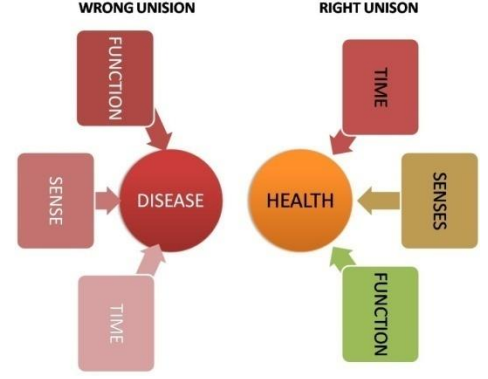


Figure 4. Factors related to disease and health

कालार्थकर्मणां योगो हीनमिथ्यातिमात्रकः । सम्यग्योगश्च विज्ञेयो रोगारोग्यैक कारणम् ॥ । अ ह ११ । १९ ॥
kālārthakarmanāṅ yogo hīnamithyātīmātrakaḥ | samyagyogaś ca vijñeyo rogārogyaika
kāraṇam || | a hr | 1 | 19 | |

Root cause for all diseases is either Vegodeerana (initiation of urges forcefully) or Vegadhaarana (Suppression of naturally initiated urges).

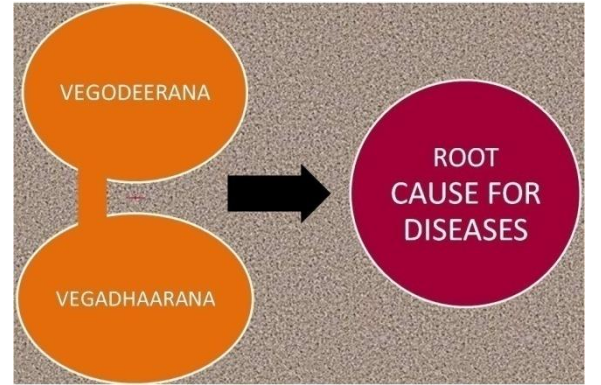


Figure 5. Root cause of disease

रोगाः सर्वे अपि जायन्ते वेगोदीरणधारणैः
निर्दिष्टं साधनं तत्र भूयिष्ठं ये तु तान् प्रति । अ ह १४ । २२ ॥
ततश्च चानेकधा प्रायः पवना यत्प्रकुप्यति
अन्नपानौषधं तस्य युञ्ज जीतातो अनुलोमनम् । अ ह १४ । २३ ॥
rogāḥ sarve api jāyante vegodīraṇadhāraṇaiḥ
nirdiṣṭaṅ sādhanaṅ tatra bhūyiṣṭhaṅ ye tu tān prati | a hr | 4 | 22 | |
tataś cānekadhā prāyaḥ pavanaḥ yatprakupyati
annapānauśadhāṅ tasya yuñj jītāto anulomanam | a hr | 4 | 23 | |

For those common diseases arising from these acts, specific treatments have been counted so far. The symptoms arising from suppression of natural urges could be treatment with food and treatment which clear the passages of vāta and help in restoring vāta natural movement direction.

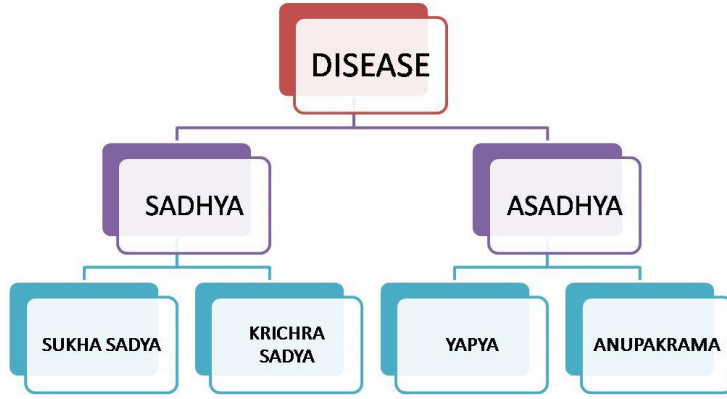


Figure 6. Classification of disease

There is a mention of two main types of diseases, which are further divided. sādhyā - Which can be cured. It is of two types – Easy to cure (sukha sādhyā), Difficult to cure (kricra sādhyā) asādhyā - Which cannot be cured.

It is of two types – vyāpya (medicine is required for as long as patient is alive), anupakrama (nothing can be done.)

साध्यो असाध्य इति व्याधिर्द्विधा तौ तु पुनर्द्विधासुसाध्यः कृच्छ्रसाध्यस्च याप्यो यश्चानुपक्रमः । अ

हृ ११ । ३० ॥

sādhyo asādhyā iti vyādhird dvīdhā tau tu punard dvīdhāsusādhyāḥ kṛcchrasādhyasca yāpyo
yaś cānupakramaḥ | a hr | 1 | 30 | |

Like a bird flying high in the sky cannot escape from its shadow, the root cause for disease

lies in tridoṣa. Even the mental qualities such as satva, raja and tama are influenced by tridoṣa. doṣa gets vitiated, the cause vitiation of body tissues (dhātu) and waste products (mala) to cause disease.

दोषा एव हि सर्वेषां रोगाणामेकारणम्

यथा पक्षि परिपतन् सर्वतः सर्वमप्यहः । अ ह १२ । ३२ ॥

छायामत्येति नत्मीयां यथां वा कृत्स्नमप्यद

विकारजातं विविधं त्रीन् गुणान्नातिवर्ततेः । अ ह १२ । ३३ ॥

तथा स्वधातुर्वेषम्यनिमित्तमपि सर्वदा

विकारजातं त्रीन्दोषान् । अ ह १२ । ३४ ॥

*doṣā eva hi sarveṣāṅ rōgāṅāmekakāraṇama
yathā pakṣi paripatan sarvataḥ sarvamapyah | a hr | 12 | 32 | |
chāyāmatyeti natmīyāṅ yathāṅ vā kṛtsnamapyadaḥ
vikārajātāṅ vīvidhāṅ trīn guṇāṅnātivartate | a hr | 12 | 33 | |
tathā svadhāturveṣamyanimittamapi sarvadā
vikārajātāṅ trīndoṣān | a hr | 12 | 34 | |*

Three types of actions (karma) pertaining to mind, body and speech lead to doṣa imbalance.

कायवाक्चित्तभेदेन कर्मापि विभजेत्त्रिधा

कायादिकर्मणां हीना प्रवृत्तिर्हीनसंज्ञकः । अ ह १२ । ४० ॥

अतियोगो अतिवृत्तिस्तु वेगोदीरणधारणम्

विषमाङ् गक्रियारम्भपतनस्वमनादिकम् । अ ह १२ । ४१ ॥

भाषणं सामिभुक्तस्य रागद् वेषभयादि च

कर्म प्राणदिपातादि दशधा यच्च निन्दितम् । अ ह १२ । ४२ ॥

मिथ्यायोगः समस्तो असाविह वा अमुत्र वा कृतम्

*kāyavākchittabhedena karmāpi vibhajettridhā
kāyādikarmaṅāṅ hīnā pravṛttirhīnasāñjñakaḥ | a hr | 12 | 40 | |
atiyogo ativṛttistu vegodīraṇadhāraṇam*

viṣamāṅ gākriyārambhapatānaskhamanādikam | a hr | 12 | 41 | |
bhāṣaṅgāṅ sāmibhuktasya rāgad veṣabhayādi ca
karma prāṇadipātādi daśadhā yacca nīnditam | a hr | 12 | 42 | |
mithyāyogaḥ samasto asāviha vā anutra vā kṛtam

hīnayoga - very less speaking, very little physical activity, very less thought process.
 atiyoga -excessive speaking, excess physical activity and excessive thinking. mityayoga -
 wrong speaking, wrong physical activities and wrong, evil thinking, suppression of natural
 urges, improper postures, abrupt jumping and falling, speaking too much immediately after
 meals, harboring of desires, attachment, passion, hatred, fear etc.

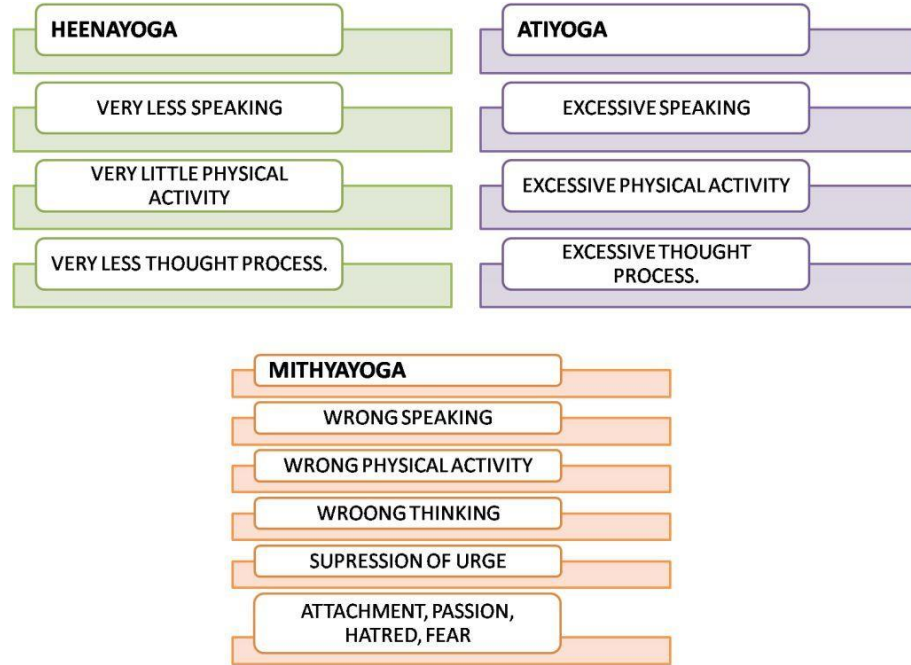


Figure 7. karma pertaining to mind, body and speech leading to doṣa imbalance sarvaroga sāmānya cikitsā, the general guidelines to treat all types of diseases are detailed in the following principles.

त्यागः प्रज्ञापराधानामिन्द्रियोपशमः स्मृतिः

देशकालात्मविज्ञानं सद् वृत्तस्यानुवतनम् । अ ह १४ । ३२ ॥

अथर्वविहिता शन्तिः प्रतिकूलग्रहार्चनम्

भूताध्यस्पर्श निर्दिष्टश्च पृथक् । अ ह १४ । ३३ ॥

अनुत्पत्तयैसमासेन विधिरेषः प्रदर्शितः

निजागन्तुविकाराणां मुत्पन्नानां च शान्तये । आ ह १४ । ३४ ॥

*tyāgaḥ prajñāparādhānāmindriyopasamaḥ smṛtiḥ
deśakālātma vijñānaṁ sad vṛttasyānuvatanam | a hr | 4 | 32 | |*

atharvavihitā śantiḥ pratikūlagrahārcanam

bhūtādhyasparśa nirdiṣṭaś ca pṛthak | a hr | 4 | 33 | |

anutpattayaisamāseṇa vidhiresaḥ pradarsitaḥ

nijāgantuvikārāṇā mutpannānāni ca śāntaye | a hr | 4 | 34 | |

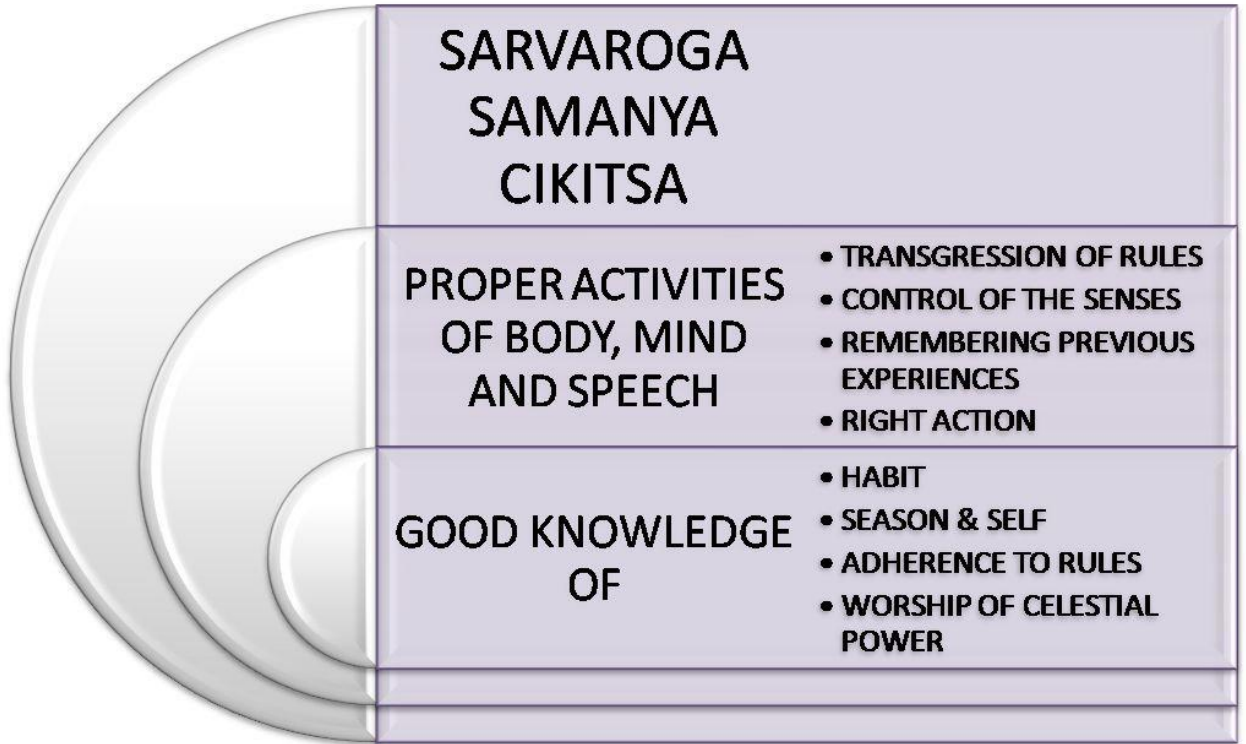


Figure 8. General guidelines for treatment

Avoidance of improper activities of body, mind and speech by willful transgression of rules, control of the senses, remembering previous experiences and acting rightly, good knowledge of the habitat, season and the self, adherence to rules of good conduct and rituals, peaceful

procedures as mentioned in atharva veda, worship of celestial powers – grahaśānti (astronomical palliative procedures), and staying away from bhūta (evil spirits, microbes). There is nothing in this universe, which cannot be used as medicine. Knowledge and purpose of each substance is required to use any substance as medicine

जगत्येवमनौषधं
 न किञ्चित् विद् यते द्रव्यं वशात् नानार्थ योगयोः । अ ह १९ । १० ॥
jagatyevamanauśadham
na kiñcit vid yate dravyam vaśāt nānārtha yogayoḥ | a hr | 9 | 10 | |

The second Chapter of aṣṭāṅgahr̥daya saṁhitā – called as dinacarya –dinacarya (dina means daily, carya means – regimen/routine), āyurveda daily routine covers mental, speech and physical aspects of well being, that should be followed every day.

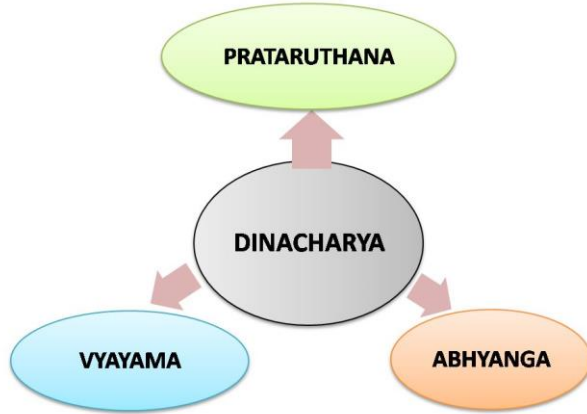


Figure 9. Triad of wellbeing

prātharutthāna (Getting up in the morning)

ब्राह्मे मुहूर्त उत्तिष्ठेत्स्वस्थो रक्षार्थमायुषः । अ ह १२ । १ ॥
brāhame muhūrta uttiṣṭhetsyastho rakṣārthamāyusaḥ | a hr | 2 | 1 | |

Healthy person should get up from bed at brāhmīmuḥūrta (Last three hours of the night – from 3 am to 6 am – is known as brāhmīmuḥūrta) or at least before dawn, or around 45

minutes before Sun rise, around 5 – 6 am.

abhyāṅga (oil massage) should be done daily, morning.

अभ्यङ्गं आचरेत् नित्यं स जरा श्रमवातहा । दृष्टि प्रसाद पुष्टि आयुः सुस्वप्न सुत्वक् दाढं यकृत । अ ह ॥२॥८॥
॥शिरः श्रवणपादेषु तं विशेषेण शीलयेत् । वर्ज्योऽभ्यङ्गः कफग्रं स्थकृतं संशुद्धिं अजिर्णिभिः ॥ । अ ह ॥२॥९॥
*abhyāṅgam ācaret nityaṁ sa jarā śramavātahā | dṛṣṭi prasāda puṣṭi āyurī susvapna sutvak
dārdh yakut | a hṛ | 2 | 8 | |
| | śiraḥ śraṇapādeṣu taṁ viśeṣeṇa śīlayet | varjyo'bhyaṅgaḥ gaḥkaphagr sthkrta saṁśuddhi
ajirṇibhiḥ | | a hṛ | 2 | 9 | |*

abhyāṅga delays ageing, relieves tiredness and excess of vāta (aches and pains). It improves vision, nourishes body tissues, prolongs age, induces good sleep and improves skin tone and complexion. Massage should be specially done on ears, head and legs. Massage should be avoided when there is an increase of kapha in the body, soon after śodhana (pañcakarma procedure) and during indigestion.

vyāyāma (exercise) recommendations and indications are provided as mentioned below.

लाघवं कर्मसामर्थ्यं दीप्तोऽग्निः मेदसः क्षयः । विभक्तघनगात्रत्वं व्यायामात् उपजायते ॥
वात्पित्तामयो बालो वृद्धोऽजीर्णी च तं त्यजेत् । अर्धशक्त्या निषेव्यस्तु बलिभिः स्निग्धभोजिभिः
॥शीतकाले वसन्ते च मन्दमेव ततो अन्यथा । तं कृत्वाऽनुसुखं देहं मर्दयेत् च समन्ततः ॥ । अ ह ॥२॥१०॥
*lāghavaṁ karmasāmarthyā dīpto'gniḥ medasaḥ kṣayaḥ | vibhaktaghanagātratvaṁ vyāyāmāt upajāyate | |
vātpittāmayo bālo vṛddho'jirṇī ca taṁ tyajet | ardhaśaktyā niṣevyastu balibhiḥ
snigdhabhojibhiḥ
| | śītakāle vasante ca mandameva tato anyathā | taṁ kṛtvā'anusukhaṁ dehaṁ mardayet ca
samantataḥ | | a hṛ | 2 | 10 | |*

Exercise brings about lightness, it improves work capacity, increases digestion power, burns fat. It brings body into good shape. People with diseases originating from vāta and pitta, children, elders, people with indigestion problem should not do exercise. Exercise should be

done till one's half strength. Exercise should be done compulsorily by those having full strength and who take oily food stuff, between the months of December and May. At the end of the exercise, one should undergo mild massage.

caraka saṁhitā described about the vyāyāma (exercise) practice as per the different seasons. vyāyāma is to give up in hot summer and during heavy rainy season. Whereas autumn is suitable for swimming and one should habitually resort to vyāyāma (exercise) in spring season. caraka saṁhitā is a living evidence of exercise therapy which prescribed vyāyāma for twenty types of kaphaja (phlegm) diseases and many other diseases to cure or minimize consequences. It also mentioned that two very common life style diseases: diabetes mellitus and obesity, which can cured through the vyāyāma (Mondal, 2014). caraka saṁhitā indicates the negative impact of excessive vyāyāma (exercise) such as - exhaustion, consumption, thirst, bleeding from different parts of the body, dyspnoea, cough, fever, vomiting etc.

āyurveda Seasonal Regimen, ṛtucarya (ṛtu means seasons carya means regimen), is described in the 3rd chapter of aṣṭhāṅgahṛdaya.

Qualities of food as per season:

The food and drink should be dry (moisture less, fat-less) during śarad and vasanta ṛtu (autumn and spring) and food should be cold during gharma (summer) and ghnanta (end of rainy season) and should be hot in other seasons.

नित्यं सर्वरसाभ्यासः स्वस्वाधिक्यमृतावृतौ ॥ १ अ ह १३ १५५ ॥

The habit of using all the six tastes every day is ideal for maintenance of health. However, during particular seasons, the particular tastes should be given special emphasis.

The fourth chapter of aṣṭhāṅgahr̥daya, rogaanupadanīya adhyāya (roga + anupadanīya. roga means disease utpādanā means production), mentions the preventive health care tips. It explains the method of adjusting the body to the natural signs so as to avoid toxic material accumulation and the onset of disease processes.

Description of the right Amount of Food (āhāramātra apekṣa) is given below.

मात्राशी सर्वकालं स्यान्मात्रा हि अग्नेः प्रवर्तिका

मात्रां द्रव्याण्यपेक्षन्ते गुरुण्यापि मघून्यापि । अ ह १८ । १ ॥

गुरुणामर्धसौहित्यं लघूनां नातितृप्तता

मात्राप्रमाणं निर्दिष्टं सुखं यावत् विजीर्यति । अ ह १८ । २ ॥

mātrāśī sarvakālaṁ syān mātrā hi agneḥ pravartikā

mātrāṇi dravyāṅyapekṣante gurunyaṅyāpi maghūnyāpi | ā hr | 8 | 1 | |

guruṅāmardhasauhityaṅi laghūnāṅi nātitṛptatā

mātrāpramāṇaṅi nirdiṣṭaṅi sukhaṅi yāvat vijīryati | a hr | 8 | 2 | |

One should always consume proper quantity of food. Right amount of food activates agni–digestion power (which is compared to fire, in āyurveda). Food that are light to digest (lagu) and those that are hard to digest (guru) both require a specified quantity for proper digestion. As a general rule, if the food is heavy to digest (such as oily food, non vegetarian food, sweets etc), it should be consumed till half of the satiation level is achieved (arda sauhitya). If the food is light to digest, it should be consumed till one is not overly satiated

(na ati tṛptatā). The right amount of food is that, which undergoes digestion easily.

āhār vidhi– regimen of diet, gives clear guidelines for food intake.

काले सान्म्यं शुचि हितं स्निग्धोष्णं लघु तन्मनाः

षड्रसं मधुरप्रायं नातिद्रुतविलम्बितम् । अ ह ८ । ३५ ॥

स्नातः क्षुद्धान् विविक्तस्थो घौतपादकराननः

तर्पयित्वा पितन् देवानतिथीन् बालकान् गुरून् । अ ह ८ । ३६ ॥

प्रत्यवेक्ष्य तिरश्च अपि प्रतिपन्नपरिग्रहान्

समीक्ष्य सम्यगान्मनिभनिन्दन्नभुवन् द्रवम् । अ ह ८ । ३७ ॥

इष्टमिष्टैः सहाश्रीयाच्छुचिभक्तजनाहतम्

kāle sānmyaṁ śuci hitaṁ snigdhoṣṇaṁ laghu tanmanāḥ

ṣaḍrasaṁ madhuraprāyaṁ nātidrutavilambhitam | a hr | 8 | 35 | |

snātaḥ kṣuddhān viviktastho dhautapādakarānanaḥ

tarpayitvā pītan devānatīthīn bālakān gurūn | a hr | 8 | 36 | |

pratyavekṣya tīraś ca api pratipannaparigrahān

samīkṣya samyagānmanibhanindannabhuvan dravam | a hr | 8 | 37 | |

iṣṭamiṣṭaiḥ sahāśrīyācchucibhaktajanāhṛtam

kale stamyam- Food should be consumed at the proper time; suci hitam– it should be the accustomed, clean, suited to health; snigdha, uṣṇa, lagu – unctuous, hot and easily digestible; tanmanā – consuming food with due attention; ṣaḍ rasa, madhuraprāyaṁ – should contain all the six tastes with predominance of sweet taste; na atidṛta, viḷambitam – partaken neither very quickly nor very slowly; snataḥ – after taking bath; kśut vān– after having good hunger; viviktastā -sitting in solitude; dautapada kara ānanaḥ– after washing the feet, hands and face; tarpayitvā piṭṛn, deevān, athitīn, bālakān, gurūn – after satisfying the manes, Gods, guests, children and Guru; After satisfying even the

dependents maintained in the house (such as servants, horses and other animals for receiving service, parrots and other pets etc.); after carefully considering one's own constitution, likes and dislikes; without scolding / abusing the food, without too much of talk; should partake more of liquid food, that which is liked; in the company of the liked persons, and served by those who are clean and faithful to him.

The following are the secrets of good health.

नित्यं हिताहारविहारसेवी समीक्ष्यकारी विषयेष्वसक्तः
 दाता समः सत्यपरः क्षमावानाप्तोपसेवी च भवत्यरोगः । अ ह १४ । ३६ ॥
nityani hitāhāravihārasevī samīkṣyakārī viṣayeṣvasaktaḥ
dātā samaḥ satyaparaḥ kṣamāvānāptopasevī ca bhavatyarogaḥ | a hr | 4 | 36 | |

He, who indulges daily in healthy foods and activities, who discriminates the good and bad of everything and then acts wisely, who is not attached too much to the objects of the senses, who develops the habit of charity, of considering all as equal, of truthfulness, of pardoning and keeping company of good persons only, becomes free from all diseases.

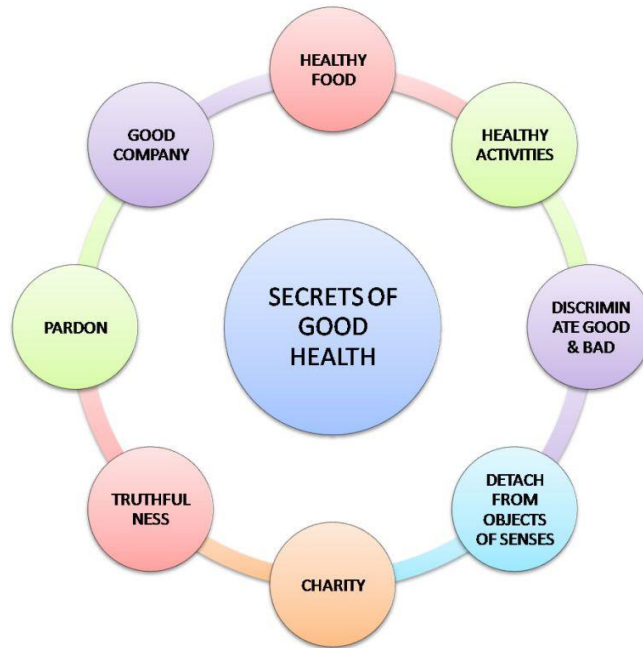


Figure 10. The secrets of good health

The concept of health and disease according to the yoga texts and the lifestyle recommendations

According to yoga, a living being is considered to be perfectly healthy when he is in a state of balanced functioning of all aspects of existence. Thus, 'samatvam', a state of balance or homeostasis is synonymous with perfect health according to ancient Indian scriptures. In fact, the word 'samatvam' is the definition of yoga (Mascaró and Brodbeck 2003).

According to the yoga text, yoga

Vāsīṣṭha, all diseases can be classified as ādhija or anādhija.

Ādhija Vyādhi (stress born disease)

is due to ādhi (stress); it begins as

an internal imbalance caused by

disturbances at the mind level.

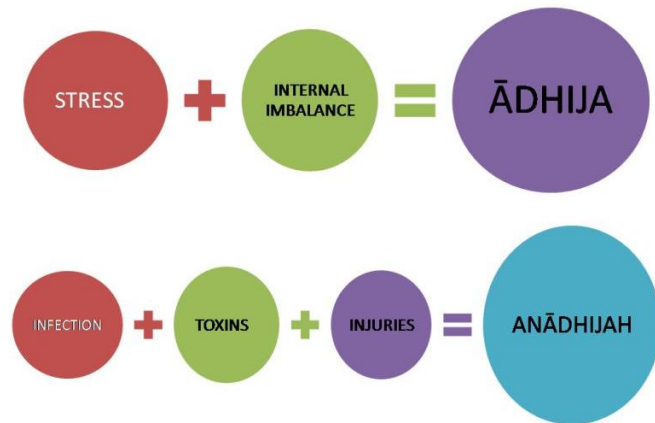


Figure 11. Types and etiology of disease - yoga perspective

On the other hand, the anādhijah vyādhayah are not due to ādhi; they are caused by external causes such as infections, toxins, injuries etc.

Although the final word about the cause of heart diseases is not known, it is clear that it is a lifestyle disease and hence can be classified under ādhija vyādhi (non – communicable life style disease). The text goes on to describe two factors that decide where the ādhija vyādhi manifests. These are: a) genetic predisposition to a particular disease and/or b) an inherent

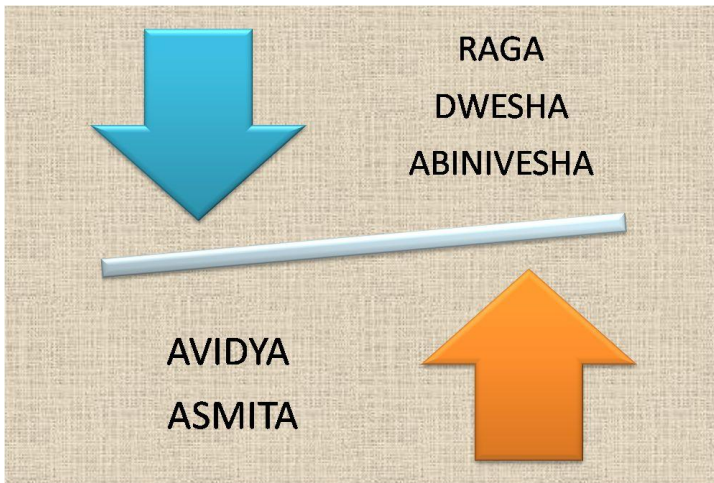
weakness or vulnerability of the organ in the particular individual (Raghuram, Nagendra 2001). The target organ in which the disease manifests may be different in different individuals, but the root cause is the wrong lifestyle which is a manifestation of imbalances that begin in the manomaya kośa (instinctual mental).

These imbalances are believed to occur due to five types of wrong notions (kleśa) which can be considered as intrinsic causes for producing uncontrolled emotional responses (distress).

patañjali, the often quoted yoga guru, says:

अविद्याऽस्मितारागद्वेषाभिनिवेशाः पञ्चक्लेशाः ॥प यो सू ।२ ।३ ॥
avidhyā'smitārāgadveṣābhiniveśāḥ pañcakleśāḥ | pa yo sū | 2 | 3 | |

(i) Ignorance about the true nature of the Self (avidyā), (ii) strong likes (rāga), (iii) strong dislikes (dveṣa), (iv) heightened ego (asmita), and (v) fear (abhiniveśa) are the five kleśas, the cause of distress.



Kleśas are the progressive steps through which the mind gets lost in uncontrollable speed that result in distress and disease.

Figure 12. Kleśas- the cause of disease

Thus, the starting point of mind body disease is the involuntary speed at the mind level that results in persistent speed (vega) which is the definition of stress according to yoga The

speeded-up rewinding negative emotional responses become habituated to concretize as a personality trait. This uncontrolled emotional response pattern that was confined initially to the manomaya kośa is gradually transferred to the prāṇamaya kośa. If nothing is done about correcting the problem at this level then it starts percolating to annamaya kośa. The vulnerability of a particular organ or hereditary pattern decides the localization of the disease. Thus habituated speeded up responses of emotions gets transferred to the body through the medium of prāṇa imbalance.

In patañjali yoga sūtra, it is said ‘the symptoms or manifestations of this distracted state (vikṣepa) are mental pain, anguish, turmoil, despair, tremors, rough and erratic breathing, and general nervousness and anxiety:

दुःख दौर्मनस्याङ्गमेजयत्व श्वासप्रश्वासः विक्लेषसहभुवः ॥प यो सु ॥१३१

duḥkha daurmanasyāṅgamejayatva śvāsapraśvāsaḥ vikṣepasahabhuvāḥ | pa yo su | 1 | 31

Distress, depression, nervousness and labored breathing are the symptoms of a distracted state of mind.

The lifestyle and genetic factors that contribute to the etiology of cardiac diseases are correlated respectively to *sāmānya* (life style) and *sāra* (basic) aspects of *ādhiya vyādhi* as described in *yoga vāsiṣṭha*.

द्विविधो ह्याधिरस्तीह सामान्यः सार एव च ।

व्यवहारश्च सामान्यः सारो जन्मनि यः स्मृतः ॥ यो वा १९१२ ॥ ।

dvividho hyādhirastīh sāmānyaḥ sāra eva ca |

vyavahārasca sāmānyaḥ sāro janmani yaḥ smṛtaḥ | | yo vā | 9 | 92 | |

In cardiac diseases, the *sāmānya* component of the *ādhi* could be equated to wrong dietary habits and lack of physical activity that result in obesity. The *sāra* aspect could be the genetic factor that leads to insulin resistance and other risk factors that goes on to further abnormalities.

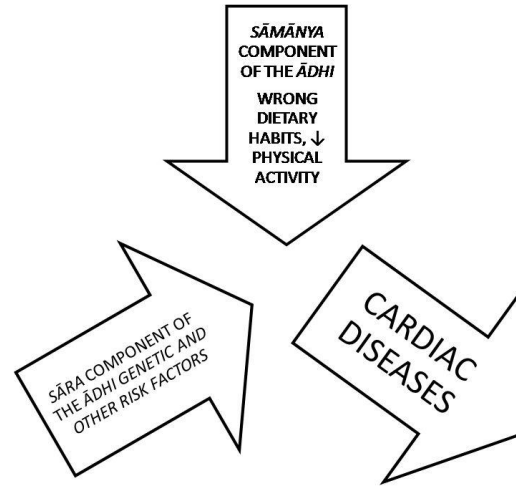


Figure 13. The *sāra* and *sāmānya* components leading to heart disease

The yoga texts say that these abnormalities rise in the mental level. In cardiac diseases, this may be correlated to imbalances in HPO axis and HPA axes resulting from psychosocial stresses (Diamanti-Kandarakis 2009).

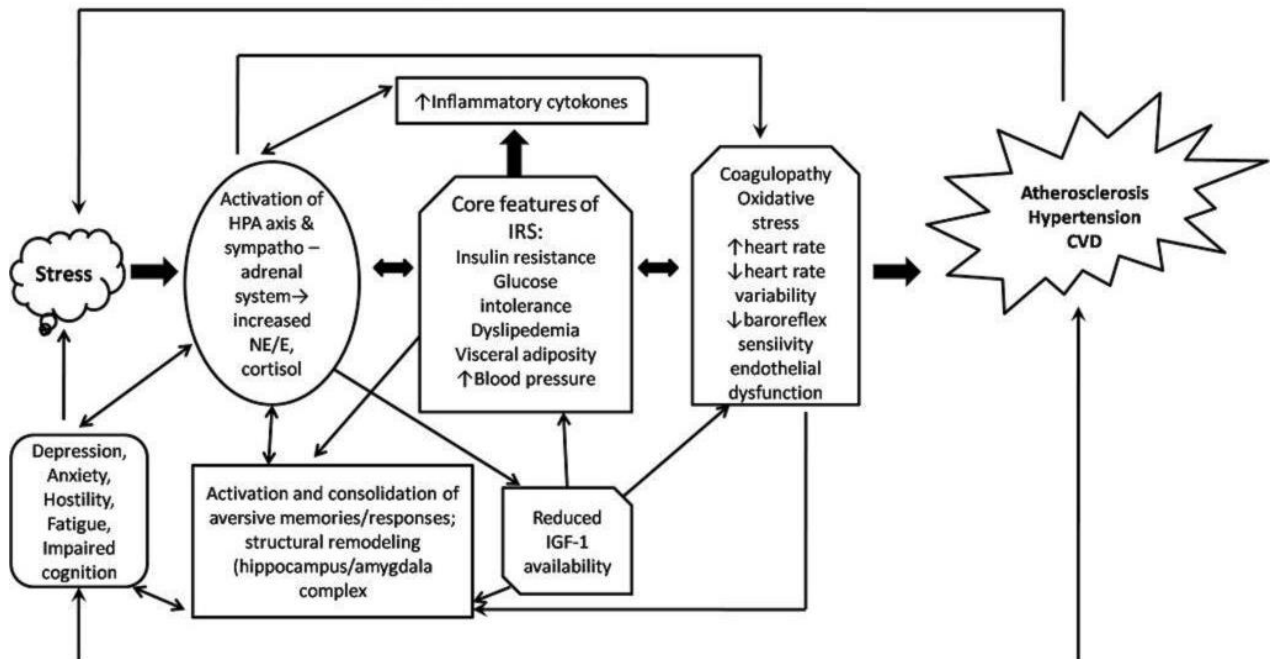


Figure 14. Schematic illustration of the effect of stress in the human body. HPA: hypothalamic pituitary adrenal, NE: nor epinephrine, E: epinephrine, IRS: insulin resistance syndrome, IGF: insulin-like growth factor, CAD: cardiovascular disease

The yoga texts give detailed descriptions of how the imbalance gets transferred from the mind to the body through disturbances in *prāṇamaya kośa*. This is described in this śloka of *yoga vāsiṣṭha*.

चित्ते विधूरिते देहं संक्षोभमुपयाति हि ॥ यो वा । ९।९७ ॥
संक्षोभात्साम्यमुत्सृज्य वहन्ति प्राणवायवः ॥ यो वा । ९।९९ ॥
कुजीर्णत्वमजीर्णत्वमातिजीर्णत्वमेव वा ॥ यो वा । ९।१०० ॥
citte vidhūrīte dehaṁ saṅkṣobhamupayāti hi | | yo vā | 9|97| |
saṅkṣobhātsāmyamutsrjya vahanti prāṇavāyavaḥ | | yo vā | 9|99| |
kujīrṇatvamajīrṇatvamātijīrṇatvameva vā | | yo vā | 9 | 100 | |

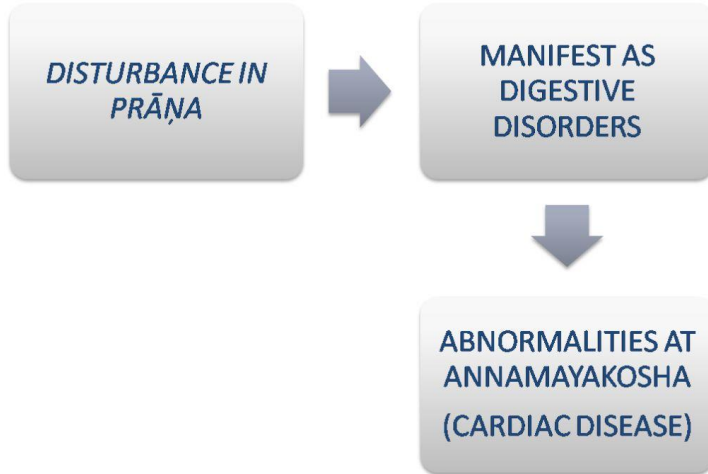


Figure 15. Manifestation of cardiac disease due to disturbance in *prāṇa*

As the *prāṇa* gets disturbed, it percolates to the body to manifest as digestive disorders.

These imbalances manifesting as structural (*Annamaya kośa*) abnormalities such as cardiac diseases may be correlated to the effect of localization of the imbalance in selected target

organs due to disturbed flow of *prāṇa* and blockages of their meridians by the endotoxins generated by the irregular digestion.

This process is described in the following verse.

दोषायैव प्रयात्यन्नं नाडीप्राणविपर्ययात् । यान्यान्नानि विरोधेन तिष्ठन्त्यन्तः शरीरके ॥यो वा ।९।१०१॥

तान्येव व्याधितां यान्ति परिणामस्वभावतः ॥यो वा ।९।१०२॥

doṣāyaiva prayātyannanī nāḍīprāṇaviparyayāt | yānyānnāni virodhena tiṣṭhantyanṭaḥ śarīrake | |yo vā | 9 | 101 | |

tānyeva vyādhitāni yānti pariṇāmasvabhāvataḥ | |yo vā | 9 | 102 | |

Yoga as therapy helps by shifting the awareness from the physical body level i.e. *annamaya kośa* (through the practice of *āsanas*) through the astral sheath i.e. *prāṇamaya kośa* (through the practice of *prāṇayama* and *kriya*); through the emotional realm i.e. *manomaya kośa* (through the practice of *dhāraṇa* and *dhyāna*) through the intellectual level i.e. *viñānamaya kośa* (with the help of knowledge counseling and notional correction) to finally reach bliss i.e. *ānandamaya kośa*. In this state, not only there is an absence of sickness in infirmity but a positive complete healthy state beyond the sickness zone where one accomplishes greater heights of awareness to the real “self”.

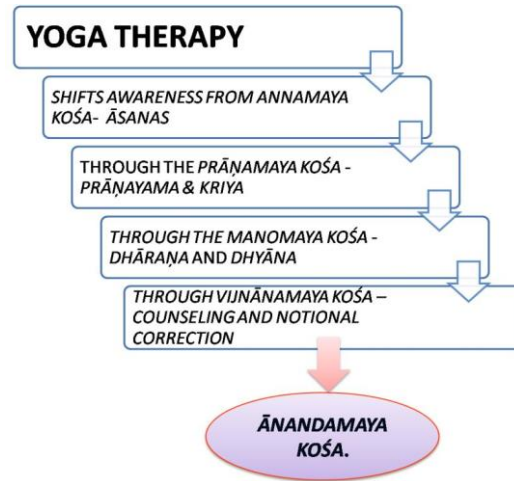


Figure 16. Mode of action of yoga therapy

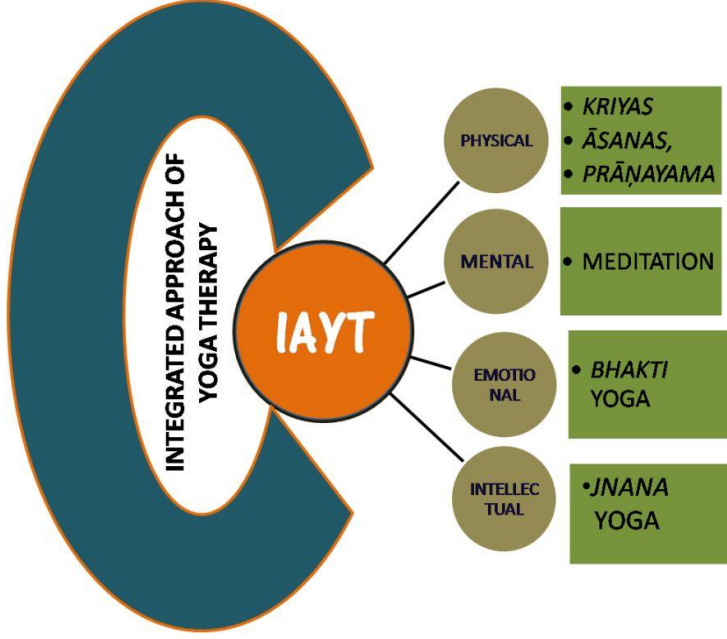


Figure 17. The concept of IAYT

The Integrated Approach of Yoga Therapy (IAYT) intervention integrates the practices at physical (*kriyas*, *āsanas*, *prāṇāyama*), mental (meditation), emotional (*bhakti* yoga), and intellectual levels

(*Jnana* yoga) that help in reducing the heightened activity at all levels and dwell restfully in *vignana* and *ānandamaya kośas*. By regular practice of yoga, one moves from gross states of awareness to the subtle. The concept of awareness is deepened with each of the yoga practices of IAYT module.

kriyā are techniques that help in cleansing the internal passages, remove the endotoxins, and provide mastery over the involuntary reflexes such as vomiting, sneezing, blinking etc. The following śloka talks about the six major *kriyā* described in *haṭa* yoga *pradīpikā*.

धौतिर्वस्तिस्तथा नेतिस्त्रटकं नौलिकं तथा
 कपालभातिश्चैतानि षट्कर्माणि प्रचक्षते ॥ह यो प्र ॥२॥२२॥
dhautirbastistathā netistraṭakani naulikani tathā
kapālabhātiscaitāni ṣaṭkarmāṇi pracakṣate | a yo pra | 2 | 22 | |

āsana form the main component of the IAYT practices that help in mastering the mind through mastering the bodily postures. The texts defines āsana as that posture in which one may stay for a long duration with ease and effortlessness.

स्थिरसुखमासनम् ॥प यो सू ॥२ ॥४६ ॥
sthirasukhamāsanam | pa yo sū | 2 | 46 | |

āsana must be practiced with internal awareness to achieve effortless alertness to meditate on the infinite silence.

प्रयत्नशैथिल्यानन्तसमापत्तिभ्याम् ॥प यो सू ॥२ ॥४७ ॥
prayatnaśaithilyānantasamāpattibhyām | pa yo sū | 2 | 47 | |

Further, when postures become firm and relaxed with regular practice through control of the natural tendencies of the body, and through meditation on the infinite awareness the non duality gets established.

ततो द्वन्द्वानभिघातः ॥प यो सू ॥२ ॥४८ ॥
tato dvandvānabighātaḥ | pa yo sū | 2 | 48 | |

prāṇāyama is the technique to develop calmness of the mind by controlling the irregularities in breathing. Several practices of prāṇāyāma with detailed descriptions are available that help in slowing down the prāṇa activity by manipulating the depth and rate of breathing.

तस्मिन्सति श्वासप्रश्वासयोर्गतिविच्छेदः प्राणायामः ॥पू यो सू ॥२ ॥४९ ॥
tasmīnsati śvāsapraśvāsayorgativicchedaḥ prāṇāyāmaḥ | p yo sū | 2 | 49 | |

Thus, as the disturbances in manomaya kośa can lead to imbalances in prāṇa, by controlling

prāṇa one can calm down the mental upsurges and reach a calm state of mind.

Several techniques of meditation (manomaya kośa practices) are recommended to help a detractable mind to reach complete silence by the process of slowing down the rate of flow of thoughts in the mind with awareness. Patanjali explains this as dhyāna as follows:

तत्रप्रत्ययैकतानता ध्यानम् ॥प यो सू ॥३॥२॥
tatrapratyayaikatānatā dhyānam | pa yo sū | 3 | 2 | |

Awareness in Prāṇayama is said to be established when the breath stops naturally and involuntarily leading to a deep state of absorption or samādhi.

वाह्याभ्यन्तरविषयाक्षेपी चतुर्थः ॥प यो सू ॥२॥५१॥
vāhyābhyantaraviṣayākṣepī caturthaḥ | pa yo sū | 2 | 51 | |

When in that location, there is one continuous thread-like flow of one's instinctive interest that is the effortless linking of the attention to a higher concentration force or person. As one moves on in deeper and deeper meditation the mind becomes silent and merges in the object of meditation. This state is called samādhi. patañjali explains in the following verse the process of this merger that occurs in samādhi, the higher transcendental states of awareness, in the following sūtra:

तदेवार्थमात्रनिर्भासं स्वरूपशून्यमिव समाधिः ॥प यो सू ॥३॥३॥
tadevārthamātranirbhāsaṁ svarūpaśūnyamiva samādhiḥ | pa yo sū | 3 | 3 | |

This shift of awareness to higher states of consciousness appears to be the real 'healer within' which helps the practitioner to reverse the long standing habituated patterns of stress responses.

The concept of health and disease according to the upaniśad and the lifestyle recommendations

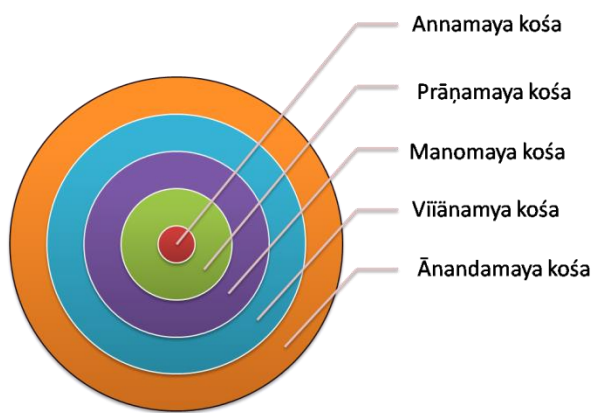
The veda, the upaniśad, and the bhagavad gīta are considered as the major scriptures of India. The veda, supposed to be the oldest and the doctrine of Indian culture and 'Way of Life', perceives divinity in fire, water, wind, and similar natural elements (Avasthi, Grover, & Kate, 2013). The veda provides a detailed elucidation of preservation of will power, emotions, inspiration, and consciousness. The term unmāda (psychosis) has been explained as a deluded state of mind. There are references to lifestyle related physical ailments including that related to the heart . The Rig veda mentions hṛdroga [1.50.11]. The atharvaṇa veda reads hṛdayāmaya and hṛdyota [6.14.1, 5.30.9 & 6.127.3]. Water has been mentioned as hṛdyota - bheśaja [remedy for hṛdroga]. hṛdroga is also treated with morning Sun rays along with hariman [Rig veda -1.50.1]. Among the diseases to be treated with the herb kupudru, hṛdayāmaya is also mentioned [atharva veda] (Vrat, n.d.).

The upaniśad are important philosophical texts which forms the base for the later Indian philosophies. The word ' upaniśad ' means sitting near the feet of a master (upa = near and niśad = sitting down). Another interpretation says upaniśad as 'that which destroys ignorance'. The philosophy driven by the upaniśad is known as the vedānta, literally meaning, 'the end of the veda ', because they form the last part of the veda and also because

in them, the veda reach the ultimate philosophy. The upaniśad circle around the central theme of 'exploration of truth, probing and analyzing the connection of body and mind.

Panca Kośa concept of human system

The taitreya upaniśad (Swami Lokeswarananda 1996) describes that the human system is not just the gross physical form, but is made up of five levels of subtleties of existence which can be perceived by



introspective investigations, viz.: physical (Annamaya kośa), Subtle bio-energy or Prāṇa (Prāṇamaya kośa), Instinctual mind (Manomaya kośa), Intellectual or discriminative mind (viñānamaya kośa) and a blissful silent state of mindful awareness (Ānandamaya kośa).

Figure 18. The Panca Kośa concept of human system

Annamaya Kośa

This refers to the material (anna) aspect, the physical personality. Every cell that constitutes the physical body (a conglomeration of molecules/quantum pockets) is made of five elements (Panca bhūta), namely the earth (Prithvi – the solid quality), water (Jala or āpah- the fluid quality), fire (Agni or Tejas – the heat), wind (Vāyu – the gaseous quality), and space (Ākāśa). This is normally nourished by the gross food that we consume.

prāṇamaya kośa

prāṇa is the vital life energy or the subtle bio-energy from which even the gross cells of the

annamaya kośa are nourished. prāṇa is the basic fabric of this universe both inside and outside the body. A uniform harmonious flow of prāṇa to each and every cell of the annamaya kośa keeps them alive and healthy. prāṇa (Raghuram and Nagendra 2001) has the capacity to increase or decrease by itself depending on demand. It flows through subtle channels in the body called nādi and has a directional flow to support all physiological activities. prāṇa has five divisions called panca prāṇas:

- a) apāna is that which promotes downward activities and is responsible for functions like defecation, urination, menstruation, ejaculation, parturition etc.
- b) prāṇa (also called mukha prāṇa) is responsible for breathing movement.
- c) udāna is responsible for upward activities like vomiting.
- d) samāna is responsible for proper digestion and balancing the prāṇa and apāna.
- e) vyāna is that which is responsible for all activities in the periphery like nerve impulses, blood circulation and cellular activity in all cells.

A balance between all these five aspects of prāṇa is health; imbalance resulting from an excessive uncontrolled flow of prāṇa to any organ is ill health.

manomaya Kośa

This is the mental personality wherein one carries on different cognitive functions such as perception (Manah) and generates emotions. Mind, which is defined as a ‘conglomeration of thoughts’ perceives and responds to the input from sense organs. The component of the manomaya kośa in which a rapid recycling takes place and gathers momentum is called the ‘Emotions’ (Bhāvana). This is characterized by feelings such as "likes or dislikes", “love or hate”. Distress, which is at the root cause of many health problems, begins in manomaya kośa as uncontrolled persistent suppressed negative emotions. Emotions are characterized by

uncontrolled speeded up loop of flow of thoughts. When the emotions become powerful, they start governing our actions. This can lead to disturbed life style if the person loses discipline and performs wrong actions. This result in imbalances called ādhi or stressful heightened reactions to situations that involve autonomic arousal. Long standing ādhis get pushed into prāṇamaya and annamaya kośa causing vyādhis. Thus, manomaya kośa is the mental and emotional library, a subtle layer of existence.

vijñānamaya kośa

This is the discriminative mind that stores the concepts of right and wrong knowledge. We all have two minds. For e.g., when the manomaya kośa perceives and responds by an emotion of joy and says, "Wow! This is a beautiful rose, I want to have it" and starts instructing the hands (the physical body, the annamaya kośa, by increasing the flow of prāṇa) to pick up the flower; the discriminative mind says: "Sorry, you cannot pluck that flower; it does not belong to you; it is from the neighbor's garden" and we stop the action. This conscience within that continuously guides one to do a thing or not to do a thing is the vijñānamaya kośa. vijñānamaya controls the manomaya kośa to achieve mastery over the basic instincts. This component of the mind has developed greatly in human race.

ānandamaya kośa

This is the bliss layer, the most subtle aspect of our existence which is devoid of any form of emotions; a state of total silence, complete harmony, and perfect health. While in manomaya kośa, the creative power predominates, in vijñānamaya kośa, it is the power to discern and discriminate. Bliss is embodied in ānandamaya kośa, the highest stage of evolution in the

manifested existence. In his journey towards the Ultimate, man crosses these layers one by one (Raghuram, Nagendra 2001).

Process of becoming gross from ānanda to ānandamaya kośa

Ordinary people feel their identities with annamaya, prāṇamaya and manomaya kosha and remain established at that level. The evaluation of well-being and ill-being is usually limited to this narrow framework. The seers and sages have urged men to move beyond the limited self-definitions as a way of overcoming suffering and experiencing the dimension that is bliss itself. This is the trick, stated in the Upanishads, in achieving true happiness and well-being. This exalted state may be achieved through a process of self-purification by following a path of virtue (dharma). It involves overcoming of desires, attachments, regulation of our sensory cravings, and negative emotions namely, anger, jealousy, hatred, and pride.

Śvetāśvatara upaniśad (Nikhilananda 2008) describes that a human being is in perfect harmony with nature and healthy when he is established in ānandamaya kośa which is the unchanging state of being, the self (called brahman) and the causal state of being from where all other (ever changing) kośa emerge. This state is experienced as a state wherein one reaches a state of inner quietude with awareness and establishes in the right knowledge, viz. 'I am made of the same universal consciousness and bliss that forms the base material of the entire creation'. The text gives an example: a salt doll dives into the ocean to understand the depth of the ocean but gets the joy of becoming the ocean itself by losing its individual entity (Nikhilananada 2000).

Waves begin in this ocean of blissful quietude and become grosser and grosser to form the other four components of the body.

तस्माद्वा एतस्मादात्मन आकाशः संभूतः । आकाशाद्वायुः । वायोरग्निः । अग्नेरापः । अद् भ्यः पृथिवी ।
 पृथिव्या ओषधयः । ओषधीभ्योऽन्नम् । अन्नात्पुरुषः । स वा एष पुरुषोऽन्नरसमयः ॥तैत्तरिय ॥२॥१॥
*tasmādvā etasmādātmana ākāśaḥ sambhūtaḥ | ākāśādvāyuh | vāyoragniḥ | agnerāpaḥ | ad
 bhyaḥ pṛthivī |
 pṛthivyā ośadhayaḥ | ośadhībhyo'nnam | annātpuruṣaḥ | sa vā eṣa
 puruṣo'nnarasamayaḥ | | taitariya | 2 | 1 | |*

From that brahman, which is the self, was produced space. From space emerged air. From air was born fire. From fire was created water. From water sprang up earth. From earth were born the herbs. From the herbs was produced food. From food was born man. That man, such as he is, is a product of the essence of food, the physical matter.

The first wave (spandana) that appears is the 'I' (self awareness) followed by several varieties of waves that form a template of right knowledge, the vijñānamaya kośa. In this state also man is in perfect health as he is in tune with nature (Swami Lokeswarananda 1996) and leads a healthy life style with complete mastery over his mind (chapter1, verse3) (Woods JH 2003). As these waves gather momentum with higher amplitude and rewinding speed [(chapter5, verse26) (Mascaró and Brodbeck 2003), (chapter8, verse88) (Swami Venkatesananada and Christopher Chappel 1984)] it gathers energy to become the manomaya kośa in which likes and dislikes begin (tattva bhoda, verse49) (śaṅkarācāry 1986).

As the process continues it goes on to become the vital energy (prānamaya kośa) and the physical molecules (annamaya kośa) (Swami Lokeswarananda 1996).

स य एवंवित् । अस्माल्लोकात्प्रेत्य । एतमन्नमयमात्मानमुपसन्क्रम्य । एतं प्राणमयमात्मानमुपसन्क्रम्य ।
 एतं मनोमयमात्मानमुपसन्क्रम्य । एतं विज्ञानमयमात्मानमुपसन्क्रम्य ।

एतमानन्दमयमात्मानमुपसन्क्रम्य । इमाँल्लोकान्कामात्री कामरूप्यनुसंचरन् । एतत् साम् गायन्नास्ते ॥

तैततिय ॥३॥५॥

*sa ya evanivrit | asmāḷlokātpretya | etamannamayamātmānamupasankramya | etani
prāṇamayamātmānamupasankramya |
etani manomayamātmānamupasankramya | etani vijñānamayamātmānamupasankramya |
etamānandamayamātmānamupasankramya | imāḷḷokānkāmātrī kāmārūpyanusāñcaran |
etat sām gāyannāste | | taitatiya | 3 | 5 | |*

He who knows thus, attains, after desisting from this world, this self made of physical matter. After attaining the self made of matter, then attaining the self made of vital force, then attaining the self made of mind, then attaining the self made of intelligence, then attaining the self made of bliss, and roaming over these worlds with command over material world at will and command over all forms at will, he continues singing this sāma songs.

The subtle controls the gross i.e. if one masters prāṇa he can manipulate the functions of physical body; mind can manipulate prāna; vijñāna can master the mind and prāna (Chapter1, verse40) (Woods 2003). The goal of life is to establish in a state of complete mastery by remaining in a state of vijñāna a state of complete freedom and contentment, freedom from all distress and disease (śvetāśvatara upa. chapter2, verse12) (Nikhilananda November 4, 2008). This is a state in which one develops the ability to manipulate the laws of nature within the body and outside the body (chapter1, verse4) (Woods 2003).

2.5 SUMMARY

Based on these concepts, we developed the content and methodology of the yoga program and incorporated relevant practices/ jñāna yoga sessions that would help directly or indirectly deal with each of the 'needs' of the cardiac patients as well as their care-givers participating in our trial. This comprehensive and Indian traditional-text-based yoga module

was prepared as an intervention to target the patients with left ventricular failure following myocardial infarction. The module which was then validated by experts, was successfully implemented in the clinical trial complementary to standard care of cardiac patients.

3.0 REVIEW OF SCIENTIFIC LITERATURE YOGA AND CARDIAC HEALTH

3.1 DIAGNOSTIC CRITERIA

History and physical examination play a vital role in the diagnosis of left ventricular dysfunction and its underlying cause. It is a challenge to diagnose the condition based on the symptomatology, in which circumstance, objective measures play an important role (Ahmed Ali, 2009).

Cardiac function is a predictor of prognosis and mortality in CAD patients. LVEF is a good indicator of cardiac performance. The LVEF could be measured using various techniques, among which the most preferred technique is the trans-thoracic, two dimensional echocardiography. It is non invasive, widely available, quite comfortable for the patient, safe and gives quality images of the heart and the associated structures. It provides an estimate of systolic and diastolic functions of the heart (Ahmed Ali, 2009). The American Society of Echocardiography (ASE) gives a cutoff value of 55% for LVEF as measured on a echocardiogram and values less than this to be considered abnormal. A large cohort study involving 2300 European whites and Indian Asian subjects reported a cutoff value of 52%. Reduced left ventricular function is associated with unfavorable long term prognosis in CAD patients (Raghuram et al., 2014). Edelman et al. adapted the ASE guidelines to perform echocardiography, where Simpson's model of discs was used to demonstrate left ventricular ejection fraction. Two categories of patients were detected, namely, systolic heart failure