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Yoga Vijnana The Science of Yoga



EDITORIAL

Life is a blend of consciousness, intelligence, senses perception, and organs of actions. It is also a perfectly happy disposition of mind toward sorrow and joy, pain and pleasure, evil and good, inspiration and expiration. Nature provides this precise instrument- the body- to adjust to its rhythm with the turmoil of day-to-day pressures. When these imbalances are over stepped, physical, physiological and psychological diseases set in, and doubts and fear occupy the seat of the mind, creating social, mental and emotional disorders. Life doesn't aspire for transient balance and harmony yet it desires conducive health to synchronize a balance between body and mind. Here, Yoga the precious gift of nature; a panacea from ancient to modern living plays its multidimensional and multifaceted roles for an integrative personality. It reveals harmony and governance at subtler layers of existence. It provides relish and rejoices for solitude. The essence of Yoga is the silence and receptivity that implants and induces in the mind.

The first article "Role of Yoga and Ayurveda in Cardiovascular Disease" written by Dr. Madanmohan has pressed the inevitable and complementary roles of both Yoga and Ayurveda in the enlightened of health, especially for the Cardiovascular menace. The second article "Promotion of Mental Health in the light of Patanjala Yoga Sutra" by Dr. B.R. Sharma has articulated the relationship between the psycho-physiological concerns and 'inner disturbances' of mankind. It attempts to understand the concept of Mental Health in the perspective of Patanjala Yoga Sutra. The third article on "Yogic Principle of Healing" by Dr. A.K. Ghosh has embellished the possibility of consciously altering physiological activity of human being, thereby an establishment of harmony and balance in all the sheath of human personality through Yoga.

The fourth article "Properties and Powers of Prana" by Dr. Veda Vrat Aalok has highlighted the importance of Prana. Prana strings body, mind, and spirit together like beads on strand and the force of it is necessary to keep the living beings alive. The fifth article "The latent serpentine and her passage" written by Dr. Indulata Das has minutely elaborated about Kundalini that generally remain latent with worldly persons but it arises and pierces six Chakras situated in different places of body and ultimately reaches the seventh centre which is the ultimate goal of Yogis. The sixth article "Traditional Yoga for value Education" written by Mrs. Mansi Bera, Dr. S. A. Sonawane and Dr. T.K.Bera has mentioned that Patanjali Yoga is more inclined towards enriching one's value education, whereas Hathayoga practices are found useful to enrich one's health related fitness.

The seventh article on "Shavasna- The best non-pharmacological and inexpensive medicine for hypertension" by Dr. Parveen Bansal, Dr. Sanjiv Kumar, Dr. S. Sharma and Dr. T. Bikshapathi has inferred that how Shavasana affects brain complex and protect the body from oxidative stress. It also stressed on that shavasana lowers the level of free radicals thereby reduces the genesis of hypertension. The eighth article on "Yoga: Path of personified emancipation" by Dr. Rajjan Kumar has made the realization of gap between mystery and manifestation. The article also mentioned that Yoga lays greater emphasis on practice, rather than philosophy behind it. The ninth and the last article written by Dr. I.V.Basavaraddi and Dr. N.G Mahadevappa on "Relationship between Yoga and Indian philosophy" where they elaborated the thin line between Indian philosophy and Yoga. They genuinely discussed how particular type of Indian philosophy leads to Yoga and Yoga to particular type of Indian philosophy.

In the light of above mentioned facts and facets and ever-increasing demands of this ancient philosophy, "Yoga Vijnana" a quarterly journal from MDNIY will certainly help to the people. The third issue of Yoga Vijnana is before you. I hope, the articles will be able to provide a holistic knowledge among scientists, researchers Yoga practitioners, and groomed the student community, and those who are interested in the field of Yoga.

Sarve Bhavantu Sukhinah, Sarve Santu Niramayah Sarve Bhadrani Pasyantu, Maa Kaschid dukh bhagbhavet Om Shantih, Shantih, Shantih

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ROLE OF YOGA AND AYURVEDA IN CARDIOVASCULAR DISEASES

Madanmohan*

Cardiovascular Disease: World Scenario

ll over the world, cardiovascular disease imposes a significant morbidity and Amortality. Inspite of greatly improved diagnostic and curative cardiology, millions die of heart disease every year. Although US health professionals and cardiologists do follow healthier lifestyle than general adult population, the incidence of higher BMI and obesity (8%), dyslipidemia (28%), hypertension (14%) and coronary events (4%) among them is a matter of concern [Abuissa et al. Am J Cardiol, 97: 1093, 2006]. In India, heart disease was relatively uncommon 50 years ago. However, there has been an alarming increase in the incidence of hypertension and coronary artery disease among the affluent sections. It is a matter of concern that relatively young (30-50 y) Indian professionals who are at the peak of their career and productivity become victims of angina. The most important cause is stress and strain of "modern" life characterized by competition, great speed and greater greed. Other causes are i) change in family structure leaving no cushion for one's day to day problems ii) opting for timesaving high fat, high calorie, nutrient-poor junk food iii) sedentary lifestyle, increase in automobile use and lack of physical exercise and iv) increase in elderly population.

Hypertension is very common among

intellectual and ambitious persons who are high up the professional/social ladder. In industrialised countries, upto 25% adults have diastolic pressure > 90 mmHg. In India, about 7% urban adults and about 4% rural adults are hypertensive. The incidence of coronary artery disease, cerebrovascular events and end-stage renal disease is increasing. Coronary artery disease alone accounts for about 30% deaths in men and is the single most frequent cause of deaths in men under 65 years.

Strengths and Limitations of Modern Medicine Good health and freedom from disease is the greatest achievement, a blessing indeed and modern medicine, yoga as well as ayurveda aim at it. All these three systems have sound scientific basis and universal outlook. They are complementary and bound to come together. It is gratifying that yoga has started using modern technology and scientific methods while science has started studying the effects of yoga techniques. Modern medicine is based on observation and rational analysis and is objective in its essence. On the other hand subjective experiences, intuitive wisdom and creative illumination are the essence of yoga. The recent advances of modern allopathic medicine are awesome. Powerful drugs have conquered many infections and decimated epidemics. State of the art diagnostic techniques and advances in surgical procedures, molecular biology and genetic

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engineering are commendable. However, it primarily depends on drugs which have many harmful side effects. Over-treatment with drugs can have serious consequences. It does not have full answers for many chronic and degenerative diseases whose incidence is increasing rapidly. Many hypertensive and heart patients have to take life-long treatment using drugs that are not only expensive, but have many undesirable side effects.

It needs to be emphasized that allopathy does not have all the answers and has its own limitations. Despite spectacular advances, it has not been able to deliver health care to large segments of population, especially in developing countries like India. Our national and international goal of "Health for all by 2000 AD" has remained a pipe-dream. High technology and expensive medicare mean low coverage as escalating diagnostic and curative costs render modern medicare beyond the reach of majority of our citizens. Yesterday's "wonder drugs" are being replaced by today's more powerful and "safer" drugs and this process continues. Resistance to antibacterial drugs, viral infections and autoimmune disorders remain problem areas. Allopathy is far from effective in chronic degenerative, old age and lifestyle disorders which are the bane of modern society.

It is clear that there is a pressing need for promoting yoga and ayurveda as complementary systems to augment modern medicare. They are natural allies and their coming together is inevitable and long overdue. Their full cooperation and ultimate merger will give us a more effective and enlightened health science that will be a boon to humanity. Popularisation of yoga and ayurveda will give a big boost to

public health. As a result, there will be a great relief to our under-staffed, fund-starved and overburdened public health delivery system. To achieve this beautiful goal, what we need is political and administrative will and affirmative action by health professionals.

Yoga and Ayurveda: an Introduction

Recently, there has been an increased awareness and interest in health and natural remedies among the general public as well as scientific community. The scientific – spiritual discipline of yoga is an effective and time-tested method for improving our health as well as prevention and management of diseases, especially chronic psychosomatic disorders. The first book of humankind, Rigveda, [5:81:1] mentions about vogic meditation by the wise. Yajurveda, [11:14] exhorts us to practice yoga for enhancing mental health, physical strength and prosperity. Upanishads are replete with yogic concepts. Lord Krishna is called as Yogeshwar (Lord of Yoga) and in 700 verses of his Bhagavadgita, the term yoga occurs 105 times. In addition, yoga related terms like pranayam, meditation and samadhi occur repeatedly in Bhagavadgita. In unequivocal terms, Yogeshwar Krishna emphasizes the superiority of a yogi [Bhagavadgita, 6: 46]. Patanjali (about 200 BC) codified the ancient marvel of yoga as ashtanga (8-limbed) yoga which is one of the six schools of Indian philosophy and is known as Yoga Darshan. More recently, modern research has established the scientific basis of yogic techniques and yoga has gained international acclaim and acceptance. Yoga has a sound and practical philosophy, scientific basis and universal, non-sectarian approach. It is a physical-mental-spiritual discipline for improving

overall health and achieving union and harmony between our body, mind and soul. Yoga means union. The ultimate goal of yoga is union of our individual consciousness with the Universal Divine Consciousness in a superconscious state known as samadhi.

Modern medicine is materialistic and concerned primarily with our body. Drugs are the cornerstone of its management. In contrast, yoga is a holistic system for the integrated development of our physical, mental as well as spiritual aspects. Practice of yoga disciplines, strengthens, quietens and relaxes our body and mind. For prevention as well as management of stress and stress disorders and for achieving psychosomatic relaxation, there is no system as effective and far reaching as yoga. In contrast to negative side effects of drugs, yoga has positive, beneficial "side effects" in terms of improvement of our psychosomatic health.

Ayuh means life, Veda means knowledge and ayurveda means knowledge or science of life. Avurveda, which is being practised in India for thousands of years is the world's first well organized health science that has sound scientific and philosophical basis. Its classical texts like Sushrut Samhita (600 BC) and Charak Samhita (100 AD) are a great source of information about holistic health, herbs, diseases and surgical treatment. Like yoga, ayurveda derives its origin to the hoary Vedas. Hence, it is one of the sub-Vedas (upa-Veda). Vedas describe prayer verses for energetic life of hundred years and beyond, with all the senses in perfect condition [Yajur Veda, 36:24]. For this, one should live a joyful life free from tensions and worries [Yajur Veda, 3:62]. The emphasis is on natural lifestyle, contact with elements of nature, life-enhancing rays from the rising sun, agnihotra (or homa, in which herbs and other items are offered to fire along with chanting of Vedic verses), use of health-enhancing herbs and living a divine life [Yajur Veda, 36:10; Atharva Veda, 9:8:22]. Vedic rishis lived such a nature-centered lifestyle based on the principles of yoga and ayurveda. Mantra chanting and noble actions purify and strengthen our mind and inner self. The result is improved psychosomatic health and natural healing.

Yoga and Cardiovascular Disease

The ancient marvel of yoga is the priceless gift of India to the world. Yoga is beneficial in health as well as disease as it is holistic and has promotive, preventive as well as curative potential. Our body, mind and spirit are intricately interrelated and constantly influence one another. The holistic science of yoga has been designed to have subtle effect on our whole being, body, mind as well as spirit. The allpervasive stress and stress-induced disorders like hypertension and angina are fast growing epidemics and bane of "modern" society. The holistic science of yoga is the best method for prevention as well as management of stress and disorders. The stress-induced psychophysiological responses to yoga are opposite to the stress response. Shavasan, voganidra, meditation and slow, rhythmic pranayam breathing are very effective in calming the mind and promoting psychosomatic health. Cardiac patients are sensitive and reactive. Yoga relaxation techniques calm the mind and make one emotionally balanced. Consequently, minor disturbances do not cause emotional upsets and cardiovascular problems.

Throughout the world, hypertension is a common condition and many patients are on life-long medication as a way of life. Drugs are expensive and have many adverse side effects. Hence, non-drug management like voga should be the first choice. If diagnosed early, majority of the cases of essential hypertension can be managed effectively by yoga alone. In more advanced cases, yoga can decrease drug dosage and improve the overall quality of life. Besides being inexpensive, safe and effective, yoga improves overall health and can be combined with allopathic or avurvedic medication. For best results, yogic lifestyle should be adopted early in life as it has been demonstrated that atherosclerotic plagues in coronary arteries form early in life. Moreover, in a recent study, we have demonstrated that the levels of total and LDL cholesterol are higher in prehypertensive as compared to normotensive subjects [Pavithran et al. Indian J Physiol Pharmacol, 51:96, 2007]. Hence, yogic relaxation and yogic diet should be adopted early in life to prevent progression of the condition and development of hypertension. The effectiveness of yoga in the management of hypertension has been demonstrated from our laboratories [Vijayalakshmi et al. Indian I Physiol Pharmacol. 48:59, 2004] and also by earlier workers [Datey et al. Angiology, 20:325, 1969; Patel and North. The Lancet, 2:93, 1975]. Hence, it is recommended that yogic relaxation techniques should be adopted as the first line of treatment for prehypertension, borderline hypertension and mild hypertension. Yoga has therapeutic potential in other conditions also. In an interesting study, we have recently demonstrated that yoga relaxation training is beneficial in patients with benign ventricular ectopies [Ravindra et al. Int J Cardiol, 108:124, 2005].

Therapeutic effect of yoga may be due to i) management of stress ii) improvement of cardiorespiratory function and overall fitness and iii) modulation of autonomic function. Stress is an important causative factor in cardiovascular diseases like hypertension and angina. In an interesting work from our laboratories, we have demonstrated that subjects trained in voga can achieve a state of deep psychosomatic relaxation associated with highly significant decrease in oxygen consumption within five minutes of practising savitri pranayam (a slow, rhythmic and deep breathing) and shavasan [Madanmohan et al. The Yoga review, 3:25,1983]. These findings are consistent with the report that yoga training not only produces a significant decrease in basal anxiety level, but also attenuates the change in anxiety score in stressful situations such as examination [Malathi and Damodaran, Indian I Physiol Pharmacol, 43:218, 1999]. It has also been reported that yoga training helps in development of resistance against stress [Udupa and Singh. JAMA, 220:1365, 1972l. Practice of asans and pranayams results in overall improvement in physical fitness and cardiorespiratory functions. In a study conducted on medical students, we have demonstrated that yoga training of 12 weeks duration produces a significant increase in respiratory pressures, breath holding time and handgrip strength [Madanmohan et al. Indian J Physiol Pharmacol, 36:229,1992]. This indicates an improved physical strength and cardio-respiratory function. We have also reported that after voga training. exercise-induced stress to cardiovascular system is less severe [Madanmohan et al. Indian J Physiol Pharmacol, 48:461, 2004]. Yoga training promotes emotional and physiological balance. In an interesting study, it was found that a brief (15 min) yoga based relaxation training

normalizes the function of autonomic nervous system by deviating both sympathetic and parasympathetic indices towards more "normal" middle region of the reference values [Toivanen et al. J Psychophysiol, 8:11,1994]. These studies show that yoga has a great potential to improve our physiological functions, psychosomatic health and overall performance.

Ayurveda and its Role in Health and Disease Drugs have traditionally been the cornerstone of western allopathic medicine. The primary concern of allopathy is patient and his disease, drugs and other modes of treatment. On the other hand, avurveda, which is a rich store house of health wisdom and herbs, has traditionally been holistic in its approach. The centre of its study and research is the whole human being, i.e. his physical body made of five elements of nature (pancha-bhoot), senses, mind and soul [Charak Samhita, Su, 1:42]. Soul, an entity different from matter, is also called as atma or purush. The concept of yoga and ayaurveda that our personality includes the existence beyond our gross physical body is supported by modern parapsychology. Cure of physical ailments is not the primary goal of ayurveda. Charak gives the two main goals of ayurveda as i) protection of health and promotion of vitality of a healthy person and ii) cure of disease of a patient [Charak Samhita, Su, 30:26]. A distinctive feature of avurveda is that it recognizes differences in the nature of our physical bodies (prakriti) and does not treat an organ / system in isolation. Its aim is not to discover bacteria for a disease and then drugs for their annihilation. Being concerned with our total health and welfare, ayurveda is called as holy science [Chark Samhita, Su, 1: 43].

According to ayurveda [Charak Samhita, Su, 11:35], the three pillars of healthy and long life are i) ahar, i.e. proper diet ii) vihar, i.e. proper activities and iii) brahmacharya, i.e. divine lifestyle and control of sexuality. A person whose lifestyle is based on these principles and is truthful, liberal, forgiving and serves noble persons will never be sick [Ashtanga Samgraha, Su, 4:46]. On the other hand, violation of these principles is the root cause of disease. In order to remain healthy, one must remain busy in good deeds based on noble intention. Ayurveda gives importance to brahmacharya which is usually translated as celibacy. Brahamacharya is not just celibacy. Its literal meaning is living a divine life for which control of sensuality and sexuality and right use of creative power are essential. Diet and fasting are fundamental in naturopathy. Ayurveda also considers improper and unnatural food habits as important factor in causation of disease. Undigested, junk food and accumulated wastes are considered toxic as they produce changes in blood, lymph and other body fluids resulting in imbalance of elements [Charak Samhita, Su, 9: 4,5]. With regulated diet, many diseases can be prevented and cured and without that, drugs can not give a real / lasting cure. Ideal diet according to ayurveda should be i) nutritionally balanced and life-giving ii) pleasing to senses iii) easily digested iv) fresh and natural, v) obtained, prepared, served and eaten with a pure and calm mind and vi) taken in moderation. Such a diet is called as "satvik diet" and is essential for vogic discipline. Pleasantly agreeable and easily digestible diet satisfies our senses and nourishes our body. Such a diet is also hearthealthy. For heart patients, ayurveda recommends appetising herbs like ginger.

Ayurveda emphasizes that in health, the

elements are in balance and harmony (homeostasis) and there is inner joy. In ill health, this harmony is lost. Hence, the purpose of ayurveda is to restore the balance [Charak Samhita, Su, 9:4; Charak Samhita, Vi, 1:5; Sushrut Samhita, Su, 15:48]. A person is considered healthy when he is joyful and at ease with himself. For prevention of diseases and promotion of health, strength and longevity, ayurveda recommends purification of body at least once a year by panchakarma during spring or rainy season [Ashtanga Hridaya, Su, 13:30]. This improves digestion and restores inner balance and homeostasis. Disease can be effectively eradicated by purification, fasting and

readily available herbs. However, it is emphasized that weak patients should not be given strong medicines, nor cleansing procedures. Ancient ayurvedic texts have given detailed description of herbs that increase mental power, physical strength, resistance, vitality and performance. Such herbs are called as rasayan. Ajashringi is described as cardiotonic herb and mango and pomegranate are heart-healthy fruits [Charak Samhita, Su, 4:9]. Heart patients are advised to avoid extremes and observe moderation in eating, exertion and sex. They should not stop natural urges like sneeze, urination and defecation.

PROMOTION OF MENTAL HEALTH IN THE LIGHT OF PATANJALA YOGA SUTRA

Dr. B.R. Sharma

ABSTRACT

This paper proposes that the psycho-physiological concerns of mankind cannot be solved unless we understand the deep underlying roots of the 'inner disturbances' of man. Sage Patanjali, widely acclaimed as an expert in Indian psychology, has suggested certain Yoga techniques both for understanding these roots as well as remedial methods by bringing suppressed & repressed thoughts, feelings, urges, fears, etc. to the conscious level and channelizing them towards total Health. The paper attempts to understand the concept of Mental Health in the perspectives of Patanjala Yoga Sutra, with the purpose of exploring its applied nature for understanding and tackling psycho-physiological problems.

Key words: Mental health, citta-nadi, citta-prasadanam, kriyayoga, pratipaksabhavanam, astangayoga.

Introduction

In this age of modern science and technology, if we observe the general health state of mankind we have to accept that in spite of the major advancements in the field of health care, we are losing our axis of balance and harmony at all levels i.e. physical, mental, emotional, ethico-social and spiritual and thus we are living in the world of mounting tensions in every sphere of life without having much sense of direction of healthy life and living. Moreover, what we are presently doing is just trying to overcome our psycho-physiological problems by opting one pathy or the other at superficial level, without going to the roots of these problems, that may give us a temporary relief but can not

provide a permanent solution and therefore, the need of the hour is to find out deep underlying roots of the 'inner disturbances' of man so that we can live at ease within and with our social environment.

Yoga, basically a science of Spirituality, has recently been widely recognized as a science of Health and Healing, not only in India but throughout the world for managing various psycho-physiological problems of man. Sage Patanjali (about 200 BC), the author of Patanjala Yoga Sutra, whose work in the field of Human Psychology is today recognized in the West, provides a systematic approach to understand the root causes of our psycho-physiological problems. Conditions such as fickleness of mind,

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passion, hatred, greed, anger, depression, tremor of the body limbs and breathing disturbances etc. are well documented and *Patanjali* provides healing / purifying techniques/practices for such conditions of mankind.

Here the topic has been laid out under the following headings along with a brief discussion:

- I. Concept of Health, in general, and Mental Health, in particular, in Indian Thought.
- II. Factors that constitute Mental Health and ill-health
- III. Adverse effects of disturbed state of mind
- IV. Promotion of Mental Health
 - a. Threefold yogic approach towards the promotion of Mental Health.
 - b. External components of Astangayoga and their inter-relationship with Tranquil/ peaceful state of mind.
 - c. Internal components of Astangayoga and their inter-relationship with Tranquil/ peaceful state of mind.
- V. Concluding remark
- I. Concept of Health, in general, and Mental Health, in particular, in Indian Thought

In order to understand the roots of psychophysiological problems of an individual and their remedy, we need to look at the concept of what Health is. It is needless to say that Indian thought considers a holistic view of Man as well as Health. It does not divide him in watertight compartments. It considers man as a whole

encompassing body, mind and spirit. The spirit aspect of man is his true realm which naturally tends towards Peace and Harmony, though body and mind belong to the realm of prime matter (prakrti). However, the mind part of this material phenomenon plays a very significant role, as it is capable of participating in the experience of both body as well as spirit aspects of man. This comprises man's ambivalent nature wherein lies the actual potential to make one's life either healthy/meaningful or unhealthy/ meaningless. It holds the key of man's psychophysiological ease as well as dis-ease and thus health is defined as not merely an absence of disease but complete physical, emotional, mental, social and spiritual well-being.

The concept of Mental Health basically belongs to Western thought which stands for a jubilant state of mind capable of choosing appropriate option, from amongst the available ones, so as to achieve contentment and happiness. However, if we understand it in terms thought it connotes Indian 'Cittabrasadanam' (P.Y.S.I/33)'Prasannatmendriya manah' (Susrut Samhita, Sutrasthanam XVI/44) i.e. "Tranquil / Peaceful state of mind". The term Citta (i.e. mind stuff) indicates the organized totality of psychical structure and processes both conscious and unconscious and considered to be responsible for the balanced functioning as well as mal functioning of body mind complex as a whole. Vyasa, the first commentator of Patanjala Yoga Sutra, has described the nature of this mind stuff as 'Citta-nadi ubhayatovahini...' i.e. the river of mind stuff flows in two directions (Vyasa on P.Y.S.I/12). When it flows down the plane of awareness or with discrimination it sets the balanced functioning of body mind complex that leads one towards True Health (svastha) while that which flows down the plane of un-aware/ non- discrimination it is considered to be responsible for the mal functioning of body mind complex that leads one to ill health.

Here, we have seen that if *citta* is tranquil / calm and composed it keeps the bodily functions in order and vice-versa. We thus understand that the disturbed state of *citta* is responsible for all sorts of psycho-physiological problems of man.

II. Factors constituting mental health and mental ill-health:

Now the question arises what are those factors which causes 'Tranquil state of mind as well as Disturbed State of mind'? To answer this we can simply say that both of these states of citta depend upon one's view of life, of oneself and the phenomenon associated with it. Patanjali, as a depth psychologist, makes us understand that one's view of life lies in the beginningless (P.Y.S.1V/10) storehouse (karmasaya) of countless subliminal impressions (samskara) and traits (vasana) with which the feeling of pain and pleasure are associated because of klesas (avidya, asmita). These klesas are inherent in karmasaya in their seed form (P.Y.S.II/3-9). When man starts interacting with life situations in the face of internal or external stimuli, this part of one's mind becomes the source of innumerable desires in the form of thought waves (vrttis). The mind tries to execute or to settle down all these by using its vehicles i.e. sensory organs. If man views life in order to do good for others as well as for himself the mind of such a man flows down the plane of 'awareness' it rationalizes by way of thinking, criticizing, comparing, synthesizing all these thought waves and finally visualizes the consequences of them and thereby can stand his ground undisturbed in the face of different life situations. Such a state of mind can be considered as 'Tranquil / Peaceful state of

mind' that represents the true mental health.

Contrary to this if the mind flows down the plane of 'unaware-ness' man views himself as the centre and the entire world as his periphery, Then the mind of such a man fails to channelize properly these thought waves because of his selfish motives. This, in turn, leads him towards the oblivion of the consequences and therefore, he identifies himself with all that which actually he is not. This has been brought out by Patanjali as *vrttisarupya* (P.Y.S.I/4). Such mind stuff may be understood as **Disturbed state of mind**' that constitutes the symptoms of mental ill health.

III. Adverse effects of Disturbed state of mind stuff

The disturbed mind knows no rest. It gives undue emphasis to ego-consciousness during interaction with the objective world wherein man develops an attachment towards the objects that give him a feeling of pleasure (raga). Any obstruction in this direction is seen as the object of hatred (dvesa). This obstruction further gives rise to the feeling of 'fear of loss' (abhinivesa) On behavioral level, these are reflected in terms of status and possessions and to maintain these he struggles and at times becomes inhuman to safeguard his status and possessions. He remains under constant strife `lest I may not lose them'. In this pursuit, man even forgets the real nature of worldly objects which are working like a ceaselessly revolving wheel because of 'gunavrttivirodha' i.e. mutual changing mode of the Gunas - sattva, rajas and tamas (P.Y.S. II/16).

However, man wants to maintain his status and possessions and tries to remove all obstructions by adopting any means —'foul or fair'. In this pursuit, he goes on adopting violent, anti-social and unethical means. *Patanjali* calls

them negative thoughts (vitarkas), which are not only disturbing his body mind complex but also disturbing the society as a whole. The adoption of such anti-social methods are usually or rather essentially guided by 'greed' (lobha), 'anger' (krodha), and 'infatuation' (moha) resulting into unending anxieties and frustrations (P.Y.S. II/34). Because it is also true that "endless are the human desires and finite is his capacity". The human anxieties and frustrations are paraphrased by Patanjali as impediments (antaraya-vyadhi, styana etc. P.Y.S. I/30) and are considered to be stumbling blocks in his way to the fulfillment of desires. By being enraged due to such a situation viz. evil tendencies and finiteness, man gets entangled into vicious circle of impediments and evil tendencies. This leads to self perpetuating unrest, imbalance, discontent, loss of peace, dissatisfaction and explosion of 'asurisampad' (i.e demonical tendencies) causing disturbances not only within oneself but society at large, culminating into various psycho-physiological problems identified as concomitants (viksepasahabhuvah) viz. pain (duhkha), depression (daurmanasya), tremors in the body limbs (angamejayatva) and disturbances in breathing (svasaprasvasaviksepa) P.Y.S. I /31). If these symptoms are prolonged for a longer period of time they may give rise to various acute psycho-physiological disorders in general and mental disorders in particular such as anxiety, neuroses, obsession, depression and other behavioral disorders. This is what we are observing today with regard to the health state of mankind where unrest, discontentment, lack of tranquility of mind is reflected everywhere in the world.

IV. Promotion of Mental Health

We have observed the root cause of **Disturbed State of Mind** and its consequences.

Unless one realizes this mistake and accordingly re-directs the flow of one's mind to do good for others as well as for him self, the talk of promotion of Mental Health will be something like "beating around the bush" and not "hitting upon the root". Yoga corrects this mistake very effectively and completely from its root level.

In this direction, Patanjali suggests that first and foremost thing one has to do is that citta should be brought back to its axis (cittavrttinirodha P.Y.S. I/2) which can only be brought back effectively through the transformation of human personality as a whole by re-channelizing the human potentialities to do good for others, as well as, for himself in and through systematic recourse to the yogic way of life consisting of wholesome food habits (yuktahara)fi wholesome activities (yuktavihara)fi purity in thought (yuktavicara) etc. (Gita VI/17) to be cultivated through various disciplinary methods.

a. Three-fold Yogic Approach towards the Promotion of Mental Health

The contribution of *Patanjala Yoga* towards the removal of disturbing factors and attainment of Tranquility/ calmness of mind can be viewed in and through three levels.

- i. Gradual diminution of unwholesome thoughts, feelings, emotions, attitude etc.
- ii. Cultivation of wholesome thoughts, feeling, emotions, attitude etc.
- iii. Promotion of mental health i.e. Tranquility/ peaceful state of mind.

Towards this end, the yogic practices can be viewed as having two basic proceduresabhyasa and vairagya which are purported to take care of these three levels. *abhyasa* stands for the doing aspect whereas *vairagya* connotes for the development of proper view towards life and the phenomenon associated with it. It goes without saying that *- abhyasa* and *vairagya* need to be taken with utmost devotion, enthusiasm, constant vigilance, considerably for a longer time without discontinuity, if one is to realize the desired aims successfully. Any insincerity in this regard will not only re-enforce the unwholesome thoughts, feelings and emotions, attitude etc. but also will render the promotion of mental health a thing of sheer imagination.

Keeping this in mind if we go through the Patanjala Yoga Sutra we find that Patanjali provides some initial practices such as kriyayoga i.e. purificatory and reconditioning processes (P.Y.S II/1-2), cittaprasadana i.e. tranquil state the mind stuff. (P.Y.S.I/33-39),pratipaksabhavanam i.e. to develop positive feeling in the face of negative ones (P.Y.S.II/33-34). Through the practice of this one can cultivate wholesome thoughts, feelings, emotions, attitude etc. by neutralizing the unwholesome ones and thereby one can promote one's peaceful state of mind or mental health. However, to make it steady, as well as, the part and parcel of one's behavior the effects of these preparatory practices are required to be properly cultivated. For this Patanjali provides a systematic approach known as Astangayoga wherein Patanjali "yoganganusthanadasuddhiksaye jnanadiptiravivekakhyateh" i.e. through the practice of eight-fold Yoga, there is diminution of impurities (i.e. negative thoughts, feelings emotions, attitude etc.) and there arises an enlightenment culminating into vivekakhyati i.e. discriminative insight (P.Y.S. II/28) which contributes towards the cultivation of positive (wholesome) view towards one's life and phenomena associated with it, thereby providing

conducive ground for the removal of psychophysiological imbalance and establishment of psycho- physiological balance and harmony. This is what exactly the purpose of Astangayoga. Though the overt behavioral aspect of man is cultured to a certain extent through the practice cittaprasadana kriyayoga, pratipaksabhavana, yet the contribution of Astangayoga is somewhat explicit, effective and broader in its approach. Astangayoga relatively can be divided into two - external and internal (P.Y.S. III/7). Here again, the external prepares the ground for internal one. External consists of first five angas of Astangayoga. Here, let us try to analyze briefly the contribution of external and internal angas though they produce the effect cumulatively.

b. External components of Astangayoga and their inter-relationship with Tranquility of mind

Yamas

The components of Yamas have been accepted as a universal code of conduct. The impurities in the form of evil tendencies and passions as discussed above are removed through the practice of yamas. Through this man overcomes animosity, loves every living creature, develops the feeling of oneness, satisfaction and well-being cumulatively leading to the experience of Tranquility of mind, balance and harmony within oneself and society at large (P.Y.S. II/29-31,35-39).

Niyamas

The root causes of human discontent and disharmony are nothing but the over emphasis on ego i.e. the sense of oneself being doer and enjoyer. This sense makes human consciousness filled with unwholesome-ness and therefore antisocial thoughts rise. So, the remedy lies in the complete surrendering of one's ego and this is the very purpose of *Niyamas* in general and *Isvarapranidhana* (one of the components of *Niyamas*) in particular. (P.Y.S. II/29, 32, 40-45) viz. cleanliness, purification of basic personality factors, purity of heart, one-pointed-ness, tranquility of mind, control of senses, ability to realize higher values, superlative contentment leading to accomplishment of balance and harmony at all.

Asana

Asana, according to Patanjali is that which gives rise to stability and a sense of well being not only at physical level but also at mental level. This exactly is the purpose of Asanas. The state of not being influenced by the pairs of opposites can be achieved only after physical and mental stability. It is only then when the body is free of organic disorders can serve properly as the best vehicles for the mind to function and when mind functions properly there is clarity of perception, as well as, in thought (P.Y.S. II/46-48).

Pranayama

According to *Patanjali* the purpose of *Pranayama* brings two major benefits on the part of practitioner:

- i. Attenuation of *Tamas* and *Rajas* leading to predominance of Sattva, can remove obstruction in the path of awareness/enlightenment.
- ii. It also develops ability for the sake of yogic concentration.

The practical cumulative import of these

benefits with respect to the accomplishment of tranquility of mind, is that man remains unaffected by the adversities of life and remains at ease because he gets rooted into reality. He not only understands the importance of peace of mind but also tends to achieve the same through the higher practices and refined behavior (P.Y.S. II/49-53).

Pratyahara

In the light of above referred awareness, man develops an insight of wholesome and unwholesome factors towards the peace of mind and keeps himself away from unwholesome factors because of the control over his own baser complexes (P.Y.S. II/54-55). This is purported by withdrawal of senses from their respective objects. i.e.pratyahara

c. Internal components of Astangayoga and their inter-relationship with tranquility of mind.

Dharana - Dhyana - Samadhi

This trio of Internal components of Astangayoga constitutes one successive practice starting from dharana and culminating into samadhi, technically paraphrased by Patanjali as Samyama i.e. constraint (P.Y.S. III/1-4) in and through the gradual and step by step practice of this trio, with total devotion and sincerity, gives rise to a new insight into the nature of oneself and one's relation to the worldly objects. As a result of which man's possessiveness, attachment and sense of mine and thine-the sources of disharmony, discontent and unrest etc.- are overcome and thereby culminating into establishment of balance, harmony and contentment. There prevails Tranquility of mind to its utmost degree, in the light of which the human relationships are re-discovered, reinterpreted and remolded. It is only on this infrastructure, the edifice of true mental health can be seen to be based.

V. Concluding Remark

From the above discussion it becomes amply clear that promotion of mental health lies in identifying the factors which are responsible for causing disturbances at mental level. Sage Patanjali has not only identified the root causes of mental disturbances which are responsible for various mental disorders, but also has provided the practical methods (techniques and practices) to overcome these root causes. Beauty of these methods lies in the fact that they do not suppress any unwholesome thought, feeling, emotion and attitude etc. but dig them up from the bottom and take them to the surface so that they can be rooted out completely by cultivating the wholesome thoughts, feelings, emotions, attitude etc.. This results into a Tranquility/ calmness of mind. Such a peaceful state of mind can become a ground for healthy life and living and further for the realization of higher values in one's life.

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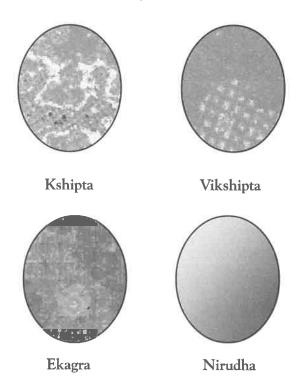
YOGIC PRINCIPLES OF HEALING

Dr. A.K. Ghosh

Introduction

e find that in spite expensive research and medical care available all over globe, there is everyday decrease in quality of life, health hazards are increasing, and there is no answer to many of psychosomatic ailments, prevailing in our society.

The current mechanistic world view, the matter-based approach in life and mounting stress is supposed to be the cause of many such ailments. In recent years, it has been found



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through researches that age-old tradition of Yoga is becoming relevant to this high-tech era. (Monro 1984). As a result of this, Yoga gained prominence as a psycho physiological system of self-regulation with therapeutic implications (Benson, Goodall, 1981, Satyananda, 1982)

Concept of health & healing

The diseases germinate within the psyche, the conditioned mind brain equipment. The state of mind interferes with the function of body's immune system. If our immune system is not functioning well, it will fail to protect us from bacteria or virus and an illness may come.

The mind generates thoughts. The mind under the influence of different stimulus and own attitude, the mind under goes stages of Kshipta, Vikshipta, Moodha, Ekagra and Nirudha states (Patanjal Yoga Sutra).

When we are fighting and struggling for our bread and butter, we are being influenced by stimulus that we receive at work place, through job stress, life stress. All these stresses influence our mind. The mind stores impressions in form of vrittis (mental modifications). These impressions live within us. All our experience and activity constantly leaving impressions upon the mind. The mind is a big storehouse of such impression/ vrittis.

Anger, fear, lust, greed, jealousy, pride, egoism, likes and dislikes are waves in the mind

Sw. Mangalteertham Saraswati, Professor R.D & D.J. Collage, Munger

guided by Rajasic and Tamasic tendencies of an individual.

(S. Sul/33)

The Rajas and Tamas, causes conditioning of mind, there by it causes disease and misery.

Lord Krishna says the same thing in Gita

ध्यायतो विषयान्पुसः सङसतेषूपजायते। सङात्स जायते कामः कामात्क्रोधोऽभिजायते।। (Gita 2: 62)

The man dwelling on sense object develops attachment for them, from attachment for them, spring up desire and from desire (unfulfilled) ensue anger.

क्रोधाद्भवति सम्मोहः सम्मोहात्स्मृतिविभ्रमः। स्मृतिभ्रशाद्बुद्विनाशो बुद्विनाशात्प्रणाश्यति।। (Gita 2: 63)

From anger arises infatuation, from infatuation, confusion of memory, from confusion of memory, loss of reason; and from loss of reason, one goes to complete ruin.

A person with predominance of Rajas will be talkative, proudy, full of anger and vanity and will have a tendency to compete. Science says the similar thing, by classifying Rajasic people as type A personality. Type A is more, prone to stress.

Person with predominance of Tamas will be fearsome, ignorant, somnolent, lazy, and depressed.

Thus, improper union of mind with its object and improper action of mind are conducive to the mental diseases. Therefore,

diseases are not something that happens to us as an external event. Diseases and misery germinates in the conditioned mind but manifest in body. Negative emotion alone is the primary cause of human suffering and agony; both organic and psychic.

It is natural for a man to respond to stress reaction when he encounters a tiger or cobra. But the civilized man responds to other stressors in the same way. At the time of anger and other emotional fits, we react in the same way because we are unable to discriminate between the stressors and a cobra.

The first and foremost reaction of such stressors can be noticed by a change in electrical activity of cerebral cortex, creating different topographic maps in such situation (Mangalteertham, 1994).

These maps generated at cerebral cortex are usually momentary but triggers the stress reaction in body involving ANS (Autonomic Nervous System) and endocrine system stress situation may be momentary but they may sit deep into level of subconscious or other levels of mind. Slowly they percolate deep into life processes and settle in specific organs depending on the genetic make up of an individual and manifested in form of organic disease, called "Psychosomatic." Some may go deep into the life process influencing cellular activity and gene expression and influences the immune system, as well. This cause disharmony and imbalance in human personality from gross to subtle levels. In terms of Yoga we say, it is the imbalance of Panch Kosha. The conventional medicine has very little to offer in this sphere. There is no such known medicine that can give the ability to human mind, to discriminate between cobra and other stressors. It is these changes that have

stimulated the thinking of life scientist to reconsider their matter-based worldview. A more holistic understanding of man has become mandatory.

Yogic Principles of Management

At this stage, the age-old tradition of Yoga are beginning to enter modern health care as a way to manage stress relate ailment and promote positive health.

Yogic concept perceive that human personality have Annamaya Kosha, Pranamaya Kosha, Manomaya Kosha, Vijyanamaya Kosha, Ananadamaya Kosha.



The Yogic integrated approach thus consists in not only dealing with physical sheath but also using techniques to operate on different sheaths of our existence. If mind is not transformed and body is not treated properly, it can be a silent killer. Therefore, de-conditioning of the mind-brain equipment is health and from here, healing begins.

There are two schools of thoughts to achieve de-conditioning of mind.

(1) Treat mind through body: Bahiranga Yoga: this includes Yamas, Niyamas, Shatkarmas,

Asanas, Pranayam, Mudra, Bandha and Karma Yoga etc.

(2) Treat body through mind: Antaranga Yoga: includes Pratyahara, Dhyana, Dharana, Samadhi, Mantra Yoga etc.

Yoga begins with Yamas and Niyamas. This is mainly preventive in nature.

The large number of Yogic practices available in the text of Yoga is adopted to balance and harmonize the disturbance at each of the koshas and tackle this to set of ailments. Shatkarmas and Asanas, they are used to operate at the Annamaya Kosha level and to remove toxin from body and create harmony at gross level of body. They bring about following effects, activate and revitalizing the organs, toning up their function, loosen the joints, stretch and relax the muscles, homogenous distribution of prana, develop deep internal awareness.

Pranayama works at Pranamaya Kosha level by regulating breath. Thus, ailments are handled at Pranamaya Kosha level. All these are promotive and curative in nature.

Meditation, Japa and other Raj Yoga, a technique directly operates at the manomaya level; the mind. When we come to mind, the question is how to de-condition it?

The possibility of investigating the physiological changes associated with altered states of consciousness is recent in science (Benson H, 1977). Nervous system that automatically regulates the physiology of body is automatic, but it is known today that the autonomy, the independent regulation of the body function, did not exclude the possibility of deliberate alteration. Scientific research carried

out in different parts of the world has shown clearly that this is achieved by increasing the faculty of self-awareness and consciousness through meditative processes (Udupa et. al., 1975). In our research at Charing Cross Medical School, London, we have found that meditation and specially "Yoga Nidra" can alter the stress induced EEG patterns (vrittis) created by stressors to bring about progressive and systematic relaxation and generate high degree of Alpha Rhythm and Yoga Nidra can induce deep progressive relaxation in only 20 minutes of time (Mangalteertham 1994, Benson, H and Good ALL, 1981). That is why it, is well said in Yoga Sutra,

योगश्चित्तवृत्तिनिरोधः।। (Yoga Sutra) "Yogaschitta Vritti Nirodhah"

In recent years, it has become clear that the nerve and endocrine systems actually function as a single interrelated system. The central nervous system, particularly the hypothalamus, plays a crucial role in controlling hormone secretion and conversely, hormones markedly alter natural function. So, one can strongly influence many types of behaviour and physiological activity, if mind is de-conditioned.

Thus, Yoga opens up the possibility of consciously altering physiological activity of human being, there by a harmony and balance is established in all the sheaths of human personality (Udupa, 1975).

In 1982, as part of project to examine the effect of Yoga on common disorder, an interesting survey was made at Yoga Biomedical Trust, Cambridge (Monro, 1984)

When data's were analyzed interesting facts come before us. It was observed that 89% believed that Yoga had increased their general working capacity. 45% believed that Yoga had decreased their susceptibility to cold and flu. Statistics for days off work on sick leave, consultation with doctor & consumption of medicine tranquilizers & sedatives also showed marked decline trends.

Table-I

	Increase	Decrease
Energy level	69%	1%
Working capacity	55%	2%
Susceptibility to colds & flu	3%	45%
Day off work on sick level	1%	23%
Consultation with Doctor	2%	32%
·Consumption of medicines - (Excluding those in 'g')	1%	30%
Consumption of tranquillizers or sedatives	1%	22%
General sense of well-being	89%	1%

Various disorders such as Back pain, Asthma, High Blood pressure, Heart disease, Duodenal ulcer, Hemorrhoids, Diseases of nervous system, Cancer, Diabetes Rheumatoid, arthritis Pre-menstrual tension, Obesity, Migraine, Insomnia, Anxiety, Smoking, Alcoholism and other showed that Yoga can bring a significant positive change in the

ailments.

This is how; it is evident that Yoga techniques can be successfully used in prevention and care of many ailments (Bhole 1983, Nagendra et. al., 1978, Nagendra, H R and R. Nagrathna, 1986, Sw. Satyananda, 1998).

Table-II

Only those respondents are included who answered "Yes" or "No" to the question –

"Has Yoga helped?"

	Cases	% Helped
Back disorders	1142	96%
Asthma or Bronchitis	228	88%
HBP	150	84%
Heart disorder	50	94%
Duodenal ulcers	40	90%
Haemorrhoids	391	68%
Diseases of nervous of muscular system	112	96%
Cancer	29	90%
Diabetes	7	86%
Rheumatism or Arthritis	589	90%
Pre-menstrual tension	848	77%
Other menstrual disorders	317	68%
Menopause disorders	247	83%
Obesity	240	74%
Migraine	464	80%
Insomnia	542	82%
Excessive anxiety	838	94%
Heavy smoking	219	74%
Alcoholism	26	100%

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PROPERTIES & POWERS OF PRANA

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VEDIC VIEW

piritual seekers and Yogis of India have tried to visualize within themselves 'Functioning of the Vital Life Force' in their worldly existence. Through deep inner perception and an intuitive realization, they were able to unfold the hidden truths of life. At the same time, they could coin very appropriate terms for the varied and vivid aspects and manifestations of reality. Of course, the divine language Sanskrit provided a very powerful basis and accurate words to communicate and convey the most obscure experiences.

These ancient seers did approach the existential reality holistically and in totality. That is why their vision could comprehend mind and spirit behind matter, as could also include the impact of universal forces interacting within and without an individual unit, living or non-living. The concepts like *Aatman*, *Prana* and *Svara* are wonderful examples of their all-comprehensive insight.

The oft-quoted hymns of BHAARGAVA VAIDARBHI have been seen more as praise or worship of Prana-Devataa. Instead, they need be analyzed from the angle of qualities, properties and powers of Prana that the seer has visualized and enumerated. Many other Vedic seers have also told a lot about Prana, at times using some other epithets in their hymns. Surveying them too for this purpose, may help us understand the reality of this Vedic concept.

The CONTROLLER

"YASYA SARVAM IDAM VASHE, YO BHOOTAH SARVASYA ISHWARAH." {A.V. 11/4/1}

= "Prana is That One, in whose powers and control lies all this, who has become the Lord of everything." This means Prana is the controller of all existence.

The SUPPORT

"YASMIN SARVAM PRATISHTHITAM" {A.V. 11/4/1}

= "That One, in whom everything is established." This means that Prana supports all existence.

PERFORMING VIVID FUNCTIONS: UNIVERSAL ACTIVITIES

Adjectives used by seer Atharvaa for Prana are:

"KRANDAAYA, STANAYITNAVE, VIDYUTE, VARSHATE." {A.V. 11/4/2}

This says that "the sound and thunder in clouds, the lightening and the rain is by Prana". What he further adds is notable. The verses declare that:

"This activity of Prana leads to the multiplicity and happiness of all creatures, and

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fresh offshoots and seeds in the plants, as in the animals." {A.V. 11/4/3-6}

SUSTENANCE of LIVING ORGANISM

Some important adjectives of Prana are: "(1) PRAANATE, (2) APAANATE, (3) PARAACHEENAAYA, (4) PRATICHEENAAYA, (5) SARVASMAI." {A.V. 11/4/8} Normally, this verse is taken to indicate the 5 variations of Prana respectively. In this order they are namely: (1) Prana, (2) Apaana, (3) Udaana, (4) Samaana, & (5) Vyaana.

Here these adjectives of Prana appear to be describing the five functions of life-sustenance in a living organism, rather than simple varieties only. Or we may say that these five types of Prana have been named on the basis of the functions they perform. How?

Here the two adjectives of Prana depict this fact very clearly. The 3rd 'PARAACHEENA & the 4th PRATICHEENA' have the root /chi in their formation. This however, reminds of the Chinese word 'CHI' (= 'QI GONG'), and there is every probability of a connection. The Sanskrit root '/chi' means, 'To accumulate, place in a line, cover or fill with, bear fruit, grow, thrive, prosper..' {V.S. Apte, p. 207}. We may say for sure that Prana, as the vital life force performs all these functions, and hence the use of 'CHI' is perfectly justified.

Do the functions of Udaana permeate the sense conveyed by Paraa + chi. And Pari + chi indicate the function of Samaana?

'PARAA', the prefix means, 'away, back, in an inverted order, aside, towards.' {V.S. Apte, p. 317} So it seems that 'Paraacheena' could be

for 'Udaana', as this moves upwards, which is the inverted order of 'Prana', which in turn is always supposed to move forward, inward and downward along with the breath of a living being.

Similarly, 'PARI' is also a prefix meaning, 'round about, further, in the direction of, successively, to the share or lot of, out of' {V.S. Apte, p. 318}. So, 'Paricheena' could be for 'Samaana', which keeps moving in a round about manner in all directions, so that it may distribute the digested juices all over the body.

These five forms of Prana seem to have been framed to indicate its five functions in the body, and hence it has to be understood especially in relation to the 'Breath', through which this is mainly gained by the body. The intake of water and food also energizes our Prana, which proves the difference of Prana from the Breath. Pranic Practices should, therefore include instructions about these intakes, and which they normally do.

PRANA is the KEY

One of the key concepts in Aayurveda is the life force that enters the body at birth, travels through all the parts of the body until it leaves at the moment of death. This life force is called Prana. Prana strings body, mind, and spirit together like beads on a strand. Prana is the force necessary to keep the living beings alive.

Prana gets its nutrition through:

- The lungs that absorb the essence found in the air.
- The colon that absorbs the Prana found in well digested food and water.

Thus the lungs and the large intestines are closely connected in Aayurveda. They both

supply Prana. For example, a few minutes of slow, deep breathing can reduce the hunger. Aayurveda is concerned with nourishing both the body as well as the mind.

Nasal Function

- 1. Nasal secretion is under the influence of both parasympathetic and sympathetic nerves, and can be induced by a wide range of neurotransmitters and mediators. Thus this serves as a cleansing agent for the internal nervous system.
- 2. The nasal cycle is the alternation of resistances between the two sides of the nose, on which the other changes are superimposed. These changes include the activities of two hemispheres of the brain and both sides of the spinal cord.
- 3. The nasal passage not only filters and moisturizes the air; it also distributes and balances the Pranic energy to flow all over the body through Pranic channels (Nadis), as also to energize both aspects of the brain, namely Emotional and Rational.

'Nervous System'

"The System of Nerves (N.S.) is divided in three parts'

- 1. Sympathetic N.S. originates in the spinal cord, and its cell-bodies are located in the thoracic and lumber region.
- 2. Parasympathetic N.S. originates in the sacral region, and its cell bodies are located there as also in the medulla.
- 3. Enteric N.S. relates to nerve fibers innervating the viscera, i.e. the soft internal

organs like gastro-intestinal tract, pancreas, gall bladder, liver, kidneys etc.

"The Autonomic Nervous System is always working involuntarily in a reflexive manner. It maintains normal internal functions, and coordinates with the Somatic N.S., related to the outer body.

"The anatomical structure of the Nervous System includes Brain, Nerves, Afferents, Efferents, Sensory Components carrying sensations from eyes, ears, nose, tongue, skin etc. to the brain.

"All this information is just general. There is little precise knowledge concerning the effects of nerves on different types of blood vessels."

'Structure and Function of Nervous Tissue'

Samson Wright's APPLIED PHYSIOLOGY (p.247-270)

"In considering the effectiveness of a stimulus, attention must be paid not only to the strength of the current, but also to the time during which it is allowed to flow through the tissue. A strong current produces a response after a very short time of flow; as the strength of the current is reduced, a larger duration of flow is required to stimulate; if the current falls bellow a minimum value, it fails to stimulate, no matter how long the duration of the flow."

'The Afferent Nervous System'

Samson Wright's APPLIED PHYSIOLOGY (p.281)

"Impressions of the outside world are conveyed by sensory nerve impulses, which are generated in the peripheral nerve endings of the afferent fibers. (These may be termed as Pranic Endings.) Cutaneous (Cutis=Skin) Receptors respond to touch or to temperature changes."

These receptors or the *Pranic endings* in the skin get connected to the brain through Prana flowing in Pranic Channels, it seems.

'Focusing, Contemplating & Meditating in nerves/Pranic Channels'

Swami Dayananda Saraswati in Rigveda-Aadi-Bhashya-Bhoomika (Upaasana-Vishaya) tells the method of approaching the Supreme Consciousness through Naadees:

"Wise Yogis and meditators properly apportion/departmentalize Pranic channels (Nadis) to contemplate Supreme Conscience in their selves... You worshipers! expand your bliss by meditating Him in your Nadis. This tendency of 'Upasana-Yoga' destroys all afflictions and fills the practitioner with peace. Through this you should enlighten, i.e. realize the (truth of ever-existing) union with God in your soul."

The Number of Pranic Naadees

Vedic Samhitas do no where mention the number of Nadis or Pranic Channels. Many Upanisads, of course tell their number, but that is not same everywhere. Yes, most of them tell it to be 72000, including BRHADARANYAKA {2/1/19} DHYANA-BINDU and **UPANISAD** {50-56}. But many others have a different version. For example, Kathopanisad {3/16} speaks of only 101 Nadis: "SATAM CHAIKA CA HRDAYASYA NADYAS, TASAM MURDHANAM ABHI-NIHSRTAIKA. TAYOURDHVAMAYAN-N-AMRTAVAM ETI, VISVAN ANYA UTKRAMANE BHAVANTI. " = "Nadis of the

heart are 101. One of them is an off-shoot to the head. One, who rises higher through that, achieves immortality. The rest are in vivid directions all around, meant for mortality."

Prashnopanisad, {in verse 3/6} says, "HRDI HYES ATMA. ATRAITAD EKASATAM NADINAM. TASAM SATAM SATAM EKAIKASYAM, DVASAPTATIR DVASAPTATIH PRATISAKHA-NADISAHASRANI BHAVANTI. ASU VYANAS CARATI." = "The soul resides in the Herat. Here, are 101 Nadis. In them each has 100 branches, which further has 72000 sub-branches each. The Vyana moves in these."

The calculation can be made as follows:-

Main Nadis: 101

Branches of Nadis: {100x101=} 10,100

Sub-branches of Nadis:

 $\{10100x72000=\}$ 72,72,00,000

The Total 72,72,10,201

The great yogi of 20th century, Sri Tapovanamji in his SAUMYA-KASISA-STOTRAM {5/12} confirms this figure.

"EKOTTARA-SATAM NADYAS, SASAKHA NISSRTA HRDAH. VYANAKHYO\TATI YASTATRA, TAMIDE MRDAMISVARAM." = "From the heart are generated 101 Nadis with their branches. The Lord roams there by the name of Vyana, to Whom Lovable One I adore." The commentators of Chinmaya Mission have come to the same figure as shown above.

May it be mentioned here that Baba Ramdeva, the present Yoga-Guru had been telling this figure only in his earlier Yoga-Camps, with a slight change as "72, 72, 10, 210".

Without the slightest dishonor for the truth of an existence of innumerable Pranic Channels, it may be said that "These figures seem more as hypothetical than as real." If not so, the numbers would have been similar in various scriptures.

Names and Locations of Nadis as per Upanisads

Various names of Nadis ranging from 1 to 16 have been provided by many Upanisads. **BRHADARANYAKA** {2/1/19} calls all of the Nadis by one name 'HITA', "HITA NAMA NADYO DVA-SAPTATI-SAHASRANI HRDAYAT PURITATAM ABHI-PRATISTHANTE. TABHIH PRATYAVASRPYA PURITATI SETE." = "There are 72000 arteries called Hita, which from the heart and the brain centre too, spread all through the body. Through them He moves forth, and rests in the surrounding body." {Swami Satya Prakash Saraswati, p. 36.}

YOGA-SIKHOPANISAD {5/17 to 27} mentions 16 names, whereas TRISIKHA-BRAHMANA-UPANISAD {67-73} counts only 10 names. However, most of the Upanisads give 14 names of important Nadis. Many Upanisads, especially JABALA-DARSANA, SANDILYA, and TRISIKHA-BRAHMANA-UPANISAD have tried to show special functions, features and specific location of these channels. After a comparative study of all these, the following list has been prepared.

The Pranic Force, the centre and the Channels

KUNDALI = PRANA-SAKTI

The Serpentine power, KUNDALINI, so

popular in the mystic spheres these days finds a rare mention in the Upanisads. VARAHA is, for instance one such UPANISAD, which mentions it as 'KUNDALI' and fixes its location in the 'NABHI-KANDA', accepted almost by every Upanisad, if not with Nabhi, then as simple Kanda. "TATRAIVA NADI-CAKRAM TU, DVA-DASARAM PRATISTHITAM. SARIRAM DHRYATE YENA, VARTATE KUNDALI." {VARAHA-TATRA UPANISAD 5/22] = "There in the NABHI-KANDA is the wheel of Nadis, with 12 spokes, which supports the body. It is here that the KUNDALI resides."

This Upanisad maintains that 12 channels are for physical sustenance through 12 types of airs or Prana-Vayus, {DVADASANILA-VAHAKAH, 5/28} whereas other 4, including SUSUMNA, (see No.3), are full of jewels, (perhaps of Pranic Power, or what?).

2. KANDAH = NABHI-KANDAH

This is the central ductless gland, where all the channels are supposed to get generated from. Vividly explained by various Upanisads, its exact location can be ascertained somewhere near the navel only. YOGA-CUDAMANI {14-15} says, "URDHVAM MEDHRAD ADHO NABHEH, KANDE YONIH KHAGANDAVAT." = "Above the urination-organ and below the navel, the gland is the source of all Pranic Channels like the egg for birds."

YOGA-SIKHOPANISAD {5/20-21} tells the same fact, "TATRA NADYAH SAMUTPANNAS, TIRYAG URDHVAM ADHOMUKHAH. TAN-NABHI-CAKRAM ITYUKTAM, KUKKUNDAMAM IVA STHITAM." "There the Pranic Channels get generated moving transversely, upwards or

downwards. That is the navel wheel, which stays like an egg of the cock."

SRI-JABALA-DARSANA-UPANISAD $\{4/2-5\}$ fixes the position of this gland in relation to the Muladhara. "TRIKONAM, GUDATTU DVYANGULAD URDHVAM MEDHRATTU DVYANGULADADHAH. DEHAMADHYAM KANDASTHANAM MULADHARAN NAVANGULAM. CATUR-ANGULAM-AYAMA-VISTARAM, KUKUTANDA-SAMAKARAM, BHUSITAM TUTVAGADIBHIH. TANMADHYE NABHIR ITYUKTAM YOGAJNAIR MUNIPUNGAVA." = "2 tips above the anus, 2 tips below the penis is the triangle. Nine tips above this Muladhara in the centre of the body, is the location of Kanda. Its size is of 4 finger dimension, like the egg of a cock, and it is decorated with skin etc. O good sage! Yogis call it the Navel."

- SUSUMNA = BRAHMA-NADI = VAISNAVI
- IDA = CANDRA
- PINGALA = SURYA
- SARASVATI

- KUHU
- GANDHARA/ GANDHARI
- HASTIJIHVA
- PUSA
- YASASVINI/ PAYASVINI
- VISVODARA
- VARUNA/ VARUNI
- SANKHINI/ KAUSIKI
- ALAMBUSA
- CITRA
- RAKA
- SURA

These sixteen names of the Naadees getting generated from the Kanda-Sthaana are also found in various Upanisads related to Yoga, and especially to Prana and Swara. These may also be added to the list of Pranic organs. Locations and functions of these are normally similar with some differences in various scriptures. That may be seen there for further studies by the seekers and practitioners of Prana-Yoga or Swara-Yoga.

THE LATENT SERPENTINE AND HER PASSAGE

Dr. Indulata Das

he word 'Kundalini literally means a sheserpent. Kundali or Kundalini Shakti is a technical name in Yogic parlance. Shakti means power or energy. Kundalini Shakti, thus, means a power or energy with some similarity with a serpent. Kundalini is also known as Bhujangini, Parameswari, Vagdevi etc.

The science of Kundalini acquires central place in the Tantrika Sadhana. The Hathayoga also attaches much importance in the science of Kundalini.

Kundalini carries utmost importance for the Yogis. In worldly persons Kundalini remains latent where as in Yogis it arises and pierces six Chakras or Yogic centers situated in different places of the body and ultimately reaches the seventh centre which is the ultimate goal of the Yogis.

Chakras: Chakras are the places in the body where more than one Nadis assemble together. There are many Chakras in the body. Some Yogis hold the number to be 14 where as some others view the number to be something different. The highest number accepted by the Yogis is 144. Chakras are not perceivable by normal eyes but are clear to the Yogic perception. Because, nothing is unperceivable for a Yogi. Patanjali makes it clear:

प्रवृत्त्यालोकन्यासात् सूक्ष्मव्यवहितविप्रकृष्टज्ञानम्¹

(When there is the dawn of Ritambhara Prajna the Yogi acquires the knowledge of subtle

things, things which are obstructed by something and things which are far away).

Although there are many Chakras in the body, seven out of them are most important through which the Kundalini moves. These are Muladhara, Swadhisthana, Manipura, Anahata, Vishuddhi, Ajna and Sahasrara. Chakras are also called Padmas because of their resemblance with lotus with several petals. In fact a few Nadis emanate from these Chakras and take the shape of petals.

Nadis: The knowledge of Nadis, like that of the Chakras is necessary for the perfect comprehension of the Kundalini and her passage.

Nadis are the subtle passages in the body through which the vital force flows. Nadis are undetectable by the human eyes or with the help of scientific instruments meant to observe the gross body. There are innumerable Nadis. Some Yogis hold that the number is 72,000 where as some hold the number to be three and half lakhs. Yet the most important Nadi are 14 and are as follows:

1-Sushumna 2- Ida 3- Pingala 4-Gandhari 5- Hastijihva 6- Kuhu 7- Saraswati 8-Pusa 9-Sankhini 10-Payaswini 11- Varuni 12-Alambusha 13- Viswodara 14- Yashaswini. Out of these, three Nadis are most important viz. Ida, Pingala and Susumna. Again among these three, Sushumna is the most important and is the only Nadi which leads to liberation. Sushumna is the passage of Kundalini. The Katha Upanishad

specifically says:

शतं चैका च हृदयस्य नाड्यस्तासां मूर्धानमभिनिःसृतैका। तयोर्ध्वंमायन्नतिमृत्युमेति विष्वड.न्या उत्क्रमणे भवन्ति।।²

(There are hundred and one Nadi in the heart. Only one Nadi (Sushumna) moves through the crown of the head. The aspirant gets liberated when he comes through this Nadi. All the other Nadi are meant for death.)

Sushumna is the Nadi in which all the seven Chakras are situated.

Sushumna Nadi and the spinal cord: The central nervous system of a man consists of the brain and the spinal cord. The spinal cord is a column of very soft grey and white brain matters. It is not divided or separated from the brain but is in continuation with the same. Every nerve of the body is connected with it. The organs of blood circulation, micturition, digestion, reproduction etc. are controlled by the neuroendocrine axis, a spinal cord.

It is very probable that the spinal cord has been called the Sucumn± Nadi by the Yogis. Because, the location, function and description of the spinal cord greatly resembles to that of Sushumna Nadi. Swami Sivananda affirms:

While discussing about the Nadi it is also desirable to discuss about the emanating place of the Nadi. The emanating place of Nadi is called Kanda in the Yogic literature.

Kanda: Kanda, which is very important for the Yogic science is the centre of the astral body. Kanda is situated between the anus and the genital organ. It is two digits above the anus and one digit below the genital.

गुदाद्वगड्.यघ्गुलतश्चोर्ध्वं मेद्रैकाघ्गुलतश्चाधः। तत्र चास्ति समं कन्दं सम ताच्चतुरघ्गुलम्।।

Kanda is just above the Muladhara Chakra. It is just like egg shape. It is four fingers in width. It is the place where Sushumna starts and connects to the Muladhara. In the physical body it corresponds to the place called Cauda equina.

Muladhara Chakra:

Muladhara is the first of the seven Chakras. It is situated between the anus and the genital and below the spinal cord. It corresponds to the Sacro-Coccygeal plexus in the physical body. Earth is the region of Muladhara. Muladhara is also called Adhara Padma (vk/kkjin~eesrf))⁴ because it is the lotus which is like a base for all other lotuses. All the other lotuses come after this one.

The first granthi:

Muladhara is the place where Ida, Sushumna and Pingala meet. Ida, Pingala and Sushumna meet thrice in three Chakras. Their meeting places are called Granthis. The three Granthis are known as Brahma granthi, Visnu granthi, and Rudra granthi respectively. The Muladhara is the Brahmagranthi.⁵

How Kundalini is placed:

As stated above Muladhara is the place of Kundalini. Inside the Muladhara there is a square space in which there is a triangular Yoni. The Yoni is beautiful and is a secret for the Yogis. Kundalini lies dormant in this Yoni with its face backward and coiled three and half times. It catches its tail in its own mouth. Kundalini surrounds all the Nadis. Kundalini is luminous and like a serpent it lives between the joints. It

is the goddess of speech and is called seed (*bija*). The Sivasamhita gives a vivid description of the placement of Kundalini as the following:

पश्चिमाभिमुखी योनिर्गुदमेद्रान्तरालगा तत्रा कन्दं समाख्यातं तत्राास्ति कुण्डली सदा। संवेष्ट्य सकलाः नाडीः सार्धत्राकुटिलाकृतिः। मुखे निवेश्य सा पुच्छं सुषुम्णाविवरे स्थिता। ⁶

The three coils of Kundalini represent the three Gunas of Prakriti and the half coil represents the group of Vikritis (Mahat, Ahamkara, Manas, five jnanendriyas, five Karmendriyas, five Tanmatras and the five Mahabhutas)

Place of Kamabija:

Muladhara is the place of Kamabija (seed of lust) which is *Klim*.

(तत्रा बन्धकपुष्पामं कामबीजं प्रकीर्तितम) 7

Colour:

Muladhara is yellow in colour, the colour of earth region.

Petals of the Chakra:

It has four petals on which the letters व शष स are designed (परिस्फुरत् वादिसान्तचतुर्वर्णं चतुर्दलम्)⁸.

Presiding deity:

There is a presiding deity and a goddess in every Chakra.

The presiding adept is Dwiranda and the

presiding goddess is Dakini.

(द्विरण्डो यत्रा सिद्धोऽस्ति डाकिनी यत्रा देवता)⁹

Corresponding Loka: Muladhara Chakra corresponds to the Bhurloka or the earth region. The seven lower worlds viz. Atala, Vitala, Sutala, Talatala, Rasâtala, Mahatala and Patala Lokas are below this place. The lower worlds refer to some minor Chakras (The Muladhara etc. are the major Chakras. There are many minor Chakras in the body).

Linga in the Muladhara: In Muladhara there is a great energy (centre) named Swayambhû Linga (योनिस्थं तत् परं तेजः स्वयम्भूलिड् गसज्जितम्)¹⁰.

There is a region near the Linga which is known as 'Kula' which is golden in colour (कुलाभिधं सुवर्णाभं)¹¹.

Bija letter:

The Bija letter of the Chakra is ya which is the letter of earth.

Swâdhisthana Chakra: The second Chakra is named Swadhisthan which is situated near the base of the genital. The space inside the Chakra is crescent moon. This corresponds to the Bhuvarloka in the sequence of the seven regions. It is also the region of water (Jala mandala). The bijaksara is oa which is the bija of Varuna. The colour of the Chakra is blood red. (स्वाधिष्ठानाभिधं तत् तु पड्कजं शोणरूपकम्)13

Petals: In this Chakra there are six petals having six letters ब भ म य र ल (बादिलान्तं च भाड्वर्णं परिभास्वरषड्दलम्)¹⁴

The presiding adept: The presiding deity is Bala and goddess is Rakini. (बालाख्यो यत्र सिद्धोऽस्ति देवी यत्रास्ति राकिणी)¹⁵

Benefits: The Yogi attains physical, mental as well as supernatural Siddhis when he meditates on the Swadhisthan Chakra. Since it is the centre of water one who meditates on the Chakra has no fear from water.

Manipura: The third centre through which the serpentine passes is called Manipura (तृतीयं पड्कजं नाम मणिपूरकसंज्ञकम्)¹⁶. Manipura Chakra is situated near the navel. The space inside the Chakra is triangular. It corresponds to the solar plexus in the physical body. The colour of the lotus is golden (शोभितं हेमवर्णकम्)¹⁷. It corresponds to the Swarloka.

Petals: It has ten petals having ten letters - ভ ভ ল ন থ द ध न प फ . The Sivasamhita writes:

दशारं डादिपफान्तार्णम्।।18

Presiding adept: The presiding adept is Rudra and the goddess is Lakini. (रुद्राख्यो यत्र सिद्धोऽस्ति सर्वमङ्.गलदायकः। तत्रस्था लाकिनी नाम देवी परमधर्मिका।)¹⁹

Bijaksara: The Chakra relates to Agni Mandala and hence bears the Bijaksara of fire which is ja.

Benefits: The Yogi who meditates on the Manipura Chakra obtains various siddhis.

Anahata Chakra: The fourth Chakra is called Anahata and is in the Sushumna Nadi. The exact location of the Chakra is near the heart. Inside the Chakra there is a hexagonal space.

The colour of this space is deep black. The colour of this lotus is deep blood red. It is a pleasant spot and is the place where the Anahata sound or the sound of Sabda Brahman is heard.

Petals: There are twelve petals having the letters ক ন্তু ग ঘ ভ. च छ ज झ স ट ত Anahata Chakra corresponds to the Maha Loka.

Bija letter: It has Vayu Mandala in it. The Bijaksara in this Chakra is य which is also the Bijaksara of Vayu. Yogis constantly hear the Anahata (unhurt) sound here thus this Chakra is called Anahata Chakra.

Place of Visnugranthi: The second Granthi i.e. the Visnu granthi is at this place. Here the Sushumna second time joint with its third part.

Vanalinga: There is a flame or energy centre called Vanalinga in this spot. This is the second Linga and in the passage of Sushumna.

Presiding adept: The Siddha here is Pinaki and the goddess is called Kakini.

Benefits: He who always contemplates on the lotus has many benefits. He has full control over the Vayu Tattva.

Vishuddhi Chakra: The name of the fifth Chakra is Vishuddha or Vishuddhi. It is also situated in the Sushumna Nadi. The place of this lotus is near the throat (कण्डस्थानस्थितं पद्म विशुद्धं नाम पञचमम्।)²⁰ It corresponds to the Laryngeal Plexus in the physical body. The Chakra is brilliant golden in colour. The space inside the Chakra is round like a full moon. It corresponds to the Jana Loka and is the centre of Akasa Tattva.

Petals: Sixteen Yoga Nadis emanate from this place and resemble sixteen petals. The vibrations produced from the Nadis resemble the sounds of sixteen letters viz. अ आ इ ई उ उ ऋ ऋ लृ लृ ए ऐ ओ औ अं अः . (सुहेमामं स्वरोपेतं षोडशस्वरसंयुतम्।)21

Bija letter: The Bijaksara of this Chakra is ga which is also the Bijaksara of the Akasa Tattva.

Presiding adept: The adept is known as Chhagalanda and the goddess is Sakini.

Benefits: When a Yogi contemplates on the Vishuddhi Chakra he acquires many Siddhis. When the mind of the Yogi is absorbed in this Chakra, he becomes unconscious of the external world and is merged in himself.

Ajna Chakra: The sixth Chakra is called Ajna which is situated near the forehead (between the eyebrows) and is also known as Trikuti. The space inside the Chakra is round.

Petals: This Chakra has two petals having two letter ह and क्ष .

(आज्ञापद्मं भ्रूवोर्मध्ये हक्षोपेतं द्विपत्रकम्)²² The colour of the Chakra is white (शुक्लाभं)²³.

Presiding adept: The presiding adept is Mahakala and goddess is Hakini. (तन्महाकाल: सिद्धो देव्यत्र हाकिनी)²⁴.

Bija letter: In the petals there is the eternal Bija 35. This is the great light and the deepest secret of the Tantra.

Rudra Granthi: This is the Rudra Granthi and is the meeting place where the Sushumna meet

for the third time with first part of it which is connected with Sahasrara Chakra.

Sahasrara: The last Chakra or lotus is the Sahasrara which is situated at the crown of the head. The corresponding centre of the Sahasrara Chakra in the physical body is the brain. It corresponds to Satyaloka.

Brahmarandhra: The point where Sahasrara is situated is called Brahmarandhra (ब्रह्मरन्ध्रे हि यत् पद्मं सहस्रारं व्यवस्थितम्)²⁵. Brahmarandhra is very important both in the physical body and in the spiritual one. It is the hollow and soft place known as anterior fontanelle in a new born baby. It is between the two parietal and occipital bones. Brahmarandhra is very important from the spiritual point of view. The Upanishad says the creater created the human body and entered into it through this way. It is also called Vidriti. When a Yogi leaves his body he takes the Prana out through this path and hence never comes back to the mortal world. This is also called Dasamadwara or the tenth door. (The word Brahmarandhra is used as a synonym of Sushumna by Swami Swatmarama in Hathayoga Pradipika)²⁶

The Chakra is called Sahasrara or thousand petalled. It is proper to say that innumerable Nadis emanate from this place. In the previous six Chakras fifty alphabets are accepted in various places. In this Chakra alphabets are repeated twenty times.

Taking the Kundalini to the Sahasrara Chakra is the goal of a Yogi. Reaching of Kundalini to the Sahasrara is called the union of Sakti and Siva. This is the final state of a Yogi. The Yogi attains supreme peace.

Passage of the Kundalini: Kundalini is the primordial energy and the cosmic power in the human body. It is a divine energy and an energy like electricity in the physical world. It remains dormant with its face downwards and coiled up. As discussed above there is a Swayambhu Linga in the Muladhara. The head of the Linga is the exact spot where the Sushumna is attached to the Kanda. At the head of the Linga the Kundalini sleeps with its face downwards just at the mouth of the Sushumna.

In the Sushumna Nadi there is another Nadi called Vajra. Inside the Vajra there is another subtle Nadi called Chitra. The Kundalini lies dormant in common human beings. Through various practices it is aroused and passes through the Chitra Nadi. Therefore Chitra Nadi has been considered very significant from the Yogic point of view. In the Sivasamhita it is said:

सुषुम्णायां सदा शक्तिश्चित्रा स्यान्मम वल्लभे।27

The Kundalini moves from Chakra to Chakra and ultimately reaches the Sahasrara. This is the state of liberation.

How to awaken the Kundalini: Awakening the Kundalini and taking it upwards is to rise from the lower state of consciousness to a higher state. Therefore awakening of Kundalini has to be preceded by endeavour to overcome the lower, vicious and demonic nature of one's existence. One should try to overcome animal instincts and demonic qualities like lust, anger, greed etc. Awakening of Kundalini is not desirable without upward spiritual upsurge. Therefore it is prerequisite for the Sadhaka to try to get rid of the internal impurities first and then try to awaken the Kundalini.

A thorough knowledge of the Kundalini, the Chakras and other informations about the Kundalini is necessary before trying to raise the Kundalini. Of course in some cases Kundalini is aroused in persons who have no knowledge about the same. But it is quite exceptional and most probably due to the grace of Guru. Sadhana of previous birth may be a cause.

Guidance, the Primary Need: Guru is the primary necessity of Kundalini Sadhana. No attempt should be made to awaken the Kundalini without the guidance of a competent spiritual Guru.

Various Methods

There are many methods to awaken the Kundalini. The first one is the method of Hathayoga i.e. through the various kinds of Asanas, Kevala Pranayama, Bandhas, Mudras etc. The second method is by deep meditation. The third is through deep devotion only. But Kevala Kumbha Pranayama is the quickest way for it. It is also to be noted that for Kevala Kumbhaka Sadhana there are many restrictions like Sadhaka must give up salt, mustard or its oil etc. sour things, hot things and the things resulting heat in the body, harsh and bitter things, taking food in large quantity, company of women for enjoyment, use of fine gossips with deceivers also must be avoided.²⁸ Other methods advised by the Guru according to the capabilities of the disciple may be adopted for the same.

All the meditative Asanas are conducive for the arousal of Kundalini. Especially the Sukhasana, Padmasana etc. are very helpful for the arousal of Kundalini. If practiced thoroughly, Matsyendrasana is also helpful in the arousal of Kundalini. Swatmarama Swami says:

मत्स्येन्द्रपीठं जठरप्रदीप्तिं प्रचण्डरुग्मण्डलखण्डनास्त्रम्। अभ्यासतः कुण्डलिनीप्रबोधं चन्द्रस्थिरत्वं च ददाति पुंसाम्।।²⁹

Bhastrika is a conducive Pranayama for the awakening of Kundalini says Swatmarama Swami, the writer of Hathayoga Pradipika:

वातिपत्तश्लेष्महरं शरीराग्निविवर्धनम्। कुण्डलीबोधकं क्षिप्रं पवनं सुखदं हितम्।।³⁰

Mahamudra is another effective practice for the arousal of Kundalini. Swatmarama Swami writes:

> यथा दण्डहतः सर्पो दण्डाकारः प्रजायते । ऋज्वीभूता तथा शक्तिः कुण्डली सहसा भवेत्।।³¹

Downfall During Practice: When the Kundalini awakens and crosses one Chakra after another there is always the possibility of a downfall upto the Ajna Chakra. Once the Yogi reaches the Sahasrara he never endures a downfall.

Of course the Yogi can come back to the Vishuddhi Chakra of his will to benefit the disciples.

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Signs of arousal of kundalini:

When the Kundalini arises and pierces the Chakra, the Yoga feels an increase of body temperature in the very place. When the Kundalini leaves the place and moves upwards the previous Chakra becomes cool and the Yoga feels heat in the other Chakra. Experience of heat in the Chakras and a glaze in the body are the main physical signs of Kundalini.

Verbal Symptoms: A person with aroused Kundalini becomes a marvelous and effective speaker. He can compose nice poetry immediately.

Mental Symptoms: When the Kundalini is aroused the Yogi's mind is filled with higher thoughts. He is free from base worldly thoughts.

Spiritual symptoms: The Yogis can practice profound meditation anytime he chooses. He can concentrate his mind on anything whenever he desires.

Conclusion: Kundalini is one of the greatest sciences of the world which the Yogis of this India have discovered. It is one of the rarest findings. The benevolent Yogis of the country through their spiritual research have unfolded one of the wonderful mysteries of the human body.

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- 11. Siyasamhita 5.63
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TRADITIONAL YOGA FOR VALUE EDUCATION

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ABSTRACT

This is a literary research where the Indian Traditional Scriptures and standard Yoga Texts were critically analyzed and evaluated in the context of value education. The extracts of Scriptures and Classical Yoga Texts were deduced scientifically and the contribution of them towards human health, fitness and value education was established. The study was conducted in considering the following steps: 1) Systematic Review of Scriptures, Traditional Yogic Texts & Research Literature, 2) Preparation of Checklist. Further each of the selected Yogic Texts (i.e., Patanjala Yoga, Hathayoga etc.), Upanishads and modern research reports, available in the Kaivalyadhama Library (Lonavla, India) were verified by using the Checklist and data related to the contribution of each of the literatures towards health, health related fitness and values were collected and analyzed with logical reasoning. The result revealed that Patanjala Yoga is more inclined towards enriching one's value education, whereas Hathayoga practices are found useful to enrich one's health related fitness.

Introduction

echnological excellence in the new millennium helps us to live more luxurious life, which in turn made us mechanical dependence that results into material gain and economic prosperity, but we lost the moral and spiritual realms. It gives birth of social inequality, horrendous wars, persecutions, atomic devastation, and of late, ecological crisis.

Man probed the mysteries of the universe but ignored the mystery of his own self. From necessities he moved to comforts and from comforts to luxuries in forgetting the supreme source of comfort and bliss. The man, therefore, becomes the victim of tremendous stress and strain that, in fact, leads towards intensive health complications.

Although *Education* is an instrument as well as a catalyst of social transformation and expected to bring about qualitative change in man's perception, attitudes, habits, priority and goals, the real sense of values in recent days somewhere missing. Moreover, the present

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system of education is information-oriented not character-based. It is consumerist in nature and makes one selfish, self-centered, irreverent and cynical. It sharpens reasons but hardens the heart. It lays little or no emphasis on such basic values as truth, love, honesty, humility, compassion, forbearance and justice. It makes one conscious about one's rights not duties. The net result is that a strongly individualistic and materialistic culture has taken birth, which promotes self-aggrandizement, nurtures opportunism and chicanery, and generates tension in society.

The Renaissance in Europe did not bring about a renaissance of human values. The Reformation altered man's perception of the sacred and the sacrosanct but did not do away with his inner vide such as lust, greed, anger and the like.

The ghost of technological power unwittingly released by man can be contained only by the right kind of education that combines science with spirituality, fitness with health, reasons with faith, *prajna* with *karuna*, empirical knowledge with intuition and insight; which keeps both progress and peace as its goals and is helpful in mitigating social evils.

Problems in School Education

- Although School Education is an instrument as well as a catalyst of social transformation and expected to bring about qualitative change in children's perception, attitudes, habits and personality, the real sense of values in recent days somewhere missing.
- The present system of education is information-oriented not character-based.
 It has become consumerist in nature and

makes one's personality so poor so that the students become *selfish*, *self-centered*, *irreverent and cynical* in their future lives.

- Today's school education lays little or no emphasis on such basic values as truth, love, honesty, humility, compassion, forbearance and justice. It makes one conscious about one's rights not duties.
- To keep pace with the fast changing society and in order to fulfill one's desire to be at the top, our system of school education is somewhere compromising with the gross erosion of values.
- Improper implementation of physical activity or some how increasing status of physical inactivity in schools causing poor health and fitness in students.
- The tendency of exam fever, suicidal attempts, emotional imbalance, juvenile addictions are increasingly evident among school students. This in fact signifies intensive personality problems.

The net result is that a strongly individualistic and materialistic culture has taken birth, which promotes self-aggrandizement, nurtures opportunism and chicanery, and generates lust, greed, anger and the like causing tension in society.

Thus, to impart real education for retaining the human health and values in the way of peaceful life, various claims of traditional Yoga which is an essence of Indian culture - need systematic verification. This piece of research, therefore, may be of imminent significance for reforming real education in the society.

Need of Value Education in Modern Era

Values are the concepts that describe human behavior. They are desirable ideals and goals, which are intrinsic and when achieved, in fact, evoke a deep sense of the fulfillment.

These days, in 21st Century, technological evolution contributes to globalization of knowledge-based education, which has changed human lifestyle. Such continuous changing condition in daily life situations jeopardizes our inner homeostasis and results into tremendous stress-related-immuno-deficient disorders, where values are left far behind. In fact there is gross erosion of values of individual to keep pace with the society in order to fulfill one's desire to be at the top. The erosion of human values of truth, co-operation, non violence, peace, love, respect for parents, elders, authority and hard work is leading to the decay of moral and social fabric of society at a speed never witnessed in the history of civilization. Our stress is too much on standards of living and not on standards of life. Though the problem of decreasing values extends to the whole range of human activities, education field is regarded as the proper place to inculcate positive values.

The Indian culture is deeply rooted in spiritual and ethical values, unless these values find their way into the life of students, education will lose its significance and will not fulfill its aim. Though we have made progress in knowledge but still we are not above the levels of our past generations in ethical and spiritual life. In some, we have declined from their standards. Today we have been successful in making professionals but not the human beings.

Thus, inculcation of human values is to be stressed up on in our system of modern education

to prevent and combat world terrorism, tension, diversities, self-centered vision and violence. Through quality education restoring of humane values (viz., Social, Moral, Spiritual, Environmental, Economical, Political and Work values) is possible.

The main aim of value education is to reform attitude and behaviour, to promote healthy lifestyle, to shape the high moral character and to develop refined personality of younger generation, who can prove them as the best citizen of a nation.

Relevance of Yoga for Value Education

Value Education is a comprehensive process. In its full range of connotation, it covers the entire domain of learning, cognitive, affective and psychomotor and includes knowledge, understanding and appreciation of our culture, moral, aesthetic and spiritual values i.e. the values springing from our nationalistic aspirations and universal perceptions. Thus value education is a process of education which involves working on the total personality of the individual keeping in view all aspects of personality development, the intellectual, social and emotional, will and character (Education in Values, N.C.E.R.T., 1992, pp.22-30).

a) Yoga as a System of Value Education

Philosophers and educationists over the ages have identified goodness, truth and beauty as an ultimate value, which do not change fundamentally from generation to generation, society to society and culture to culture. The humane values viz., honesty, tolerance, justice, self-control, compassion, freedom etc enable man for self-control than other animal, so that he cultivates certain

ideals, which are available in plenty in our rich cultural heritage. In Indian modern education, number of commissions and committees recommended character formation, religious education, and moral education. However, recent recommendation emphasizes on value-based education that covers various factors of environment and nation with reference to international understanding.

When human values are inculcated through curriculum to transcend cognitive, conative and psychomotor level for conducive development of individual, social, national and international understanding, it is called value education.

In fact, Dhyan-yoga and Karma-yoga lead to wisdom and proper spiritual development that makes individuals to understand real values in human.

The Indian concept of education is more inclined towards spiritual development, receiving knowledge and disciplining the mind as well. Swami Vivekananda viewed education as "manifestation of divine perfection already existing in man." He said, we want that education by which character is formed, strength of mind is increased, and the intellect expounded and by which one can stand on one's own feet. In the light of the above goal of education, it becomes relevant to assign the role to Yoga to fulfill this goal.

Yoga, the ancient treasure of our nation has stood the test of time. The various definitions of Yoga, - "Yoga Karmasu Kausalam," "Yoga Samatvam uchyate," "Yoga citta vritti Nirodha," etc. teach us -

What we should derive from life; and

• What should we give to others.

In modern time, the education is much inclined towards Western bent of "Learn only to earn." But education can't become only the source to livelihood, because human life has more precious and gracious purpose. The value-based education leads us steadily towards that purpose. The basic Sanskaras of Ahimsa, Satya, Asteya, Aparigraha, and Bramhamacharya form the foundation of values, which are the part of Ashtanga Yoga.

The Yama- Niyama concept, if deeply rooted in early primary education would mould the soil to the desired shape at the right time.

The Asanas, Pranayamas, Kriyas, Bandhas, Mudras are not only beneficial for body but also for the mind. The healthy mind resides in healthy body. When integration of body, mind and spirit is achieved, one's personality blossoms. The number of such personalities can be created with the help of Yoga education.

b) Yoga – The Basis of Spirituality

There is a gap between what we expect and what we actually get. This gap widens day by day and inner dissatisfaction grows along with it. A dissatisfied and unhappy person likes to bring out his anger, frustration and bitterness. While doing so, he may get into crimes, atrocities, coercion, sexual assaults, frauds, corruption, accidents etc. When this type of people grows in number, such incidents occur more frequently. That is precisely what is happening in modern times. Daily newspapers are flooded with such stories.

In modern times, there is abundant material prosperity on one hand and extreme poverty on

the other. Understandably, there is a growing dissatisfaction among the poor and underprivileged that they cannot afford such prosperity. Interestingly, those who have every thing in plenty also suffer from dissatisfaction. This is called real spiritual impoverishment. Spiritually poor cannot differentiate between the means and an end. They run after material wealth at the cost of spiritual awakening. Such material wealth is extremely harmful to the person and the society in which he lives. Material wealth without spiritual wealth is the real cause of all human suffering.

The Ancient Science and Art of Yoga is the real, time tested, comprehensive, long-term solution to all human problems. The greatest advantage of Yoga lies in the fact that it addresses human problems at individual and collective levels. It helps create harmony within the person and the society in which he lives. It integrates body, mind, intellect, emotions and spirit. Integration brings harmony and harmony brings happiness. Happiness brings peace. A happy and peaceful person knows the real meaning of spiritual wealth.

c) Yoga - A Cognitive Approach for Moral Development

Morality is equivalent to the principles used to make judgements about actions that have an impact on human life and welfare. The cognitive development approach makes an important distinction between the structure of moral reasoning and the content of moral thoughts. In 1971 Kohlberg pointed that moral development follows an invariant six stages in sequence. The six stages are organized into three levels:

Level-I: Pre-conventional stage (Stage-1:

Hetronomous morality, Stage-2: Individualism, instrumental purpose and exchange);

Level-II: Conventional stage (Stage-3: Mutual interpersonal expectations, relationships and conformity and Stage-4: Social contract or utility and the individual rights); and

Level-III: Post conventional or principles (Stage-5: Social contract or utility and individual rights and Stage-6: Universal Ethical Principles).

Patanjali enumerates eight limbs or stages at Yoga. Among eight limbs of yoga, the first of these is yama. Ethical disciplines - ahimsa, satya, asteya, brahmacharya and aparigraha are the rules of morality for society and the individual, which if not obeyed bring chaos, violence, untruth, steeling, dissipation and covetousness. The roots of these evils are the emotions of greed, desire, attachment, which may be mild, medium or excessive. They only bring pain and ignorance. Patanjali strikes at the root of these evils by changing the direction of one's thinking along the five principles of Yama.

A regular practitioner of yoga can achieve all the six stages of moral development, which was described by Kohlberg. In fact, a Yogi is much above the sixth stage or moral development, which is described here. He is naturally moral. He does things right and stays away from wrong in a natural and spontaneous manner. He is the real ambassador of morality. His value system is an outward expression of inner equilibrium.

d) Yoga - A tool for Modification of Behaviour, Emotion & Personality

Patanjali Yoga explains the real significance of emotional intelligence by way of complete

cessation of modification of behaviour (P.Y.S.-I:2). In fact, yoga practices work at the visceral and the emotional level in following psychophysiological principles and tackles functional disturbances of the neuro-vegitative system and emotional disturbances.

Relaxative asanas are claimed to give rise to chitta vishranti i.e. tranquility and peace. Corrective asanas are supposed to develop stability, steadiness and lightness of the body. Emphasis on relaxation taking help of gravity to ensure eternal effects of tackling emotional aspects of the individual has been indicated.

Asanas, Bandhas, Mudras, Kriyas and Pranayamas could be special beneficial effects on autonomic nervous system, brain and the mind. Along with yoga practices, yogic diet comprising of simple vegetable proteins, low in salt content and moderately rich in cereals, vegetables and fruits and adequate minerals and vitamins seem to have been prescribed for better health. Such type of food influences the awareness and overall feeling, thinking, being and behavior. Yoga aims at improving the emotional control and overcoming of the imbalance rhythm. Yoga ultimately enriches our emotions, value systems and attitude to life as a whole and influences our personality.

In fact, Yoga is a bridge between body, mind and spirit. Since its practices smoothly coordinate the functions of the bones, muscles, blood, brain etc., which help to improve health, and as they train human mind, which is immaterial and intangible, for modifying proper attitude, behaviour and values in establishing establish mental peace.

Thus, the objectives of the study were:

- To identify the major dimensions of human values;
- To critically study the traditional Yogic texts and to identify various "means and/or techniques of Yoga," which claim to achieve human values;
- To examine, based on systematic review of research literature as well as logical interpretations, the real implications of the "identified yoga practices" in achieving each dimension of values;
- To evaluate "Traditional Yoga" as a system of Value Education;

Research Design

This is a literary research, where the Indian Traditional Scriptures and standard Yoga Texts were critically analyzed and evaluated in the context of value education. The extracts of Scriptures and Classical Yoga Texts were deduced scientifically and the contribution of them towards human health, fitness and value education was established. The study was conducted in considering the following steps:

1) Systematic Review of Scriptures, Traditional Yogic Texts & Research Literature

The ancient as well as modern literature were reviewed systematically to identify the major dimensions of human health, health related fitness and values.

¹ P.V. Karambelkar, "Patanjala Yoga Sutra." (Lonavla: Kaivalyadhama S.M.Y.M. Samiti, 1984), p.3.

² See details in Appendix-III.

2) Preparation of Checklist

Based on the attributes of the major dimensions, common Checklist was prepared for human values. For this, standard procedure was followed (Guilford & Fruchter, 1973).3 The preliminary form of the checklist to assess the status of human health, health related fitness, and value education had 25 items respectively. These items (question / point) of each dependent variable had been sent to various experts of the field of medical science, physical education and education. After verification from the experts, checklist contained 17 items. Further, the checklist was given to five researchers who are directly involved in literary research since last 20 years. Finally, the items were modified and amalgamated in such a way so that the checklist contained 12 items to identify the data on human health, health related fitness and value education (APPENDIX-I). This assures the objectivity and content validity of the Checklist.

3) Source of data & Data Collection

Each of the selected Yogic Texts (i.e., Patanjala Yoga, Hathayoga etc.), Upanishads and modern research reports, available in the Kaivalyadhama Library (Lonavla, India) were verified by using the Checklist as developed in this study and data related to the contribution of each of the literatures towards health, health related fitness and values were collected.

Variables

There was only one dependent variable i.e., Value Education, whereas the independent variables included were Hathayoga; and Patanjala

Yoga.

Procedure of Data Collection

Since this is a literary research, the investigator intended to collect information pertaining to this study from various libraries and websites. As per information from website, the researcher confirmed that no library in India has sufficient literature on yoga as compared to Kaivalyadhama, Lonavla (India). researcher, therefore, fully concentrated on the literature as available in the Kaivalyadhama Library. However, prior to this, the researcher prepared a request letter and submitted to the Kaivalyadhama authority to seek permission to use its library for the purpose. After receiving the consent from the authority, the researcher conducted this literary research. A list of all the standard literature, traditional texts, Upanishads, manuscripts related to yoga - as available in the Library, was prepared carefully and commentaries of many authors on Hatha Yoga and Patanjala Yoga have been reviewed in-depth. Further, related information (data) were collected as per the checklist.

Data Analysis

Importance of different Yoga practices that claim to achieve human health, health-related-fitness and values, were identified, accumulated and categorized. They were then interpreted logically with scientific reasoning.

Major Findings

 The major dimensions of human health and values have been identified. The findings

³ J.P.Guilford, & B. Fruchter, Fundamental statistics in psychology and education. (New Delhi: McGraw Hill Book Co., 1973), pp.13-54.

indicate that the dimensions of human health are physical, mental, social and spiritual, whereas Theoretical, Economical, Aesthetics, Social, Political and Religious attributes are representing the values. Similarly, the dimensions viz., cardiovascular efficiency, strength and endurance of abdominal muscles, flexibility and fat percentage represent one's level of

health related fitness.

Critical study of the traditional Yogic texts helped to gather different claims of various yoga practices to achieve human health and fitness. Literature suggested some Yoga practices to attain the same are 11 Asanas, 3 Pranayamas, 1 Bandha, 1 Mudra, 3 Kriyas and 6 other practices:

Yoga Practices		Intensity	
1.	Sirshasana	1/4 min. to 12 mins., adding 1/2 min. per week.	
2.	Sarvangasana	1/2 min. to 6 mins., adding 1 min./ week.	
3.	Matsyasana	1/4 min. to 3 mins., adding 1/4 min. per week.	
4.	Halasana	1 min. to 4 mins., for all stages put together, adding 1 min. per week.	
5.	Bhujangasana	3 to 7 turns of each, the pose	
6.	Salabhasana	being maintained for 10 seconds.	
7.	Dhanurasana	adding one turn every fortnight to each.	
8.	Ardha-Matsyendrasana	1/4 min. to 1 min., for each side, adding 1/4 per week.	
9.	Paschimattanasana	1/4 min. to 1 min., adding 1/4 per week.	
10.	Mayurasana	1/6 min. to 2 mins., adding 1/4 min. per week.	
11.	Savasana	2 mins. to 10 mins., adding 2 mins. per week.	
12.	Uddiyana Bandha	3 to 7 turns, adding 1 turn per week.	
13.	Yoga-Mudra	1 min. to 3 mins., adding 1min. per week.	
14.	Nauli Kriya	3 to 7 turns, adding 1 turn per week.	
15.	Kapalabhati Kriya	3 rounds of 11 to 121 expulsions each, adding 11 expulsions to each round every week.	
16.	Ujjayi Pranayama	7 to 28 rounds, adding 3 rounds every week.	
17.	Bhastrika	3 rounds of 11 to 121 expulsions each, adding 11 expulsions to each round every week. Every round to be followed by a suitable Kumbhaka	

- Literary survey suggested some Yoga practices to enrich the values are –
 - o Reading holy books e.g., Puranas, Vedas, Bhagwatgita, Koranas, Bible etc. and implementing the principles in day to day life.
 - o Observing Yamas & Niyamas in social life.
 - o Listening religious songs, music, prayers etc.

- o Attending religious lectures, spiritual activities, collective prayers etc.
- o Practicing Omkar recitation, Dhyana etc.

Conclusion

Within limitations, the present investigation draws following conclusion:

Patanjala Yoga is more inclined towards enriching one's value education, whereas Hathayoga practices are found useful to enrich one's health related fitness.

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"SHAVASNA" – THE BEST NON-PHARMACOLOGICAL AND INEXPENSIVE MEDICINE FOR HYPERTENSION

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ABSTRACT

Researches on influence of yoga practice on human in Polish scientific centres have shown that yoga practice increases stress resistance, emotional balance, health improvement, mind concentration and attention. Yogasanas are proved to control the metabolic disturbances and hyperkinetic circulatory state through root level.

Earth is a powerful magnet so body on the floor gets faster relaxing effect because of the gravitational action. The article explores the effect of shavasana on hypertension taking into consideration various biochemical parameters affected by it. It also explores the role of routine unattended stress, which takes shape of hypertension.

Key words: Shavasana, Hypertension, oxidative stress, endothelins

Introduction

oga is a mind body intervention, which has been recognised by World Health Organisation (WHO) and is largely used in health prevention and care. According to a very recent report of a survey, in different clinical trials published in North American journals of different specialities, 91% of the researches consider yoga a promising instrument for cure, prevention, health promotion and quality of life (1). Yoga is getting biggest recognition not only in European continent and American continent

but worldwide. Results obtained from researches on influence of yoga practice on human in Polish scientific centres have shown that yoga practice increases stress resistance, emotional balance, health improvement, mind concentration and attention (2). Yogasanas are proved to control the metabolic disturbances and hyperkinetic circulatory state through root level (3).

The disturbed body and mind relationship is essentially held responsible for the occurrence of psychosomatic disorders. Distress and excess stress is known to disturb this relationship

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particularly when it is continued for a long period of time, It gets reflected on the body in the form of various disorders like bronchial asthma diabetes mellitus, IBS (Irritable Bowel Syndrome), insomnia and most important being the high blood pressure or hypertension. It is the fully blown picture of underlying psychological disturbances that has perpetuated for a long time. Every other citizen of first world countries dies suddenly of one of its later consequences, the fatal cardiovascular events like heart attack, stroke and embolism. Certainly 25-30% of the population are suffering from hypertension. Prevalence studies show that rule of halves still apply in Indian population (4). Death and disability from cerebrovascular disease are increasing so rapidly in these parts of the world that they will rank #4 as causes of global burden of disease by the year 2020 A.D.

There are a number of factors that cause the genesis of this disease, however the most important factors are psychosocial and environmental factors as example family situation, employment status and working conditions that cause stress ultimately causing Hypertension. There are a number of drugs, which are being given for the management of this disorder, but unfortunately due to their longterm use the side effects are very serious and at the same time these are expensive. According to a recent report pursuing yogic way of life may lead to good health, which means slower aging, fewer diseases, milder diseases, efficient selfhealing, but no blanket immunity against diseases and death. What yoga guarantees is that even a painful disease will not make life miserable (5). Due to this reason people of today's era are getting inclined towards holistic management of the disorder, which include lifestyle modifications and yoga therapies. Intervention programs indicate that the desired lifestyle changes can be achieved and maintained over prolonged period of follow up with an associated reduction in incidence of hypertension of 25-50% (4). A study in African Americans showed significant decrease in systolic and diastolic blood pressure by the use of some relaxation therapies (24). The present communication is intended to look into the biochemical approach through which shavasana lowers the blood pressure.

Genesis of hypertension

In emergency situations as a part of the defence mechanism described as fight or flight response, the adrenal medulla secretes stress hormones epinephrine and nor epinephrine which increase blood pressure. The hormones thus released get consumed in the process, however when the kind of stress is continuous and chronic, the stress hormones being produced continuously do not get dissipated. As a consequence these over secreted hormones chronically stay in the body leading to the long drawn ailments including hypertension. Normally the effect of catecholamines on the heart rate is mediated by b-receptor that includes increased heart rate, contractility and conduction velocity. All of these contribute to increased cardiac output. Renal blood vessel constriction of heart and brain increases the secretion of renal pressor substances which in turn constrict the peripheral blood vessels throughout the body and thereby increasing the peripheral resistance against which the heart pumps. It is this pumping against the peripheral resistance that increases the blood pressure.

According to neurogenic theory early phase of hypertension is often characterised by features suggestive of enhanced adrenergic activity that induces peripheral vasoconstriction with greater a- mediated constriction, whereas b₂-mediated

vasodilatation is unchanged or down regulated (6). Vascular endothelium produces vasodilators Prostacyclin (PGI₂), nitric oxide and endothelium derived hyperpolarizing factor (EHF) and other vasoactive factors like endothelins and prostaglandin E1. Under physiological conditions a balance is maintained between endothelial vasoconstrictors and vasodilators such that normal blood pressure is maintained. When this balance is altered more in favour of vasoconstrictors such as endothelins, when the concentration of vasodilators is reduced, or both, hypertension develops. One mechanism by which endothelium dependent vasodilatation is impaired is due to an increase in the oxidative stress that inactivates nitric oxide and PGI 2

A current hypothesis is that increased intraluminal pressure damages the endothelium thus allowing release of endothelin and inhibiting the release of nitric oxide. The ensuing vasoconstriction helps to perpetuate the hypertension. In patients with hypertension endothelin impairs endothelium dependent vasodilatation. Regarding nitric oxide a new concept is that oxidative stress promotes the formation of peroxynitrite thereby consuming vasodilatory nitric oxide. (6).

So it seems that stress is one of major causative factors causing hypertension. Yoga and some other alternative systems help to reduce the stress factor and hence help in controlling hypertension. In this communication authors have reviewed effect of shavasana on hypertension and proposed its probable mechanism of action.

Mechanism Of Action Of Shavasana

Asanas or postures connote a large number

of different postures by the practice of which everyday one can hope to get not only a steadiness in bodily health but also attain a tranquillity of the mind. One of the important physiological phenomena that take place following Asanas is the increase in circulatory efficiency of various vital organs including all the endocrine glands. This leads to increased oxygen uptake and metabolic turnover of their secretion products that naturally improves all the functions of the body in addition to maintenance of elasticity of the blood vessels. which are often effected by the modern disorders of stress and strain. Another important factor that operates in stressful situations is the secretion of excess of cortisol by the adrenal cortex as a result of excessive stimulation of hypothalamohypophyseal system by various cerebrocortical and subcortical centres. Shavasanas relieves the body of stress. When stress is released there is no stimulation of sympathetic nervous system and hormone levels remain at optimum levels. In other words stress induced changes in hormone levels come to a normal level.

There are several methods of yogic practices originating from different schools of thought. Out of them method propounded by Patanjali seems to be the most popular and is being discussed in this communication. Although he had elaborated eight stages but in nutshell regular practice of yogic exercises improves the psychological functions of the body. Biochemically there occurs a decrease in the circulating acetylcholine levels and slight to moderate increase of catecholamines and cortisol. All these findings suggest that there occurs an overall improvement in the bodily functions possible due to improvement in the microcirculation leading to more efficient oxygen supply to all the organs and tissues of the body thus vital centres. So asanas if practiced

regularly increase the stress competence of the body (7).

In a study conducted by Udupa et al. (8,9,10) specific asanas like shirshasana, sarvanga asana, shavasana has been found to lower catecholamines, levels urinary excretion of neurohumors and blood sugar. Similarly breath holdings practice (Pranayama) also lowered serum catecholamine levels and blood sugar at the end of six months of breath control practice (8). In a similar type of study the effect of posture, breathing exercises and relaxation were observed and it was found that there was a reduction in all the three neurohumors and a slight rise of plasma cortisol indicating a better stress competence of these persons (11). Udupa etal. (12.13) observed effect of meditation on biochemical parameters and found that plasma cortisol, urinary nitrogen and corticoid levels were lowered depicting a less stressful state. In another study blood pressure came under control in 15 days and the effect was sustained even in studies up to 3 months. (14,15). In a recent report the systolic and diastolic blood pressure was reduced with significant reduction in the dosage requirement of antihypertensive drugs after three weeks of continuous shavasana practice (16). Pasek et al (17) has shown that stress can be managed through relaxation and concentration training of yoga. Results obtained from researches on influence of voga practice on human in Polish scientific centres have shown that yoga practice increases stress resistance, emotional balance, health improvement, mind concentration and attention (2). Relaxation therapy reduces proprioception, which lowers the sympathetic responsiveness of the hypothalamus and vice-versa. Blood pressure was reduced by profound relaxation of muscles with considerable relaxation in electromyographic activity (18). In another study shavasana has been shown to produce complete mental and physical relaxation and reduce hypertension (19). Practice of shavasana directly affects the mid brain complex, calm the hypothalamus thereby shutting off excess sympathetic stimulation (20). According to Shrivastava et al, (3) symptoms associated with hypertension and diabetes was completely subsided after 3 months of shavasana. Similarly frequency and severity of migraine reduced and patients were able to reduce antidepressant drug therapy (21). In different study in patients with diabetes, palpitation and heart rate decreased significantly (22). Bensen etal (23) has also shown reduced blood pressure after relaxation therapy. In another recent publication it has been reported that in newly diagnosed patients of blood pressure the effect of drug and Yogasanas both had significant effects, while patients who were already taking drugs and practicing Yogasanas the drug dosages were reduced (25).

In a very recent study, statins have been shown to increase the endothelial production of nitric oxide an effect correlated to up regulation of endothelial nitric oxide synthase expression. Statins inhibit production of reactive oxygen species such as superoxide anion and hydroxyl radicals in animal vessal models so this action can also contribute to vasodilation (26). Probably shavasana removes stress from body and it in turn lowers the levels of free radicals protecting the body from oxidative stress, which is an important causal factor in genesis of hypertension. This is supported by a recent study, which suggests that lowering oxidative stress may be beneficial in affording protection against salt induced hypertension (27). Another report from America shows that aerobic endurance training favourably affects blood pressure and supports the general view that physical activity is important not only for prevention of cardiovascular disease but also in the management of hypertension (28).

Conclusion

Shavasana directly affects the mid brain complex, calm the hypothalamus thereby shutting off excess sympathetic stimulation. Secondly it protects the body from oxidative stress thus up regulating the endothelin system. So probably shavasana removes stress from body and it in turn lowers the levels of free radicals protecting the body from oxidative stress, which is an important causal factor in genesis of hypertension.

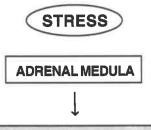
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ROLE OF STRESS RESULTING IN HYPERTENSION



BLOOD

EPINEPHRINE

B-RECEPTOR

]

RENAL BLOOD VESSEL CONSTRICTION OF HEART AND BRAIN

INCREASES SECRETION OF RENAL PRESSOR SUBSTANCES

CONSTRICTION OF THE BLOOD VESSELS
THROUGHOUT THE BODY

INCREASES THE PERIPHERAL RESISTANCE AGAINST PUMPING

1

MORE RESISTANCE, MORE BLOOD PRESSURE



YOGA: PATH OF PERSONIFIED EMANCIPATION

Dr Rajjan Kumar*

ABSTRACT

Yoga is a perfectly structured and integrated worldview aiming at the transformation of a human being from his actual unrefined form to a perfected form. It has a technique for attitudinal change, behavioural modification and integrated development of personality. That is why it is said that the appraoch of Yoga is spiritual cum worldly. Yogic principles and their practices are most effective, practical and universally accepted to achieve the highest goal of life i.e. self-realization. One must not imagine that Yoga is only a collection of certain practices devoid of metaphysical basis. It becomes a panacea for all, not only for the persons who wish to get salvation but also for everyone for keeping oneself healthy and active to achieve the goal of one's life and enjoy a complete and perfect healthy and blissful life.

Introduction

oga is religion, science, and art, since it is concerned with being (Sat), knowing (Jhana) and doing (karma). The aim of Yoga, however, is beyond these three and beyond any opposites they imply. Yoga attempts to eliminate the obstacles to the natural unfolding and development of the human being so that his or her true and real nature may be realized. This real nature is independent of the contingent conditioning of space-time, thought feeling, fearpleasure and form-species.

Yoga: Spirit and approach

Yoga, one among the six classical (darsana) of Indian Philosophy, is aiming at the attainment of the ultimate reality. Out of the six schools of Indian Philosophy viz, Samkhy, Yoga, Nyaya,

Vaisesika, Mimamasa, and Vedanta the school of Samkhya is often associated with Yoga, and two are frequently coupled together. There does not seem to be much basis for this association, for Yoga and Samkhya for a very long time have represented two distinct approaches, even though there are some similarities in their underlying cosmologies. On the other hand, all the schools of thought in India, even the ones opposed to Yoga in its metaphysical doctrines, have recognized the great value of the practical aspects of Yoga. In practical term, Yoga can be said to constitute the very essence of the spirituality of India. It has had an enormous influence on all forms of Indian spirituality including the Buddhist and Jain¹.

In view of Yoga school the word Yoga came to denote different phenomena and actions. Some regarded Yoga as a method of freeing

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oneself from suffering, others as uniting man's individual soul with the absolute soul (atman), in which it would mean the end of suffering. While still others saw Yoga as the process of separating Purusa (conscious) from Prakrti (matter) and as the end of that process, that is, their separation itself, which simultaneously means release².

As per instruction of the spiritual seers the purpose of *Yoga* is to lead to the silence of the mind³. This silence is the prerequisite condition for the mind to be able to reflect accurately the objective reality without introducing its own subjective distortion. *Yoga* does not create this reality, which is above the mind, but only prepares the mind to apprehend it, by assisting in the transformation of the mind from an ordinary mind full of noise⁴. At this situation the individual gets such potency, which leads him, to attain the state of emancipation, the prime aim of all. Now, the *Yogi* becomes eligible for liberating his soul from the bondage of the material world including one's own body.

Yoga: Myth or Manifestation

Mythologically, sometimes Yoga is personified as the son of dharma and kriya. Dharma is essentially the order that is the support of the cosmos, and kriya as action and performance is a Sakti (energy, power) of Visnu, is one of His incarnations. The importance of Yoga in the Indian tradition is obvious: a name or an epithet of Siva is Yoginatha, of Visnu Yogapati, of Krsna Yogesvara, and of Mahavira Niggantha in each case meaning is essentially "the master or lord of Yoga".

Without the mastery of Yoga, indeed, nothing can be accomplished rightly. As the

Yogasika Upanisad says "Varily there is no merit higher than Yoga, no good higher than Yoga, no subtlery higher than Yoga, there is nothing that is higher than Yoga". It is well supported as - the best means for getting the highest states of moksa i.e. the Ratnatraya (Jnana, darsana and caritra). It is the Upanisadas of Yogasastras; it is the moksapradata (provider of liberation), apayasamani (destroyer of obstacles), hence is kalyanakari (auspicious)? It ranks first among dharmas (virtues) and is attained only by getting mastery with Sva-adhyavasaya (self-deligence)8.

Yoga: The Foundation

In actual sense, Yoga is not considered only a kind of philosophy. Both in the remote past and at present Yoga is usually regarded as a definite form of practice on which the methodological foundation is based on the Samkhya philosophical doctrine. According to the Samkhya, the world is the combination of various forms of material matter of Prakrti, which is the ultimate basis of all that is. It is eternal and one. The motion of Prakrti is just as eternal as Prakrti itself. The emergence of formation of any object or phenomenon does not signify creation of matter, just as the destruction of individual object or phenomenon does not signify destruction of matter. Matter cannot be either create, created or destroyed. The totality of matter in all its actual and potential states remains constant⁹.

Patanjali, the author of Yoga-Sutra which is considered as a manual of Yogadarsana, comprehended and interpreted the Samkhya philosophy in the spirit of dualism: the material (Prakrti) and the spiritual (Purusa) are regarded as opposite principles that cannot be reduced to each other. Under certain circumstances, Prakrti

and *Purusa* may be interconnected, penetrating each other and forming infinitely diverse shapes, qualities, and systems. Man, a combination of body (matter) and soul (*Purusa*) is one of the highest and complicated material-spiritual combinations (systems)¹⁰.

The individual soul (Purusa) as a part of an absolute spiritual (atmana) is immortal; birth and death should be regarded from this viewpoint as changes in matter but not all as "changes in ourselves" (in the soul). There is no death; there is 'eternal' (very large of long) circle (reincarnation or Samsara). However large and long as the circle may be, it can arrive at an end or completion. The cycle of reincarnations performed by the soul- "departure" for the other side (for atmana) and 'return' to earthly life, another departure and another return etc. may ultimately end in the so called full release, a sort of sublime communion with God or salvation (moksa or vivekakhyati)". This is the basic and highest goal of Yoga.

Thus, it is quite true that Yoga is intimately allied to Samkhya. The Gita calls them one Yoga, means spiritual action, and Samkhya means knowledge. Samkhya is theory; Yoga is practice. For all practical purposes, Samkhya and Yoga may be treated as the theoretical and the practical sides of the same system. Yoga mostly accepts the metaphysics and the epistemology of Samkhya. It shows the practical path by following which one may attain Viveka-jnana, which alone leads to liberation. Yoga accepts the three Pramanas of Samkhya and also the twenty-five metaphysical principles. Yoga believes in God as the highest 'Self' distinct from other selves. Hence it is sometimes called Sesvara Samkhya or theistic Samkhya as distinct from classical Samkhya which is nirisvara or atheistic¹².

Yoga: Source of Perfect Realization

Yoga, the Indian system of thought is not mere speculation on the nature of things, but with all sincerity and earnestness at its command, dive deep into the mysteries of the universe in order to find the way out of the limitations of the worldly existence, vitiated by perversities and crippled by various privations and disabilities. The perfect unfolding of the potentialities of the self is the object aimed at. The pursuit of truth must culminate in the realization of the truth.

The ordinary sources of knowledge are found to be inadequate to the discovery of the ultimate truth, being subject to the limitations imposed by the senses. The intellect, though possessed of a superior status in that it organizes the data of experience into a system, is also not immune from the limitations of the senses and has been found to record varying and conflicting, conceptions, which cannot all be true. Our reason is a valued instrument but its services are found to be negative. It can enable us to determine that the ultimate reality cannot be of this or that sort. But it is undependable so far as the positive nature of it is concerned. For this we must fall back upon another organ and this organ is Yoga (meditation) free from the visitations of the extraneous influences¹³.

The word 'Yoga' literally means 'union' i.e. spiritual union of the individual soul with the universal soul. The Gita defines Yoga as that state when there is nothing higher or worth realizing and firmly rooted in which a person is never shaken even by the greatest pain; that state free from all pain and misery is Yoga¹⁴. It aims at the union of the human and the divine all within oneself. It is a way to one's wholeness, in

integration of all aspects and levels of oneself. One must not imagine that Yoga is only a collection of certain practices devoid of a metaphysical basis. According to Patanjali, Yoga does not mean union but spiritual effort to attain perfection through the control of the body, senses and mind, and through right discrimination between Purusa and Prakrti¹⁵.

In fact, Yoga is a perfectly structured and worldview aiming integrated transformation of a human being from his actual and unrefined form to a perfect form. The Prakrta (literally-natural, common, vulgar, unrefined) state is one in which a person copmulatively repeats his actions, in reaction to the forces of Prakrti, which are active both outside him and inside. Through Yoga one can becomes Samskrta (literally-well-made, well put together) and thus no longer be wholly at the mercy of natural forces and inclinations. It can be said that Yoga aims at freedom from human nature, its flight is to the transcendence of humanity and the cosmos, into pure being¹⁶.

Meditation, the most effective part of Yogasadhana helps men to realize the state of perfection. It is the only means of realizing truth and perfection. One cannot grasp the truth unless one meditates upon it, and one cannot realize it unless one grasps it. The aspirant should pin his faith on whatever system he might have been initiated into and should see for himself at the end of the process whether he started with a right postulate. A sceptic has no place in the path of realization.

How can one realize the truth unless one exerts oneself for it? And why should one exert oneself for the truth unless one has implict faith in it and the possibility of its realization? One must have either unflinching faith in the

authority of one's preceptor (guru), or else one must have a direct glimpse of the truth itself before one can proceed in the path or realization. Implict faith in the truth, whether born with the help of the preceptor or fostered by a spontaneous intuition of the truth, is the starting point of the path of spiritual realization. There is various process of leading oneself from this stage of implicit faith in the truth to the stage of final realization of the truth. The processes have a common term for them and that term is Yoga¹⁷.

Citta, Vrttis and Yoga

Citta is defined as mind whereas Vrttis means activities or modification of mind. Hence both the two terms are structured the personality of man. According to Patanjali Yoga is declined as the causation of the modification of citta¹⁸. This cessation is through meditation or concentration, which is also called Yoga¹⁹. Citta defines the three internal organs of Samkhya buddhi (intellect), ahamkara (ego) and manasa (mind). In view of Samkhva citta is considered as the first evolute of Prakrti and has the predominance of Sattva. It is in itself unconscious. But being finest and nearest to Purusa it has the power to reflect the Purusa and therefore appears as if it is conscious. When it gets related to any object, it assumes the 'form' of that object. This form is called Vritti (modifications).

The modifications of the citta are of five kinds²⁰ — 1. Pramana (right cognition), 2. Viparyaya (wrong cognition), 3. Vikalpa (imagination or verbal cognition), 4. Nidra (sleepness or absence of cognition) and 5. Smrti (memory). Right cognition is of three kinds — 1. Pratyksa (Perception), 2. Anumana (inference) and 3. Sabda (verbal testimony). When the citta, through the sense organs comes into contact with the external object and assumes its forms, or

comes into contact with the internal mental state, the cognition is called pratyksa. In Anumana, the citta cognizes the generic nature of things. When citta gets knowledge through sastra or aptavacana, it is called sabdajnana. Viparyaya is positively wrong knowledge or is a kind of misunderstanding having incorrect impression and identification of mind with that incorrect image as rope-snake. Vikalpa is mere verbal cognition. It is an activity of mind, which is based on hypothetical words like that of a hare's horn. Nidra is a state of mind, which depends on absence of perception through five senses. Smrti is the reflection of past experiences through the impressions left behind.

There are five levels of mental life $(cittabhumi)^{21} - 1$. Ksipta (restless), 2. Mudha (torpid), 3. Viksipta (distracted), 4. Ekagra (concentrated), and 5. Niruddha (restricted). The differences in the levels are due to the predominance of the different gunas i.e. sattva, rajasa and tamasa. First or ksipta is the lowest level. It is a state of restless because the mind here is puzzled with excess of rajas and is tossed about like shuttlecock between different sense objects. In the second stage mind is predominated with tamasa and tends towards ignorance, sleep and lethargy. Viksipta is the third state of mind where sattava predominates but rajasa also asserts itself at times. Ekagra is that state of mind where sattva is entirely dominated and rajasa-tamasa are subdued. The mind becomes concentrated on the object of meditation. At Niruddha the mental modifications are arrested though their latent impressions remain. The first three levels are not at all conducive to Yogic-life, only the last two are.

In fact the *Purusa* is the eternally pure and transcendental consciousness. It is the *Citta* with

the reflection of the Purusa in it or the Purusa as reflected in the Citta, which is the phenomenal ego or iiva, which is subject to birth and death and transmigration and to all painful or pleasurable experiences, and which imagines itself as the agent and the enjoyer²². There are five kinds of sufferings (klesas) to which it is subject²³ — 1. Avidya (ignorance), 2. Asmita (ego), 3. Raga (attachment), 4. Dwesa (aversion) and 5. Abhinivesa (instinctive fear of death). The bondage of the self is due to its wrong identification with the mental modifications and liberation, therefore, means the end of this wrong identification through proper discrimination between Purusa and Prakrti and the consequent causations of the mental modification.

It is considered that *Purusa* is the only conscious entity whereas all other things, which are found in this universe, are the evolute of *Prakrti*, hence are material and unconscious. *Jnana* (knowledge) is a kind of *vritti*. As per *Yoga* concept it is said that the light of consciousness, which comes from the *Purusa* and illuminates this 'form' (*vrittis*) is called *jnana*. However *Purusa* is essentially pure consciousness and is free from the limitations of *Prakrti*. But it wrongly identifies itself with its reflection in the *Citta* and appears to be undergoing change and modification. *Citta*, therefore, is the physical medium for the manifestation of the spirit.

Due to this wrong apprehension the conscious *Purusa* appears as undergoing modifications and *Citta* appears as conscious. It can be explained as in a red-hot iron wall, here formless fire appears spherical and cold iron appears hot, similarly on account of its reflection in the *Citta*, *Purusa* appears changing and *Citta* apears conscious. When the *Purusa* realizes that it is completely isolated and is only a passive

spectator, beyond the play of *Prakrti*, it ceases to identify itself with its reflection in the *Citta* with that the light is withdrawn and the modifications of the *Citta* fall to the ground. This cessation of the modifications of the *Citta* through different means is called *Yoga*'.

Yoga, Asmita and Vivekakhyati

The aim of Yoga is clear seeing, which is the sole power of the seer and only of the seer (Purusa), not of the mind, but it is asmita (ego) who tends the Purusa to derecognise its own innate nature. Asmita²⁵ is the basic ignorance and is a limitation by particularization. Purusa says 'I am'; asmita says-"I am this" or "I am that". From this egoism comes the strong desire to perpetuate this specialization of itself and the resulting separation from all else, manifesting itself as a wish to continue living (abhinivesa) as this separate entity. This wish is maintained by indulging in 'I like this' (raga-attraction) or 'I do not like this" (dwesa-aversion). The means for freedom from the fundamental ignorance, leading to all sorrow, is own uneasing version of discernment (Vivekakhyati)²⁶. This vision of discernment alone can cease all kinds of afflictions and can permit transcendental insight (prajna) to arise. Nothing can force the appearance of this insight; all one can do to prepare the ground for it.

The ground to be prepared is the entire psychosomatic organism, sarira, for it is through that and in that whole organism that Purusa sees and prajna arises, not the mind alone nor the heart nor the physical body by itself. One with dulled senses has as little chance of coming to prajna as the one with stupid mind or with an unfeeling heart. Agitation in any part of the entire organism causes a fluctuation of attention. And every act including mental acts like thoughts,

volitions, intentions-leaves an impression (samskara) on the psyche, which is turn lodges itself in the various tensions, postures and gestures of the physical body. These impressions in turn create tendencies (vasana), which dispose one toward certain sorts of actions.

The really deep tendencies cut across the boundaries of what we ordinarily call life and death that is, the life and death of the physical body. This in short, is the law of karma (action, act, work); as one acts, so one is, and as one is, so one acts. It is less to say that one reaps what one sows, it is more in accordance with the idea of Yoga that every act makes a person a little different from before, and this different person now naturally acts according to what he is. Within the realm of Prakrti and Karma, one is not anything except own actions, thoughts, feeling all the conditioning of the past. A person is an expression of the working out of the law of karma. One repeats oneself helplessly, at the some level, neurotically, precisely because one does not know what one does and why²⁷.

In this world there are two types of cosmic tendencies under which one functions mechanically that is Pravrtti and nivrtti. Due to Pravrtti one is busy for endless repetitions but at certain level the tendency that tends to wake up to one's real situation is nivritti. And accordingly one may alter it with effort. The effort required, with the ultimate aim of coming to the vision of discernment (Vivekakhyati), which alone may lead to true insight (prajna) is enormously difficult for the simple reason that a total cleansing of the deepest recess of one's entire consciousness is required. Otherwise, subtle impressions and tendencies will reassert themselves heading one into a repetitious circle²⁸.

Yoga, Samadhi and Personified Emancipation

The real seer is Purusa, which neither is nor personally mine or yours, it is the pure power of seeing. Prakrti, the unconscious entity plays very vital role for the bondage of Purusa. It is neither considered unreal nor even a mental projection. It is very real, and though it can overwhelm the mind with its dynamism and charms and veil the truth from it, yet in its proper place and function Prakrti exists in order to serve Purusa. Yoga with its components places constraints on the usual activity of our desires, inclinations, bodies, breath, senses, mind attention, and ego, so that they may be brought under control of something higher. The more controlled and quietened these various aspects of ourselves are, the greater is the development of the vision of discernment.

This, in its turn, leads to the removal of ignorance about our true identity. Then we realize that we have been identifying ourselves only with our mental physical self, which is of the nature of the object rather than a real seer. When this mis-identification is broken and we no longer rely on the mind for true insight, the natural conflict between the whole and the part that is, between what is and the projections of the mind is dissolved. That leads to the removal of sorrow and its underlying causes, and to the cultivation of deeper and deeper silence, and finally to the aloneness of the pure awareness²⁹.

This is the state of *kaivalya* (emancipation) of aloneness, not because there is an opposition or a separation but simply because there is no other.

The individual follows the ending of all the causes of sorrows, of all the blemishes and imperfections; little remains to be known, for the insight in this state the infinite, the purpose of the human incarnation is fulfilled and the sadhaka is completely free and established in the pure awareness. It is stage of nirbija samadhi³⁰ (seedless silence), when there is no separated object but the Purusa, there is no separated subject but the Purusa, and there is no knowing except the Purusa. The seer, the seen, and the seeing are all one³¹. There is no other. This is nothing but a stage of emancipation.

Conclusion

Thus, the misconceptions rely for Yoga as merely a mystic and spiritual Vidya may be eliminated. Yoga is an approach through which one may realize the gap between mystry and manifestation. Yoga itself is a very systematic and precise method. The practices are linked in such a way, that the goal of Yoga does not seem like a remote possibility, but a reality which one can achieve here and now if one desires. Yoga lays greater emphasis on practice, rather than philosophy behind it.

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RELATIONSHIP BETWEEN YOGA AND INDIAN PHILOSOPHY

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o say that Yoga and Indian Philosophy are related to each other is a gross oversimplified statement. In fact, the two are related to each in two ways. That is, (1) only a particular type of Indian philosophy can lead to Yoga and (2) Yoga can give rise only to a particular type of Indian philosophy.

It is noticed that only those who are encountered with perennial pain and suffering are feel the necessity of philosophising. The kind of philosophical questions they raise are interesting. For example, they ask (i) Are all people subject to misery? (ii) Do pain and misery come to an end at the point of our death? or do we have rebirth such that pain and suffering recur in some form or the other in the next birth also? (iii) Is it possible to overcome all misery and reach a state in which not only misery does not recur but also man finds himself in an eternal blissful state called, *moksha* (final liberation from all miseries).

These questions have many philosophical implications. The first question presupposes the ubiquitous presence of misery, of which death is the most fearful form. As Dhammapada says "Not in the sky, nor in the depths of ocean, nor having entered the caverns of mountain, nay, such a place is not to be found in the world, where a man might dwell without being overpowered by death". 1

If Buddha concluded from this, "Sarvam Dukhamaya" ("All is full of misery") it is only true, though a little exaggerated. Because by misery Buddha and other ancient Indian philosophers meant not merely death, but loss of property, loss of beauty, youth and health, inability to achieve desired results, etc., which every man faces. There may be instances of happiness, but both their recurrence and duration are so negligibly small. In fact, the attempts to obtain them and their loss themselves are painful. So the ancient Indian philosophers, almost rightly, regarded misery as existential, such that human existence could not be easily extricated from misery.

Most men, who are afflicted with misery, are interested in eradicating it, but without asking philosophical questions. Philosophizing misery requires a philosophical bent of mind, which only a few have. So the subject's own experience of pain and misery and philosophical bent of mind are a necessary condition of philosophizing in ancient India.

The second philosophical question implies two possibilities. Assuming that misery is a necessary accompaniment of human existence, we can think of overcoming it in either of the two ways (i) If we believe that this life is the only life we have and that there is no rebirth, then the way of overcoming the misery is

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hedonistic, based on scientism. A Charvaka, for example, who does not believe in an eternal spiritual substance (atman) or God (parmatman), tries to meet misery by adopting hedonistic ways. Since there is no opportunity of being reborn either in this world or in the next, he must depend on science and technology for medicine, etc., in order to be happy till he dies. Since he is not afraid of God in whose existence he has no belief. he may indulge in immoral way without hesitation in order to enhance happiness and extend his life on earth. (ii) If, on the contrary, man believes in an eternal spiritual substance, he believes in karma and rebirth. Though the belief in karma and rebirth is a necessary condition for the practice of Yoga in the Indian context, it may not be so in a non-Indian context. For example, the Christians who do not believe in karma and rebirth can still practice Yoga and become good Christians in order to become eligible for salvation after death. In any case, it is believed by ancient Indian philosophers that belief in a chain of births and deaths in each of which man faces misery, is a good reason why Yoga must be practiced and if man, like Charvaka, believed in only in this life, he would not resort to Yoga practice.

The third question presupposes two things. (i) It is possible to completely terminate the miseries; (ii) while termination of misery is a negative aspect, it is possible positively to enjoy bliss, which is qualitatively and quantitatively distinct from any pleasure we know of. In other words, by the regular practice of Yoga we can attain liberation – liberation for the soul from ignorance, *karma*, rebirth, selfishness and misery which derives from the complex of these.

Here some clarifications are needed. What is *moksha*? Is it the same as living in heaven (*svarga*)? Is it union with Brahman? Is it living

in eternal companionship with God in his world? Is it simply realization that one's self is not *prak[ti* or matter? Is it possible to attain *moksha* in an embodied state? Or, is it necessarily an afterdeath attainment?

All these sub- questions concerning moksha (liberation) presuppose that the soul, which was defiled in its worldly state, becomes pure in the liberated state and liberation is the necessary consequence of Yoga. Moksha is pursued not only as freedom from misery or as a state of blissfulness and peace, but as the highest value.

Here also, we can conclude that if man thought liberation or salvation was a myth or something which human beings can never attain, or if he thought that there are higher values than *moksha*, then he might not have attempted at its attainment. But since he believes in the possibility of attaining it as the highest value, he falls back upon Yoga.

Thus the three philosophical doctrines (i) that misery is inbuilt into human existence, (ii) that misery persists even in our next births and (iii) that misery can be successfully terminated by Yoga make us depend on Yoga for solution.

(2) The other, equally important side of the question is, How is Indian philosophy depended on Yoga? An answer to this question follows from a consideration of the question, What is Yoga?

Many modernists believe that Yoga means a set of asanas (physical postures) coupled with pranayama (regulated breathing). In a few cases Yoga is mistaken for meditation. Those who have studied Indian philosophy may mean by Yoga one of the six systems of Indian Philosophy. But, though Yoga is really each one of these in a

restricted sense, it is something more.

The word "Yoga" can be broadly used in two senses, to mean either (i) an end (goal) or (ii) a conscious, long and strenuous effort leading to that goal. When used in the former sense, it refers to a supra-sensory and supra-intellectual experience, which enhances one's knowledge of oneself and of the world. Such a state is called 'Yoga Samadhi', 'Yoga pratyaksha' 'Turiya which are counterparts of the English 'mystic experience'. Used in the second sense, the word 'Yoga' applies to various means to the end, such as Bhakti-yoga, Karma-yoga, Patanjal-yoga, etc. This definition, therefore, is not restricted to any one form of Yoga, because this state can well be the result of Bhakti-yoga, Karma-yoga, Jnanayoga, Raja-yoga, or any other form of Yoga.

While "turiya", "Yoga-samadhi," etc., are general terms applicable to all schools of Yoga, "Brahma-sakshatkara", "Shunyanubhava" "Kaivalya", etc., seem to be terms having specific connotations in addition to what the general terms connote. For example, when a Yogi disciplined in Advaita metaphysics of Shankar has such an experience he tries to interpret it in terms of Advaita. He would say, for example, that in the turiya state his soul coming out of all limitations merged in Brahman or became Brahman.

In any case, interpretations of the *turiya* state gives rise to philosophy. About the emergence of Indian Philosophy from mystic intuition Karel Werner has this to say:

According to Indian tradition, the ancient Vedic religion is not a product of the imagination of primitive minds reacting to natural phenomena by personifying, worshipping and dreading them, but on the contrary is the creation

of exceptional individuals who had reached the fullness of mystical vision, which gave them an understanding of and insight into the problems of life and existence that may have amounted to the final knowledge of the truth itself. ²

The earliest and clearest expression of deep mystical form which takes the form of philosophy is found in the *Upanishads*.

The philosophy of *Upanishads*, which belongs to the time prior to the creation of Philosophical systems, was not predominantly speculative, but was obviously inspired to a great degree by mystical experiences in which the Yogic approach played an important part.³

The importance the *Upanishads* attach to *dhyana* (contemplation) as a method of verification of the so called *mahavakyas* (maxims), such as "Aham brahmasmi", "tat tvam asi", etc. shows how *dhyana* can be yard-stick of measuring the philosophical truths.

While 'original philosophy' depends on the supra-intellectual perception of reality (such as Brahman or atman, or "Shunya" as the Madhyamika Buddhists preferred to call it), the philosophical systems such as Vedanta, for example, were the products of speculation. What Buddha perceived in his mystical state he conveyed to his disciples - perhaps in unclear terms and several schools of Buddhism sprang up, each claiming to be in possession of key to interpretation of his philosophy. His refusal to discuss metaphysical issues might also have added to our being in dark about the original meaning of what he said. Similarly, the original Vedanta (which is a synonym of "Upanishads") was compressed into the aphorisms called "Vedant sutras" or "Brahma-sutras" by Badarayana. We are not sure whether Badarayana was himself a

mystic, but he is believed to have made the first attempt at culling out a systematic philosophy from the Upanishads. In fact all sutras, such as Nyaya-sutras, Vaishashika-sutras, etc., are believed to be systematic presentation of the various mystic intuitions. But the Vedanta systems, such as Advaita, Vishishtadvaita, etc., are clearly speculative in nature. Their attempt is, on the one hand, to show that their own interpretation or commentary (bhasya) on the "Brahma-sutras" is the most correct one, and on the other, to show, though indirectly, their own metaphysics (for example, Advaita) is what the Upanishads, and the Brahma-sutras teach. As a result of these varied commentaries on the sutras of different schools, there spring a variety of philosophical schools, upholding their own metaphysics, their own epistemology, their own logic and their own axiology. Occasionally, philosophy of language has sprung out of this speculation.

In addition to these commentaries, elaboration (*vrittis*), and *Yukttis* (criticism) also help develop philosophy. It is believed that the six systems of Hindu Philosophy sprang up

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simultaneously and as a result, by mutual criticism, Indian Philosophy was able to develop both in width and depth.

As earlier, here also we can note that the philosophy that has sprung from Yoga is of a particular type. It is chiefly metaphysics especially metaphysics that takes into consideration the reality as a whole. The reality is Brahman which is the essence of the world or an identity of the atman and Brahman, or Prakriti and Purusha, or God whose body the world is, are some which are claimed to be the contents of the mystical vision. In order justify their method of interpretation of the mystic utterances, each school develops its own epistemology, logic, etc. Thus it can be said that while development of metaphysics is the main product of mystic intuition, development of logic, epistemology and other branches of philosophy is the by-product. We cannot fail to note in this context that the type of philosophy which gives rise to Yoga is not the same as the type of philosophy, which springs from Yoga, though both of them are termed "Indian philosophy".

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BOOK REVIEW

Yoga Book for Doctors
By
Dr. Prakash C. Malshe
Pages 112, Price Rs 120.

by the media as a panacea for cure of multitude of ailments, the medical community has different views on yoga, ranging from hard skepticism to devout faith. While on the one hand the traditional yogis are not exposed to medical anatomy and physiology, the doctors are not exposed to the yoga practices. The present book fills up this communication gap by providing yogic knowledge to the doctors in the language that they understand.

The present book can be said to be a medical understanding of various yoga practices and is full of genuine ideas that give substantial food for thought on a number of potential mechanisms by which yoga may mediate its beneficial effects. One is particularly impressed with the sections on use of yoga in eliminating Helicobacter pylori infection – doubtlessly an original hypothesis- and the description of hypoxia in pranayama with its potential to generate coronary collaterals amongst other benefits.

The book starts with a passage quoted from the 'Harrison's Principles of Internal Medicine' and is divided in nine chapters. The prayer section appears to have been included just to maintain the tradition. Nowhere in the book does the author beg for having faith in the yoga practices. On the other hand, by the wonderful explanations on mechanisms of action of yogic practices on human physiology, one gets convinced about their effectiveness. There

are photographs of actual performance postures and original Sanskrit quotations with appropriate English translation. The author has put forward his views based on his work done in this field to reveal the influences on Asana, Pranayama, Shatkarmas (internal cleansing processes) and practices which can establish more balance in autonomic nervous system. In chapter VIII author has precisely put forward his views on application of Yoga Practices in diseased conditions viz: Obesity, Peptic Ulcer, Amoebiasis, Gall Stone, Diabetes, Hypertension, Ischaemic heart disease etc.

The author maintains that there is a definite need to intensify research in the field of Yoga by medical colleges and to this effect; the book has a purpose to stimulate research by physiologist. In this objective, the author has largely succeeded in his effort. This book has appeared with new dimensions on influences of Yoga Practices on human physiology and anatomy. This will enable physicians and others to understand the more about basic physiological mechanisms and other aspects of Yogic Science. Yoga is a science of body and mind, it has definite scientific principals to establish a harmony in body mind complex.

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BOOK REVIEW

A Synthetic Approach to Diet & Nutrition
By
Dr. A.K. Ghosh (Sw. Mangalteertham)

his book belongs to the field of Diet and Nutrition. It is felt that scientific research has made huge data available to us on various aspects of nutrition concentrating on calories and biochemistry of diet in relation to the gross constituents of our body and physiological processes. But life is not calorie or chemistry only

So far, very little has been made to integrate the idea of science of Yoga & Ayurveda on diet and nutrition. The author has offered an overview of science, Yoga, ayurveda independently and efforts have been made to bridge the gap between science of yoga and ayurvedic concept in part one of this book, whereas, the second part deals with eating habits, food schedules, balance diet, fasting, elimination of junk food and more about diet, body, mind and personality.

So, this book may bridge the gap between modern science and ancient science about diet and nutrition.

Dr. Ishwar V. BasavaraddiDirector,
Morarji Desai National Institute of Yoga,
New Delhi

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MDNIY Students and Kathak Dancers performing Fusion of Yoga/Dance/Music during Arogya 07



Hon'ble Dr. Anbumani Ramadoss watching Yogasana demonstration of Institute Senior Yoga Expert Sh. Balmukund Singh and Ex-Students of MDNIY



Dr. Ishwar V. Basavaraddi with Hon'ble Health Minister of Govt. of Punjab & Dr. S.K. Sharma (Ayurveda)



(C) Dr. Ishwar V. Basavaraddi, (L) Ms. Vanmala Vachani, AD(Lit), Senior Yoga Expert Sh. Balmukund Singh with Yoga/Dance/Music Fusion Programme team during Arogya International 07



DYT Students taking Yoga Therapy Sessions at MDNIY stall



DYS and DYT students playing their parts during Bi-monthly Socio Cultural Programme - Pancham Swar



(R) Dr. R. M. Varma (Former Director and Prof Emeritus, NIMHANS), Dr. D. Nagaraja (Director & Vice Chancellor, NIMHANS), Dr. H. R. Nagendra (Vice Chancellor, SVYASA) and Dr. B. N. Gangadhar at candle light session of the seminar



(C) Dr Ishwar V. Basavaraddi with Chinese delegation during their visit to MDNIY



(3rd from rgt) Ms. Patricia Francis with her colleagues, (4th from rgt) Dr. I. V. Basavaraddi, Director MDNIY, staff and students of MDNIY



Dr. Ishwar V. Basavaraddi with Ms. Patricia Francis, Executive Director, International Trade Centre, Geneva, Switzerland during Institution visit

FORM - B

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