



Yoga Vijnana

The Science of Yoga

A Quarterly Journal of MDNIY devoted to the promotion of Education, Therapy and Research in Yoga
Volume-IV (Combined Issue), 2010-11



MORARJI DESAI NATIONAL INSTITUTE OF YOGA, NEW DELHI
(An autonomous organisation under department of AYUSH, Ministry of Health & Family Welfare, Government of India)

Yoga Vijnana

The Science of Yoga

Editorial Board

Dr. S.L.Goel

Former UGC professor of Emeritus,
Punjab University,
185, Sector 16-A,
Chandigarh

Swami Anant Bharti

Director,
Swami Keshwananda Yoga Institute,
B-2/139-140, Sector-6, Rohini,
Delhi – 110085

Dr.C.G.Deshpande

Prof of Psychology (Retd.)
13,Indira'Gananjaya-1,
Kothrud, Pune

Dr. Madan Moh. ❁

Former Director-Professor & Head,
Department of Physiology,
JIPMER,
Pudicherry – 605006

Swami Mangalteertham

Director
Nutan Sanjeevani Sanasthan,
Bele Bagam, Math Bari,
Post-Dburgram,
Deogarh-814112, Jharkhand

Sh. R.N. Sinha

Director,
Department of AYUSH,
Ministry of health & F.W.Red
Cross Building,New Delhi-110001

Advisory Board

Dr. W. Selwamurthy

D.S. & C.C R&D (LS&IC)
Ministry of Defence,
Room No. 338,
DRDO Bhawan, Rajati Marg,
New Delhi – 110001

Shri M. Madhvan Nambiar, IAS

Former Additional Secretary,
Deptt. of Information Technology
Govt. of India,
New Delhi

Dr. S. P. Mishra

Vice-Chancellor
Shridhar University
Chirawa Road,
Pilani,
Rajasthan- 333031

Dr. K.K. Sharma

Advisor and Pro-Vice
Chancellor,
Sohan Lal DAV College of
Education
Ambala City,
Harayana

Dr. Sneha Anand

Professor,
Central Biomedical Engineer,
Indian Institute of Technology
(I.I.T),
New Delhi

**Prof. Acharaya Chandra
Has Sharma**

Retd. Dean,
Lal Bahadur Shastri Sanskrit
Vidyapeeth,
Qutub Institutional Area,
New Delhi

Editor

Dr. Ishwar V. Basavaraddi

Director,
MDNIY, New Delhi

Managing Editor

Md. Taiyab Alam
Media Consultant
MDNIY, New Delhi



Morarji Desai National Institute of Yoga

Yoga Vijnana
The Science of Yoga

Yoga Vijnana

The Science of Yoga





Editorial

Featured by brilliance and speed modernization along with economic prosperity, the growth of modern era is unraveled. This lifestyle geared to get more economic prosperity but has not brought the overall growth in terms of health. Lifestyle and behavioural pattern have undergone rapid change leading to sharp increases in the prevalence of diseases and disorders. The health hazards have started shaking the very foundation of matter based paradigm. The faulty lifestyle and stress generally fuel psychiatric, psychosomatic, psycho-physiological, neurological and physical disorders where modern medicine finds it hard to manage.

Yoga accepts the perfect explanation of the diseases with in-depth reasoning. Yogic practices respond to the requirements of healthy living and contributes to help people in addressing physical, mental, emotional and social dimensions of health. Indeed, one may consider Yoga as a way of life. Yoga is gaining recognition worldwide as we gradually enter into natural ways of healing and Yoga therapy is walking ahead in many therapies. It has established as a preventive science backed by numerous research publications.

The article **Three Facets of Ashtanga Yoga Spiritual – Wellness – Psychological and Social Transformation** by **P.A.Bhagwatwar** stresses upon how Yama and Niyamaanga; Aasana-Praanaayamang and Pratyahaar-Dhaarana-Dhyaana-Samadhyaanga which contribute towards Spiritual facet; Physical wellness facet and Psychological health facet respectively.

Meditation: Holistic Approach to Alleviation & Better Life Management by **Dr. S.P.Mishra** elaborates how meditation develops inner and outer harmony, genius ness and spiritual immunity for stable and meaningful life.

Mind and its Well Being by **Dr. Indulata Das** corelates mind and well being through Creation of the Mind, Devoid of Consciousness, Temporal purview of mind, Nurture of mind, Role of mind in human soundness, etc.

Health and Yoga Education by **Prof. Aruna Goel and Prof. S.L. Goel** mentions in details the in-depth potential of Yoga philosophy, techniques and science for channelizing the person's energy for overall all health development.

Yogic Attitudes in Patanjali's Yoga Darshana: A Key to Happiness and Mental Wellbeing by **Dr. Sadhana Arya & Dr. Ishwar V. Basavaraddi** discusses the Sutras of Patanjali advising that the attitudes of *maitri* (friendliness), *karuna* (compassion), *mudita* (joy and gladness), *upeksha* (indifference/apathy) should be adopted respectively towards happy, miserable, virtuous and vicious persons/events.

The research paper **Hirdaya Chetna Sthanam** by **Shastri Chandrakant Dev** highlights the points of Centre of Consciousness.



Altered State of Consciousness in Healing & Health by **Swami Mangalteertham** explains how Yoga can regulate gene activity in a natural way by altering the state of consciousness through different antarang Yoga techniques.

Role of Yoga in Lifestyle Related Menstrual Disorders with Special Reference to PCOS by **Dr. Ulka A. Natu** states the approach of dehasadhana (physical practices of asanas, shuddhikriyas), pranasadhana (pranayama), bhavasadhana (culturing of emotions), divyasadhana (divine practices – pratyahara, dharana, dhyana), diet, congenial atmosphere, and counselling can help in treating gynecological disorders.

Beneficial Effects of Yoga based Lifestyle in Improvement of Risk Factors for Coronary Artery Disease by **Shantaram Shetty** discussed how Yoga is effective in the management of CAD.

Yogic Interventions for Wellness and Wellbeing by **Dr.M.V.Bhole** states how Yogic intervention is effective for overall wellness and wellbeing of the people.

Complementary Nor Alternative, Just Medicine by **Ramesh Bijlani** has beautifully elaborates the importance of Alternative and Complementary Medicine. He has also mentioned that while retaining the achievements of the past, and absorbing the benefits yet to come from biotechnology and molecular biology, modern medicine has started incorporating also the central principles of ancient disciplines such as Yoga.

Yoga Therapy for Diabetes Mellitus by **Dr. Prakash C. Malshe** highlights how Yoga therapy can be helpful in several ways for the prevention and treatment of Diabetes Mellitus.

The Role of Sweat in the Praxis of प्राणायाम by **Dr. Chandramouli S. Naikar** narrates the performance of asanas and kriyas attain a state of purification and starts sweating due to the heat produced in the body. This sweat helps the body to maintain the normal temperature of the body, by loss of accrued heat.

Use of Solar Energy as a Cure for Common Ailments by **VK Gothecha, Anita Sharma and Anita Gautam** focused upon how sunbath prevents from many ailments.

Along with these selected articles, you will come across a special section of book review followed by photo gallery. I invite suggestions and articles for this journal from the eminent readers and Yoga practitioners for improving the present standard.

Dr. Ishwar V. Basavaraddi

Editor



CONTENTS

1. **Three facets of Ashtanga Yoga Spiritual-Wellness
Psychological and Social Transformation** 1-4
by P.A. Bhagwatwar.
2. **Meditation: Holistic Approach to Alleviation
& Better Life Management** 5-16
by Dr. S.P. Mishra.
3. **Mind and its well being** 17-21
by Dr. Indulata Das.
4. **Health and Yoga Education** 22-31
by Prof. Aruna Goel and Prof. S.L. Goel.
5. **Yogic Attitudes in Patanjali's Yoga Darshana:
A Key to Happiness and Mental well being** 32-35
by Dr. Sadhna Arya and Dr. Ishwar V. Basavaraddi.
6. **हृदय चेतना—स्थानम्** 36-40
शास्त्री चन्द्रकान्त दवे
7. **Altered State of Consciousness in Healing & Health** 41-48
by Swami Mangalteertham.
8. **Role of Yoga in Life Style Related Menstrual Disorders with
Special Reference to PCOS** 49-52
by Dr. Ulka A. Natu.
9. **Beneficial Effects of a Yoga Based Life Style in Improvement
of Risk Factors for Coronary Artery Disease** 53-60
by Shantaram Shetty, Research Coordination.
10. **Yogic Intervention for Wellness and Wellbeing** 61-63
by Dr. M. V. Bhole.



11. Neither Complementary Nor Alternative, Just Medicine	64-67
<i>by Dr. Ramesh Bijlani.</i>	
12. Yoga Therapy for Diabetes Mellitus	68-77
<i>by Dr. Prakash C. Malshe.</i>	
13. The Role of Sweat in The Praxis of प्राणायाम	78-83
<i>by Dr. Chandramouli S. Naikar.</i>	
14. Use of Solar Energy as a Cure for Common Ailments	84-88
<i>by V.K. Gothecha, Anita Sharma and Anita Gautam.</i>	
Instructions to Authors	89-90
समीक्षा / पुस्तक परिचय	91-92
Photo Gallery	93-94



Three Facets of Ashtanga Yoga Spiritual – Wellness – Psychological and Social Transformation

**P.A. Bhagwatwar*

Social transformation is the urgent need of our country. Ours has become the valueless society, which is reflected in all walks of life. There is rampant corruption in every aspect of nation's life depicted in the media with the exposure of a scam somewhere or the other in the country, as if there is anarchy in the nation. Leadership, at all levels, from spiritual down to the family level, passing through political, social, and educational, is highly toxic; exceptions are like oasis in the desert. Social transformation implies transformation of Indian society from present deficiency centricity to growth centric society. Following may be described as some of the destinations:

1. Replacement of deficiency orientation by growth orientation.
2. Development of spontaneous intelligence/spirituality.
3. Management of physical health.
4. Attaining a psychologically healthy status.

Spontaneous/Spiritual Intelligence (SQ) implies inculcation, nurturance, and development of values like honesty, integrity, respect for self and others, compassion, and courage, the virtuous qualities are present in all infant from birth as a result of human inheritance. Physical well being is a necessary condition for psychological health, which represents self realization. Following three facets of Ashtaanga yoga have the potential to contribute in all three areas, respectively.

- Yama and Niyamaanga (YNF): The Spiritual facet

- Aasana-Praanaayamang(APF): The Physical wellness facet
- Pratyahaar-Dhaarana-Dhyaana-Samadhyanga (PDDSF): The Psychological Health facet.

Social transformation is the urgent need of our country. Ours has become the valueless society, which is reflected in all walks of life. There is rampant corruption in every aspect of nation's life. Every day we open a news paper in the morning and it begins with the exposure of a scam somewhere or the other in the country. It looks as if there is anarchy in the nation. It is high time that we should find a solution to the problem. It won't be an exaggeration to state that leadership at all levels, from spiritual down to the family level, passing through political, social, and educational, is highly toxic. Of course, this does not mean that every leader is corrupt. There is some oasis in the desert, as an exception.

Social Transformation

Social transformation implies that the Indian society should move from its present status of deficiency centric to growth centric society. Identifying the destination thus is a first priority. Without a clear understanding of destination our journey may prove to be a rudderless and frustrating. Following may be described as some of the destinations:

5. Replacement of deficiency orientation by growth orientation.
6. Development of spontaneous intelligence/spirituality.
7. Management of physical health.
8. Attaining a psychologically status.

*Deptt.of Applied Psychology, University of Mumbai, Mumbai

Such changes are absolutely essential for realization of our dream of placing India in the class of developed nations, with an identity of its own. It necessitates a three pronged attack to attain transformation at all levels of the society. There has to be change simultaneously in spiritual or spontaneous values, physical wellbeing, and psychological health.

Core Ideology

The major problem with us is that India does not have any core ideology, composed of core purpose and core values. Core ideology is not something stated in our documents, not to be found when needed. It is something that reflected in nations, behavior. We describe ourselves as a sovereign social democratic republic. Our core purpose is wellbeing of the masses. However since independence there has been a very little change in the condition of the masses. Similarly core values like honesty, integrity, compassion, etc have been completely done away with from our individual and social life. There is almost no such thing as patriotism, morality, and such other spiritual aspects reflected in our behavior.

Spontaneous/Spiritual Intelligence

It implies inculcation, nurturance, and development of values like honesty, integrity, respect for self and others, compassion, and courage. In fact these virtuous qualities are present in every infant right from the time of birth as a result of human inheritance. However they are masked by socializing influences in the direction of toxic behavior. The prestige of any nation is judged in terms of the status of this intelligence and not on the financial/economic status. It is because of almost total absence of honesty and integrity that India we have attained

the distinction of being a highly corrupt nation in the world.

Physical Wellbeing

Physical wellbeing is a necessary, but not sufficient condition for realization of one's purpose, which is self realization or self actualization. Wellbeing does not mean that one should be very strong and stout, but it simply implies freedom from pain.

Psychological Health

Psychological health is or should be the aim or purpose of life of every individual. Unfortunately such individuals are not to be found in plenty. They are not even 1% in the total population. Particularly it is necessary to have such mentally healthy individuals in leadership positions. Abram Maslow has stated that even if there are 8% such mentally healthy individuals in the society, they are enough to transform the entire nation into a mentally healthy nation. Thus the problem of social transformation is ultimately the problem of developing mentally healthy leaders in the society.

Ashtaanga Yoga's contribution (AY) towards Social Transformation

Three facets of Ashtaanga yoga have the potential to contribute in all three areas. The facets of Ashtaanga Yoga are:

- Yama and Niyamaanga (YNF): The Spiritual facet
- Aasana-Praanaayamang (APF): The Physical wellness facet
- Pratyahaar-Dhaarana-Dhyaana-Samadhyanga (PDDSF): The Psychological Health facet.



Spiritual and Physical wellness facets are jointly known as Bahirangas and Psychological health facet is called Antarangaas of (AY). Most important facets for social transformation are the spiritual and psychological facets, as the ultimate goal of Ashtaanga yoga is self realization, which is the sign of psychological health. But to attain it spiritual facet is a necessary condition, with physical wellbeing as a mediating variable.

In the context of social transformation we have to concentrate on leadership, as leadership is primarily responsible for the prevalent pathetic condition of our country and leadership transformation is the only way out for social transformation.

Most distinguishing characteristic of the present leadership is that it is very high on Political Intelligence (PQ) and Business Intelligence (BQ); high or low in Emotional Intelligence (EQ); but extremely low on Spiritual Intelligence (SQ). SQ represents the 'core values' the way one is going to conduct oneself in life. SQ may be defined as the ability to rise above ones ego and overcome the self-centeredness and ambition that goes with ego; and exchange it for a deeper understanding of oneself; a stronger sense of meaning and purpose; and amore courageous approach to everything that one does. 1. It is reflected in ones purpose and values for guiding them in their life, and sense of their duty towards 'the world'. To put it differently we need leadership that is high on Spiritual Intelligence (SQ). When a leader is high on the first three intelligences and low on SQ he/she is more likely to exploit the situation for one's personal advantage at the cost of the society. SQ is manifested in the display of honesty, integrity,

responsibility, compassion, respect for self and others, and courage. All these values are the core of Yama and Niyam facet of AY.

SQ represents a part of the core ideology if an individual. It provides guidance as to the way one going to conduct oneself in life. It can and should be developed during the period of childhood only which is the highly impressionable age. Also it is quite easy to develop it during that period, as the child is born with such values only. The role of parents and teachers is simply to nourish them during the process of socialization. The only way to do it is for the parents behave what they preach to their children.

Antaranga phase constitutes the core of life an individual. It represents the 'core purpose' that one stands for. What do I want be in my life?; What do I stand for? This is the second part of an individual's core ideology. It begins with identifying the Aalambana, the aspect of existence to be concentrated upon. The most striking part of The Indian philosophical thought is that most of the practices are thought to be difficult to implement, which in fact is not true. If we start from Bahirangas it is difficult to practice, but when we begin from antarangaas it is extremely easy. No where has Patanjali stated that we should always start from Bahirangas and in a particular sequence. Let us see how Teevrasamveg yoga facilitates attainment of organizational excellence, when it is used as aalambana. The 39th sutra of Samadhi pada,

“YATHABHIMATADHYANADWA”

P.Y.S. 1/39

gives us freedom to have any object/concept/ thought/idea for “aalambana” (concentration of attention). Further, sutra 21



“TEEVRASAMVEGAANAAMAASANA”

P.Y.S. 1/21

implies that the experience of samaadhi is facilitated if the aalambana one selects is the one that one intensely desires to seek. Sutra 22

“MRUDUMADHYAMAADHIMATRATWATTATOPI VISHESHAH”

P.Y.S. 1/22

suggests the three point scale of intense desire, and indicates that stronger the desire for intensely sought for object easier it is to attain samaadhi. All three sutras Jointly point to the fact that experience of samaadhi depends on intensity of one’s liking for aalambana and extent to which one desires to seek it. Though we have the freedom to choose subject/object of our liking and the one that we are good at it is not that easy. It takes a long time to identify it, generally about 15-20 years. However the search needs to be continued. That alone makes our life meaningful. What it simply means is that if we so intensely desire to transform the society, we have to concentrate fully on it and the doors will automatically be opened If it is so intensely liked and desired individual may identify with ease and come out with more and more creative areas to attain social transformation. There are four stages of samaadhi as shown in the 17th of sutra of samaadhipaad.

VITARKAVICHAAR-AANANDAASMITAANUGAMAT SAMPRADNYATAH

P.Y.S. 1/23

(Phases of Samaadhi)

With concentration on an intensely desired theme Savitarkasamaadhi is automatically attained and a person enters into savichaarsamaadhi stage with ease. This phase may require any length of time depending on scope and complexities of the theme. But after it matures nirvichaarsamaapatti is automatically facilitated. Nirvichaarsamaapatti facilitates the

activation of RITAMBHARAA PRADNYAA, which is the ability to have objective and unbiased understanding of reality. Maturation of savichaarsamaadhi leads to SAANANDA SAMAADHI, which is free from any thought of the initial aalambana. It may be described as a state of pure joy. At this stage the role of “any object being interesting for concentration” recedes into the background. Any object or topic can be concentrated upon with ease. This state further leads to SAASMITA SAMAADHI, making one forget one’s own identity.

At the end what remains is the wellness component of or once mission. It is facilitated by the practice of **aasana-pranayamaanga**. It represents the necessary physical fitness as a necessary condition for undertaking any activity. However it is just a necessary condition, but not a sufficient condition to bring about social transformation. There are a number of examples to show that one can devote full life for a noble cause, even at the cost of one’s physical condition. Mahatma Gandhi was almost never in a physically sound condition however he sacrificed his entire life for the cause of the down trodden and freedom our country.

References

1. Cook Sarah, Macaulay Steve, and Coldicott Hilary (2005): Change Management Excellence – Using the four intelligences for successful organizational change, Kogan Page India, New Delhi, P 76.
2. Kolhatkar K.K.: BharatiyaManasshastra – Patanjala Yogadarshan, (1918), KeshavBhikajiDhavale, SamarthaSadan, Girgaon, Mumbai, India,
3. Maslow Abram: Motivation and Personality, Edited by Cynthia McReynolds with New Material by Ruth Cox and Robert Frager, 3rd ed. Pearson Education



Meditation: Holistic Approach to Alleviation & Better Life Management

*Dr. S.P.Mishra

INTRODUCTION

There are established facts to realize that the world is suffering from deep rooted problems today. With technological and scientific developments at its best, we seldom find people with a satisfied inner self and a mind at peace. If we have a look at the development that has happened in the 20th and 21st century so far, we can draw out one interesting fact. This development was meant to make human life easier, comfortable, fast, and smooth so that one can spend time on self introspection and be a better being; but interestingly what we notice is an ugly picture of development, which has increased the divide between rich and poor, global warming, increased crime rates, less civilized people, and much more. A root-cause analysis shall reveal that at the core of the problem lies the contamination of thoughts, which lead to the current scenario. Human mind is the store house of thoughts arising from previous experiences & unfulfilled desires. An average human mind experiences more than 60,000 thoughts a day. Hence, there is a definite established need for not only managing, but also transforming these thoughts in the righteous direction, to which Meditation is **THE** Solution.

All human activities spread over the entire life span are governed by the mind. The mind is considered to be the sixth sense. Its attributes are greed, attachment (*moha*) towards worldly objects and people, and egoism. The mind experiences joy when these three attributes are attended to. These subtle and imperceptible thoughts and feelings arising in the mind determine the nature and direction of human actions.

The mind is different from the rest of the senses in that it is always unsatisfied and ambitious. New hopes and ambitions arise once the old ones are fulfilled. In this globally competitive world this mind is receiving "too much information" which has been scientifically termed as *sensory overloads* i.e. inundation of information. This sensory overload leads to *polyphasia*. *Polyphasia* is a term used to describe an abundance of simultaneous thoughts cluttering the mind. The end-results of these actions are also accordingly determined. Malice, animosity, anger, jealousy, or the soothing sentiments of love and compassion, originate and grow in the domain of mind.

A great revolutionary, saint and scholar of the modern era- Yugrishi Shriram Sharma ji has preached and disseminated various practical spiritual techniques, which can help us gaining control over our thoughts and thereby resolving most of our physical and psychological problems. According to him, the folly of the wise man is ignorance of his true self and his ultimate goal of life. Since we don't know the goal of our life, most of us are blindly following rest of the people which puts us in unwanted situations and undesired experiences of life. We have forgotten that the true joy of life lies not in the worldly pleasures but in oneness with the whole, the Divine Bliss. This indicates that our bio computers is incorrectly programmed for long. As told by a reputed Indian saint Swami Satyananda Saraswati, due to this incorrect programming we are continually exploiting ourselves to seek for pleasure through making money, obtaining status, drinking, smoking etc. Therefore to live a meaningful life we need to

*Vice-Chancellor, Dev Sanskriti Vishwavidyalaya, Gayatrikunj-Shantikunj, Haridwar - 249411(Uttaranchal), India.



reprogram our minds, which had been destructively programmed since birth.

With the practice of meditation, we can reprogram this bio computer to find intervals of relaxation and self-realization. Shakespeare said-“the eyes are the windows to the soul”. By closing the eyes from time to time, one can see through the window, the soul. This creates higher awareness, which is going to free humanity from most of the individual and social problems.

Thus meditation is the need of today. We all have an inherent ability to concentrate and contemplate which unluckily has been avoided continuously for long. If only we could realize the importance of necessity to calm the mind, to concentrate and go beyond the mind, a state of lasting happiness for ourselves and an absolute peace for the world can be achieved.

The Indian Way

Within the Indian tradition meditation has been a subject of deep study, research and experiments from time immemorial. A variety of meditative practices have been developed and systematized in the different spiritual traditions over several centuries. Indologists have traced the development of meditative practices in the Indian traditions in the pre Aryan period of Indian history, which dates back to nearly 3000 BC during the time when the first river valley civilization of the world existed. The cults that existed during this period glorified the life of renunciation with the aim of “mental control”.

Scientific spiritual practices were part of the Vedic era. The Vedic religion did not believe in the personal God. There religious practices consisted of rituals aimed at harnessing the natural forces through propitiation. In this tradition meditation practices are known as “*Upasana*”, not yoga. It is derived from the roots *upa*, (near) and *asna* “(to sit). Thus the word literally means, “Sitting near” the power.

Upasana is an “Objective” meditation. Objective meditation involves concentration of the mind on the object, which may be light, fire, sky etc. or some qualities like love, compassion and inner pleasure.

In the era of Upanishads, the Indian sages who used to perform experiments on their own body developed the “Subjective Meditation called “*Atam Vichar*”. Unlike *Upasana*, in *Atam Vichar* there is no focusing of consciousness or effort or will. On the other hand it is an attempt to seek the source of consciousness to trace one “I” back to its roots. This meditation is difficult to practice. It is only proper training of mind by *Upasana* that one can proceed with *Atam Vichar*.

Yoga Mysticism and Meditation

Though the yoga discipline existed for many centuries, it is widely accepted by scholars that it was the sage Patanjali in the second century B.C who codified all the existing theoretical and practical aspects of yoga in the form of sutra (aphorism). These are known as Patanjali *Yog Sutras*. In his system of yoga *Dharana*, *Dhyana* and *Samadhi* are together called *samyama*, which represents meditation proper in this system.

According to the text, in *Dharan* for the first time the power of consciousness is directed towards the inner being. When the mind is fixed with only one object, sees only one object, and nothing else. *Dhyan* is a state of pure consciousness, which transcends the inner and outer consciousness. The climax of *Dhyan* is *Samadhi*. In Indian traditions it is used for inner soul growth.

Patanjali yoga system was not just a practical discipline. It had a metaphysical basis. Patanjali accepted the basic notion of Samkhya philosophy according to which the entire universe and its activities are result of the interaction of two fundamental principles *prakrti* and *purusha*. *Prakrti* refers to the

principle of materiality and *Purusha* to transcendental consciousness. Ultimate nature of man is *Purusha* (transcended consciousness), but human beings are unaware of it because of the activity of *prakrti*. To transcend the influence of these and to recover ones true nature is the goal of meditation.

The Golden Age

In India, the sixth century was an era of asceticism and renunciation. Jainism, which began as the reform movement believed that neither in God nor in the divine mercy. According to the faith human creature is a *Jina* or a conqueror. His destiny is to free himself from the cycle of birth and rebirth. Only by austerity and practice of meditation he can free his soul from the cosmic law of karma that acts through the properties of matter.

A serene and vigorous personality, one who preached the highest peak of spiritual contemplation and silence accessible to man, was Gautam Buddha. It is through meditation that obtained enlightenment. Buddha in his Eight Fold paths has highlighted the importance of Right Mindfulness and concentration. Buddhism stressed on earnest and diligent striving for the holy life on transcendental love by demolishing the boundaries of ego through meditation.

Another popular religion Sikhism which flourished in India during the fourteen century emphasized on mediating on the “*naam*” and concentrating the thought on one Immortal Being, the *Waheguru*. The Guru in Sikhism is the perfect prophet in whom the Divine energy shines. Through him the glory of Lord is transmitted therefore one should meditate on the qualities of the Guru.

Thus in Indian tradition, many Sages and saints, who have reportedly have attained the highest level of meditative states as per the traditions have served as models. They have been

responsible for integrating meditative practices in all their diversity into daily.

The synthesis of approach

The views of western psychologists about meditation, in some respects, very much resemble the principles of yoga. The east and the west both believe, to a greater or a lesser extent that meditation is about the expansion of field of vision of consciousness. Although the applicative approach towards the practice of meditation varies significantly.

The west considers meditation more or less, like sleeping pills. It is a technique to relax the stressed conditions. In this context, transcendental meditation by Indian Saint Maharshri Mahesh Yogi was popularized a lot all over Europe and America. It is now extensively used for physiological and psychological treatments worldwide. Latest research studies too focus at these aspects of applicative meditation.

In this synthesis Woodworth has written, *Dhyan* means becoming alert and activated for the purpose of seeing an object or doing some act. Thus according to him *Dhyan* may be of two types momentary and continuous. In the beginning, it is of course, momentary but it gains continuity by continued application of mind in it.

Sidney Smith opines that Meditation (*Dhyan*) is nothing but to forget everything else except the objective. Yosen Meredith says that a person who seeks only one thing in life may rest assured that he would get it before the end of his life. According to Charles Dickens Meditation (*Dhyan*) is a useful, harmless, definite and beneficial process. Swet Mordon thinks that concentrating the power of resolve is *ekagrata*. Once *ekagrata* is achieved no work can remain unaccomplished.

In this context, Earnestwood holds that *Dhyan* begins where *dharana* ends. *Dharana* localizes concentration to a very small region of the



mental image with the objective of intensifying the light of consciousness on that subject. In *dharana*, there is a contraction of the field of vision while in *Dhyan* it expands. Hence, the progress of *dharana* is inherent in the success of *Dhyan*. However what is left unanswered is whether this was the motivation in ancient traditions that made the sages and monks practice mediation. Investigating the lives of these very saints and monks it becomes clear that essentially mediation is meant for an altogether different application. These can be summarized as follows –

- Cleansing of the Psyche.
- Expansion of individual consciousness to cosmic consciousness.
- Gaining of spiritual energy.

This reflects the utility of meditation as recognized and practice in the east. The physiological and psychological benefits follow automatically.

In the east, the practice of meditation eventually leads to two types of changes at two different levels. First, being the transformational changes resulting into changes in personality traits. These work at personal level i.e. for reframing the individual personality. While the second, the transpersonal changes carry the personality beyond senses of individuality, reframing the interrelation between the individual existence and cosmic presence. This is the state of self-realization. The west and the east, at this point, tread separate paths. Although the physiological and psychological aspects are worth importance, still the basics of application must not be neglected. The west must now look beyond what is visible to them presently. This could help humanity explore newer dimensions of peace, progress and prosperity at international platform, for all.

The Right Perspective of Meditation

Most of the world population has heard about meditation till date. However, just a few have any concept regarding it and still fewer have any real experiences.

It is also observed that the practice of meditation being integrated with the practice of religion is generally mistaken as a religious practice itself. However, meditation being adopted by most of the religions directly or indirectly is the not religion itself. In it, the object of focus could be a Hindu or Buddhist lotus, Islam's moon, Jew's star of David etc. It purely reflects the growth of consciousness and does not interfere with any religious and cultural belief.

In the east, the practice of meditation eventually leads to two types of changes at two different levels. First, being the transformational changes resulting into changes in personality traits. These work at personal level i.e. for reframing the individual personality. While the second, the transpersonal changes carry the personality beyond senses of individuality, reframing the interrelation between the individual existence and cosmic presence. This is the state of self-realization. The west and the east, at this point, tread separate paths. Although the physiological and psychological aspects are worth importance, still the basics of application must not be neglected. The west must now look beyond what is visible to them presently. This could help humanity explore newer dimensions of peace, progress and prosperity at international platform, for all.

We define meditation as “the art of consciousness becoming aware of oneself on the grand and cosmic scale. It is an inward journey from the gross to subtle and to the most subtle aspect of one's being. More than 55 types of meditation techniques have been experimented and proliferated by Hon'ble Chancellor of Dev Sanskriti University, Dr. Pranav Pandiyaji, with

the effect being gauged on 1000 plus sample. The observatory results have been astonishing and beneficial to the participants in their respective spheres of life.

Meditation follows concentration

Concentration and meditation are often mistaken to be similar. But this is not the case. While concentration is confinement of the consciousness to one point or one object or one arena, meditation is the continuity of consciousness with that point of concentration. In concentration, the person lacks continuity. The awareness of the object breaks after some time due to oscillations of mind. When this concentration is practiced for long, the consciousness can be continually aware of the object without interruptions i.e. to say that the oscillations of mind are stopped and are under voluntary control of mind.

Concentration is therefore a preliminary practice which when perfected induces the state of meditation automatically. The scattered sunrays cannot burn even a thread, but when the same rays are focused with the help of a convex lens, a spark of fire is produced, capable of burning anything. Similarly – “*yada pancavatishthante gyanam manasa sah.*” That is, when five *karmendriyas* and five *gyanendriyas* are not attracted towards their objects of desire, the mind becomes stable. In meditation, when the external world of objects and the false ego-self are forgotten, it should be assumed that the mind is getting quieted. Thus regular practice of concentration will lead the practitioner to higher dimensions of consciousness beyond the ordinary mind, instinct with paranormal ranges of light, life and bliss.

Concentration → One-Pointedness → Uninterrupted flow of mind towards one object → Meditation state → Mind is expanded to the higher realms of state of supreme oneness.

Deep and focused mental concentration is the major prerequisite for meditation. To illustrate these two states, the following examples can be considered. The oil from a pot can be poured out in two ways, first would be an interrupted stream with breaks and second would be a continuous flow, regular and steady. Similarly, as small quantity of explosive material, condensed in a bullet and targeted through a gun, hits the focused aim. If one focuses the potentials and efforts in a constructive direction, the goal of the life may be achieved. Thus meditation is a regular flow of thought with regard to the object of concentration. Meditation follows concentration.

Meditation: Scientific dimensions

The human body consists of over 7510^{12} cells. There exists an electrical potential of about 60 to 90 millivolts across the membrane of each cell. The body is thus a strong electrical powerhouse. Very important function of this system such as the heart beating, nerve and muscle stretching and contraction, hormonal secretion, information processing by the central nervous system etc involves electrical activity. During respiration we inhale negative ions, which are absorbed in the blood corpuscles and are spread in the whole body with the circulation of the blood. These ions are discharged back into the atmosphere through the skin pores. This electrical cycle continues throughout our life.

The total electrical pressure is about 10^{-5} volts per centimeter exists in the human body, which is continuously lost by emission through the skin pores and the genital organs. The electrical energy, if saved could be utilized for various benefits to the mankind in physiological, psychological as well as spiritual sense. Meditation has proved appreciatively significant in conserving this electrical energy. This conserved energy can be expressed in the form of immunity power of man. Immunity can be therefore classified into three sections –



- The Biological Immunity.
- The Psychological Immunity.
- The Spiritual Immunity!!

Biological Immunity and Physiological Responses

Biological immunity refers to the resistive ness towards the physical states of in-equilibrium. It can also be called as the physical immunity. Meditation helps induce a greater biological immunity, which is clearly visible in the physiological effects seen after practicing meditation. Scientific studies of physiological effects had been a point of attraction for long but it is only within the last half centaury that meditation has become a subject of keen scientific interest. Although meditation is traditionally considered a technique to control the non-conscious states of awareness, still the physiological effects of meditation remains the center of research studies.

The Descartes theory of dualism of body and mind further emphasizes the importance of physical effects of meditation especially for the western scientists. The first notable clinical research to measure mind control over body was in 1935 by Brosse who discovered that Indian yogic masters had amazing control over their autonomic nervous system. In 1957, Bagchi and Wenger tried again and found similar results exhibiting mind control to decrease heart rate and ventilations and alter the distributions of blood flow. The investigations of Wallace and Benson (1970, 1972) regarding the effectiveness of transcendental meditation, proved that meditation can reduce the release and responsively of nor-adrenaline throughout the central nervous system.

Hence, it is now clear that practice of meditation can promote some amazing physiological responses. A few physiological benefits are listed below:

- Deep rest-as measured by decreased metabolic rate, lower heart rate, and reduced workload of the heart.
- Lowered levels of cholesterol and lactate-two chemicals associated with stress.
- Reduction of free radicals- unstable oxygen molecules that can cause tissue damage.
- Decreased high blood pressure.
- Higher skin resistance. Low skin resistance is correlated with higher stressand anxiety levels.
- Drop in cholesterol levels. High cholesterol is associated with cardiovascular disease.
- Improved flow of air to the lungs resulting in easier breathing. This has been very helpful to asthma patients.
- Decreases the aging process.
- Relief from various pains, such as headache, joint pains etc.
- Very beneficial in insomnia.

Psychological Immunity and Related Responses

Psychological immunity signifies immunological responses towards psychological disorders. Many first line scientists are presently working to research the subtle psychic realms of existence. Meditation has therefore become an interesting topic of study for them. Since meditation is considered as a relaxation technique, its psychological effects are obviously a point of investigation. The findings are appreciable too. In 1977, Dillbeck proved that meditation can reduce many factors related to perceive stress and improved mental health. Marcus, 1974, showed that the subjects practicing meditation exhibit less anxiety and decreased recreational drug use. In 1985, Rohsenow demonstrated that meditation promotes self-actualization and increases internal locus of control and could sleep more



soundly. Meditation has also been found effective in rehabilitation.

Eventually, meditation has become an integrative aspect of psychotherapy. Through meditation, an aspirant's cognition, emotion and volition become unified and his /her latent powers are awakened. Through such integration of the mind, one can develop dynamic personality. Some psychological benefits are listed below:

- Increased brain wave coherence.
- Greater creativity.
- Decreased anxiety.
- Decreased depression
- Decreased irritability and moodiness
- Improved learning ability and memory.
- Increased self-actualization.
- Increased feelings of vitality and rejuvenation.
- Increased happiness.

Spiritual Immunity and the Response of the Self

It is now clear enough that meditation unequivocally produces beneficial changes to both body and mind. With regular practice of meditation whatsoever the reason for initiating it was, it gradually shifts the interest towards personal and spiritual growth. This spiritual growth is the development of spiritual immunity. Spiritual immunity is probably the most recent type of immunity known. Strictly, it is not a medical term. Spiritual immunity refers to immunity towards immediate changes and accidents of life. How is this immunity developed? Whatever thoughts and emotions that randomly enters and leave our minds, are later conserved in condensed form. These condensed thoughts have high density and develops a strong magnetic field around it. This magnetic field now attracts identical energies

from the various levels of cosmic energy. Meditation helps to utilize these energies according to one's wishes.

Dr. Borysenko, while working with patients of cancer and AIDS, observed that many are most interested in meditation as a way of becoming more attuned to the spiritual dimension of life. She reports her results as that most patients died "healed" in a state of compassionate, self-awareness and self-acceptance. Although most individuals learn meditation for its self-regulatory aspects but later they are drawn into the spiritual realm.

Some spiritual benefits are listed below:

- A feeling of tranquility and freedom in daily life.
- Infinite patience, increase in affection and sympathy for others.
- Growth in devotion and belief in the Supreme Being.
- A stronger urge and aptitude for service and cooperation in social life.
- Integrated development and ennobling transmutation of personality and life as a whole.
- Expansion of narrow peripheries of selfishness towards selflessness
- Transformation of the ego-based individual self into the impersonal self is essential for the realization and manifestation of the real self in its entirety.
- In the trance state, at the gross level, the mind-body system remains fully organized and energetic without any pressure or hindrance.
- Receives natural support and driving force of the inner strength.

Types and techniques

Meditation is an ancient practice dating back to the time of the Vedas and the Upanishads in

Indian culture. Since then, a great deal of transformation has occurred in almost all respects. Practice of meditation too has gone through various modifications. The concept, practice and use of meditation, all had been modified with the changing needs of man. When it comes to classifying the types of meditation, it is too obscure to say anything definite.

There is not just one way to meditate. Meditation has different paths. It can be classified as:

- Concrete and abstract meditation.
- Exclusive and inclusive meditation.
- Active and passive meditation.
- Japa-sahit and Japa-rahit meditation

Concrete meditation is the gross meditation (Sagunadhyana) of any desirable object while abstract meditation is the subtle meditation (Nirgunadhyana) of silence or peace or bliss.

Exclusive meditation, also known as concentration meditation involves restriction of consciousness to focus on a single thought. Inclusive meditation is also known as access meditation or insightful meditation. It is free association where the mind wanders aimlessly. No attempt is made to control the mind's content.

Active meditation is one that occurs when one performs ones daily duties. Thus they are performed with greater enthusiasm and energy. Passive meditation on the other hand is done sitting in one pose and meditation practice. The aim is to still the ever restless and wandering mind and make it one-pointed so that meditation experience will automatically follow.

Japa-sahit meditation is associated with japa. Examples are meditating while doing japa of Gayatri Mantra. Japa-rahit meditation on the other hand is when the japa drops itself when one progresses in meditation.

Techniques for meditation are also indefinite. While searching for one technique one is

generally lost in the “jungle of meditation”. One must therefore find that technique that is best suited to his personality. Some common techniques are:

- Simple meditation
- Transcendental meditation
- Walking meditation
- Mindfulness meditation
- Journey meditation
- Vibration meditation
- Movement meditation
- Body scan meditation
- Breath and navel meditation
- Central channel meditation
- Instant calming meditation
- Microcosmic orbit meditation.



These can be classified under the following head points:

- Concentration Meditation for emptying your mind.
- Insight Meditations for contemplation and self-research.
- Meditation in Motion.
- Goal-oriented Meditation

The first category aims at improving our concentration. One must learn how to focus in order to bring the endless stream of thoughts to a standstill and to limit our thoughts to only those

that are relevant for this moment. Emptying our mind by means of focus and concentration is the most difficult and the most important aspect of Meditation. In this state, according to many spiritual traditions, one reach a situation of Samadhi, you become one with the object of your Meditation. Zen-Meditations, mantra Meditations (TM) and object Meditations all belong to this category.

If one wants to go further than only emptying your mind the next step is learning how to become more aware of our thoughts, emotions and sensory perception. Concentration training and mindfulness Meditation belong to this category. In the third category, one learns to understand the nature of our problems and the working of our mind. This reveals various domains of our minds.

The fourth category, Meditation in motion, consists of all forms of meditation in which one is active. This develops the ability to be more attentive and aware towards our activities, even in routine life. The most well known forms of motion-Meditation are Tai Chi, Qi Gong, Chi Neng and walking Meditations.

The Indian Experiment

Meditation is about having a positive attitude. Param Poojya Pandit Shriram Sharma Acharya, Shantikunj, Haridwar has said- "*Man is bundle of thoughts, so he becomes what he thinks*". Even the cosmic energy is transmitted through the flow of thoughts. In this context, he



innovated new techniques for meditation that reconnects the chords between the individual energies and the cosmic energies.

This technique is known as "*Jyoti avtaran ki dhyana sadhana*". In this technique one has to establish nearness, unity and integrity with the God Almighty, the Supreme Being in the form of Savita, the Sun God. This practice takes approximately 35 minutes. In this sadhana, one has to sit in solace and control and direct his/her thoughts inwards, visualizing oneself in the form of a flame and the cosmos in the form a surrounding divine light. It is now felt as if the divine energy enters the body illuminating it with the light of knowledge and purity. This helps to eradicate the evil tendencies and leads to spiritual enlightenment. This is called as "The Great Union". This is a powerful sadhana and with regular practice one can feel the changes he/she undergoes. The centre of contemplation in this practice is heart which said to be the centre of emotion and true intuitive vision in the Holy Scriptures. Hence one can find solution of all the psychological problems through this.

This practice develops the attitude of service and surrender to the cosmic will and thus uncovering the veils of our minds we enter the new realms of humanity.

Researches on meditation

Various researches carried out not only in India but also across the world have revealed the scientific importance of the spiritual techniques of ancient Indian scriptures. Several studies in the field of meditation made a significant achievement in the domain of scientific researches. Some of the prominent researches in this area are-

- Swami Satyanadaji's innovative technique of Yoganidra through which one can find the significant results in altered states of consciousness. Various psychological problems have been treated successfully



through the application of this newly invented technique

- RR Michaels, MJ Huber made a significant contribution in this regard and gave a scientific approval to the meditation techniques. Their researches show a significant impact on stress and other psychological problems.
- In the works of Lindberg DA we find another outcome in which increased attention has been given to meditation-relaxation strategies to improve physical health, reduce pain, enhance immune response, improve emotional well-being, and foster spiritual growth.
- Effect of Hatha Yoga and Omkar Meditation on Cardio respiratory Performance, Psychological Profile, and Melatonin Secretion Alternative & Complementary Therapies was published in the Journal of Alternative and Complementary Medicine, which suggests that yogic practices can be used as psychophysiological stimuli to increase endogenous secretion of melatonin, which, in turn, might be responsible for improved sense of well-being.
- Walsh, Shapiro SL found that meditation is now one of the most enduring, widespread, and researched of all psychotherapeutic methods.

Meditation Going Global

Meditation has many layers for application. To justify the application of meditation according to the needs of the contemporary age, we first need to analyze the current requirements of the world and its each member. The world seems to be saturated long back, as far as ethical and moral values are considered. This super saturation of humanity is causing increasing moral degradation. This poses a great danger for the

survival of humanity on this globe. This global degradation is essentially because of individual rusting of mind and soul, worldwide. To solve the complex problems facing communities and nations world wide collective efforts are required. Problems of environment, civil unrest, terrorism and cultural deterioration can be solved only by groups of conscious individuals who can come as torchbearers and enlighten the communities about their duties and responsibilities

But the individual consciousness are seldom, if ever, in the presence of silence for any length of time. To keep one's sanity, one's mind had to unload the sensory stimulations or it will suffer the consequences. The human mind, now craves for homeostasis just as the body does. The current requirement is therefore, to reframe our social system by substituting good in place of evil, like co-operation in place of competition and brotherhood in place of antagonism. On individual level, we need to discover an existence liberated from physical and mental albatross.

While investigating for probable reasons for this degradation of human values, following few points came into light:

- Urge for more and more wealth.
- Unhealthy competitive feeling.
- Selfish aims and lost aims of lives.
- Irregular and in disciplined lifestyles.
- Unhealthy diet.
- Addictions of various types.
- Lack of self-contemplation.

These factors influence each individual personality resulting in increased gap between the gross and the subtler minds, costing us for loss of our self-awareness. Each one is busy in justifying their thoughts and actions. With self-realization, the immoral attitude can be replaced

by the moral attitude. This would check our perceptions and responses at all level i.e. cognitive, behavioral, intellectual, emotional and intuitive.

Each member existing on this globe is naturally spiritually healthy and naturally good, compassionate and peaceful. With an awareness towards this true self, we all possess, we can get freedom from all lower forms of nature and leave a hallmark on global humanity. Individual refinement of our minds would yield a beautiful world and initiate a new era of moral progress. By now, it is clear enough that meditation can help us achieve these higher targets because meditation can infiltrate our lives at physiological, psychological and the most important, spiritual level. The significant effects that meditation has on the personal life of an individual are- First, it gives one control over the control room. Second, it develops detachment from the illusory world of forms and a simultaneous attachment to the Soul. Thirdly, meditation leads to decentralization or the inclusive group conscious view. This leads to holistic management at the individual level.

These dimensions can transform our specific personalities as well as influence our system towards a new direction, the direction that leads us all to peace, progress and prosperity. The bottom line is that we all need times of solitude to cleanse the cluttered mess from our minds. Each one getting self-aware will satisfy our present integral needs too.

Thus, we here introduce the term of “**Global Mediation**” and invites the group of civilized nations to reorganize the entire system for the equal good of all. The world already stands at the first step of spirituality. And with meditation in international frame, a new community medicine can be launched. This would not only provide psycho physiological health, but will also

develop inner and outer harmony, genius ness and spiritual immunity for stable and meaningful life. Let’s follow this higher idea to build a better world. Fyodor Dostoyevsky puts it as – “Neither a man nor a nation can live without a higher idea, and there is only one such idea on earth, that of an immortal soul; all other idea by which man live follow from that.” The world after meditation goes global would be the altogether the birth of a new generation.

Shanti Kunj, Haridwar has pioneered this effort. Will you join this movement?

References

- Kanaknandiji, ShriAcharya, Dhyanka VaigyanikVishleshan, Dharma-Darshan –Vigyan-ShodhSansthan, Meerut, Edition 1997.
- Jyotirmayanandaji,Swami, Concentration and Meditation, International Yoga Society, Lalbagh, Gaziabad, Edition 1998.
- Guenther, Herbert, Meditation Differently, MotilalBanarasidas Publishers pvt. Ltd., Delhi, Edition 1992.
- Ballentine, Rudolph M., The Theory and Practice of Meditation, The Himalayan International Institute of Yoga Science and Philosophy of The USA, Honsdale, Pennsylvania, Second Edition.
- Sivanandaji, Swami, Concentration and Meditation, Divine Life Society Publication,Uttranchal, India, Eleventh Edition, 2001.
- Kirankumar,S.K., Psychology of Meditation-A Contextual Approach, Concept Publishing Company, New Delhi, Edition 2002.
- Lakshamanandaji, Swami, Dhyan-Yoga-Prakhasha, SavitrideviBagadhiya Trust, Kolkatta, Eight Editions, August 1998.
- SatyanandaSaraswati, Swami, Four



- Chapters on Freedom, Yoga Publication Trust, Munger, Bihar, India, Edition 2000.
- Woods, James Haughton, The Yoga System of Patanjali, Motilal Banarasi Das Publications, Edition 1998.
 - Abhedanandaji, Swami, The Yoga Psychology, Ramkrishna Vedanta Math, Kolkatta, India, Edition July 1999.
 - Rama, Swami, Spirituality-within and without, The Himalayan Institute Press, Honsdale, Pennsylvannia, Edition 1998.
 - Krishnanandaji, Swami, The Yoga of Meditation, Divine Life Society Publications, UA, India, Fifth Edition, 2000.
 - Ashokanandaji, Swami, Meditation: Ecstasy and Illumination, Advaita Ashram Publication Department, Kolkatta, India, Edition February, 2001.
 - Ramamurthi, B. Gopal T.V., Mohan, S. Ram, Rao, K.S., Facets of Consciousness, Organized by NBRC and CSI, Chennai, Sponsored by Infinity Foundation, USA, March 9th and 10th, 2001.

Mind and its well Being :

(With Special Reference to the Parikarma of Patanjali)

**Dr. Indulata Das*

Mind has been a mystery for the philosophers and thinkers since man started exploring the internal world. The unique nature and behaviour of mind has perplexed man from time immemorial. Great sages and seers of the land have delved deep into various aspects of the mind and its behaviour throughout the ages. Mind has been the centre of study in almost all spiritual and philosophical literature not only in India but in the whole world.

Creation of the Mind

Sankhya, whose metaphysics is accepted by the Yoga system almost in toto¹, holds that mind is a modification of the Prakriti, the primordial matter. Mahat Tattva (or Mahan) or Buddhi is the first modification of the Prakriti. From Mahat emanates the Ahamkara. Ahamkara generates a set of sixteen principles which can be grouped in two categories. One is the group of Tanmatras whose number is five and the other is the group of the Indriyas whose number is eleven. The Sankhya Karika says:

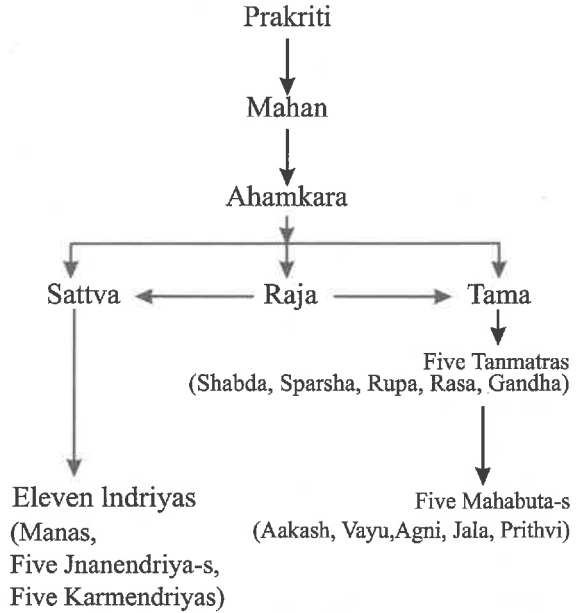
प्रकृतेर्महांस्ततोऽहंकारस्ततो गणश्च षोडशकः ।

तस्मादऽपि षोडशकात् पञ्चभ्यः पञ्चभूतानि ।²

(Mahan is generated from Prakriti, and Ahamkara comes out from the Mahan. A group

of sixteen principles are produced from the Ahamkara. Five Mahabhutas are generated from the group of five Tanmatras.)

The complete sequence of creation is as the following:



Thus mind and the Indriyas are the products of Ahamkara. To be more explicit the Sankhya-Yoga system further holds that the mind and the Indriyas are the productions of the Sattvika aspect of the Ahamkara which is also known as

¹MA Sanskrit, Ph.D (BHU), PG Diploma in Yoga Therapy (Utkal), MA in Yoga (Utkal) Director, Academy of Yoga and Oriental Studies, Bhubaneswar, Orissa

²पञ्चविंशतिः तत्त्वानि तुल्यान्युभयतः समम् ।

योगे सांख्येऽपि च तथा विशेषं तत्र मे शृणु ।। (Mahabharata Santi Parva 236.29)

³Sankhya Karika 22

⁴The Ahamkara has three aspects viz. Sattvika, Rajas and Tamas which are technically named as Vaikrita, Tajjas and Bhutadi.

⁵Samkhya Sutra 2.18

⁶सात्त्विकः एकादशकः प्रवर्तते वैकृतादहंकारात् ।

भूतादेस्तन्मात्रः स तामसः तैजसादुभयम् ।। (Sankhya Karika 25)



Vaikrita Ahamkara³ (सात्त्विकमेकादशकं प्रवर्तते वैकृतादहंकारात्)⁴. The group of five Tanmatras are produced from the Tamasika aspect of the Ahamkara known as Bhutadi⁵.

Devoid of Consciousness: Mind, being the modification of the Prakriti is devoid of consciousness and is a matter. But it behaves like a conscious principle because of the vicinity of the Purusa, the consciousness. It is possible because of the beginningless union of the Purusa and the Prakriti caused by ignorance. Both Purusa and the Prakriti superimpose on themselves the qualities of each other:

तस्मात् तत्संयोगादचेतनं चेतनावदिव लिङ्गम् ।

गुणकर्तृत्वेऽपि तथा कर्तेव भवत्युदासीनः ॥⁶

(Because of their union, the Prakriti behaves like a conscious principle and the inactive Purusa behaves like a doer although activity belongs only to the Prakriti.)

Mind, a Karana: The mind comes under the category of Karana which is thirteen in number (करणं त्रयोदशविधम्)⁷. Buddhi, Ahamkara, Manas and the ten Indriyas constitute the group of thirteen Karanas.

Mind, an Antahkarana: The Karanas are divided into two groups viz. Bahyakaranas and Antahkaranas. Bahyakaranas are ten in number and the number of the Antahkarana is three. Where as the ten Indriyas (five Jnanendriyas and five Karmendriyas) are known as Bahyakaranas the Manas, Ahamkara and the Buddhi (Mahan) are known as the Antahkaranas⁸. Thus mind is an Antahkarana.

⁶Sankhya Karika 20

⁷Sankhya Karika 32

⁸अन्तःकरणं त्रिविधम् (Sankhya Karika 33)

⁹Sankhya Karika 27

¹⁰Sankhya Sutra 2.40

¹¹Ibid

¹²Ibid

¹³Chhandogya Up. 6.5.1.

Mind, an Indriya: Mind is also an Indriya. As mentioned above the Sattvika Ahamkara produces a group of eleven principles viz. the five Jnanendriyas (sense organs), the five Karmendriyas (motor organs) and the mind. Sense organs receive knowledge and the motor organs perform actions. Since mind has the capabilities of the both, it has been regarded as an Indriya which belongs to both the categories (उभयात्मकमत्र मनः संकल्पकमिन्द्रियं च साधर्म्यात्)⁹

In fact mind is supreme among the Indriyas. It is like a master among servants (द्वयोः प्रधानं मनो लोकवद् भृत्यवर्गेषु)¹⁰

Temporal purview of mind

The Bahyakaranas or the ten Indriyas operate only within the temporal limit of the present (साम्प्रतकालं बाह्यम्)¹¹. But the functions of the Antahkaranas cross the boundary of the present and extend to the past and future as well. In other words the Antahkaranas can function in all the three temporal phases of past, present and future (त्रिकालमाभ्यन्तरं करणम्)¹². Mind being an Antahkarana can freely move in the three phases of time.

Nurture of Mind: The Upanisad discusses about the nurture of the mind. The Chhandogya Upanisad holds that mind is made up of food. The food eaten by a living being is transformed in three ways. The grossest part of the food is released out of the body as excreta. The medium part is absorbed

in the body and is transformed into flesh. The subtle part of the food is transformed into mind.¹³

Nature of Mind: There is no better depiction of the nature of the mind than the observation of Arjuna made in the Bhagavadgita. Arjuna says:

चञ्चलं हि मनः कृष्णः प्रमाथि बलवद्दृढम् ।

तस्याहं निग्रहं मन्ये वायोरिव सुदुष्करम् ॥¹⁴

(O Krishna! Mind is very fickle, formidably strong and agitating. Control of mind is difficult like the control of the air.)

Cause of Sorrow and Happiness: Mind is a unique principle. It is the one because of which man suffers from all sorts of sorrows. And it is the very principle which takes man to the supreme abode of bliss. Because, mind is the cause of all the bondages of human being and it is also the cause of the liberation from those bondages. The Viveka Chudamani puts it with a nice analogy:

वायुनानीयते मेघः पुनस्तेनैव नीयते ।

मनसा कल्प्यते बन्धः मोक्षस्तेनैव कल्प्यते ॥¹⁵

(It is the wind which brings the cloud and it is also the wind which removes the cloud. Likewise bondage is created by the mind. And Moksa is also attained by the same mind.)

Attachment of the mind towards the material world makes the contradiction possible, holds the Upanisad. The mind which has attachment towards the material world is the cause of bondage and a mind without that is the cause of

liberation.¹⁶ On the basis of the attachment to the material world (or desire of having material gain) the Upanisad divides mind into two categories viz. pure and impure. The Amritabindu Upanisad puts it in the following way:

मनस्तु द्विविधं प्रोक्तं शुद्धं चाशुद्धमेव च ।

अशुद्धं कामसंकल्पं शुद्धं कामविवर्जितम् ॥¹⁷

(Mind is of two kinds viz. pure and impure. The impure is that which has desire in it. The mind devoid of desire is pure.)

Role of Mind in Human Soundness: Mind plays a crucial role in keeping a human being sound. The definition of a healthy person forwarded by Maharsi Susruta is:

समदोषः समाग्निश्च समधातुमलक्रियः ।

प्रसन्नात्मेन्द्रियमनाः स्वस्थ इत्यभिधीयते ॥¹⁸

(A person in whom all the Dosas are in balance, has a perfect metabolism, the Dhatus are in perfect order, excretion system functions well and whose mind, Indriyas and soul are cheerful is called a healthy man.)

Maharshi Charaka states that there are two grounds on which diseases occur viz. the body and the mind.¹⁹ On the basis of their grounds diseases are also divided into two groups viz. body based diseases and mind based diseases.²⁰

Thus mental wellness is essential for keeping a human being healthy physically, mentally and otherwise. Therefore it is most important for a human being to keep the mind in perfect

¹⁴Gita 6. 34

¹⁵Viveka Chudamani 174

¹⁶मन एव मनुष्याणां कारणं बन्धमोक्षयोः ।

बन्धाय विषयासक्तं मुक्त्यै निर्विषयं मनः ॥ (अमृतबिन्दूपनिषद् 1-2)

¹⁷Amritabindu Upanisad 1.1

¹⁸Susruta Samhita Sutrasthanam 15.48

¹⁹शरीरं सत्त्वसंज्ञं च व्याधीनामाश्रयो मतः (Charaka Samhita Sutrasthanam 1.55)

²⁰द्वे रोगनीके अधिष्ठानभेदेन- मनोऽधिष्ठानं शरीराधिष्ठानं च ॥ (Charaka Samhita. Vimana Sthanam 6.1)



soundness. Maharsi Patanjali in the first chapter of Yoga Sutra has advised a few methods for the purification and pacification of the mind. The group of measures have been technically named as Parikarma.²¹ Following are the Parikarmas of Patanjali:

1. Development of specific attitude for specific persons:

The whole human race falls under four categories on the basis of their deed (कर्म) and experience (भोग). Some people perform good deeds and some perform bad actions. Some enjoy happiness and some experience sorrow. Right attitude toward these four categories of people removes dirt from the mind. Maharsi Patanjali prescribes four right attitudes for these four categories of humans²²:

- For persons experiencing happiness (सुखी) --
---- Amity (मैत्री)
- For persons experiencing sorrow (दुःखी) ---
Compassion (करुणा)
- For persons performing good actions (पुण्यवान्)---- Good will (मुदिता)
- For persons performing sinful actions (पापी)
----- Indifference (उपेक्षा)

Culture of such attitude for persons specified in the group cleanses the mind of negative thoughts and the mind is purified.

2. Control of Breath:

The second Parikarma advised by Patanjali is control of breath. Movement of the mind is

intimately associated with the movement of the air in the body. Rightly it has been stated by Swami Swatmarama:

चले वाते चलं चित्तं निश्चले निश्चलं भवेत्²³

(Mind moves when the air in the body moves. It remains still if the air is still.)

Patanjali advises the control of air for the well being of mind.

प्रच्छर्दनविधारणाभ्यां वा प्राणस्य²⁴

(Mind can also be pacified by expulsion and retention of air.)

3. Development of higher perception (Pravritti) of objects:

The third Parikarma is by developing a higher perception on one of the five objects (Sabda, Sparsa, Rupa, Rasa, Gandha).

विषयवती वा प्रवृत्तिरुत्पन्ना मनसः स्थितिनिबन्धनी²⁵

(Mind is stabilized by the development of the higher perception of the objects.)

4. Development of the Jyotismati Pravritti:

Development of specific Yoga Pravritti called Jyotismati is highly conducive for the stability of mind²⁶. This Pravritti is aroused by deep contemplation on the innermost core of the heart (हृदयपुण्डरीके धरयतो)²⁷. Jyotismati is known as Visoka because the arousal of this Pravritti removes all sorrows from the Yogi. Jyotismati is two fold viz. Visayavati and Asmitamatra. Visayavati is related to the objects and Asmitamatra is related to the pure I-ness (Asmita).

²¹Vyasa Bhasya on Yoga Sutra 1.33

²²मैत्रीकरुणामुदितोपेक्षाणां सुखदुःखपुण्यापुण्यविषयाणां भावनातश्चित्तप्रसादनम् | Yogasutra 1.33

²³Hathayogapradipika 2.2

²⁴Yogasutra 1.34

²⁵Yogasutra 1.35

²⁶विशोका वा ज्योतिष्मती (Yoga Sutra 1.36)

²⁷Vyasabhasya on Yogasutra 1.36

5. Contemplation on a pure mind:

It is another method of purifying the mind. In this method the support of another mind is resorted. Contemplation is done on a mind which has developed detachment towards the objects²⁸. This makes the contemplating mind pure.

6. Contemplation on the impression acquired during sleep:

Maharsi Patanjali, prescribing another method for stabilizing the mind states:

स्वप्ननिद्राज्ञानालम्बनं वा²⁹

(Contemplation done on any perception or

impression acquired during sleep is conducive in purifying the mind.)³⁰

7. Contemplation on anything the mind likes:

This is the last Parikarma prescribed by Maharsi Patanjali. Yogi practices contemplation on anything according to his choice (यथाभिमतध्यानाद्वा)³¹ Meditation on anything the mind likes purifies the mind and improves stability.

The Parikarmas of Patanjali are the Yogic methods for the purification of mind. These are highly conducive for the wellbeing of the mind in general and spiritual well being in particular. Practitioners adopting one or more methods of the Parikarma are sure to acquire physical, mental and spiritual soundness.

BIBLIOGRAPHY

1. **Chhandogya Upanisad** : Gita Press, Gorakhpur, Samvat- 2050
2. **Amritabindu Upanisad (Upanisdsamgraha)** : Edited by *Pandit Jagadish Sastri*, published by *Motilal Banarasidas Publishers Private Limited*, Bunglow Road, Delhi, 110007, 1998
3. **Yogasutra** : by *Patanjali*, Geeta Press, Gorakhpur, 31st edition
4. **Vivekachudamani** : by *Sankaracharya*, Translated by Swami Turiyananda, Sri Ramkrishna Math, Mylapore, Madras-1991
5. **Sankhya Karika** : by *Iswarakrisna*, Translated by Swami Virupaksananda, Mylapore, Chennai-1995
6. **Sankhya Sutra** : Published by Prachya Bharati Prakashanam, Kamakhya, Varanasi, 1st Edition 1964
7. **Mahabharat** : by *Ved Vyasa*, Geeta Press, Gorakhpur, 5th edition, Samvat-2045
8. **Bhagvadgita** : by *Vyasa*, *Gitapress*, Gorakhpur, Sambat-2054
9. **Hathapradipika** : by *Swatmarama Swami*, *Swami Digambaraji*, Kaivalyadhama, S.M.Y.M, Samiti, Lonavala, Pune, 1998
10. **Charaka Samhita** : by *Charaka*, *Rastriya Sanskrit Sansthan*, Deemed University, New Delhi, 2002
11. **Susruta Samhita** : Commentry by *Vaidya Ambika Datta Sastri*, Chowkhambha Sanskrit Sansthan, K. 37/116, Gopal Mandir Lane, Golghar, Varanasi, 221001
12. **Vyasa Bhasya (Sankhyayogadarsanam)**, Edited by *Sri Goswami Damodarasastri*, Chaukhambha Sanskrit Sansthan Varanasi, 1989
13. **Tattvavaisaradi Tika** : by *Vachaspati Mishra (Sankhyayogadarsanam)*, Edited by *Sri Goswami Damodarasastri*, Chaukhambha Sanskrit Sansthan Varanasi, 1989
14. **Bhaswati Tika** : by *Swami Hariharananda Aranyaka (Sankhyayogadarsanam)*, Edited by *Sri Goswami Damodarasastri*, Chaukhambha Sanskrit Sansthan Varanasi, 1989

²⁸चित्तरागविषयं वा चित्तम् ।(Yogasutra 1.37)

²⁹Yogasutra 1.38

³⁰Here the word Swapna means sleep and Nidra refers to a Sattvika sleep (Tattvavaisaradi Tika on Y.S. 1.38). Nidra is accepted as Susupti by Commentators like Hariharananda Aranyaka (Bhaswati Tika on Y.S. 1.38)

³¹Yogasutra 1.39



Health and Yoga Education

**Prof. Aruna Goel*

***Prof. S.L. Goel*

Remain in bliss in this world,
Fearless, pure in heart,
Wake up in bliss every morning,
Carry out all your duties in bliss,
Remain in bliss in weal and woe,
In criticism and insult,
Remain in bliss unaffected,
Remain in bliss pardoning everybody.

—*Rabindranath Tagore*

Yoga encompasses all values and includes all values which sharpen the human beings in achieving their material, intellectual and spiritual goals. Yoga can promote theory and practice of all values essential for personality development. The theory and practice of yoga enrich the quality of life through the values inherent in Yoga. Yoga if followed earnestly can create happy family life, social life and peace and prosperity in the universe.

Prof. T.R. Anandharaman, in his article, “Yoga for the Incoming Millennium” clarifies that Yoga constitutes without any doubt one of the India’s many priceless gifts of perennial value to the human value. Despite being a very ancient tradition, it has all along proved ever so modern and relevant to every generation to seekers of human perfection. As the Science of Total man and Technology of Conscious Evolution, its potentialities has always been immense and its contributions manifold as well as in tune with the needs of the concerned age, whether it was the bygone age of the “Upanishads” or the present age of Science, Technology and Engineering. In

fact, as this planet awaits the next millennium, Yoga seems to have approached its zenith in popularity, fascination and usefulness in more parts of the world than ever before.

Yoga helps in the overall development of the personality of people. The concept of positive health and lifelong learning are relatively new concepts which need to be promoted. An overall development of the individual is intended to be achieved through higher education using an affective domain in addition to cognitive skills. Shri Kumar Swamiji in his book Dimension of Yoga strongly feels that Yoga aims at recreating the world. Not the acceptance of the world as it is, but to change it, to mould it in the pattern of the Divine Reality, is the main objective of Yoga.

To say this, is to say that evil has no permanent place in the scheme of things. Creation is a complex movement which represents the various notes and rhythms that make up the grand harmony of the spheres. This music that moves the cosmos is magnificent and wonderful and is the glory of God manifest therein. But a doubting voice raises the question, is there not

Prof. of Sanskrit, P.U., Chandigarh -- President Awardee; Former Member of UGC, Sahitya Academy, GOI, Sanskrit Board & Member Governing Bodies of Indian Institute of Advanced Study, Shimla & Professor of Public Admn. P.U., Chd. (Retired); Emritus fellow, UGC; Chairman Editorial Board, Indian Journal of Public Administration, IIPA, New Delhi.



some chaos in this cosmos? Is there not a confusion in this concord? Is there not a Walpurgis night in this winning light? Yes, there is. In the order of creation, first there is the consciousness and division of trenchant separation of good and evil. This is the outlook of individualized consciousness. Next, as the consciousness grows and encompasses the whole existence, good and evil are both embraced and are found to form as secret harmony. This is the outlook of the cosmic consciousness. There is still a higher status, the status of transcendence in which evil is not simply embraced but dissolved and even transformed into supreme reality of which it is an aberration, a projection or a lower formulation. In Yoga the total eradication of evil from the world and human nature, with a remoulding of terrestrial life in the pattern of the divine Reality, is viewed not as a mere concept but as a concrete fact.

Yoga deals with the problems of human nature and human psychology through a vast repertory of practical methods which aim towards purification, regulation and awakening of human potential. At present, yoga is passing through a momentous period of growth consolidation and expansion with its rapid integration into modern society. Many institutions dealing with the theory of Yoga and its practice have come up. At many levels we can see changes and new developments as yoga is being applied in different facets of life in a variety of new ways, such as a form of therapy, a technique of health and stress management.

Modern man is all set for a revolution after nearly four centuries of continuous growth. From the era of blind faith and superstitions he has progressed an era of rational thinking, experimentation, matter-based approach and its fascinating applications to comfort his living. The strides of this growth encompass all facets of life including education (science and

technology – orientated) and the very direction of growth of an individual (economy – based) and a country (measured with the yardstick of GNP). Tremendous growth has been made in understanding the structure of this physical universe and the laws governing them.

The two major challenges of this era of science and technology – viz. Stress and pollution have become the true triggers for the new revolution. If pollution is working at the material front to direct man towards better ecological and appropriate technology, the challenge of stress is shaking the very foundations of the matter-based objective approach of science. As we glide through the decades of transition, our understanding is bound to encompass a greater spectrum of the universe–life, mind, psyche, etc.

India, known for its wisdom has given us the Upanisads, the quintessence of the VEDAS, and a saga of knowledge. From these books of knowledge–Vedas, Upanisads, Yoga texts – are emerging new rays of hopes which are essential to face the new revolution.

Scientific and technological progress all over the globe has made man highly sensitive, critical and also creative. Sharp to the core, his intellect has gained tremendous power of analysis. The left side of his brain is highly developed, helping him to unravel the subtle mysteries of nature and understand clearly the general law of nature. Technology has helped man reap the benefits of its use. Automation and computers have brought great speed and sophistication in all our interactions. In search of happiness we are propelled by a desire to increase our living standards by acquiring more and more comfort giving objects and experiencing sensual pleasures. To satisfy this desire we are always on the lookout to earn more and more. In the process, we have become very active and have overcome our lethargy.

Associated with this growth is the emergence of two basic challenges: pollution and stress. The challenge of pollution is being tackled effectively but not met totally. Strict pollution control measures in the industrial sectors and extensive research leading towards the use of ecologically friendly technologies, have certainly yielded dividends. But on the second front, in spite of extensive research all over the globe, a decreasing quality of life, increasing health hazards, social unrest, student unrest, etc. traits which are all different expressions of stress, have shown no trend of decrease. On the contrary, over the last two decades, it is rather on the path of ascent.

The current mechanistic world-view, the matter – approach the increased dependence on science and technology and the associated lifestyle have to undergo basic changes towards embracing a more holistic world view and a healthier and more harmonious lifestyle. Emotion trainings and harnessing of the will power – the growth of the right side of the brain in general – are then the associated adjuncts for such a holistic understanding and also for a healthier and harmonious living. And that is what Yoga offers.

Today, man is subjected to a large number of stressful situations in the modern fast way of life and his balance is frequently disturbed. The system is constantly kept under sympathetic stimulation without enough time for the parasympathetic to do its job. This repeated sympathetic stimulations lead to intermittent upsurges of heart rate, blood pressure, poor digestion, elevated blood glucose, etc. when this happens over a number of years it become a habit for the heart and the blood glucose, etc. when this happens over a number of years it become a habit for the heart and the blood vessels to remain in stimulated state and they lose the capacity to come back to the resting levels. This is the main cause for the increasing incidence of high blood pressure and diabetes among people today.

Youth in the system of higher education represents a tremendous potential for society, provided it is channelled in the right direction, the enthusiasm, initiative and idealism of young people can help others, including the elderly, the handicapped, the poor, and in so doing can create a happier and more balanced society.

Unprecedented challenges face the youth of today, said Dr. Hiroshi Nakajima, Director-General of WHO, in a message to the world assembly of Youth. And he added that young people may be given opportunities “to demonstrate their creativity, energy and commitment to solving their own problems and helping to build a healthy future for the entire community in which they live.”

Unwise life-styles pose the biggest threats to students health. Innovative judgments, a tendency to show off, or the desire to keep up with their fellows- all these incline them towards risk-taking behaviour. This may include experimenting with dangerous substances like alcohol or drug driving too fast on the highway, or simply defying adult society.

In many cases, the cigarette is the very first contact young people have with the life-style of adulthood. This first encounter often occurs at a very early age: by the time they reach their teens, they may already be unable to break the smoking habit. It is vital that they should be aware of the short-term and long-term risks that smoking represents to their health.

The risk destroying their most important assets; the health and physical fitness through laziness and lack of exercise, rash driving and traffic accidents, suicide or attempts to suicide, slow suicide through the use of alcohol, smoking, drug abuse, excessive intake of tea and coffee, unprotected sexual encounters, sexual misadventures like rape, sexually transmitted diseases, teenage pregnancies and abortions or unwed child births. The ill-effects on their health



can extend far into later life. Accidents are estimated to disable permanently three times as many as they kill, smoking and alcohol can store epidemics of respiratory diseases, liver damage and cancer. Teenager pregnancy can kill mother or child or else leave them physically and mentally handicapped. Needless to conclude that in some countries youth is the only age-group in which mortality and morbidity rate is rising, due to these ills of modern society. Alcohol and unemployment is behind alarmingly large number of deaths through accidents and suicide (Jerome, 1980).

Before a dam was constructed on Satluj River, at Bhakra, the water resource was not only wasted but it resulted in floods, leading to loss of life and property. The same is true for youth resource. The idle youth is not only a waste, but also the tide of this unutilized energy can result in negative development wasted in the field of health and economy. The youth can be our best resource if they are healthy and if their joyous energy is channelized for building a better society. The potential energy of youth has to be converted into kinetic energy with understanding, support and technological knowledge and its use should be made to build modern India. Much needs to be done both for and by young people. It is not sufficient merely to have activities directed towards youth. If the aims and objectives of International Youth Year, 1985, and the WHO Global Strategy for Health for all by the year 2000 are to be achieved. Serious efforts of collaborative action by everyone – young and old are needed. The youngsters of today, with their capabilities, energy and commitment, represent a vital resource; they must be partners in the quest for a just future.

Life of students in higher education is becoming more and more artificial and they are travelling more and more away from natural living. In order to return to natural life, they should

practice Yoga and learn to live more in consonance with nature and cosmic consciousness.

We see the disinterest and inevitable suffering among many student's. It has been realized that every individual contains hidden potential, which when developed allows him to attain pertinent bliss, inner peace and the ultimate goal of our existence.

A brief discussion with students revealed the following problems of students in the system of higher education

- (a) Lack of interest in studies
- (b) Lack of vitality, enthusiasm and eagerness
- (c) Enamored by affluent environment leading to alcoholism, smoking, gambling etc.
- (d) Irregular in food habits
- (e) Not interested in exercises and games
- (f) Drudgery in life
- (g) No aim in life
- (h) Lack of reading habits
- (i) Not following any regular course of life
- (j) Full of tensions, worries and agitations
- (k) Lack of peace – restlessness
- (l) Lack of concentration
- (m) Problematic both at home and in a college
- (n) Bad company
- (o) Aimless life.

How can we overcome the problems inflicting the personality of students in higher education system? How can we channelize their potential energy into kinetic energy to make them enjoy the bliss of life? How can we stimulate students towards holistic approach? How can we make them develop their personality in totality? How can we check students from indulging in bad habits- alcoholism, smoking, gambling etc.? How can we educate them to put them on right track? The only answer is the need of imparting yoga education which can solve all the problems



simultaneously. It requires understanding and practice of science and practice of yoga.

Impact of Yoga on Life of people - The ancient literature is full of philosophy, science and techniques of channelizing the potential energies of people and their life long journey. But how? The answer is compulsory education of Yoga from school to university level in graded manner. Let us mention some of the facts which can be developed by Yoga Education to improve the personality of students.

(a) Holistic Development of Personality i.e. physical mental and spiritual. This coincides with the definition adopted by World Health Organization. Health is a state of physical, mental and social well-being and not merely the absence of infirmity. Yoga offers us a holistic life style of bliss, peace, creativeness, emotional balance and physical well being.

The concept of 'mental equanimity' is more satisfactory than the concept of mental health because the former alone can produce spiritual development in an individual. Swami Vishnu Devanandastates :

तदेवार्थमात्रनिर्भासं स्वरूपशून्यमिव समाधिः ।

पा.यो.सू.

When consciousness of subject and object disappears and only the meaning remains, it is called samadhi. Samadhi is a merging of the mind into the essence of the object of meditation. Nothing exists but that pure awareness.

Mind is the most powerful part of the human system. It is a Super Computer. Teachers in the higher systems of Education don't realize its potential or devise ways and means to harness this most important source. Higher Education system can achieve excellence, provided they know the secret of tapping students mind We generally notice that most of the students are not mentally positioned as one or the other problems

concerning their education continuously bogs them down. Many of them become mental wrecks and a liability on the Higher Education system. The higher education systems instead of solving their problems, cause further deterioration. 25 percent of students in every higher education system are a liability and the other 75 percent are not contributing as per their potential. Teachers should try to create positive mental attitudes among the students. Positive mental attitude is a state of mind that reflects the strength of students belief in what they do. It generates inner and voluntary emotions which enhances motivation, resulting in positive thoughts. Positive thinking is the key to development and is result oriented.

The ancient Indian philosophers laid stress on mental equanimity for the general well-being of individuals. The mind of an ordinary person is usually very restless. Myraids of desire produce upheavals in the mind of an individual. Over and above this, the mind of an ordinary person is afflicted by several tensions.

The ancient Indian Philosophers maintained that if the mind of an individual usually remains in a disturbed state, he is very likely to develop pathological symptoms. An individual with pathological mental symptoms quite often develop certain pathological organic symptoms because there is very close relationship between the body and the mind of an individual. The mind of an individual becomes free from anxiety and miseries, if there is peace in his mind."

The mind is a reservoir for numerous powers. By utilizing the resources which are hidden within it, one can attain any height of success in the world. If the mind is trained, made one-pointed and inward, it also has power to penetrate into the deeper levels of our being. It

is the finest instrument that a human being can ever have.

Holistic approach to health represents a revisioning of the human endeavour to restore order in the organismic functioning, that has occurred in the past several centuries with the medical profession. The holistic health movement is the reflection of the growing dissatisfaction among the professional as well as lay people about the capacity of modern medicine in delivering the health care. A shortcoming of modern medicine is its failure to recognize the interactive nature of the different aspects of human existence viz. physical, psychological social and spiritual in the etiology of illnesses and in the maintenance of health and well-being.

Since modern medicine is itself a development within the framework of science, many have argued that the change needs to be brought about in the very framework. Thus, holistic movement is viewed as a by-product and manifestation of the contemporary thrust on the revision of the scientific framework. One can find this trend in the works of behavioural, natural and social scientists which are contributing for major change in the world view. It involves a fundamental shift in cognition leading to radical alterations in the belief and assumptions about the nature of the universe, about the human nature, about organism environment interaction, and about the nature of consciousness. The newly emerging world view is described as holistic paradigm.

In the final analysis, the physical, social, mental and spiritual balance is the most desirable for holistic health. Unless a person is physically fit and active; he cannot perform at his best level. On the other hand, it is the mind, which accounts for 80 percent of physical and social problems. These are called psychosomatic diseases. Lastly, it is the spirit which ultimately directs the mind and through it to the body. The teachers should devise ways and means to ensure

synergy of the physical, social, mental and spiritual capabilities, which would release the infinite potential powers of the students and generate efficiency and happiness in the organization.

(b) Control of negative thought waves in the mind. When Patanjali speaks of “control of thought waves”, he does not refer to a momentary or superficial control. Many people believe that the practice of yoga is concerned with “making your mind a blank” – a condition which could, if it were really desirable, be much more easily achieved by asking a friend to hit you over the head with a hammer. No spiritual advantage is ever gained by self-violence. We are not trying to check the thought-waves by smashing the organs which record them. We have to do something much more difficult – to unlearn the false identification of the thought waves with the ego-sense. This process of unlearning involves a complete transformation of character, “renewal of the mind”, as St. Paul puts it.

(c) Creation of positive Attitude: To attain success in life and to reach the desired goal one must have a positive attitude. Faith in oneself and in God, courage, strength and fearlessness are the characteristics of a positive intellect. For a man of intense faith nothing is impossible in this world. That person alone who is ready to undergo any amount of suffering and face any difficulty can reach the goal. One should never harbour negative thoughts, like ‘I am only a householder’, ‘I am a sinner’, ‘I am good for nothing’, ‘I am weak’, Such negative thinking can do tremendous harm to our personality. Swami Vivekananda stressed this idea again and again. He was very particular that our younger generation must cultivate positive ideas. He says, “He is an



atheist who does not believe in himself. The old religion said that he was an atheist who did not believe in God. The new religion says that he is an atheist who does not believe in himself.

- (d) **Vast Intellect:** VisalaBuddhi is that characteristic of the intellect, which transcends all narrow and selfish ideas and embraces the whole world. When a person lets go his individuality and identifies himself with the whole existence, he is called a man of vast intellect. We bow down to the great sage Vyasa because he possessed this vast intelligence.

Swami Vivekananda wanted our people to develop such an intellect. In one of his lectures delivered in Madras he said, 'We want that education, by which character is formed, strength of mind is increased, the intellect is expanded and by which one can stand on one's own feet.' Further he said, 'Expansion is life, contraction is death.'

A person who is only interested in himself is like a prisoner. He remains confined within the four walls of his house, without any concern for the outside world. He is quite happy with himself and is not aware of his spiritual dimension. There is no expansion of heart. A little spiritual growth will help us to expand our intellect. The same Divine dwells in the heart of everybody and we are one spiritually. Therefore we must change our attitude towards others.

Sri Krishna shows us how to develop this vast intellect (6.32):

ज्ञानं आत्मौपम्येन सर्वत्र समं पश्यति योऽर्जुनः ।
सुखं वा यदि वा दुःखं स योगी परमो मतः ॥

'He who judges pleasure and pain everywhere bothersome standard as the one he applies to himself, that yogi is thought to be the highest.

The idea is, the man of vast intellect (VisalaBuddhi) empathizes with the joys and sorrows of all beings as his own. He understands the sufferings and shares the happiness and miseries of others. Through this teaching Sri Krishna exhorts us, to love others as we love ourselves. Be full of kindness and compassion, identify yourself with others and partake of their joys and sorrows. Why ? Because unity underlies this apparent diversity.

The man of vast intellect breaking all barriers embraces the whole world. A selfish man on the other hand feels miserable when others are happy and feels happy when others are suffering. This is called Bheda Buddhi. He always wants to preserve his separate identity. Such a man does not hesitate to harm others for selfish purposes. Because of his deluded intellect, he divides people into different categories, depending on their caste, creed, religion, sex, social status, just to exploit them for his selfish motives. What happens to such a man ?

All the great religions of the world have come out of one Truth. If we follow religion without practicing the Truth, it is like the blind leading the blind. Those who belong to God love all. Love is the religion of the universe. A compassionate one transcends the boundaries of religion and realizes the undivided, absolute Reality.

- e) **Decisions based on deep thinking**

Our decisions, motives, actions should always be guided by serious and deep thinking and not by mere impulse or emotion. A calm and study mind alone is fit to discriminate between right and wrong. We find a beautiful verse in the Katha Upanishad which can guide our intellect to make the right choices (1.2.2):

श्रेयश्च प्रेयश्च मनुष्यमेतः तौ सम्परीत्य विविनक्ति धीरः ।
श्रेयो हि धीरोऽभिप्रेयसो वृणीते प्रेयो मन्दो योगक्षेमाद्वृणीते ॥

‘Both the good and the pleasant present themselves to a man. The calm soul examines them well and discriminates. He prefers the good to the pleasant; but the fool chooses the pleasant out of greed and avarice.’

(f) Strengthen spiritual power :

Spiritual strength is the highest strength, the next being intellectual and the last, physical. Those who have made considerable progress in spiritual life alone can experience spiritual strength; till then we have to depend upon intellectual strength. Intellectual conviction is possible only through right understanding. Regular study of the scriptures, teachings of great luminaries and discussions on spiritual matters help us to develop right understanding.

The Taittiriya Upanishad says (1.19):

स्वाध्यायः प्रवचनाभ्यां न प्रमदितव्यम् ।

Do not be careless, about learning and teaching’

Since it is difficult to keep the mind always on the spiritual plane, it is better to engage it in intellectual pursuit, lest it should go down to the physical and sensual level.

Thirst for knowledge is inherent in man and no one likes to be ignorant. Knowledge alone can remove ignorance. A beautiful verse in Chanakya Niti (XVII-17) says:

ज्ञानं नराणामधिको विशेषः ।
ज्ञानेनहीनाः पशुभिः समानाः ॥

What distinguishes a man from an animal is his capacity to acquire knowledge. Without knowledge men are equal to animals;

Spiritual knowledge comes through direct experience of Truth, but very few can reach

that state. Others have to follow the path of discrimination, using their intellect.

There is a popular saying :

स्वदेशे पूज्यते राजा विद्वान् सर्वत्र पूज्यते ।

The king is honoured only in his kingdom whereas a learned person is honoured everywhere.

(g) Helps in sorting out psychological problems born out of tensions, conflicts etc.

What most psychologists ask their patients to do is to yield to the demands of the unconscious. In some cases this may release the inner tensions. But this may not be permanent and may even be more harmful. The super conscious is at present unknown to us, but that does not mean that it is the same as the unconscious mind of the psychologists. It can be attained through spiritual disciplines. It is the source of supreme peace and bliss. More than all, it gives man the feeling of wholeness, the feeling of supreme fulfillment.

(h) Strengthen Will power

Development of will power is a problem that is often faced by everyone of us. If we can exercise our body and build up its strength gradually, there is no reason why the same cannot be done with our mind! By denying ourselves small pleasures and temptations to begin with, we can gradually but surely build up our will power. The example given by the Holy Mother of the farmer who could lift a bull because he used to carry it daily since the time it was a small helpless calf, can give us much-needed encouragement here also.

Fear is the greatest of all foes. It is a devil residing with. Fearlessness is the first rung on the ladder of freedom. To cultivate the quality of humility is one step toward



enlightenment. By being humble we gain much and lose nothing. Prayer and contemplation strengthen our willpower in cultivating this inner quality.

(i) Understanding the purpose of Life

Swami Rama feels that "If a human being remains constantly aware of the purpose of his life and directs all his actions toward the fulfillment of that purpose, there remains nothing impossible for him. Those who are not aware of the purpose of life are easily caught by the whirlpool of miseries."

A human being is fully equipped with all necessary healing powers, but does not know their usage. The moment he comes in touch with the healing potentials within, he can heal himself. All the powers belong to only one God. A human being is only an instrument.

(j) Nutrition for Yogic Persons:

Swami Vishnu Devananda in his book Meditation and Mantras has rightly said that, What is consumed by the human body correlates directly to the efficiency with which the brain functions. Recent studies show that certain red food colouring creates hyperactivity in children, and that refined sugar can cause emotional instability. These are just two examples of substances that are often heedlessly consumed without understanding their effect on the body and mind.

Several years ago vegetarianism was, in a sense, an underground- practice. A person who refrained from eating meat was viewed with a certain amount of curiosity, if not suspicion. To day it is quite a different story. Health food stores and vegetarian restaurants are prevalent. There is a growing awareness that our health is directly affected by what we eat. Many diseases can be cured by a change in diet or a short period of

fasting, with no medications at all. This is true not only of physical disorders, but of many mental difficulties as well. It is particularly important that pregnant mothers have this awareness; too often they do not realize the effect of their diet on the developing fetus.

There is no doubt that, "You are what you eat." a subtle part of what is consumed becomes the consciousness. Those who have changed from a meat to vegetarian diet notice a corresponding change in consciousness. There is a certain grossness that disappears, and the awareness becomes finely tuned.

In the Bhagavad-Gita three types of food have been mentioned which produce three different types of dispositions in individuals. A person becomes healthy, moral, religious, intelligent and creative by regularly taking, sattvika food. Sattvika spreads sattvika and the Cumulative effect is purity of environment

आयुः सत्त्वबलारोग्यसुखप्रीतिविवर्धनाः ।

रस्याः स्निग्धाः स्थिराहृद्याआहाराः सात्त्विकप्रियाः

xvii/8 Bhagavad Gita

Foods which promote longevity, intelligence, vigour, health, happiness and cheerfulness, and which are sweet, bland, substantial and naturally agreeable, are dear to the Sattvika type of men."

कट्वम्ललवणात्युष्णतीक्ष्णविदाहिनः ।

आहाराराजसस्येष्टा दुःखशोकामयप्रदाः

xvii/9 Bhagavad Gita.

Foods which are bitter, acid, salty, overhot, pungent, dry and burning, and which cause suffering, grief and sickness, are dear to the Rajasika type of men.

यातयामं गतरसं पूतिपर्युषितं च यत् ।

उच्छिष्टमपिचामेध्यं भोजनतामसप्रियम् ॥

xvii/10 Bhagavad Gita.



Food which is half-cooked or half-ripe, insipid, putrid, stale and polluted, and which is impure too, is dear to men of a Tamasika disposition.

Conclusion

Systematic and regular practice of Yogic technique viz. Postures, Pranayama, Mudras, Bandas, Shat-Kriyas, Concentration, meditation and diet regulations under experts guidance and certainly not from books alone, will go for to build up the lost muscle tone of various organs, glands, nerves etc. mental clarity, positive attitude towards life, and in removing physical and mental restlessness and physiochemical process as the stress creates nerves disorders due

to modern hectic, pressurized, frustrated living.

It has been reported in the ancient literature that Yogic practice brings change in various hormonal and physiochemical process in the human body by operating at the higher levels in the nervous system.

“Yoga helps in maintaining good health And gives resistance, stamina, vitality and vigour to the body.

Yoga is the best curative and preventive medicine.

Yoga leads to chittanasa which is moksha.

Yoga practitioners should not become Bhogi.

If no Yoga – no health, no peace, no life.”

NOTE:

1. Xth Plan of University Grants Commission, New Delhi, 2002, p.51
2. Dr. H.R. Nagendra and Dr. R. Najarathna, News Perspectives on Stress Management, Swami Vivekanada Yoga Prakashana, Bangalore, 2003, Preface.
3. Ibid., pp. 2-327.
4. YB; ii (2)
5. YSI (2)
6. YS (i) 12
7. R.H. Singh “Yoga and Health, Science and Philosophy of Indian Medicine, Baidyanath Bhawan, Nagpur, 1978.
8. Dr. CH Sudarshan, Yoga for better health, in NIS Argopcar Varta, National Institute of Naturopathy, Pune, May 2001.
9. Y.S.H. 30
10. Swami Vishnu Devananda, op.cit., p.177.
11. Bata K. Day, Ethics: Maladies and Remedies, in IJPA, July-Sept, 1995, p.46.
12. Swami Srikantananda, op.cit.p.56-57.
13. Ibid, p.17
14. Ibid., 65-66
15. Swami Yatishwarnanda, Meditation and Spiritual Life, Rama Krishna Ashram, Bangalore, 1983, pp.17-18.
16. Ibid.
17. P.K. Hassangas, “Yoga in the Culture of Labour based on Research” Arya Vidya

Yogic Attitudes in Patanjali's Yoga Darshana: A Key to Happiness and Mental Wellbeing

—Dr. Sadhana Arya &
Dr. Ishwar V. Basavaraddi

Introduction

Wellness is one of the most important issues of life. Wellness means a state of being and feeling healthy and well. Wellness is a multidimensional concept that includes physiological, intellectual, emotional, social and spiritual dimensions of life. These dimensions are not air-tight compartments; rather they are overlapping and interconnected. While looking at all the dimensions, emotional and intellectual dimensions of wellness are very important; collectively they form the domain of mental wellbeing.

Happiness and Mental Wellbeing

Mental wellbeing is a positive attribute; it signifies not merely the absence of mental disorders; but also puts emphasis on effective functioning directed toward growth and development. Mental wellbeing is central to other aspects of wellness as it establishes a balance among all dimensions of life and contributes to achieving complete wellness including physical, social and spiritual growth.

Mental wellbeing assumes a greater relevance especially in today's modern life. In spite of having so much comfort in life, people are not happy. Health -related problems are increasing and taking a toll on mental wellbeing. A question therefore, arises - 'what could be an important requisite for mental wellbeing'? The answer to this question is: happiness is the most important requisite; it handsomely contributes one's mental wellbeing.

Happiness is the most crucial component of mental wellbeing. It is an index of mental wellness of an individual. Happiness is a state of

mind. A person with meager resources may be happy and well; while a person having lot of wealth and resources may be miserable (Kulakarni). Thus, attaining a happy state of mind is an important issue in the domain of mental wellbeing.

Happiness and Attitudes

Attaining tranquility and peace of mind, however is difficult, as it depends on the attitude one has towards life, towards others and especially toward oneself. An attitude is a learnt emotional predisposition to behave in a consistent manner towards a person, object and/or situation. Attitudes play a predispositional role in mental wellness. There is a relationship between attitudes and psychosomatic disorders (Graham, 1962 as in Coleman, 1984, 277-278). Personal happiness depends on the attitude a person has towards life, towards others and especially toward the self. A positive attitude helps to reduce stress and develop a happy state of mind. Positive attitudes enhance happiness in life (Terri Emmett, 2005). The importance of the attitude can be seen in the fact that attitude towards life and surrounding circumstances is more important than the disease itself.

Yogic Attitudes in Patanjali's Yoga Darshana

In the context of happiness, Maharishi Patanjali's Yoga-philosophy is very relevant. Maharishi Patanjali in his text *Yoga Darshanam* propagates a precept of *Chittaprasadana*. *Chittaprasadana* is a state of happiness characterized by inner peace. The state of *chittaprasadana* can be attained by adopting yogic attitudes.



Yogic attitude is a way that helps in achieving this state of *Chittaprasadana*. It is a key to enhance mental wellness. A yogic attitude comprises of certain guidelines that guide a person how to behave consistently in certain situations. Patanjali provides these guidelines in the following sutras in *Yoga Darshana* to achieve the state of *chittaprasadana*:

*Maitrikarunamuditopekshanam
sukhadukhapunyaapunyavishayanam
bhavanaatashchittaprasadanam*//P.Y.S.:1.33//

In relation to happiness, misery, virtue and vice, by cultivating the attitudes of friendliness, compassion, joy/gladness, and indifference respectively, the mind becomes purified and peaceful. (Satyananda Saraswati)

Vitaragavishayam va chittam//P.Y.S.: 1.37//

Or the mind can be brought to control by a person who is vitaraga (renounced attachment i.e. detached) towards worldly things.

Maharishi Patanjali in above sutras prescribes adoption of the attitudes of *maitri* (friendliness), *karuna* (compassion), *mudita* (joy/gladness), *upeksha* (indifference), and *vairagya* (detachment) in order to achieve happiness and a state of mental wellbeing in life.

According to Patanjali, an attitude of 'friendliness' should be adopted towards a happy person; an attitude of 'compassion' should be adopted towards a sad and sorrowful person; an attitude of 'joy and gladness' should be adopted towards a virtuous person; and an attitude of 'indifference/apathy' should be adopted towards a vicious person.

The above advice though seemingly very simple carries a lot of depth in it. They compliment the basic postulate that mental wellness depends upon the happy state of mind or *chittaprasadana*.

The attitude of *maitri* (friendliness) towards a happy person/event helps to promote mental

wellbeing. Generally, a person in modern tends to have a feeling of jealousy towards a happy and successful person. Jealousy makes a person unhappy as the person starts making comparisons and thinks himself/herself as unsuccessful. This in turn makes him/her unhappy. Contrary to this, if the person has an attitude of friendliness, it will make the person happy; and will promote his/her mental wellbeing.

The attitude of *karuna* (compassion) towards a sad and sorrowful person/event again helps to promote mental wellbeing. The attitude of compassion will make the person to empathise with the sad person and motivate him/her to help the sad person. Indulging in a helping act develops a sense of satisfaction (*chittaprasadana*) and thus in the process promotes person's mental wellness.

The attitude of *mudita* (joy/gladness) towards virtuous person/event also is a way to achieve a state of mental wellbeing. This attitude of *mudita* will motivate the person to stay in the company of good people only and also to adopt their virtues. It will result into a satisfying experience and thus again promote the person's mental wellbeing. This attitude of *mudita* will also help the person in introspection and making an inward journey towards the self.

The attitude of *upeksha* (indifference/apathy) towards vicious person/event can also be a contributing element towards promoting mental wellness of an individual. Actually, a person generally has a feeling of hatred towards vicious persons. A confrontation with such people will create unnecessary stress in the person and negatively affect his/her mental wellness. In such cases, if a person adopts an indifferent attitude avoiding any relationship with such people, then it would shield the person from unnecessary stress and promote his/her mental wellbeing

Attitude of *vairagya* (detachment) is an important attitude that helps to bring a state of happiness. According to Patanjali,

Drishtaanushravika-vishaya vitrishnasya vashikarasanjya vairagyam//P.Y.S.: 1.15//

When an individual becomes free of desires for the sense objects - seen and heard - that state of consciousness is called *vairagya*.

According to yogic philosophy, *raga* (attachment) is a prime cause of negative mental state. *Raga* means attachment to the worldly things that causes negative attitudes such as pain, anger, frustration, depression in life. Attachment is reflected in endless desires. If the desires are not fulfilled, it will disturb the person and create disappointment, frustration, aggression etc. Fulfillment of a desire also would lead the person to desiring more and more. It is an endless journey. Therefore, if a person performs duties with an attitude of detachment it will bring a permanent state of happiness and protect the person from negative emotions.

Professional researchers have validated the effectiveness of a positive attitude and its beneficial effects on mental wellbeing. The impact of yogic attitudes propounded by Patanjali can be explained by the physiology involved in emotions. Prolonged negative mental state not only disturbs the mind, it adversely affects the body as well. A negative attitude creates a state of arousal and activates the sympathetic nervous system. If activated for long, it may later result into psychosomatic disorders. Contrary to this, positive attitudes bring relaxation and activate the parasympathetic system (Nuernberger, 2003). By following the above yogic attitudes mind becomes free from disturbances and attains the state of happiness (*chittaprasadanam*). It will not only promote mental wellbeing, will also promote physical wellness.

Patanjali by propagating yogic attitudes, has stepped into the domain of emotional intelligence, a concept recently popularized by Daniel Goleman. Emotional intelligence (EI) is related to the competencies that help to manage the emotions in an intelligent way. EI puts emphasis on the process of channelisation by which negative attitudes can be directed into positive attitudes. EI emphasizes that the negative emotions and attitudes that tend to dominate the person and create stress can be channelized by creating self awareness and motivating oneself with empathy.

The yogic attitudes as mentioned by Patanjali are very relevant in everyday life of a person. In a normal course of life a person develops jealousy towards a happy person; indifference, apathy or even happiness towards a person in misery; jealousy and apathy towards virtuous person; and hatred and anger towards vicious persons. This leads to a negative state of mind and increases undue stress in a person that in the long run can result into serious problems like depression, anxiety disorders, phobia, bipolar disorder etc.

By dealing with these attitudes, Patanjali has touched upon a very root cause of the sufferings that lies within the person. He has also provided solution. According to him, our mental modifications and negative emotions are the root cause of our mental suffering. The solution of this problem lies in proper channelization of these negative emotions. It will help to bring a state of happiness.

Conclusion

It is obvious that yogic attitudes as propounded by Patanjali are a key to happiness resulting into enhancement in a person's state of mental wellness. Negative emotions are the basic cause of a person's suffering and the solution lies in an appropriate channelization of these emotions. Yogic attitudes, if adopted by a person can



enhance his/her mental wellbeing and would also promote social harmony in the community. The bottom-line message is that people should cultivate yogic attitudes in themselves. These are not just the end-states, but also a means to achieving mental wellbeing and overall positive growth.

References:

- Coleman, James C., 1984. *Abnormal Psychology and Modern Life*. Bombay: D.V. Taraporevala Sons & Co. Private Limited.
- Goleman, Daniel, 1995. *Emotional Intelligence*. New York: Bentam Books.
- Kulkarni, Dhanajaya. How to achieve happiness in <http://www.buzzle.com/editorials/6-15-2004-55479.asp> visited on 30.1.2011
- Nuernbergar, Phil, 2003. *Freedom from Stress*. Pennsylvania: The Himalayan International Institute of Yoga Science and Philosophy Publishers.
- Satyananda Saraswati, Swami, 2002, *Four Chapters on Freedom*. Munger, Bihar : Yoga Publication Trust, Ganga Darshan.
- Terri Emmett, 2005. *Defining Happiness* in [http://www.justmentalhealth.com/main.php?pid=happiness&title=What Is Happiness?](http://www.justmentalhealth.com/main.php?pid=happiness&title=What%20Is%20Happiness?) visited on 30.1.2011.



हृदयं चेतना-स्थानम्

शास्त्री चन्द्रकान्त दवे

पञ्चभौतिक प्राणी शरीर में चेतना, चैतन्य या चित्त का क्या स्थान है यह बहुत ही जटिल विषय है। प्रोटोप्लास्म को चेतना तत्त्व मानने वाले वैज्ञानिक भी वास्तव में इस विषय में किसी तथ्यपूर्ण निर्विवाद निर्णय पर अभी तक नहीं पहुँचे पाये। शरीरातिरिक्त चैतन्य है यह मानने के लिये पाश्चात्य जगत् को भी बाध्य होना पड़ता है किन्तु चैतन्य एवं शरीर का क्या सम्बन्ध है, साथ ही मन क्या है?, कहाँ है? आदि प्रश्नों का समुचित उत्तर भारतीय दर्शन ही दे सकता है। कतिपय पाश्चात्य मानस शास्त्री स्नायु संस्थान को ही मन कहते हैं। कुछ के अनुसार प्राणियों की प्रत्येक क्रिया मनोशारीरिक है। यहाँ मुख्यतः चेतना स्थान (Centre of the consciousness) क्या होना चाहिये इसी की विवेचना की जायेगी। इसका निर्णय हो जाने पर उसके कार्य-कलाप एवं सम्बन्ध स्वतः ही स्पष्ट हो जाते हैं।

आलोच्य विषय सुश्रुत की उक्ति “हृदय चेतना स्थानम् है, वह अधोमुख पुण्डरीक के सदृश आकृतिमान है, जाग्रत अवस्था में वह विकसित रहता है एवं सुषुप्ति में निमीलित रहता है।” हृदय चेतन्यास्पद या मुख्य चेतना केन्द्र है या नहीं इस विवाद से पूर्व ‘हृदयशब्द’ प्रकृति में किस अर्थ में आया है यह भी देखना चाहिये। सुश्रुत के अनुसार “शोणित कफ प्रसादजं हृदयं यदाश्रयाहि धमन्यः प्राणवहाः” ही हृदय है जिसे अंग्रेजी में (Heart) कहते हैं, जिसके अधोवाम भाग में प्लीहा एवं फुफ्फुस है, दक्षिण भाग में यकृत, क्लोम है। यहाँ हृदय शब्द मन का पर्यायवाची नहीं। मन का स्थान आचार्य ‘भेल’

“शिरस्ताल्वन्तर गतं सर्वेन्द्रिय परं मनः” कह कर निर्णीत करते हैं जो कि दर्शनकारों को भी अभिमत है। योगशास्त्र के अनुसार मन का स्थान आज्ञाचक्र में है जिसे (Hind Brain) भी कह सकते हैं। मन की स्थिति आज्ञाचक्र (भ्रूमध्यस्थ) में होने के कारण ही समयोपासना पद्धति में आज्ञाचक्र से प्रारम्भ होने वाले अवरोहणक्रम को स्वीकार किया गया है। साधारण भाषा में इसे लघुमस्तिष्क (Gerebellum) कहते हैं। इसे कपालकन्द भी कहा जाता है। यहीं पंचज्ञानेन्द्रियों एवं स्वप्न की नाड़ियों का स्थान माना जाता है। सहस्रार जिसे कि एक प्रकार से सुषुम्ना से आने वाले स्नायु समूहों का प्रसार (Gerebrum) कहना चाहिये, सर्वोच्च भाग है, इसके बीच में ही ब्रह्मरन्ध्र (Third ventricle) है। जो मनश्चक्र से एक अतिसूक्ष्म नलिका द्वारा सम्बन्ध है। ब्रह्मरन्ध्र त्रिकोणाकृति माना जाता है, यही वेदाक्त हिरण्यमयकोश भी है। ब्रह्मरन्ध्र के पृष्ठ भाग में एक आँख के आकार की ग्रन्थि (Pineal gland) है जिसे योगियों का तृतीय नेत्र कहना चाहिये। उपनिषदों के अनुसार “मनः स्थानं गलान्तं, बुद्धेर्वदन, महंकारस्य हृदयं, चित्तस्य नाभिरिति”। ये चार ही आभ्यन्तर कारण कहलाते हैं, केवल इनसे संयुक्त रहने पर स्वप्नावस्था होती है जहाँ ज्ञानेन्द्रिया कर्मेन्द्रिय दोनों निष्क्रिय रहती हैं। एक अन्य मत के अनुसार हृदय बुद्धि का स्थान है। “तत्र यत्पंकजं तुल्यं यद् बुद्धेः स्थानं तद् हृदम्।” आधुनिक विज्ञान के मतानुसार हृदयाख्यं फरीर का स्थान पम्प का कार्य करता है जो एक ओर फुफ्फुस से संबद्ध है, दूसरी ओर रक्त को

*एम. ए., व्याकरण, सांख्ययोग, दर्शनाचार्य

लाने, ले जाने वाली नलिकाओं से संबद्ध है। यह हृदय चेतना स्थान या आत्मा का स्थान नहीं हो सकता' वैसे प्राणवाहिनी नाड़ियाँ जिनकी संख्या 72 हजार हैं, जो समग्र शरीर का संबंध सुषुम्ना द्वारा मस्तिष्क से करती है, अतः मुख्य चेतना केन्द्र मस्तिष्क माना जाना चाहिये तथा सामान्य रूप से चेतना सर्व शरीरव्यापी है। उपनिषदों में "आपोमयः प्राणः" कहा गया है तदनुसार जल का स्थूल भाग मूत्र, मध्यम प्राणवाही रक्त तथा सूक्ष्मतरल प्राणशक्ति के रूप में परिवर्तित होता है, इसीलिए "रक्त जीव इति स्थितिः" कहा गया है। इन समस्त नाड़ियों में भी नासिका वामस्थित इडा, दक्षिण पिंगला, मध्यस्थितसुषुम्ना - ये तीन प्रमुखतम प्राणवाहिनी मानी गयी है। तदतिरिक्त - वामदक्षिण चक्षु गांधारी हस्ति जिह्वा। दक्षिण वामकर्ण-पूषा यशस्विनी। मुख-अलम्बुसा कुहू-लिङ्गदेश। मूलस्थान शंखिनी - ये भी प्रधान वाहिनियाँ हैं। अन्य गौण। एक विश्लेषण के अनुसार नाड़ियों में चित्त की गति प्राण-शक्ति के आधार पर है जो एक होते हुए भी प्राण, अपान, व्यान, समान, उदान भेद से पंचधा विभक्त है। तदनुसार मन, बुद्धि, चित्त, अहंकार ये चार चेतना के स्तर, जो मस्तिष्क से नाभिपर्यन्त मुख्यतः फैले हुए हैं, माने जाने चाहिये इसीलिए नाभि से ऊपर का भाग पवित्र नीचे का अपवित्र। आधुनिक मनोविज्ञान चेतन, अचेतन, अवचेतन ये तीन स्तर मस्तिष्क के मानता है। अहंकार को उस मत में Ego कहते हैं। जिसके भी एकाधिक विभाग हैं।

सांख्यदर्शन भी, सत्व, रज-तम भेद से इसे त्रिधा विभक्त मानता है। यदि इसी को लघु विभाग कर कहें तो तीन प्रकार की शक्ति हुई ज्ञान, इच्छा, क्रिया। मुख्य रूप से ज्ञानशक्ति का स्थान मस्तिष्क, क्रियाशक्ति का सुषुम्ना, इच्छा या संकल्प इन दोनों के मध्य मन में, जिसे लेकर ही

कुछ लोगों ने मन, हृदय पर्याय मान कर Heart को चेतना स्थान कहा।

उपनिषद भी प्रज्ञानात्मक ब्रह्म के ही विभिन्न स्तर कहता है- "यदेतद् हृदयं मनश्चैतत्। संज्ञानमाज्ञानं विज्ञानं प्रज्ञानं मेधा दृष्टिर्धृति मति मनीषा जूतिः स्मृतिः संकल्पः क्रतुः असुः कामो वंश सर्वाण्येवैतानि प्रज्ञानस्य नामधेयानि।"

जैसा कि सुश्रुत कहते हैं हृदय कमलाकृति एवं अधोमुख है। योगशास्त्र अनाहत चक्र जो कि ठीक सुषुम्ना मध्य, नाभिस्थ स्वाधिष्ठान चक्र से ऊपर है अधोमुख एवं 12-दल वाला कहा गया है वह सूर्य तत्त्व है अतः चन्द्रमण्डल आज्ञाचक्र (भ्रूमध्य) से झरने वाले अमृत का शोषण करता है। संभवतः आचार्य सुश्रुत ने उपर्युक्त अनाहत चक्र के आशय से ही अपना मत स्थापित किया है किन्तु शयनकाल में निमीलन यहाँ भी संभव नहीं दिखायी पड़ता। योगियों के अनुसार अनाहतचक्र कुण्डलिनी जागरण के पश्चात् उन्मुख हो चन्द्रमण्डल से अमृत स्रवण कराता है। एवंज ब सहस्रार पर्यन्त ज्ञाट् चक्र वेध-पूर्वक कुण्डलिनी फक्ति का गमन होता है तो समग्र नाड़ियाँ अमृतपूर्ण होकर योगी के फरीर को दिव्य बनाती है।

एक अन्य दृष्टिकोण परिस्वतंत्र नाड़ीमण्डल (Autonomous nervous System) का है। शास्त्रानुसार कपाल कंद से ही एक नाड़ी जिसके स्थलानुसार कूर्म विश्वोदरी कुहू (Vagus Nerve) आदि नाम हैं, ग्रीवा, वक्ष, कटि भाग में होती हुई गुदा पर्यन्त आती है। इसके वाम, दक्षिण दो भाग हैं। दक्षिण भाग वक्ष, उदर, कटि, प्रदेश में होती हुई इडा-पिंगला की मुख्य नाड़ियों (Sympathetic Columns) से संबन्ध करती है तथा इडा-पिंगला द्वारा सुषुम्नागत चक्रों से भी संबंध रखती है। संभवतः सुश्रुत वर्णित, हृदय कमल इसी प्राण,



अपान, समान की स्वतन्त्र नाड़ी से संबंध होना चाहिये। किन्तु “यह अधोमुख हो एवं इसका निमीलन उन्मीलन भी होता है।” इसका प्रमाण प्राप्य नहीं। तथापि मुख्य केन्द्र मस्तिष्क मूर्धास्थान ही माना जायेगा। क्योंकि ऐतरेय उपनिषद् कहता है **“स एतमेव सीमानं विदार्य तथा द्वारा प्रपद्यत। सैषा विहतिर्नाम द्वास्तदेतन्नन्दनम्।”** सेन्द्रिय शरीर पूर्ण बना कर ब्रह्म ने मूर्धास्थान से उसमें प्रवेश किया एवं समग्र इन्द्रियों व शरीर को अनुप्राणित किया। विदीर्ण करने के कारण वह स्थान विहति कहलाता है (आनन्द निकेतन ब्रह्म द्वार वही है अतएव ब्रह्मरन्ध्र भी कहना चाहिये। उसी चित शक्ति का योगियों को साक्षात्कार होता है। वहीं प्रणवकला है - **“अर्धं मात्रा स्थिता नित्या यानुच्चार्या विशेषतः”** (अगम्यता ही अनुच्चार्या का तात्पर्य है) का भी रहस्य है। बिन्दु (प्रणव) का स्थान ललाट का अपरांश माना है जहाँ जीवात्मा सूक्ष्मरूप से निवास करता है। जैसा कि कहा है- **“भागे बिन्दुमयी शक्तिः ललाटस्या परांशके। बिन्दुमध्ये च जीवात्मा सूक्ष्म रूपेण वर्तते हृदये स्थूल रूपेण मध्यमेन तु मध्यमे।”**

सम्भवतः सुश्रुत का आशय इसी स्थूल रूप से हो। अरुणाचल के परमसन्त योगी श्रीरमण महर्षि की प्रक्रिया के अनुसार हृदय -

अहंवृत्तिः समस्तानां वृत्तीनां मूलमुच्यते।
निर्गच्छति यतोऽहंधीर्हृदयं तत्समासतः।।
अन्यदेव ततो रक्तापण्डाद् हृदय मुच्यते।
अयं हृदिति वृत्त्या तदात्मनो रूपमीरितम्।।
तस्य दक्षिणतो धाम हृत्पीठे नैव वामतः।
तस्मात्प्रवहति ज्योतिः सहस्रारं सुषुम्नया।।

इसके अनुसार हृ-अयम (आत्मा) - हृदयम्। इस व्युत्पत्ति के द्वारा हृदय-आत्मा का स्वरूप है, वक्ष में दक्षिण की

ओर स्थित है। यह अष्टदल कमल सदृश है, अनाहत अधोमुख चक्र से पृथक्, रक्त पिंड से भी अन्य है, जहाँ से ज्योतिः प्रवाह ऊपर सुषुम्ना में होता हुआ सहस्रार में जाता है। यहाँ उल्लेखनीय बात यह है कि महर्षि रमण हृदय को अहंवृत्ति का उदय स्थान मानते हैं। अहंवृत्ति (Egoism) ही समस्त वृत्तियों का मूल है। यह हृदय दक्षिण में है अतः इसका संबंध उपर्युक्त विश्वोदरी नाड़ी (Vagus-Nerve) से माना जा सकता है। साथ ही यह चक्र सुषुम्नागत ज्ञादचक्रों से पृथक् हैं तथापि इसका सुषुम्ना से पूरा-पूरा संबंध है। इसे संचित् कमल की संज्ञा दी गयी है।

छान्दोग्य उपनिषद् का भी यही अभिमत है। **“सवाएष आत्मा हृदि तस्यैत देव निरुक्तं हृद्यमिति तस्माद्हृदसमहरहर्वा एवं वित्त्वर्ग लोकमेति।”** वहाँ इन हृदय की नाड़ियों में पिंगल, शुक्ल, नील, पीत एवं लोहितवर्ण का अणुरस प्रवाहमान रहता है ऐसा माना गया है। इनकी संख्या एक शत कही गयी है। इन्हीं में से एक नाड़ी मूर्धास्थान सहस्रार की ओर जाती है। इन नाड़ियों का आदित्य की रश्मियों से संबंध है। इन्हीं नाड़ियों में पुरुष का प्रवेश प्रगाढ़ सुषुप्ति अवस्था में माना गया है। अतः पुरीतति नाड़ी यहीं माननी चाहिये जैसा कि शंकराचार्य ने **“पुरीतदिति हृदय परिवेष्टन मुक्षयते”** कह कर माना है। **“तद्यत्रैतत्सुप्तः समस्तः संप्रसन्नः स्वप्नं न विजानाति आसुतदा नाडीषु सृप्तो भवति तेन कश्चन पाप्मा स्पृशति तेजसा हि तदा संपन्ने भवति।”**

“शतं चैका च हृदयस्य नाड्यस्तासां मूर्धानमलिनीः सृतैका।” यही शंकराचार्य का **“यदिदमस्मिन्ब्रह्म”** पुरे **दहरं पुत्ररीकं वेशमदहरोहस्मिन्नन्तराकाशः”** है।

यदि उक्तप्रकार से वर्णित इस युग के परम योगी श्रीरमण महर्षि तथा शंकराचार्य आदि से समर्थित औपनिषद् हृदय

को ही आचार्य सुश्रुत द्वारा वर्णित हृदय माने तब भी “अधोमुख-पुण्डरीक सदृशता तथा निमीलन उन्मीलन” की सर्वथा असंगति ही कही जायेगी। क्योंकि किसी भी आचार्य या उपनिषद् ने ऐसा नहीं माना है। ऐसा प्रतीत होता है कि आचार्य सुश्रुत वेद, दर्शन, उपनिषद्, तन्त्र एवं योगियों के इस चक्रक चक्र जाल में फंसकर निकल नहीं पाये। उपनिषदों ने इस हृदय का वर्णन प्रायः शयन के सन्दर्भ में ही किया है जैसा कि कौषीतकि ब्राह्मणोपनिषद् से ज्ञात होता है- इन हृदय नाड़ियों को हिता भी कहा गया है- **हिता नाम हृदयस्थ नाड्यो हृदयात्पुरीततमभि प्रतन्वान्ति तद्यथा सहस्रधा केशोविपाटित स्तावदक्त्र्यः पिङ्गलस्याणिम्ना तिष्ठन्ति। शुक्लस्य, कृष्णस्य, पीतस्य, लोहितस्येति तासु तदा भवति।**” इसलिए सुश्रुत ने भी इस संदर्भ में निद्रा का वर्णन किया है। अच्छा होता यदि आचार्य सुश्रुत इस विषय का स्पष्ट एवं विस्तृत वर्णन करते किन्तु उन्होंने इस जटिल प्रश्न का एक श्लोकमात्र में वर्णन कर पलायनवादी प्रवृत्ति का आश्रयण किया। हो सकता है सुश्रुत जैसे महान् शल्य-शास्त्री को वेदान्तों में वर्णित एका हृदय की व्याख्या समग्र अंशों में मान्य न हो किन्तु आज इस विषय में जब कि उल्लेख अति संक्षिप्त है “इदमित्थं” रूप से कैसे कुछ कहा जा सकता है। वेद, उपनिषद्, तन्त्र के रहस्य अति जटिल हैं, उनमें सूक्ष्म विज्ञान भरा पड़ा है जिसे भौतिक विज्ञान नहीं पा सकता किन्तु उनका उद्देश्य भूतवाद से ऊपर उठकर आत्मा की ओर जाना था जहाँ किसी वाद के विवाद की कोई सत्ता नहीं, केवल शक्ति ब्रह्म ही सत् रूप से जहाँ वर्तमान है। वैसे विज्ञान के अनुसार वैदिकप्रक्रिया की व्याख्या पूर्णतः संभव है। तदनुसार ही चित्ति शक्ति (Consciousness) का केन्द्र सहस्रार है जहाँ से मनरूपी चन्द्र चेतना ग्रहण

करता है एवं प्राण रूप सूर्य सम्पूर्ण शरीर को अनुप्राणित चेतना प्रवाह से युक्त करता है। ये दोनों चित्ति शक्ति के Negative व Positive स्रोत के समान है। इन दोनों का प्रारंभ एवं अवसान वहीं होता है अतः प्रणव की नित्या कला भी वहीं मानी गयी है। आत्मा की स्थिति सहस्रार में मानने पर ही आत्मा से आकाश, आकाश से वायु, वायु से अग्नि, अग्नि से जल, जल से पृथ्वी, पृथ्वी से ओषधियाँ, ओषधियों से अन्न, अन्न से पुरुष, अतः यह शरीर पुरुष अन्न रसमय है, यह सृष्टि प्रक्रिया जो आयुर्वेद को भी मान्य है, संगत होती है क्योंकि मूलाधार (गुदा) पृथ्वी, स्वाधिष्ठान (उपस्थ), जल तत्व, मणिपूर (नाभि) अग्नि तत्व, अनाहत (हृदय) वायु, विशुद्ध (कंठ) आकाश, आज्ञा (भ्रूमध्य-मनश्चक्र) तदुपरि सहस्रार (मूर्धास्थान) आत्मा का।

अन्न रसमय पुरुष है अतएव यह भूतात्मा है। विज्ञान भी प्रोटोप्लाज्म रूप रस को जीव कहता है, उसमें कोई आपत्ति नहीं। वह अन्न से बनता है। उपनिषदों में प्राणशक्ति रूप माना है। वह सूक्ष्म शक्ति रसरूप हैं जल उसका स्थूल वाहक है। उपनिषदों में भूतात्मा एवं परमात्मा का पृथक-पृथक वर्णन मिलता है। आचार्य चरक एवं सुश्रुत ने उसे यथावत स्वीकार किया है।”
“पंचतन्मात्रा भूत शब्देनोच्यन्तेऽथ पंचमहाभूताति भूत शब्देनोच्यन्ते। तेषां यत्समुदयं तच्छरीर मित्युक्तं मथयोह खलु वाव शरीर इत्युक्तं स भूतात्मा।” शरीर पुरुष को यहाँ कर्ता तथा आत्मपुरुष को कारयिता कहा है - “यः कर्ता सोऽयं वै भूतात्मा करणैः कारयितान्तः पुरुषः। अथ यथाऽन्नानाऽयस्मिण्डोऽन्यो वाऽभिभूतः कर्तृभिर्हैन्यमानो नानात्व मुपैति एवं वाव खल्वसौ भूतात्माऽन्तः पुरुषेणाभिभूतो गुणैर्हन्य मानोनानात्व मुपैति। चतुर्जालं चतुर्दशविधं चतुरशीतिधा परिणतं



भूतगणमेतद्वेनानात्वस्य रूपम्।” पुरुष नानात्व की इससे श्रेष्ठ व्याख्या प्राप्त होना अति कठिन है। यह चेतना वायु रूप है तथा शरीर में सर्वत्र संचरण करता है “स वायुरिवात्मानं कृत्वाऽभ्यन्तरं प्राविशत्।” उस पुरुष ने अपने पांच विभाग किये- “स एकोनाशक्तस्य पंचधात्मानं विभज्योच्येते यः प्राणोऽपानः समानः उदानो व्यान इति।” चरक सुश्रुत ने भूतात्मा के सिद्धान्त को उपनिषदों से ही लिया है। योगी लोग इसीलिए प्राणशक्ति पर ही ध्यान केन्द्रित करते हैं उसे हृदय से ब्रह्म रन्ध्रस्थ आत्मा से मिला देते हैं तब अमरत्व होता है शक्ति ही इस जगत् में मुख्य वास्तविक तत्त्व है। शक्तिमान् उससे अभिन्न ही माना गया है। जड़शक्ति को ही, जिसे विज्ञान के अनुसार (Cosmic energy), और सांख्य के अनुसार प्रकृति कहना चाहिए जिसे वेदों में अव्यक्त असत् कह कर, सत् रूप समग्र सृष्टि का कारण माना गया है (Electrons एवं Protons) इसी सर्जक शक्ति ईश्वर की संकल्पात्मिका शक्ति का परिणाम है। कहा है “असतः (अव्यक्त से) सद् (व्यक्त) अजायत।” ऋग्वेद में इसी प्रक्रिया को निम्न प्रकार से वर्णित किया। “यद्देवा अदः सलिले सुसंरब्धा अतिक्वत्। अत्रा वो नृत्यतामिच तीव्रो रेणुरपायत्।।” सृष्टि शक्ति यां सलिलाकार घनीभूत हो गयीं, उनमें विक्षोभ हुआ वह एक प्रकार के वेगपूर्ण ती नर्तन के समान था। (जैसा कि परमाणु जो स्थूल जगत् का कारण है, की रचना में (Nucleus) केन्द्रक

स्थित Protons के चारों तरफ (छः) 6 स्तरों पर Electrons (विद्युदणु) घूमते हैं) जिससे रेणुभूत परमाणुओं का निर्माण हुआ।

वेदों के अनुसार भूः, भुवः, स्वः, महः, जनः, तपः, सत्यं को सृष्टि प्रक्रिया के 7 स्तर (ब्रह्माण्ड प्रक्रिया में) मानने चाहिये। पिण्ड प्रक्रिया में जैसा कि मुख्य विषय जल रहा था मूलाधार से सहस्रार पर्यन्त भूः भुवः के क्रम से मानते हुए, सहस्रार को सत्यलोक- मुख्य चित् शक्ति का स्थान मानना चाहिए। इनकी नाड़ियों का प्रसार ही एक प्रकार से शरीर है जिसमें सारे में ही प्राणशक्ति प्रवाहित होती रहती है। आधुनिक विज्ञान अभी तक वेद-वेदान्त और योग दर्शन की सूक्ष्मता एवं ऊँचाई को नहीं छू पाया है, क्योंकि उनका पर्यवसान अभी तक भौतिक शक्ति एवं मानसिक शक्ति पर्यन्त ही है। Einstein के अनुसार भूत Matter शक्ति में परिणत हो जाता है या शक्ति भूत (Matter) में। किन्तु सब शक्तियों का मूल ब्रह्म, आदि शक्ति है। वेदान्त सृष्टि प्रक्रिया में विज्ञान एवं उसके तत्त्वों आदि का अन्तर्भाव हो जाता है। योगदर्शनाकार ने समस्त भूत एवं भूत शक्ति (Kinetic & Static) परिपूर्ण विश्व का रहस्य एक सूत्र में ही भर कर छोड़ दिया, जिसमें विज्ञान निरंतर उलझा है और उलझा रहेगा -

“प्रकाश क्रियास्थिति शीलं भूतेन्द्रियात्मकं भोगा पवर्गाथ दृश्यम्।”

Altered State of Consciousness in Healing & Health

**Swami Mangalteertham*

Introduction

Altered state of consciousness for a given individual is one in which he clearly feels a qualitative shift in his pattern of mental functioning. It can be induced by various physiological, psychological or pharmacological maneuvers or agents, and can be recognized subjectively by the individual himself as different from waking consciousness (Ludwig, 1966). Altered state of consciousness may be produced in any setting by a wide variety of agents or maneuvers, which interfere with cognitive process. (Tart, 1972). There are a variety of methods to produce altered state of consciousness.

In Yoga, pratyahara (e.g. yoga nidra, antarmauna) is a technique, where we decrease alertness by relaxing critical faculties; thereby we come to a state where thinking is minimal. Therefore in the process, it is possible to alter the states of your consciousness, whenever an individual acts consciously to accelerate change or direct the course of his physiological activity. The nervous system that automatically regulates the physiology of the body is called "automatic", but it is known today that the autonomy, the independent regulation of bodily function, does not exclude the possibility of deliberate alterations.

There is emerging scientific evidence from three converging areas of research:

- (i) Epidemiological research: Some experiences with common health conditions
- (ii) Physiological research :
 - (i) Mental imagery in the management of NIDDM
 - (ii) Enhancement of memory
- (iii) Clinical research : Immunity to AIDS (case history)

Epidemiological Research

A wide cross section of participants, numbering 380, was selected from courses conducted at Bihar School of Yoga. The participants were of varying age groups, both male and female. Their complaints consisted of general weakness, constipation, anxiety, headache, gas, lack of appetite, indigestion, tonsillitis, depression, sciatica, arthritis and back pain. The result of the study, tabulated in Table-1, clearly indicates that 95% to 98% of subjects recorded that their condition had improved with the practice of yoga and yoga nidra/antarmauna. The degree of improvement was statistically significant in all cases.

*Director, Nutan Sanjeevani Sansthan, Deoghar (Jharkhand)

Table-1: (n = 380) Improvement due to yoga practices.

Sl. No.	Complaints	No. of Complaints	Pre	Post	Difference	X2	T	P
1.	Weakness	25	1.52	0.76	0.76	32.37	3.30	.01
2.	Constipation	22	1.68	1.09	0.59	33.14	2.26	.05
3.	Anxiety	38	2.21	1.31	0.89	45.50	4.94	.01
4.	Headache	29	1.62	0.58	1.03	28.94	5.72	.01
5.	Gas	31	1.38	0.87	0.51	21.74	3.40	.01
6.	Poor appetite	32	1.40	0.53	0.87	37.28	4.57	.01
7.	Indigestion	38	1.63	0.71	0.92	59.56	4.60	.01
8.	Tonsillitis	40	1.92	1.22	0.70	42.40	4.30	.01
9.	Depression	31	1.64	1.09	0.55	21.20	3.66	.01
10.	Sciatica	27	2.03	1.50	0.52	22.35	3.05	.01
11.	Arthritis	26	2.4	1.12	0.92	25.94	4.60	.01
12.	Back pain	31	1.04	0.81	1.13	41.25	5.38	.01

Experiment 1: MENTAL IMAGERY IN THE MANAGEMENT OF NIDDM (Dilip Kumar et al 2001).

Objective: To evaluate the effect of mental imagery (the effect of sweet and bitter) during yoga nidra practice for patients of *NIDDM*.

Research design and Method– 48 known diabetic patients were selected and grouped into A, B and C. Three separate clinical yoga camps were conducted for ten days each. During yoga nidra session of camp for group B an intervention was made by suggesting the patients to imagine as if they are eating some sweets. In the group C suggestions were given to imagine bitter foods. O.G.T.T. was conducted in all the patients before and after the camps. Results were statistically analyzed.

Results– Results of group A shows reduction of mean blood sugar values in the fasting and the two-hour stages (fasting S.E. (d) 2.1 and actual difference 31, two hour S.E. (d) 3.57 and actual difference 36) of O.G.T.T.

In group B, the one-hour blood sugar value (S.E. (d) 2.7 and actual difference 19) and two-hour blood sugar value (S.E. (d) 3.4 and actual difference 26) shows a substantial increase.

In the group C, the blood sugar value in all the four stages (Fasting SE (d) 2.7 and actual difference 19; half hour S.E. (d) 2.8 and actual difference 28; one-hour SE (d) 3.2 and actual difference 28; two-hour SE (d) 3.9 and actual difference 29) shows remarkable reduction.

Conclusion

Analysis of the available results substantiates the efficacy of clinical yoga techniques in the management of diabetes mellitus observed in earlier studies. Values of group B and C show decline in curve during one hour to two hour in the final reading. This may be either due to the increased secretion of insulin or the suppression of insulin inhibiting hormones.

Comparison of values also indicates that the imagination of visualizing, touching, and tasting of sweet food causes an enhancement of blood

glucose level. So also the imagination of bitter food causes the reduction of blood glucose level.

Experiment 2: EFFECT OF YOGA NIDRA ON MEMORY OF CHILDREN (Vina Verma and Mangltertham 2002)

In the present study, yoga nidra was used as a tool to investigate its effect on memory in children.

The sample of study consisted of 30 students in the age group of 13-15 years who were randomly assigned to experimental and control groups. PGI Memory Scale (Pershad, 1977 and Pershad and Wig 1988) with ten subjects measuring ten parameters of memory, was administered on both the groups.

In experimental group seven dimensions show significance at .01 levels and in three dimensions it is non-significant due to high pretest score (may be these three subjects were too easy for the example).

In control group "t" value was non-significant in all the ten dimensions.

Overall result also shows a very high significance of mean difference in experimental group. It is beyond 01 level of significance, whereas in the control group the value is non-significant. Thus, the finding of the present study taken dimension wise or as a whole show that yoga nidra has a positive and relevant effect in enhancing memory of children.

Therefore, yoga nidra can be used to bring extraordinary improvements in both absorption and retention of information from external sources as well as the tapping of knowledge within one's own mind. It helps to dive deep into the realms of the subconscious mind, thereby releasing and relaxing mental tensions, and establishing harmony in all facets of our being. (Sw. Satyananda 1993)

During yoga nidra, mind moves through different states of consciousness whereby there is withdrawal from senses. Therefore, yoga

nidra helps in releasing mental and emotional tensions. It also inspires, guides and reveals to us names, facts and scenes from the storehouse of memory.

Children can be taught to use the power of altered state of consciousness to improve their memory. As the mind is in a state of receptivity, the suggestions sent to it through "the Sankalpa" (resolve) find fertile ground and can thus reach the subconscious mind. From there, they are transferred to the conscious level in the form of will power.

Visualization in yoga nidra is very important state, as it increases the capacity to recall and reproduce. Since memory is the process of retaining traces of previously learned material and to bring them to the present state of consciousness. Encoding, storage and retrieval are stages in memory. The yoga nidra helps all such stages of memory.

EFFECTS OF YOGA NIDRA ON MEMORY OF CHILDREN

Table-2: Comparison of Memory enhancement in control and Experimental group n = 15

Group	Tests	Mean	AD	t	Remarks P. value
Expt. Group	Pre	72.73	4.82	13.88	0.01 Significant
	Post	93.83	3.42		
Control Group	Pre	67	8.62	1	N.S.
	Post	70	2		

Immunity of AIDS Virus (a case history)

Dr. M. Vega, M.D. became sick in 1985. He was diagnosed with AIDS in early 1990's. By Jan. 1996, he was tested positive for the virus. Three months later, he found himself dying at home. He wished to end life by taking a handful of sleeping pills. He took the first one. But something inside of his was still saying "Don't Do it".



He started listening, became aware of self and surrounding. He says, he started practicing conscious observation, may be it is antarmouna or meditation. By doing it he could promote a state in mind.

“Stillness and Harmony”

In six months, he could choose between hatred – fear – love. One day he was not afraid of AIDS and was cured.

Four year later, there was no detectable sign of the HIV virus in his blood. (Marcial-Vega, 2001, 2002).

Discussion

Taken together, these different kinds of research are beginning to show a coherent picture, that altered state of consciousness can bring about physiological changes and enhance healing process. (Kabat-Zinn 1990, Dimonton 1972, Meares 1979, 1980 Udapa 1977, Melchizender (2000).

Why it is essential to bring about a change in state of consciousness?

Mind in waking state processes perception, memory, expresses, emotion, depending on his individual attitude and finally the manifestation of behavior.

When we are fighting or struggling for our bread and butter, we are being influenced by stimulus that we receive at work place and life stresses. Depending on our attitude, the mind undergoes stages of kshipta, vikshipta, moodha, ekagra and nirudha stages.

When we are in deep sleep, mind is withdrawn and the world temporarily vanishes for all of us. Through altered state of consciousness, we try to modify patterns of mind from kshipta, vikshipta, and moodha to ekagra or nirudha states. In pratyahar there is alpha synchronization because chitta states percolate into brain causing a change in its electrical potential, specifically in the

cerebral cortex, and form a brain wave pattern. (Mangalteertham, 1994).

When we synchronise alpha activity in brain, the mind enters into an altered state of consciousness. This altered state of consciousness can activate and enhance immunity.

Violence, anger, hate, fear and jealous, cause imbalance of mind-brain equipment and causes conditioning of mind. Diseases and misery geminate in the conditioned mind and later it percolates in the body through neuroendocrine axis. Negative emotion alone is the primary causes of human suffering and agony.

A Seer

If one observes the mind with non-reactional attentiveness the attentivity takes over the subject and the subject sees the object without any mutilation. This frame of reference is called non-dualistic frame and has capacity to understand life directly, instead of in the abstract, linear terms or representational thinking.

The non-dual frame of reference has the capacity to perceive the whole. The attentivity is at higher quantum energy potential than relativistic thought, so it bombards thought and annihilates it. In this frame of reference thought ends, or a cultural dissipative structure goes in abeyance, or the morphopsychic fields are transcended. This results in the mutation of human psyche. This is how, all imbalances and all conditioning ends. (Kanwaljit and Sampooran 1989).

Therefore, the key to health is the (mind + brain) equipments, lies in looking at the objective world and the subjective world with non-reactional alertiveness. It is the higher level of awareness that can heal all diseases, including **CANCER&AIDS**.

Body is the best pharmacy ever devised as it synthesizes all chemicals needed for healing,

when mind is pure or de-conditioned. A person's mental state affects immunity. Optimism, devotion and love can develop more "T" cell. Therefore, cause of cure lies in altering the state of consciousness or de-conditioning of mind. Therefore, in yoga, we do not treat symptoms or diseased part of the sufferer. We primarily try to de-condition mind by altering state of consciousness. By doing so, disease and symptoms starts vanishing of their own.

Natural genetic engineering and transcriptional gene regulation by hormone

The DNA molecule has been called the blueprint of life. DNA is contained in the chromosomes within the nuclei of each and every living cell. Each strand of DNA consists of a sequence of nucleotides forming a polynucleotide chain like the beads of a garland. The sequence of these bases is a simple code containing a vast repository of genetic information replicated each time the cell divides itself into daughter cells.

The DNA molecule has genetic information for almost all the proteins which may be required by an organism in specific amounts, at certain definite times of the life cycle, but all the genes (citrons) of the DNA molecule cannot make polypeptides all the time because, if all of them were operative at the same time, the cell would become filled with unnecessary proteins. There is much evidence to show that many proteins, which play an important role in an adult animal, are not synthesized primarily during embryonic development, and certain other proteins may be synthesized primarily during embryonic development, but not during adulthood. Therefore, the flow of information from DNA to protein is regulated in some manner.

Regulation, a fundamental property of living matter is related to adaptation to the changing environment and to the phenomena of growth and differentiation. The mechanism of regulation of gene action has been extensively

studied in prokaryotes as well as in eukaryotes. Various kinds of experimental evidence have shown that the activities of eukaryotic genes can be regulated at the level of genome, at the level of transcription, and at the level of translation.

Several experiments have proven that the synthesis of different kinds of proteins in a differentiating cell does not depend on DNA replication or on translation, but on a differential transcription of certain genes, and is regulated by steroid hormone.

Yoga and Hormonal Secretion

Yogic asanas have a close relationship to the anatomical situation of the exocrine and endocrine glands of the body. It is now well asserted that the endocrine and nervous systems are toned and stimulated by yoga practices. They are influenced in two ways:

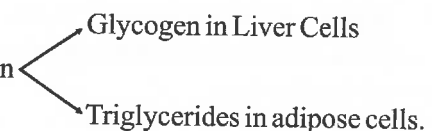
1. Primary by local increase in the blood circulation in about the endocrine glands and nerve plexuses.
2. By influencing the secretory production of these glands.

Carsello 1978, Cooper 1985, Devi 1986, Jeving 1977 & 1978, Shah 1974, Stone 1976, Udapa 1977, Wienshilbom 1976 in their different studies, have shown that there were marked changes in the thyroxin, catacholamines, epinephrine, histamiase, plasma cortisol, and urinary 17 hypoxysteroids and others, while practicing yoga.

MECHANISM OF HORMONE ACTION

(Tortora, Grabowski) – 2003

The response to hormone depends on both the hormone and the target cell. Various target cells respond differently to the same hormone. For example-

1. Insulin 
 - Glycogen in Liver Cells
 - Triglycerides in adipose cells.



The response to hormone is not always the Synthesis of new molecule, as is the case of insulin.

2. Other hormonal effects include changing the permeability of the plasma membrane, Stimulating transport of substance into or out of the target Cells, altering the rate of specific metabolic reactions, or causing contraction of smooth muscles or Cardiacmuscles.

In part, these varied effects of hormones are possible because single hormones can set in motion several different Cellular responses. But first, however, a hormone must “announce its arrival” to a target cell by binding to its receptor.

- (a) For lipid Soluble hormone, the receptors are Located inside target Cell.
- (b) For water Soluble hormone, the receptors are part of the plasma membrane or target Cells.

Action of Lipid-soluble Hormones

Lipid-Soluble hormone, including Steroid hormones and thyroid hormones, bind to receptor within target Cells. Their mechanism of action is as follows:

1. A free lipid soluble hormone molecule diffuses from the blood, through interstitial fluid, and through the lipid bilayer a plasma membrane into a cell.
2. If the Cell is a target Cell, the hormone binds to and activates receptors located within the Cytosol or nucleus. The activated receptor hormone Complex than alters gene expression: In turns specific genes of the nuclear DNA. On or Off.
3. As the DNA is transcribed, new messenger RNA (m- RNA) forms, leaves the nucleus, and enters the Cytosol. There, it directs Synthesis of a new protein, often an enzyme, on the ribosome.

4. The new Protein alters the Cell’s activity and causes the typical, physiological responses of that hormone.

Action of water-Soluble Hormone

Catecholamine, peptide, protein, and eicosanoid hormones are not lipid soluble, they cannot diffuse through the lipid bilayer of the Plasma membrane and bind to receptor inside target Cells.

Instead, the receptors for water soluble hormones are integral proteins in the plasma membrane that protrude into the interstitial fluid

The action of a typical water-soluble hormone occurs as follows.

1. A water-soluble hormone (the first messenger) diffuses from the blood through interstitial fluid and then binds to its receptor at the exterior surface of a target Cell’s plasma membrane. The hormone hormone-receptor complex activates another membrane protein, called a G Protein, which in turn activates adenylate cyclase.
2. Adenylate Cyclase Convert ATP into Cyclic AMP (c-AMP). In the cytosol of the cell.
3. Cyclic AMP (the second messenger) activates one or more protein kinase, which may be free in the cytosol or bound to plasma membrane. A protein Kinase is an enzyme that phosphorylates (adds phosphate group to) Cellular protein. The donor of the phosphate group is ATP, which is converted to ADP.
4. Activated protein Kinase phosphorylates one or several other enzyme. Phosphorylation activates some enzymes and inactivates others, rather like turning a switch on or off.
5. Phosphoyrylated enzyme, in turn, Catalyze reaction that produce physiological responses.

Different protein Kinases exist within different target cell. Thus, One Protein kinase might trigger glycogen Synthesis, a second triglyceride, breakdown, a third protein Synthesis, and so forth. Moreover, phosphorylation by a protein Kinase can inhibit certain enzymes.

For example, some of the Kinases unleashed when epinephrine binds to Liver Cells inactivate an enzyme needed for glycogen synthesis.

6. After a brief period, an enzyme called phosphodiesterase inactivates C-AMP. Thus, the Cell's response is turned off unless new hormone molecule continues to bind to their receptors in the plasma membrane.

Conclusion

There is ample evidence to indicate that yoga practices influence hormonal secretions by affecting the endocrine gland system. The above findings further show a clear interaction of hormones in regulating gene activity at the level of transcription, either through cyclic AMP or by directly binding to non-histone chromosomal proteins.

Therefore, Yoga opens up the possibility of consciously accelerating the individual evolution. In the process, we can have more resistance power. We can bring about a change in much physiological activity of the cells, thereby influencing a revolutionary change in behaviour and other aspects of life.

Any attempt, therefore, to modify the gene activity of the human being is an unnecessary and unwanted trial by genetic engineering

techniques. As such a trial will not only be dangerous to the human race, but also may even do more harm and make the human race completely extinct. It will not be less disastrous than an atom bomb explosion. So, all of us should think about the ways and means of individual evolution by the Yogic process, rather than by some induced mutation process or by some genetic Engineering process, which do not possess the potentialities to alter gene expression consciously.

The Switching on and off of human genes can be influenced by unconscious or conscious external action. The hypothalamus of the brain sends out the signal that tells the pituitary gland to release a hormone that tells other endocrine glands to secrete hormones. Hypothalamus takes orders from the conscious part of the brain which gets its information from the outside world, Yoga prepares our mind to receive every happening in a positive way e.g. "Sambhawa". Sambhawa is nothing but it is a state of mind in which we look at the objective world and subjective world with nonreactive alertness.

So, we can have a scheme, how yoga can regulate gene activity in a natural way by altering the state of consciousness through different antaranga yoga techniques. This scheme shows, how mutation of psyche or altered state of consciousness can change a vibration of mind-brain equipment and then crystallization (the hormone) and finally a change in the physiology of cell by altering the formation of new enzyme. This can initiate new enzymatic reaction or help in the materialization and transformation of physical, mental and emotional behaviour of human personality



References

1. Carsello, C. J. & J.W. CREASER (1978) Does TM training affects glands. *JAL. Psychol* 63, 644–645
2. Cooper, R et el 1985. Hormonal and biochemical responses to TM. *Post Graduate Med J*, 61, 301-304
3. Devi, S.K. (1986) Biochemical studies of Kundalini Yoga in health & disease. Doctoral thesis, BHU, Varanasi, INDIA.
4. Dilip Kumar KV, et al (2001) Effect of clinical Yoga Technique and mental Imagery in the Management of NIDDM. *Clinical Yoga. Res. Ins. Vaidyatanam P. S. Varir Ayurveda College Magazine, Kottakal (INDIA).*
5. Jeving, R. et el (1978) Plasma growth & growth hormone during meditation, *Psychosome Med.* 40, 329-333
6. Jeving R. et el (1977) Plasma, Prolactin and Cortisol during TM. *Sc. Res. TM Programme, 1 special Pre publication copy.*
7. Kabat-Zinn, (1990), *Full Catastrophe Living.* Dell Publishing New York-10036.
8. Kanwaljit and Singh S. (1989) Mind's war on Cancer-AIDS. *The Tribune* July 16.
9. Ludwig, AM (1966) Altered States of Consciousness. *Arch.gen.Psychiat.* Vol.15 225-35.
10. Mangalkeertham (1994) "Brain Mapping and Yoga Nidra" *Proceedings of World Yoga Conference, Bihar School of Yoga, Munger.*
11. Marcial-Vega (2000) The healing of AIDS. *The sprit of Meat Vol.- 1:1-6.*
12. Marcial- Vega (2002) Healing of AIDS : Chronology. *The spirit of Maat Vol. 16 Oct. 11-7.*
13. Melchizedek D (2000) The super Psychic Children. *The sprit of Maat Vol 1 : 1-5.*
14. Meares, A. (1979) "Regression of Cancer of the return after intensive meditation. *Med. J. Aust.* 2(10): 539.
15. Meares, A. (1980) Remission of massive metastases from undifferentiated Carcinoma of the Lung associated with intensive meditation. *J. Aimer. Soc, Psychosom. Dent. & Med., 27(2): 40-41.*
16. Martin, P. (1997) *The sickening Mind: Brain, behaviour, immunity, and disease.* Harper Collins, LONDON.
17. Sw. Satyananda Saraswati (1993) *Yoga Nidra: Bihar School of Yoga, Munger.*
18. Simonton, OC. (1977): Pathogenesis and Management of Stress disorders *Quarterly J. Surg. Sci. (BHU) 13(2): 56.*
19. Shah, VV (1974) Yoga, mind and body. *Heart Care* Oct-Dec.
20. Stone, RA & J. Delco (1976) Study of meditation & blood pressure. *New. Engl. J. Med.* 294: 14, 787.
21. Tart, CT (1972) *Altered states of consciousness.* A Doubledday Anchor Book, NEW YORK.
22. Tartora, G. J. and Grabowski, S. R. (2003) "Human Physiology" *Johnwiley and Son, Jn.*
23. Wienshilmom, R (1976) study of meditation and blood pressure. *New. Engl. J. Med.* 294; 14, 786



ROLE OF YOGA IN LIFE STYLE RELATED MENSTRUAL DISORDERS WITH SPECIAL REFERENCE TO PCOS

**Dr. Ulka A. Natu*

Although First described by Stein and Leventhal in 1935, it is the most prevalent lifestyle related multisystem disorder of modern age women today. Its prevalence has recently been reported at 28% of unselected obese and 5% lean women. Stress of modern lifestyle predisposes to problems of PCOD, obesity related menstrual disturbances. An approach of dehasadhana (physical practices of asanas, shuddhikriyas), pranasadhana (pranayama), bhavasadhana (culturing of emotions), divyasadhana (divine practices – pratyahara, dharana, dhyana), diet, congenial atmosphere, and counselling can help in treating gynaecological disorders by correcting disturbances in hypothalamus pituitary ovarian axis, help to accept disease in a better way.

With the growing advances in every field related to modern life, role of woman also seems to have advanced from a 'home builder' to a 'society builder'. Though this changing scenario has helped in improving the social status of a woman, it has invited lot of challenges for women with the increasing burden of workload outside and inside the house. With the changed lifestyle and increasing demands, women are becoming more prone to develop lifestyle related disorders.

The main challenges faced by woman are the problems related to reproductive health. As all of us are aware, the average age of menarche has decreased from 14 years to 10 years all over the world. This is related to increase awareness because of exposure to loads of information on audio visual and print media. The early age of menarche is also associated with problems of heavy menstrual flow, irregularity in the rhythm of cycle, and also associated pain. The modern lifestyles of adolescents is associated with disturbed day & night schedule because of stress of studies, sedentary lifestyle with lack of exercise, faulty dietary habits and tremendous mental and emotional stress. This has probably resulted in genesis of increasing incidence of PCOS (polycystic

ovary syndrome) at an alarming rate.

Although traditional concepts of PCOS as a gynaecological/endocrine condition presenting with menstrual irregularities, anovulatory infertility, obesity, hirsutism and acne still prevail, there have been several recent developments in the literature on the agreed definition, pathophysiology, treatment and possible long term health consequences.

Definition of PCOS

The main recent advance in the agreed definition of PCOS was agreed at Rotterdam ESHRE/ASRM sponsored workshop. The criteria agreed up on in this workshop were two out of the following three after exclusion of other causes of androgen excess:

- i) Oligo and/or anovulation
- ii) Clinical and/or biochemical sign of hyperandrogenism
- iii) PCO morphology on ultrasound scan, defined as the presence of 12 or more follicles in each ovary (with one ovary being sufficient for diagnosis) measuring 2-9 mm in diameter and/or increased ovarian volume (>10ml.)

Insulin resistance is also recognized as being central to pathophysiology of PCOS.

Relation of lifestyle to menstrual disorders

Stress activates release of corticotrophin releasing hormone (CRH) from hypothalamus. CRH activates sympathetic nervous system and also regulates ACTH secretion. Experimental evidence indicates that CRH directly inhibits hypothalamic GnRH secretion, probably cells as ACTH. It is secreted parallel with ACTH in

*Consulting Gynaecologist, Yoga Therapist, M.D., D.G.O., D.y.ed, Advanced Diploma in Yoga, University of Mumbai



response to stressful stimuli (Ranjan). The exact mechanism of stress induced amenorrhea is unclear but it is mediated by the above pathway. In short, excessive stress stimulates production of cortisol as well as endorphins, further inhibiting the release of gonadotropins. It suppresses secretion of FSH and LH. This could probably play a role in genesis of anovulatory cycles. Thus the opioid peptides also play an important role to maintain the cyclicity of menstrual rhythm.

Similar mechanism could be explained in the stress of modern lifestyle predisposing to problems of PCOD, obesity related menstrual disturbances. The consequences of uncontrolled chronic stress of demanding lifestyle on body are profound. A continual state of stress disturbs the neurochronical balance in brain leading to increased appetite. Depression also increases desire to eat more. Stress induced cortisol release and insulin resistance predispose to weight gain leading to central obesity. This predisposes to PCOS. Development of PCOS is itself a major stressor. Excess hair growth, hair loss, overweight, acne and associated infertility result in diminished self esteem, reduced quality of life and negative body image.

Role of Yoga

There is something beyond the hormones which controls the rhythmicity and that is our mental and emotional make up. How the thoughts and emotions which are a non-molecular entity are converted to neurotransmitters which are a physical entity is unknown. Hypothalamus is connected to ANS, higher areas of cerebrum and limbic cortex which is seat of emotions and to pituitary gland by portal circulation. Stressful events evoke emotional response in form of release of opioids, neuro transmitters. These substances disturbs HPO axis. Yoga is master key for training emotions. It helps us to develop

optimism, control over impulsive behaviour and channelize our negative emotions. Yoga is nothing but homeostasis, or equanimity, harmony or balance, joy or happiness. It is a perfect lifestyle. Yoga means physical reconditioning, mind controlling, and emotion culturing and spiritually evolving.

Yoga as Therapy

Science of yoga has not originated as a means of therapy for various types of diseases.

Yoga scriptures do not mention specific therapeutic prescription for gynaecological disorders

Discussion about diseases and remedies occur in yogic scripts only as passing reference. Even then yoga is being used mostly for controlling and managing diseases because Yoga plays a major role in reconditioning, training, stabilizing, silencing, and ultimately sublimating the mind.

An approach of dehasadhana (physical practices of asanas, shuddhikriyas), pranasadhana (pranayama), bhavasadhana (culturing of emotions), divyasadhana (divine practices – pratyahara, dharana, dhyana), diet, congenial atmosphere, and counselling can help in tearting gynaecological disorders, help to accept diseases in a better way.

Specific Consideration

A variety of gynaecological disorders can be benefited by regular yogic practices. The question is whether different sets of practices should be prescribed for different disorders.

Once we understand yoga as a lifestyle, and a healthy and methodized effort towards self-perfection a few simplified yogic practices can be prescribed as common for all problems.

Consistency and dedication in practices is mandatory. Inverted postures have to be avoided during menses.



Lifestyle modification

It is important in management of PCOS as weight loss and exercise show a striking improvement in ovulation function and features of hyperandrogenism.

In a study (yet unpublished) done at GMM, Thane by the authors on 32 PCOS women of reproductive age group there was improvement in menstrual rhythm after consistent yogic practices. It was observed that regular yogic practices help in improving insulin resistance and also help in increasing serum levels of sex hormone binding globulins. This helps in reducing levels of free serum testosterone. Serum LH levels decrease, FSH levels increase, bringing spontaneous ovulation.

Science of yoga has never originated for the purpose of yoga therapy. At the same time, we must remember that the diseases related to wrong life style never existed in ancient times.

Though disease wise description of yoga therapy doesn't exist in ancient yogic literature, evidence exists to show that yogic science was used in the past to treat or prevent diseases.

With an increasing incidence of non – communicable diseases, we have no other choice but to choose a non – pharmacological, non-invasive and safe treatment modality that is free of side effects. And that is 'yoga'.

Conclusion

“It is the combination of ‘sahaja yoga (simplified yogic practices), sattya yoga (consistency in yogic practices) and samaja yoga (socially relevant yoga) which is the need and culture of tomorrow” saya Swami Satyakamananda allias yogachharya Vyavahare.

List of References (Books)

1. Recent developments in polycystic ovary syndrome – Aarti Sharma, Mohmd Yousef Ridnna Burill William atiomo – progress in

obstetrics and gynecology-edited by John Stud vol. 16

2. Postgraduate reproductive endocrinology – R. Rajan – 4th edition – Jaypee publication.
3. Polycystic ovary syndrome: Agnide to clinical management – Adam Balen, Gerard S.Conway, Taylor and Francis group – special edition 2007.
4. Polycystic ovary syndrome: Edited by Cabor T.Kovas – edition 2001.
5. Yoga for health healing and harmony h3 Yoga – Yogacharya Vyavahare and Dr. Ulka Natu.

List of References (Scientific Studies)

1. An epidemiological survey of symptoms of menstrual loss in the community, Mark Shapley, MA, FRCGP, General Practitioner and Research Fellow, Kelvin Jordan, PhD Research Fellow in Biostatistics, and Peter R Croft, MD, MRCGP, Professor of Epidemiology. Br. J Gen Pract 2004 May 1:54(502): 359-363, PMID 126617 Copyright British Journal of General practices, 2004.
2. Auditory Evoked Responses During Different Phases of Menstrual Cycle, Shah Ydav*, O. P. Tandon and Neelam Vaney, Department of Physiology, University College of Medical Science and GTB Hospitals, Delhi-110095.
3. Dysfunctional uterine bleeding in ovulatory women, Postgrad med. 1985 jan; 77(1):235-7, 240-3, 246- Links, Strickler RC.
4. Epel ES, et al, Stress and body shape: stress-induced cortisol secretion is consistently greater among women with central fat, Psychosom Med 2000 Sep-Oct;62(5):623-32
5. Epel ES, et al, Stress may add bite to



- appetite in women; a laboratory study of stress-induced cortisol and eating behaviour, *Psychoneuroendocrinology* 2001 Jan;26(1):37-49
6. Effect of '61 points relaxation technique' on stress parameters in premenstrual syndrome. Dvivedi J, Dvivedi S, Mahajan KK, Mittal S, Singhal A. *Indian J Physiol Pharmacol.* 2008 Jan-Mar.52(1)-69-76.
 7. Exercise and self-esteem in menopausal women: a randomized controlled trial involving walking and yoga. Elavsky S, McAuley E. *Am J Health promot.* 2007(a) Nov-Dec 22(2): 83-92.
 8. Huber-Buchholz Mm, Carey DG, Norman RJ. Restoration of reproductive potential by lifestyle modification in obese polycystic ovary syndrome; role of insulin sensitivity and luteinizing hormone. *J Clin Endocrinol metab* 1999; 84: 1470-1474.
 9. Norman RJ, Davies MJ, Lord J, Moran U. the role of lifestyle modification in polycystic ovary syndrome. *Trends Endocrinol Metab* 2002;13:251-257.
 10. Psychological problems and uterine bleeding, Barillieres Clin Obstet Gynaecol, 1989 Jun;3(2):375-89, Links, Lles S, Gath D.
 11. Rotterdam ESHRE/ASRM- Sponsored PCOS Consensus Workshop Group. Revised 2003 consensus on diagnostic criteria and long term health risks related to polycystic ovary syndrome. *Fertile Steril* 2003; 81:19-25.
 12. Structure and function of endometrial blood vessels, Peter A. W. Rogers. *Human Reproduction Update* 1996, vol.2, 1pp 57-625 European Society for Human Reproduction and Embryology.
 13. Systematic review of the efficacy of meditation techniques as treatments for medical illness. Arias A.J, Steinberg K, Banga A, Trestman RL. *J Altern Complement Med.* 2006 Oct; 12(8): 817-32.
 14. Treating the climacteric symptoms in Indian Women with an integrated approach to yoga therapy: a randomized control study. *Menopause.* Chattha R, Raghuram N, Venkatram P, Hongasandra NR. 2008 Sep-Oct;15(5):862-70.
 15. Yoga Asana session increase brain GABA levels: a pilot study....*J. Altern Complement Med* 2007; 13:419-426 Streeter CC, Jensen JE, Permuter RM et al.
 16. Yoga: an adjunct to infertility treatment, Khalsa HK. *Fertil Steril.* 2003 Oct, 80 Suppl 4:46-51.
 17. Zawadzki JK, Dunaif A. Diagnostic criteria for polycystic ovary syndrome; towards a rational approach. In; Dunaif A, Givens JR, Haseltine FP, Merriman GR. (eds) *Polycystic Ovary Syndrome.* Oxford; Blackwell, 1992;377-384.



Beneficial Effects of a Yoga Based life Style in Improvement of Risk Factors for Coronary Artery Disease

**Shantaram Shetty*

Introduction

Increasing understanding of various risk factors as causative agents of coronary artery disease (CAD) has generated a lot of interest in prevention and regression of arterial disease. Many researchers have proved that proper lifestyle has great potential in prevention & treatment of cardiovascular diseases. Evaluation of improvement of risk factors like faulty diet, lipid profile, body mass index (BMI), waist to hip ratio (WHR), stress, diabetes (D.M.) and blood pressure (B.P.) in the ischemic heart disease patients was done in a study namely "CARING HEART PROJECT". This prospective controlled, open trial included angiographically proven coronary artery disease patients (71 patients in study group and 42 patients in control group). All the patients had multiple risk factors for CAD. They were followed for a period of one year. Patients were assessed at base line and at the end of one year after following yogic lifestyle and yogic sattvik diet. The primary efficacy variables were percent change from baseline at one year in total calories in diet, fat content in diet, complex carbohydrate content in diet, BMI, WHR, lipid profile, stress levels, blood glucose and blood pressure.

Studies on Risk Factors for CAD

Syndrome X, faulty diet, wrong habits, sedentary and stressful lifestyle are some of the etiological factors responsible for CAD. Risk factor modification is the latest strategy being implemented for preventing CAD. Yoga based lifestyle modifications along with yoga diet have earlier shown to have been beneficial in CAD in

small number of patients.

Ornish et.al (2000-2003) have conducted extensive studies on the effect of lifestyle changes based on yoga philosophy and yogic diet on reversal of CAD.

Lifestyle Heart Trial (LHT) and Multimember Lifestyle Demonstration Project (MLDP) were 2 classic clinical trials developed to assess improvement in medical risk factors and quality of life in subjects with coronary artery disease, after risk factors modifications. The MLDP was carried out to assess generalizability of lifestyle change program to different geographic regions of United States & to women with heart disease. These trials included comprehensive lifestyle changes (diet, exercise, stress management and social support) for patients of CAD and the effects of these changes on cardiovascular risk factors & events were assessed.

Manchanda et.al, 2000 studied the effect of a yoga lifestyle and yoga diet on coronary artery disease. The study consisted of 42 men with CAD who were randomly assigned to a yoga intervention group or a control group and were followed for one year. The yoga lifestyle program included a strict control of risk factors, weight reduction, increased physical activity, dietary modifications & stress management. This resulted in favorable changes in lipid profile and in CAD in subject group in comparison to control group.

The Yoga Institute Study – Caring Heart Project

The YOGA INSTITUTE, Santacruz, Mumbai, India has been working on similar lines for a

*Research Coordination, International Board of Yoga, Mumbai



number of years. Many cardiac patients have benefited from this 90 year old institute. Seeing the beneficial effect of yoga based lifestyle and yogic diet, the study called CARING HEART PROJECT was initiated as mentioned earlier. A yoga based life style primarily deals with balanced state of mind and healthy body. This is achieved with the help of yoga philosophy, yoga techniques and yogic, sattvik diet. The philosophy of better living through yoga is based on principles from Patanjalis yoga sutra and Sankhya philosophy. The yogic sattvik diet could be described as a lacto vegan diet high fiber, low fat, moderate protein and high complex carbohydrate diet including 10% of the total calories as fats with restriction of all non-vegetarian, alcohol, and processed foods.

This was associated with certain useful yoga techniques like yoga asana and meditative techniques which helped in better compliance of the diet. Some of the prominent asanas used were sukhasana, vakrasana, yastikasana, savasana and pranayama no II.

This diet has based on nutritionally balanced diet as proposed by the National Institute of Nutrition, Hyderabad. The dietary changes were modifications of the patients existing diet thus ensuring good patient compliance. The control group was managed by conventional methods i.e. risk factor control and American Heart Association Step 1 diet.

Material and Method

The Study Group - This prospective controlled, open trial included angiographically proven coronary artery disease patients (71 patients in study group and 42 patients in control group) and with multiple risk factors. Both the groups were comparable to start with in terms of age, anthropometric parameters. The study was approved by the ethics committee of yoga institute. Written informed consent was obtained from all the participants prior to initiating any of

the study procedures. After initial screening tests like ECG, X-ray, and other biochemical tests, the patients with severe disease, or any other complications were excluded. All were asked to continue drugs as per their physician's advice except statins. No other concurrent therapy for control of any of the risk factors was permitted.

Baseline Assessment - All the participants were subjected to baseline assessment like myocardial perfusion imaging (MPI) test, angiography, biochemical test, anthropometric measurements, psychological assessment and clinical evaluation. The study group was closely monitored and trained at The Yoga Institute and control group was followed as per conventional norms of treatment at an outside venue.

Guidelines to participants - All the participants from the study group were told to undergo yoga training in two days yoga heart camp. In this camp patients were given basic knowledge of CAD, yoga based better living and yoga techniques. Cardiologist, dieticians, and yoga experts gave talk on different subjects. Regular follow up and monitoring was done by volunteers. The participants from the control group were followed at different venue by doctors as per conventional method of treatment without yoga.

Questionnaire - A comprehensive pre-tested questionnaire was developed to collect information about dietary patterns and frequency of consumption of various foods. Nutritional status was assessed using dietary parameters such as 24-hour food recall, food frequency and consumption. This was further compared with measurements of weight and body mass index.

Dietary Instructions - A record of biochemical parameters was analyzed and related to anthropometrical measurements and dietary intake. For reduction in fat content complete stoppage of non vegetarian foods and overall

reduction of fried foods was advised. Patients were also encouraged to take high carbohydrate (mostly complex carbohydrate providing 70% of calories). They were advised to take high soluble fiber diets consisting of vegetables and fruits, sprouted pulses, soybeans and fenugreek seeds. In addition, the diet advised was rich in antioxidants (carrots for beta-carotene, fruits for vitamin C, nuts like almonds and walnuts for vitamin E and flavenoids from colored fruits and vegetables and omega 3 fatty acids from flaxseeds).

Change from refined sunflower oil to unrefined groundnut oil or olive oil was advised. Artificially flavored, packed foods, Devitaminized or sprayed food, frozen foods, colas, fast foods, chocolates with high sugar and cream content, puddings and pies, full fat ice creams, biscuits made with refined flour were excluded. Also modification in the method of preparation of meals as using more pressure cooking, broiling and baking instead of deep frying.

Periodic Assessments - Patients from both the groups were periodically assessed at 1, 3, 4, 6, and 12 month's period and simultaneously counseled individually and with their spouses. Changes in the lifestyle and diet was gradual. These were supported by regular hands on training on yoga techniques and illustrative recipes and menus with known nutritional

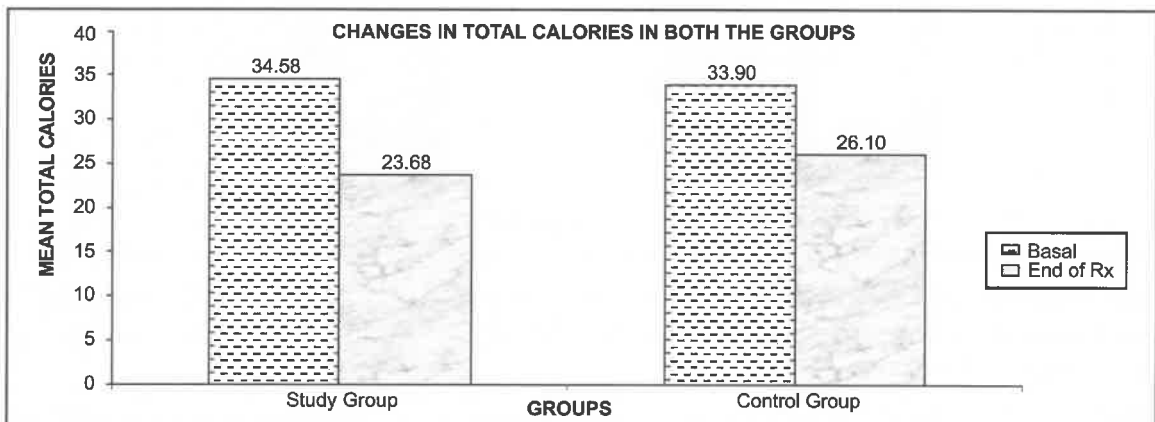
values. Group counseling for stress and sattvik diet was done. Patients maintained a daily diary which included details of daily routine, menu, quantity of food consumed, timing of the meal, and experienced emotions. Support therapy was used as an integral part of the program. Family and spouses were met at regular intervals and the concept of family as a unit was explained.

Tests and Analysis - All the tests done during baseline assessment were repeated at the end of study.

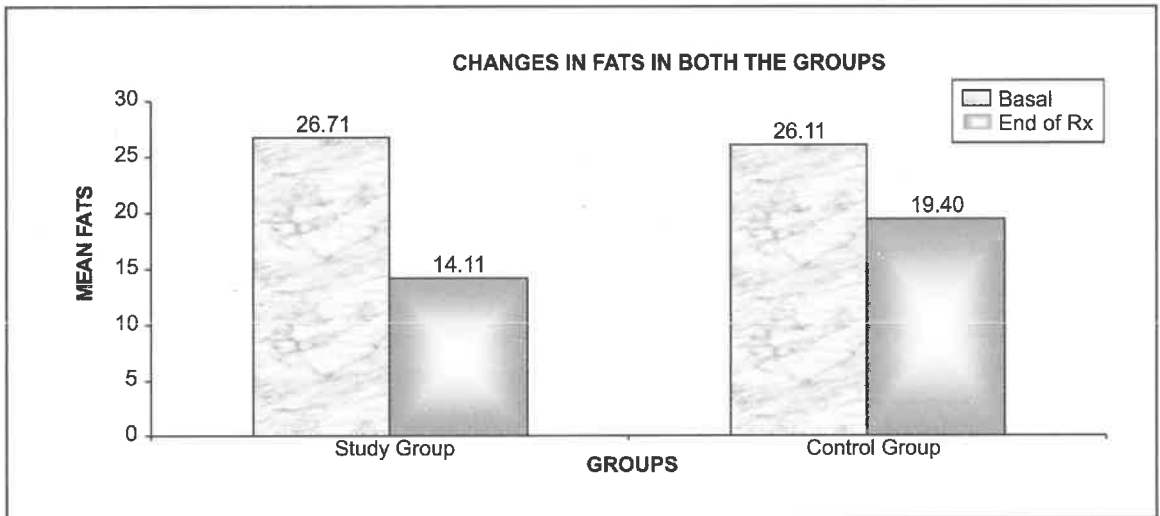
For statistical analysis group variables on a continuous scale were expressed as mean along with standard deviation and categorical data frequency with percentage. All statistical tests were two tailed and acceptance level of statistical significance in overall analysis was P-0.005. Comparative statistical analysis were carried out using ANNOVA i.e. analysis of variance in data measured on continuous scale and using suitable non- parameters ANOVA in data measured on ranking scale.

Observations

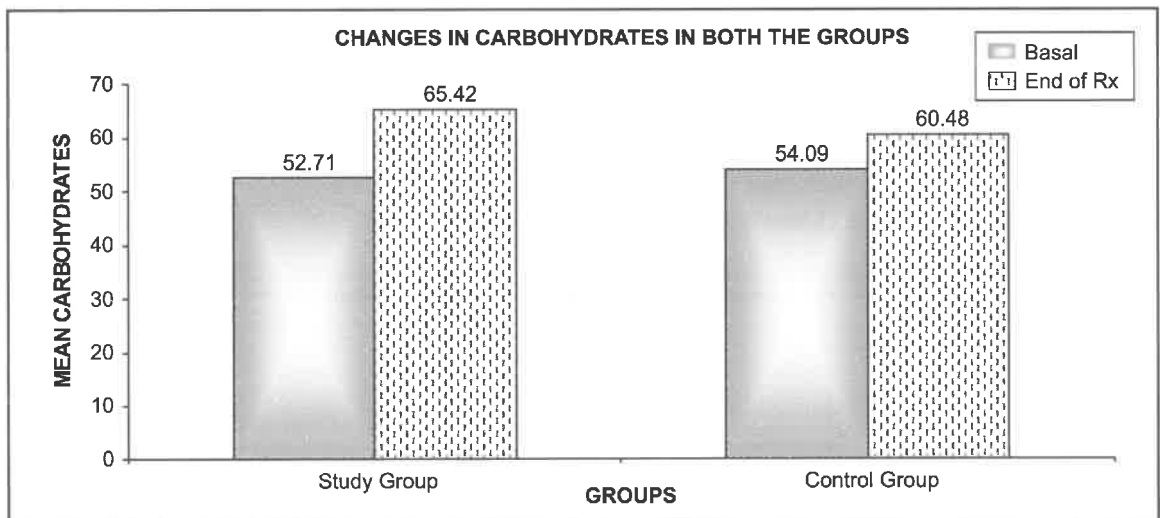
Calories - The average total calories were 33.90 among Control group and 34.58 in Study Group at basal which was same and difference was not statistically significant. At the end of treatment the total calories significantly reduced by 31.5% in study group as compared to 23% in the controls.



Fats- In the beginning the average fats were 26.11 and 26.71 respectively in control and study group which was same and difference was not statistically significant. At the end the total fat content also markedly reduced by 47.2% as compared to 25.7% in the control group.



Carbohydrates - The mean carbohydrates were 54.09 among Control group and 52.71 in study group at basal which was same and difference was not statistically significant. At the end the complex carbohydrate content increased in the total diet by 24.1% as compared to only 11.8% in the controls. Though there was increase in both the groups, if you compare the increase was more in study group than control.



Body Mass Index - All overweight patients achieved near normal ideal body weights thus resulting in near normal BMI. The body mass index showed a fall of 4.2% in study group which was more as compared to 2.9% in control.

Duration in Months	(Mean ± SD)	
	Control Group	Study Group
Basal	26.65 ± 2.80	25.99 ± 3.53
End of Rx	25.86 ± 2.85	24.89 ± 3.02
Mean Change	-0.79 ± 1.04	-1.1 ± 1.78
% Change	-2.9	-4.2

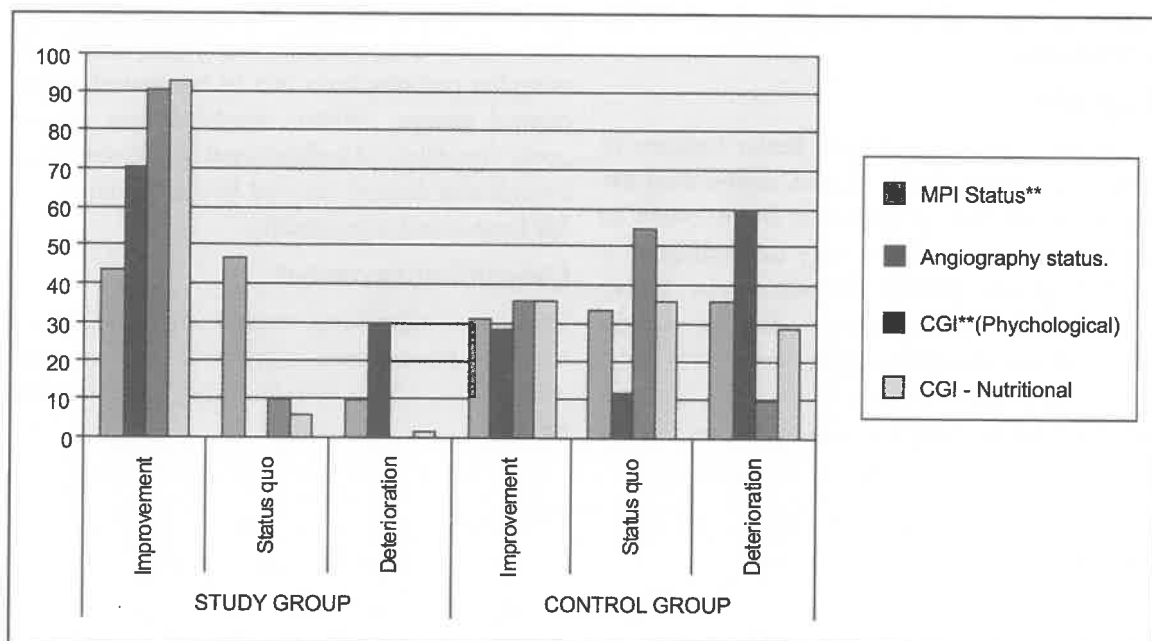
Nutritional Values- Average nutrition values (processed food) were 3.48 among Control group and 3.37 in Study Group at basal which was same and difference was not statistically significant. After treatment, at the end of 1.5 month only, mean levels were significantly increase in study group but in control group change were observed at the end of 3.5 month. At the end of 1 year, increase was 95.5% in study

which were also significant as compared to 52.0% in control group. The average nutrition levels were 6.71 and 6.89 respectively in control and study group at basal which was same and difference was not statistically significant. After treatment, at the end 3.5 month only in study group mean nutrition level showed significant increase as compared to control at the end of 8.5 month. At the end of 1 year, increase was 23.9% in study group as compared to 23.2% among control.

Cholesterol - There was significant reduction in cholesterol level of 184.8+ from 247.2+ in the study group as compared to controls from 223.5+ at the beginning to 213.8+ 39.4.

Category	Study Group	Control Group
Before	247.2 ± 39.71	223.5 ± 36.7
After	184.8 ± 43.9	213.8 ± 39.4

Blood Sugar - The mean fasting blood sugar decreased from 196 mg% to 156 mgm% in subject group as compared to 190mgms% to 174mgms% in control group also post prandial blood sugar value has decreased from 260mgms% to 186mgms% in subject group as compared to 290mgms% to 240mgms% in control group.





Blood Pressure - Mean B.P. in subject group has changed from 166/94 to 136/86 in comparison to control group which has shown the change 160/92 to 156/90. There was significant change in the anxiety level, personality traits and quality of life, after the program in the study group compared to the control group.

Comparison of Overall Effect of Intervention Between Study and Control Graph of the Comparison of Overall Effect of Intervention

Parameters	Study Group			Control Group		
	Improvement	Status quo	Deterioration	Improvement	Status quo	Deterioration
MPI Status**	43.7	46.5	9.8	31.0	33.3	*35.7
Angiography status as per No. of patients.	70.4	0	29.6	28.0	12.0	60.0
CGI** (Psychological)	*90.2	9.8	-	35.7	54.8	9.5
CGI- Nutritional	*93.0	5.6	1.4	35.7	35.7	28.6

By Chi-Square test *P<0.05 Significant

**MPI-Myocardial Perfusion Imaging **CGI Clinical Global Impression.

Dietary modifications had a positive effect and were concordant with improvement in psychological parameters, myocardial perfusion status and coronary artery lesions as proved by different tests

Discussion

The diabetic patients showed better balance in blood glucose levels, as shown above with the help of foods low in glycemic index (such as fenugreek seeds and sprouts) as compared to control group. Blood pressure was better controlled as shown above due to weight reduction and cessation of processed foods and a diet high in fiber and potassium from fruits as compared to the control group. At the end of the

study period all overweight patients were near normal to their ideal body weights and there was significant reduction of serum cholesterol, LDL cholesterol and triglyceride, because of the high fiber, low fat, moderate protein and high complex carbohydrate diet as compared to the control groups. Dietary modifications as per yogic way showed a significant improvement in overall risk factors, proved by improvement in MPI status and angiography.

Overall Improvement

There was significant overall improvement in various parameters, including on anxiety parameters, which is summarized in the chart below:

Parameters	Study Group				Control Group			
	Before Treatment	End of Rx	Mean Change	P Value	Before Treatment	End of Rx	Mean Change	P Value
No. of Pts	71				42			
Weight	65.74 ± 9.59	62.39 ± 8.49	- 3.35 ± 1.87	166.0 ± 6.28	71.78 ± 10.43	69.83 ± 10.54	- 1.95 ± 2.07	< 0.036
BMI	25.99 ± 3.53	24.89 ± 3.02	- 1.1 ± 1.78	67.9 ± 11.05	26.65 ± 2.80	25.86 ± 2.85	- 0.79 ± 1.04	< 0.036
Total Calories	34.58 ± 4.95	23.68 ± 4.28	- 10.90 ± 4.73	67.9 ± 11.05	33.90 ± 4.40	26.10 ± 4.54	- 7.80 ± 3.26	< 0.036
Fats	26.71 ± 5.84	14.11 ± 5.81	- 12.6 ± 5.09	23 ()	26.11 ± 4.03	19.40 ± 5.03	- 6.71 ± 3.26	< 0.0016
Carbohydrates	52.71 ± 7.84	65.42 ± 8.43	12.71 ± 5.59	02 ()	54.09 ± 4.01	60.48 ± 5.81	6.39 ± 3.88	< 0.0016
Nutritional Status Veg	6.89 ± 4.05	8.54 ± 2.90	1.65 ± 1.04		6.71 ± 3.53	8.27 ± 2.52	1.56 ± 1.01	
Processed Food	3.37 ± 1.12	6.59 ± 1.90	3.22 ± 1.35		3.48 ± 1.09	5.29 ± 1.67	1.81 ± 0.84	
Overt Anxiety	17.50 ± 4.28	16.29 ± 5.01	- 1.31 ± 1.46		17.4 ± 6.01	18.58 ± 3.81	1.18 ± 1.08	
Covert Anxiety	17.10 ± 4.01	17.75 ± .26	0.65 ± 0.99		17.13 ± 3.26	18.06 ± 3.91	0.9 ± 1.11	

Further Follow up

The study was further taken forward by the students of the Yoga Institute and a synopsis of the latest study is given below:

- 55% of patients had maintained a BMI of between 21 and 24 indicating normal weight. 35% were overweight and only 10% were obese.
- 90% of the group felt that a Yogic diet has helped them out of which 77% stated that a Yogic diet has helped them significantly. This clearly establishes the efficacy of a yogic diet in controlling the risk factors.
- Practicing Yoga and walking regularly helped 85% of patients in overall health management and well being. This establishes that Yoga and walks are very helpful.
- Other parameters studied were Quality of life, physical and social well being, etc. It has been clearly established that due to Yoga there have been great improvements in quality of life, well being, social life and cognitive processes.

**BIBLIOGRAPHY**

1. Damodaran, A.: Malathi, A.: Ptil, N.: Shah, N. "Suryavanshi and Marathe, S., (2002)" Therapeutic Potential of Yoga Practises in Modifying Cardiovascular Risk Profile in Middle aged & Women", *Journal of Association of Physicians of India*, 50 : 633-640
2. Gould, K.L. : Ornish, D.: Kirkeeide , R and Brown, S., (1992). "Improved Stenosis Geometry by Quantitative Coronary Arteriography After Vigorous Risk Factor Modification", *The American Journal Of Cardiology*, 69:845-853
3. Gould, K.L.: Ornish, D.: Schewitz, L.: Brown, S. and Sdens, P.R., (1995) "Changes in Myocardial Perfusion Abnormalities by Positron Emission Tomography After Long-Term, Intense Risk Factor Modification", *Journal of American Medical Association*, 274(11):894-901.
4. Koertge, J.: Weidner, G.: Eller, M.E.: Scherwita, L.: Marlin, R.: Lipsentnal, L.: Finkel, R.: Saunders, D.E.: Scheer, J. M and Collins, R.E., (2003) "Improvement in medical Risk Factors and Quality of Life in Women and Men with Coronary Artery Disease in the Multicenter Lifestyle Demonstration Project", *The American Journal of Cardiology*, 91:1316-1322
5. Mahajan, A.S.:Reddy, K.S. and Sachdeve, U.,(1999) "Lipid Profile of Coronary Risk Subjects Following Yogic Lifestyle Intervention," *Indian Heart Journal*,51:37-40.
6. Manchanda, S.C. and Marang, R.,(1996) "Yoga and Coronary Artery Disease", *Indian Heart Journal*, 50:227-228.
7. Ornish, D.: Brown, S.E.: Scherwitz, L.W.: Billings, J.H.: Armstrong, W.T.: Ports, T.A.: Kirkeeide, R.L.: Brand, R.J. and Gould, K.L., (1990) "Can Lifestyle Changes reverse coronary heart disease?", *Lancet*, 336:129-33.
8. Yogendra, H.J., (ed.) (2002) *Yogic life for control of Diabetes (A practical guide to a fuller life)*,.
9. Yogendra, J., (ed.) (2000) *Cyclopaedia YOGA*, Mumbai : Yogendra Publications.
10. Smt.Hansaji Jayadeva Yogendra : *Recipes for happiness-Yogic life style diet*. IBY, Yoga Inst. Santacruz, Mumbai. Yogendra Publication.



Yogic Interventions for Wellness and Wellbeing

*Dr. M. V. Bhole
M.B., B.S.; M.D.

INTRODUCTION

Traditional oriental sciences have classified human sufferings under three headings as follows:

1. *Adhi-daivika*
2. *Adhi-bhautika*
3. *Adhyatmika*.

In another classification, human sufferings have been classified under headings as under:

1. *Agantukavyadhi* where the cause of suffering is external, and
2. *Nijavyadhi* where the cause of suffering is in the self or the individual.

Ayurveda has recognized the importance of yoga to maintain and promote health, balance and happiness in "*Svastha-Vrutta*" and recommended yoga practices for treatment of certain clinical conditions.

Modern medical (Allopathy) practitioners have started to recognize the role and importance of yoga and yoga practices in the management of various types of "Stress or Tension Disorders" and "Psycho-somatic Diseases". Medical institutions have started working on research projects to study and understand the efficacy, logic and modus operandi yoga in specific clinical conditions with the help of advanced laboratory techniques. Neuro-scientists have started experimental work to understand the nature of "Consciousness and Awareness" in

collaboration with Dalai Lama.

Traditional Yoga texts have mentioned yoga as the best help for "*Adhyatmika*" type of human sufferings and yoga being the important remedy for "*Bhava-tapas*" i.e. sufferings because of becoming someone. In this sense, Stress disorders and Psycho-somatic diseases can be looked upon as bhava-tapas.

UNDERSTANDING "WELLNESS" IN TRADITIONAL INDIAN LITERATURE

Upanishads and other ancient Indian literature have referred to the following concepts and doctrines for guiding and leading one's life and living:

Broad objectives of life:

1. *Dharma*,
2. *Artha*,
3. *Kama*
4. *Moksha*

Stages or Phases of life:

1. *Brahmacharya*,
2. *Gruhastha*,
3. *Vanaprastha*
4. *Sanyasa*

Various Vedic and Upanishadic Mantras and recitations and compositions in other languages give important messages to guide our values, attitudes and relationships in life, such as:

* Retired Jt. Director of Research, Kaivalyadhama Yoga Institute, Lonavala (Pune) and Consultant in Yoga Therapy, Lokmanya Medical Research Centre, Chinchwad (Pune), Maharashtra.



- *Om bhur, bhuvah, svah; Om tat saviturvarenyam, bhargodevasyahimahi,*
.....
- *Bhadramkarnebhishrunuyamdevah, bhadrampasshemakshabhiryajatrah,*
.....
- *Asato ma sad gamaya, tamaso ma jyotirgamaya,*
.....
- *Sahanavavatu, sahanaubhunaktu,*
.....

“*Svastha*” and “*Asvastha*” are terms related with the subjectively experienced states of consciousness and awareness. They reflect different aspects of wellness and well-being viz. physical, physiological, emotional, intellectual, spiritual, psycho-social, political, financial, relational etc.

Developments in technological and medical sciences have contributed to time and Life saving devices and they seem to have improved the overall “Quality of Life”. Yet, human sufferings still continue. Their nature might have changed to certain extent.

Human sufferings are on the rise in spite of the qualitative and quantitative improvements in the facilities for Games, Sports, Exercises, Recreations, Rest and Relaxation, Enjoyment, etc.

On this background, the curiosity and interest to study, understand and practice Yoga of Indian origin is increasing all over the world. It becomes the duty and responsibility of those who are the custodians of traditional yoga (scriptural yoga and yoga taught through living “*gurusishyaparampara*”) and those who are knowing various aspects yoga (theoretical, practical and experiential) to present yoga in proper way to those “Very Fresh Individuals” who want to know, learn and practice it for their personal

wellbeing. They will become the torch-bearers of good yoga in future. Because of bad yoga or wrong yoga or futile yoga, we start to suffer.

In a very broad sense, whatever we do with consciousness and awareness can be looked upon as yoga, because the consciousness gets connected/joined/related/identified with something. Broadly speaking, there is reference to three major types of yoga:

1. Material or Worldly Yoga where we essentially work through “*Indriyas*” (*jagat*),
2. Spiritual Yoga where “*manas*”, usually understood as mind is active (*jiva*), and
3. Transcendental Yoga where we go beyond the mind and the senses (*Ishwara*).

All the three types of yogas are useful for our wellness and wellbeing in daily life and living.

Vedas, Upanishads, Patanjala Yoga Sutras, Bhagvad Gita, Hatha Yoga, Mantra Yoga, Bhakti Yoga, Tantra Yoga as well as other traditional texts of Buddhism, Jainism, Shikh and other sampradayas give different guidelines useful for different types of individuals. Even though the approaches seem to be different and sometimes contradictory to each other in these traditions, the ultimate aim of all of them is the same, i.e. to reach the non-differentiated, non-identified pure nature of consciousness. There are different intermittent aims and objectives in each and every school of yoga to suit the needs of different individuals having different psycho-social and environmental backgrounds, upbringing in life, states of consciousness (*mudha-kshipta-vikshipta-ekagra-niruddha*), phases/stages in life (*yuva-vruddha-ativruddha-vyadhita-jarjara-maranomukha*) etc.

Practicing any school of yoga under proper guidance and with proper aims and objectives is bound to give rise to a feeling of Wellness and Wellbeing. It may not be a disease free state.



Laboratory investigations may reveal disturbances in body functions and mechanisms.

Many traditional yoga practices are seen to be getting highly modified to suit the needs and demands of the present day society. On analysis, we find that they are helping and leading their practitioners to the concept of “self” (*atma*) and thus help them to go away from the “non-self” (*anatma*) which is the traditional yogic concept and approach (*atma-anatmaviveka*). Slowly, slowly the practitioner may develop interest and curiosity to understand “adhyatma yoga” and develop ability to differentiate it from “material or worldly or sensory-motor (*indriya vishayas*) yoga”. However, very often, people practice these types of yoga for their worldly or material or sensory-motor interests and requirements. Thus, they are unable to travel towards “transcendental yoga” (*paramatma*).

The Living Indian Tradition recommends the practice of Spiritual and Transcendental Yoga two to three times a day after taking bath (*trikalasnana-sandhya* or *sandhya-vandana*) before starting and after finishing the daily routine related with Material or Worldly yoga. This consists of practicing ten to twenty rounds of nadi-shuddhi pranayama in a suitable asana. If practiced with proper understanding, this will help the practitioner to go to the “self” (*atma*) and remain with it (*atma-stithi* or *svarupa*) for some time. After pranayama, one is expected to

recite the of Mantra (Gayatri or any other suitable mantra) given by the spiritual preceptor for 108 to 1008 times. This is expected to help the practitioner to experience and become aware of the transcendental state of consciousness (*paramatmabhava*).

Most of the yoga schools introduce their practitioners to the recitation of “AUM” or “OM” and where one is supposed to get guided by sound vibrations without any name (*nama*). This is supplemented by witnessing light without form (*rupa*). Again, if properly practiced, the practitioner will become aware of the state of consciousness where there are no forms or images with any name (*nama-rupatita*). This will help to understand the concept of “Ishwara” as mentioned in Patanjala Yoga Sutras.

Along with these simple practices, tradition advocates that one should remember the obligations of parents, teachers and seers in our life and offer our oblations (*Pitru-tarpana*, *Rishi-tarpana*, *Devata-tarpana*) to them every day as well as on certain occasions.

Such a Life Style with proper Value System and Attitudes in Life is expected to give rise to a sense of Wellness and Wellbeing. Otherwise, the tensions and stresses are bound to continue in spite of improved life situation, material prosperity and technological developments.



Neither Complementary Nor Alternative, Just Medicine

**Ramesh Bijlani*

Following the rapid progress in physics and chemistry during the European renaissance came a period of spectacular achievements in medical sciences. It was during the hundred-year period from 1850-1950 that the 'microbe hunters' demonstrated, one by one, the organisms responsible for the most dreaded communicable diseases, as also discovered the vaccines or antibiotics which could control them. During the very same period were discovered all the major micronutrients, and in them were found the specific keys to cure scurvy, beriberi and pellagra. Finally, the same period saw the discovery of insulin and other hormones which could provide effective and rational treatment for some enigmatic diseases. The effect of these achievements was so overwhelming that it cast a spell on doctors and patients alike. It seemed that the body could be treated like a mathematical proposition. Diseases were the result of entry into the body of something undesirable, or absence in the body of something desirable. All what medical science had to do was to find in each case the agent responsible, and provide either an appropriate antidote or the right replacement. The complacency, however, did not last long.

Emergence of new killers

The steep decline in the prevalence of infectious diseases in developed countries was paralleled by increased incidence of non-communicable diseases such as coronary heart disease, hypertension, diabetes mellitus and cancer. The increase was greater than could be accounted for by better diagnostic facilities and longer life

span. This attracted the attention of some perceptive doctors towards isolated lifestyle factors such as low fibre intake, high fat intake, reduced physical activity, smoking and mental stress. But surprisingly, hardly any studies were conducted till recently on lifestyle as a whole.

Further, advances in medical technology such as bypass surgery, hemodialysis and total parenteral nutrition, while providing a ray of hope to many, pushed the cost of medical care to exorbitant levels. This sharpened the contrast between the high cost of treatment using modern medical techniques and the low cost of simple lifestyle measures. Further, the lifestyle measures were, in some respects, better than the hi-tech methods of treatment. Finally, the lifestyle measures can supplement or complement other modes of treatment: they are by no means mutually exclusive.

Some recent developments and discoveries have further shaken the complacency generated by the triumphs of modern medicine. Bacteria are quite quick in acquiring resistance to antibiotics, necessitating the development of newer antibiotics. The known nutrients by no means exhaust the list of biologically active and useful chemicals obtained from food. A few thousand other chemicals found in plant foods, collectively called phytochemicals, may be nutritionally important because of their antioxidant, immunoenhancing, anti-infective and antitumour activity. Human breast milk has a few hundred chemicals which distinguish it from animal milk. Thus it seems that we have to go back to nature. Antibiotics are no substitute

*Sri Aurobindo Ashram – delhi branch, new delhi 110 016, rambij@gmail.com



for better host resistance. Fibre supplements or multivitamin pills cannot compensate for the drawbacks of a refined diet rich in animal foods. No amount of chemical jugglery can make animal milk mimic human milk.

Modern medicine has kept pace with the new killers

While on one hand, we have realized the weaknesses of modern medicine, two positive developments have given it a new orientation. One of these is the realization that the epidemic of non-communicable diseases is not only attributable to poor lifestyle, improving the lifestyle can also help patients recover from these diseases using the healing mechanisms residing in the body itself. The lead in revealing that reversal of disease is possible was provided by Dean Ornish who reported angiographically demonstrable reversal of coronary artery disease brought about by lifestyle modification based on the principles of yoga (Ornish et al 1990). The *second* positive development is the emergence of the discipline of psychoneuroimmunology (Kiecolt-Glaser et al 2002), which has provided the mind-body relationship a strong scientific basis. These two developments are not entirely unrelated because inculcating mental peace is part of a good lifestyle, and the endocrine and immunological changes induced by mental relaxation promote self-healing.

Paradigm shift in modern medicine

The recent developments in modern medicine have a profound significance in that they have challenged the mechanistic model of life itself (Bijlani 2003). The model, based on Rene Descartes' strict separation of body and mind, was, till recently, the foundation of modern medicine. But with increasing application of the mind-body relationship in clinical medicine, the mechanistic model is no longer valid. That is why Larry Dossey considers modern medicine to have left behind around 1950 the era of

physical medicine and entered the era of mind-body medicine (Dossey 1993).

Besides Dean Ornish, who has applied the mind-body relationship to the prevention and management of cardiovascular disease, Bernie Siegel has used it in cancer (Siegel 1990), and Deepak Chopra in a wide variety of clinical situations (Chopra 1989). An interesting corollary of all this has been a renewed interest in yoga. Yoga is one of the best lifestyles ever devised, and incorporates an infallible philosophical basis for equanimity which is independent of external circumstances. Today there are several programs of lifestyle intervention based on the principles of yoga being run all over the world for promotion of health, and prevention and treatment of disease. One such initiative is the Integral Health Clinic of the All India Institute of Medical Sciences.

Integral Health Clinic

All India Institute of Medical Sciences started an Integral Health Clinic in the Department of Physiology in February 2000. The clinic runs lifestyle courses based on the principles of yoga. Each 9-day course is spread over two weeks. The language of the courses is either Hindi or English, depending on the choice of the patients. A typical day in the course starts with a set of simple asanas and pranayama for about one hour. The next activity, after a short break, is a lecture or a video film. Besides providing elementary facts about nutrition and the specific diseases which the patients have, these sessions introduce the patients to the principles of yoga and yogic techniques. One full session is devoted to principles and practice of meditation, and one to stress management. There is ample time for questions and unstructured discussion. The programme for the day ends with relaxation through either *shavasana* or meditation. On one of the days the patient has a one-to-one session with a doctor. This session is tailor-made



according to the requirements of the individual patient. The atmosphere in the Integral Health Clinic is homely and peaceful. The patient has an opportunity to browse through a variety of books and magazines, listen to soothing music, or some humorous poetry during short breaks between sessions. The patients can also borrow books for a few days. Some reading material is also provided to each patient as a part of the course (Bijlani 2004).

In order to examine whether our courses are actually doing some good to patients in terms of some objective criteria, we collected blood samples on the first and last day of the course for fasting blood sugar and lipoprotein profile. We found that these two samples, collected only 9 days apart, showed some significant differences. At the end of the course, there was a statistically significant reduction in fasting blood glucose, total cholesterol, LDL cholesterol, total cholesterol/HDL cholesterol ratio and triglycerides, and an increase in HDL cholesterol (Bijlani et al 2005).

We see the Integral Health Clinic of All India Institute of Medical Sciences as the nucleus of futuristic medicine. According to Larry Dossey we entered the era of mind-body medicine about fifty years ago. But it will probably take another fifty years before the principles of mind-body medicine get completely and universally incorporated into the fabric of scientific medicine. Integral Health Clinic is a small beginning but carries in it hints of the way medicine will be universally practised in the very near future.

Closing thoughts

What mind-body medicine does is to use the thought process of the patient to bring about self-healing. The mechanisms of self-healing are inherent in the body. What we are doing is merely to give those mechanisms their best chance. Homeostasis, or correcting deviations from

normal through physiological mechanisms is a time-honoured concept. What mind-body medicine has revealed is that, first, the scope of these mechanisms is much wider than hitherto assumed; second, that the mind can influence these mechanisms; and finally that the patient can be guided to use the mind-body relationship to his advantage.

It is quite common to look upon yoga as complementary medicine, or even, an alternative system of medicine. This may be true if a few yogic postures or breathing practices are used as an add-on to conventional treatment. But mind-body medicine neither looks upon yoga as just a set of techniques, nor does it use it as an adjunct. The contribution of the mind-body relationship to chronic disease, as well as the possibility of using the relationship for management of chronic disease are now well-established through epidemiological, clinical and experimental studies in psychoneuroimmunology. Using the mind-body relationship for management of disease needs a tool. Ancient mind-body approaches like yoga are an excellent tool for this purpose because they combine superb lifestyles with potent prescriptions for lasting mental peace. In yoga, the healthy lifestyle and mental peace are part of a wider philosophy of life. The result is that the person adopts the healthy lifestyle not out of fear of disease and death, but because he enjoys it. Further, the person gains mental peace not by using a relaxation technique, but by learning to view events and circumstances of life from the spiritual angle. The new worldview makes his sense of well-being independent of events and circumstances. That is why he gains mental peace which is event-proof and shock-proof. Against this background of peace, it is easier to inspire in the patient confidence in his self-healing mechanisms, and to use the powers of his mind to promote self-healing. In short, several physicians have made mind-body



approaches like yoga an integral part of modern scientific medicine. The approaches are scientific not only because they are supported by clinical studies, but also because there is a plausible explanation for why and how they work now available in psychoneuroimmunology. Thus yoga is neither complementary nor alternative, it is just medicine.

Mind-body medicine is a significant development, but it still falls far short of the ideal. It takes into account two modes of consciousness, and uses one (the mind) to correct disorders of the other (the body). Integral, or total, health should take into account the totality of man. The total person consists of not only the body and the mind but also his divine essence, the soul. Yoga incorporates, besides an underlying spiritual philosophy, also the methods for giving a practical shape to the philosophy so that the unity of body, mind and soul can be approached, and eventually realized, while living and working in the real world. Only a life lived in accordance with these principles is conducive to integral health.

That mind-body medicine is only a transitional stage has also been predicted by Larry Dossey (Dossey 1993). According to him the era of mind-body medicine will be followed by that of non-local medicine. In non-local medicine, even the mind of the healer will be employed to affect the patient's body, and evidently, distance between the healer and the patient would not matter. Moving from one era into another does not mean throwing away the gains of the previous eras. While retaining the achievements of the past, and absorbing the benefits yet to come from biotechnology and molecular biology, modern medicine has started incorporating also the central principles of ancient disciplines such as yoga. Mankind has

everything to gain from this creative and critical synthesis of the old and the new.

References

1. Bijlani RL. Scientific medicine shows signs of a paradigm shift. *New Approaches to Medicine and Health (NAMAHA)* 2003; 11 (1): 28-40.
2. Bijlani RL. Body-mind medicine in action: the Integral Health Clinic of All India Institute of Medical Sciences. *New Approaches to Medicine and Health (NAMAHA)* 2004; 12 (1): 37-48.
3. Bijlani RL, Vempati RP, Yadav RK, Basu Ray R, Gupta V, Sharma R, Mehta N, Mahapatra SC. A brief but comprehensive lifestyle education program based on yoga reduces risk factors for cardiovascular disease and diabetes mellitus. *J Alt Compl Med* 2005; 11 (2): 267-274.
4. Chopra D. *Quantum Healing. Exploring the frontiers of mind/body medicine*. New York: Bantam Books, 1989.
5. Dossey L. *Healing Words*. New York: Harper Collins, 1993.
6. Kiecolt-Glaser JK, McGuire L, Robles TF, Glaser R. Emotions, morbidity, and mortality: new perspectives from psychoneuroimmunology. *Annu Rev Psychol* 2002; 53: 83-107.
7. Ornish D, Brown SE, Scherwitz LW, Billings JH, Amrstrong WT, Ports TA, McLanahan SM, Kirkeeide RL, Brand RJ, Gould KL. Can lifestyle changes reverse coronary heart disease? *Lancet* 1990; 336: 129-133.
8. Siegel BS. *Peace, Love and Healing*. The path of self-healing. London: Arrow Books, 1990.



Yoga Therapy for Diabetes Mellitus

**Dr. Prakash C. Malshe
M.D; P.G.D.Y.M.*

Introduction

Diabetes Mellitus (DM), especially the type-2 DM is a major health problem for the developed as well as the developing world. According to an estimate, about 7-15% of various population groups in India are suffering from type-2 DM1. Leading to great morbidity and mortality, yoga therapy can be helpful in several ways for the prevention and treatment of diabetes mellitus.

Modalities available in yoga therapy

Diet

Asanas

Pranayama

Internal cleansing procedures

Vata-sara

Vari-sara

Neti

Dhauti (Vastra)

Nauli

Diabetes mellitus is a disorder resulting from a combination of genetic and environmental factors and affects the carbohydrate and lipid metabolism adversely. It is characterized by elevated blood sugar level (hyperglycemia) which, if left untreated leads to long-term complications like neuropathy, nephropathy, retinopathy, cataracts, bleeding tendencies, infarctions and gangrene and diabetic patients suffer a host of infections including pyogenic infections and tuberculosis. Diabetes mellitus is responsible for a large number of loss of man hours, premature disability and death, and constitutes a large burden on any state health

service. Disabled diabetic patients become a burden on the family and society.

Classification

Diabetes is of two types:

1. Insulin dependent diabetes mellitus (IDDM) Fortunately IDDM is rare in India and it affects about 3% of all diabetic patients.
2. Non-insulin dependent diabetes mellitus (NIDDM): about 93% of diabetic patients suffer from NIDDM.

The remaining (about 4% patients) belong to one of several rarer categories, like fibrocalcific pancreatic diabetes, one due to chronic pancreatitis, or due to drugs such as steroids. Detailed description can be found in any standard text books of medicine.

IDDM: In IDDM there is complete autoimmune destruction of the insulin-producing beta cells on the islets of the pancreas. Yoga therapy at present cannot eliminate the need for insulin.

Causes of diabetes

Genetic: Several genes are thought to be responsible for the occurrence of NIDDM in the audit. There are at least two biochemical abnormalities:

1. Release of insulin is delayed and often inadequate
2. There is resistance of the peripheral tissues to insulin.

However, it is not uncommon to see cases of diabetes where there is no family history. Even there are cases where both the parents of a

*Antar Prakash Centre for Yoga, SF 10-20 Surya Complex, Ranipur Turn, Haridwar



diabetic patient are alive and healthy. In such cases, it is obviously the lifestyle which is causative in type-2 DM.

What exactly has changed in our lifestyle?

Recent surge in the number of people affected with diabetes is attributed to several factors which are related with the lifestyle. Some of these are as under:

1. Reduced physical activity.
2. Reduced exposure to sunlight, leading to vitamin D deficiency.
3. Increased intake of carbohydrate and fatty foodstuffs.
4. Reduced intake of fruit.

Obesity is the forerunner of insulin resistance and diabetes. We can say that it is a continuum where a lean person starts becoming obese due to some maladjustment of the appetite – and body – weight regulating mechanism. Obesity is always associated with some insulin resistance and hyperinsulinemia, and the question still remains unsettled which of them is primary. To say in other words, the process may start with an increased secretion of insulin which then leads to increase in appetite and weight gain. A further weight gain leads to further insulin resistance and ultimately to hyperglycemia. Yogic way of life has several things to offer to prevent obesity a thereby stalling the onset of NIDDM.

Diet, Satiety and Obesity

Obesity can occur as a part of a wider systemic disorders, which includes:

- a) Genetic Syndrome there are some well recognized syndrome which are known by the names of the inventors, such as the ‘Prader-Willi Syndrome’, the ‘Laurence-Moon-Biedl syndrome’ etc. Now-a-days great efforts are being made by researchers to precisely identify and locate the defective genes and much success has already been

achieved.

- b) Endocrine disorders: hypothyroidism, Cushing’s Syndrome
- c) Hypothalamic lesions: damage to a certain part of hypothalamus-which regulates appetite, feeding behaviour and body weight-is rarely a cause of obesity.

All these systemic disorders collectively make up less than 5% of the obese population. The rest 95% suffer from what is known as ‘simple obesity’, people in whom there is no genetic or hormonal abnormality. Their obesity has simply resulted from an imbalance between calorie intake and calorie expenditure, or a slight disturbance of appetite and body weight regulation.

It is also of interest that obesity is largely restricted to humans and animals which are domesticated or living in a zoo.

What is the cause of ‘Simple Obesity’

Fat is stored by the organisms to be used as a source of energy in times of food scarcity. Hibernating animals store fat before going into hibernation and use this body fat as a fuel during the cold months. They emerge lean and thin. Non-hibernating animals in most cases, maintain a constant body weight despite cyclic changes in the availability of food.

Several studies have been conducted to find out why obesity occurs.

Twin studies have been conducted to find out importance of genetic and environmental influences.

Experimental studies (in animals): In 1994 a naturally occurring mutant obese mouse was discovered². It was seen to have ob/ob genes. The product of the ob gene is a 16 kda protein (Hormone) called the leptin. The ob/ob mice were found to be deficient in leptin. Injection of leptin in these mice produces satiety and reduces weight. Many hopes were pinned on leptin as a

possible therapy for obesity. However, normal animals as well as in humans cannot be equated with the genetic ob/ob mice. In obese humans the leptin production is proportional to plasma and already high³. For this reason the possibility of leptin deficiency being a cause of obesity and leptin being used as an anti-obesity agent have become remote.

As is obvious, in obese individuals the large amount of fat stored in the adipose tissue, which can serve as a source of energy, does not suppress the desire to eat a precise amount of food. When a person becomes obese, the appetite remains good despite the high levels of leptin.

Regulation of body weight

A part of the brain known as the hypothalamus is involved in regulation of body weight, both in the short and the long run.

Certain area of the brain-called the hypothalamic ventromedial, dorsomedial, paraventricular and arcuate nuclei are involved in appetite regulation and have receptors for leptin. The hypothalamic and other brain areas receive signals from the olfactory and taste receptors as well as from the oral mucous membrane, the jaw and muscles of mastication. These impulses reach the brain through the different cranial nerves, the olfactory, lingual, trigeminal, glossopharyngeal and the vagus. The importance of filling of the stomach was clearly demonstrated in experiments in which showed that dogs continue to eat endlessly if the food that they swallow is not allowed to reach the stomach. (Sham feeding)⁴

Ghrelin: The gastro-intestinal tract is actively involved in the regulation of meal size. Hunger has been shown to be proportionate to the strength of contraction of stomach as early as about a century ago by Cannon, who also gave us the term 'hunger pangs'. Now it is well established that the stomach secretes a peptide called 'ghrelin' in the fasting state. Injected ghrelin

causes hunger. In the filled state of the stomach the stretch receptors get activated and give rise to a sensation of satiety. Also, intake of food inhibits the release of ghrelin. It is this mechanism that is somewhat defective in persons who develop obesity. In obese individuals food fails to suppress ghrelin secretion⁵. Sensations from the stomach are carried to the brain via the two vagi. Ghrelin is also a secretagogue for growth hormone⁶. Growth hormone has important actions on various tissues including the cartilage. In the author's opinion, this fact may have important bearing for the patients suffering from osteoarthritis of the knees, also known as 'joint failure', a condition currently thought to be due to inability to regenerate the amount of daily cartilage wear and tear.

Satiety peptides: After food reaches the intestines, the intestinal mucosa senses its calorie content and in response it secretes several chemicals such as cholecystokinin (CCK), oxyntomodulin and peptide tyrosine-tyrosine (PYY), bombesin, glucagon-like-peptide-1 (GLP-1), enterostatin and somatostatin. When injected, several of them are able to induce satiety and reduce food intake. Together they have come to be known as 'satiety peptides'. Most of them act on the afferent nerve fibers contained in the vagi, but some also reach the brain via the blood circulation and act on the hypothalamus directly. Since many of them also cause secretion of insulin, they are termed 'incretins'.

GLP : GLP-1 which is a member of the pancreatic polypeptide group has occupied a special position. It is secreted by the enteroendocrine L cells of the small intestine. Physiologically it regulates appetite and is a stimulus for the secretion of Insulin. Orally given glucose releases GLP-1, while intravenous glucose does not. It has been shown that in obese persons the GLP-1 secretion in

response to a meal is lesser than a normal weight individual⁵. GLP-1 has a very short plasma half-life, being quickly excreted by the kidney and degraded by the enzyme dipeptidyl peptidase-IV. For the purpose of study, it has to be administered by continuous intravenous infusion. Infusion of GLP-1 produces satiety, reduces food intake, increases insulin secretion and in the long run, reduces body weight. In animals it has been shown to promote regeneration of pancreatic β cells- the cells responsible for insulin secretion. A drug, exenatide⁷, a GLP-1 receptor agonist has been developed and tried in type-2 diabetes patients. It has also been approved by the US-FDA. It has a longer half-life and can be given subcutaneously. It causes satiation and reduces food intake and body weight, but also can cause nausea and sometimes a 'feeling of illness'.

Other neurotransmitters: Hypothalamus is also acted upon by several other chemicals such as adrenaline, dopamine, 5-HT, and some cellular messengers called cytokines such as interleukin-1 (IL-1) & tumour necrosis factor (TNF). Efforts have been made to develop drugs based on these chemicals, but so far the drug treatment remains far from ideal.

While the hormone leptin functions to maintain the mass of adipose tissue constant, it does not terminate an individual meal on its own. It is thought that it modifies the response to other chemicals e.g. the satiety peptides.

The gastrointestinal regulation of food intake has been extensively reviewed by David E. Cummings and Joost Overduin⁸. However, in the author's opinion the commonly held view that 'gastric satiation is volumetric, intestinal satiation is nutritive' endorsed by them is seriously challengeable because of the following:

1. Intestinal distension has not been investigated by any researcher, probable

because of the obvious difficulty involved in introducing a balloon in the whole length of the intestines. An interesting fact to note is that efforts are already on to get a patent of an instrument which can be inserted in the gut and distended to produce satiety.

2. The role of CCK has been only partially investigated. We must not forget its earliest known function, contraction of the gall bladder. Parentrally administered CCK contracts the gall bladder and the resultant outpouring of cholesterol-rich bile in the duodenum may itself contribute to the satiety.
3. While studying intraduodenal perfusion, corn oil has been used. ID perfusion of cholesterol has not been studied. Vegetable oils do not contain cholesterol.

Recently evidence points to the fact that the cholesterol that is synthesized in the liver and secreted in the bile as several functions. It is possible that pouring of cholesterol-rich bile into the intestinal lumen due to gall bladder contraction contributes to satiety. It remains to be seen whether intestinal distension by air releases GLP-1. Going by authors personal experience of air-filling manoeuvres leading to satiety, it probably does.

Determinants of body weight: The body weight is a result of interplay between two opposing factors- food intake and energy expenditure, which in turn depend upon various other influences.

In a lean individual, it is difficult to increase weight. A force-feeding usually leads to production of more body heat (thermogenesis) mediated by a modified thyroid hormone – the "reverse T3". Brown Adipose Tissue (BAT) consumes fuel and releases heat, thus helping maintaining normal body weight. A prolonged increased intake of food- which provides a small surplus of calories-in the long run leads to

significant weight gain. Once gained the weight becomes has to lose, homeostatic mechanisms will try to maintain it at the new level.

Why are certain persons lucky who can eat as much as they feel like and still stay lean while others cannot, is a question often asked by the obese. Put in different words, it means, with as much food as is required to maintain their body weight constant, why do they not feel satiated?

This brings us to the basic question of satiety. Viewed thus, obesity is a disorder of satiety. Type 2 diabetes mellitus most commonly develops in obese individual and therefore should be considered an extension of the same process. This fits well with the observation that in obese individuals, food fails to suppress ghrelin secretion and also the secretion of GLP-1 is lesser. This also makes GLP-1 or an analogous drug a rational choice for the treatment of obesity as well as type 2 diabetes.

Insulin, Glucagone-like-peptide-1(GLP-1) and other satiety peptides

Regulation of appetite involves stimuli for both, feeding and satiety. The hypothalamus has feeding and satiety centres which are acted upon by a host of neuronal and chemical stimuli originating in the gut. While the wall of stomach secretes ghrelin in the fasting state, which is associated with gastric contractions and elicits feeling of hunger pangs; in the fed state the wall of the duodenum and small intestines secretes Glucagone-like-peptide-1(GLP-1), Cholecystokinin-pancreozymin (CCK-PZ), enterostatin, somatostatin, and several others.

It has been recognized that food in the stomach exerts stretch on the gastric wall. This stretch inhibits secretion of ghrelin and abolishes hunger pangs. This was demonstrated as early as 1909 by W.B.Cannon and forms the basis of bariatric surgery to reduce food intake in the obese patients. It has also been shown that the chemical composition of the upper intestinal lumen causes

the secretion of the other satiety peptides including GLP-1 which is a secretagogue for insulin. However, according to the author, these investigations are still incomplete, as, distension of intestines has not been studied and there is reasons to believe that intestinal distension with air may lead to increased secretion of GLP-1 and contribute to satiety.

Management of obesity

Dietary control: This is probably the only way available to reduce body weight in obese persons. If we take into account the daily calorie consumption as around 2200-2400 calories and the fact that 1g of fat produces 9 calories then it can be calculated that a totally fasting individual will lose is much more than this. It is due to the loss of water and electrolytes and this is soon regained once normal diet is resumed.

Of not totally fasting, one must reduce the total calorie content of the food compromising with the daily intake of proteins vitamins, electrolytes and water. Crash dieting is reported to be bad because although weight loss occurs quite rapidly, the lost weight is gained back equally fast.

Effect of fasting: On a normal day, hunger may force one to leave the work in hand and seek food. If one is fasting for some time, one tends to think of eatables every now and then. There is a persistent desire to eat something. Still later, the stomach starts contracting intermittently and the contractions bring about intense, urgent desire to eat; it is these contractions that have been termed 'hunger pangs' by Cannon.

A mention of tasty eatables before a fasting person provokes salivation. At such an occasion if an eatable item is presented, a fasting person finds it too irresistible. If resisted, the hunger pangs would increase and at times would take the form of pain in abdomen. Some persons may start having headache. We will see that by filling the stomach by kaki mudra several of these



symptoms can be attenuated. In fact it is in this way that the ancient Vedic rishis used to stay comfortable without food for several days at a stretch. But a common man gets headache, depression, irritability and anger if he does not eat. There is no initiative and no entertainment is welcome except for food. Even there is no desire for sex. Prolonging the fast deteriorates the intellectual functions and mistakes of spelling, grammar and calculations occur frequently.

Yogic management

1. **Diet:** If one has to adapt a yogic lifestyle, one of the prime requirements is eating less (mitahara)

O Arjuna! Neither he who eats too much nor he who eats too little succeeds in yoga. Neither the one who sleeps too much nor the one who keeps awake!

Only to the one who take appropriate quantity of food, does appropriate amount of effort and takes appropriate amount of sleep the yoga becomes destroyed of all sorrows. (Bhagwadgeeta chapter 6/16-17)

He who begins the practice of yoga without controlling his diet suffers from many diseases and does not make progress in Yoga.

Controlled diet is one which is pure, sweet, lubricated, and fills only half of the stomach and which is palatable and is eaten to please the God (in oneself).

In Praise of a Fruit Diet

It is possible to maintain normal health on an "only fruit" diet!!

- a) By cutting down cooked food and replacing it with fruits and raw vegetables, one can maintain normal body weight. one can replace the lunch with watermelons, cucumber, tomatoes, carrots, papaya, guava etc. in olden days there was enormous stress on 'phalahar' (living on fruit diet); there are still some 'phalahari' babas who eat only

fruit for living. Fructose reduces biliary cholesterol secretion in experimental animals" and in human beings fruit diet may help avoid gallstone formation.

Although fruits do not contain proteins, they contain lots of amino acids. In fact some of their sourness and sweetness is because of this. These amino acids are readily absorbable from the gastrointestinal tract without any need for digestion. While Phalaharis eat only fruit, some others stay without the use of fire; niragni. That means that they do not eat cooked food. For them the amino acids of the fruit seem to be the sole source from which the body synthesises proteins. When one eats fruit, there is lesser requirements for digestive enzymes which save one a lot chemical energy.

- b) By keeping a fast on some day of every week. In olden times people used to undertake weekly religious facts during which they would not eat anything but just drink plenty of water. Some people observe facts with 'phalahar' i.e. eating only fruit. There are others who misuse this term and eat a very high calorie diet comprising of starchy materials and fats completely devoid of fibres.
- c) By performing regular suryanamaskara, maneuvers to fill intestines with air. In the experiments done at the Antar Prakash Centre for Yoga, filling up of the intestines has been seen to produce satiety, there is reason to believe that intestinal distension is enough to cause secretion of GLP-1 even in absence of nutrients in the gut lumen.

Regular filling of intestines with air may serve as a daily of GLP-1. This is the hypothesis that needs to be studied further. Going by personal experience, it most probably does. The author's personal experience is that air drinking and



maneuvering it in to the intestines by inverted postures quickly abates hunger and allows one to function comfortable without eating. In addition, if the hypothesis is proved, i.e. air satiety is mediated by GLP-1, one can think of possibility of regenerating beta cells.

The air-filling maouvres of suryanamaskara suggested above, if performed regularly before eating may lead to early satiety, reduced food intake, increased secretion of GLP-1 and insulin and may be helpful in reducing obesity as well.

All yoga therapy suggested for the treatment of obesity is useful in reducing insulin resistance and improving glycemic control in the diabetics. Indeed a recent study has shown that regular performers of yoga have lesser insulin resistance.

Role of air in the gut

In addition to producing a favourable environment for aerobic bacteria and inhibiting the anaerobes, air distension of the intestines can cause satiety and help reducing food intake. Stated in simpler terms, even if there is a great mass of stored fat, the individual still feels hungry and then it is up to him to fill the intestines with solid food.

The role of air in the stomach has been well recognized by the ancient yogis. The Gheranda samhita mentions:

‘One should fill half the stomach with food, one quarter with water and the remainder with air. Yogis in ancient India have deliberately used movement of air in the gut. While on the one hand procedures like the kaki-mudra teach us sucking-in the air into the stomach, asanas such as the sarvangasana and the Nauli-Kriya allow air to enter into the rectum.

‘Vata-sara is to be kept a secret. It is great purifier, destroyer of all diseases and increases the body heat’.

Procedure

‘One should drink air making the mouth like a crow’s beak. Then by moving the abdomen all this air should be moved down to be expelled through the lower passage’.

There is one more mudra devoted to air drinking, it is called Bhijagi Mudra.

Protruding the mouth a little, one should drink air through the throat. This becomes the bhujangi mudra which is the destroyer of old age and death.

Suryanamaskara is the procedure for vata-sara

Greater details have been discussed in the section on Yogic treatment for digestive disorders. Suffice it to say here that filling up of intestines with air induces satiety and can be used as a therapeutic measure for the treatment of obesity. (It is similar to the experiments of Cannon performed as early as 1909 where they have tried balloon distension of the stomach in experimental animals such as dogs to induce satiety)

The whole 12-step process of suryanamaskara a series of postures designed to fill the intestines with air: suryanamaskara, by sequentially alternating the posture from upright to inverted trunk, horizontal and inclined trunk aims at filling the intestines with air.

(The Mantras are as taught to us by tradition)

1. First position: Mantra: *Om Mitraya Namah*

It is just standing position. It prepares you for ingesting air. By tradition one should stand facing the east.

2. Second position: *Mantra*

Om Ravaye namah Raise the arms above you head, bend the neck a little backwards, relax your abdomen, contract the

- sternocleidomastoid muscles, lift the sternum a little to let the gullet open-in short, by kaki mudra such in air to fill the stomach.
3. Third position: *Mantra Om Surya Namah*
Swallowing a little saliva produced by rubbing the back of the tongue with the palate (Manduki mudra) bend forwards and place the two hands by the side of the two feet, the trunk should be inverted. You will feel the ingested air moving down the duodenum in to the small intestines. Stay in this position for about 15 seconds. Swallowing the saliva sends a peristaltic wave down the esophagus and prevents the acidic gastric juice from regurgitating and the air from escaping by belching.
 4. Fourth position: *Mantra Om Bhavane Namah*
Place the left foot in between the two hands, flex the knee, straighten and shift the right foot backwards, look in front, again performing the kaki mudra. Feel the stomach being filled with air.
 5. Fifth position: *Mantra Om Khagaya Namah*
Swallowing a little saliva produced by rubbing the back of the tongue with the plate (Performing Manduki mudra). Lift the hips up, with the whole body's weight on the hands and feet.
 6. Sixth position: *Mantra om Pushne Namah*
Place the knees down, the hips up and the chest down. That is, be in the knee-chest position. The duodenum is the uppermost in this position and the air contained in the stomach easily escapes in to it. Stay in this position for about 10-15 seconds. It renders the stomach empty.
 7. Seventh position: *Mantra om Hiranyagarbhaya Namah*
Lie prone with the chest, head and neck lifted up. By kaki mudra drink air again.
 8. Eight position: *Mantra Om Marichaye Namah*
Swallow saliva by manduki mudra, Again lift the hips up, bearing the body weight on two hands and two feet, like the sixth position. Again it renders the stomach empty.
 9. Ninth position: *Mantra Om Aditya Namah*
bring the left foot forward to place it between the two hands. Look up; drink more air by Kaki mudra.
 10. Tenth position: *Mantra Om Savite Namah*
Swallow saliva by manduki mudra, stand bent forwards; keeping both the palms on either side of the feet. Let the trunk be inverted.
 11. Eleventh position: *Mantra om Arkaya Namah*
Straighten up, bending a little backwards with two hands stretched well above the head.
 12. Twelfth position: *Mantra Om Bhaskaraya Namah*
Stand straight with folded hand in prayer position.
- Thus we see that is ingested in the second, fourth, seventh and ninth position in Suryanamaskara. Repetition of the cycle 12 times gives you opportunity to swallow air 48 times. As X-ray done before and after the 12-minute procedure clearly shows the difference in the state if dilatation of the intestines.

β -cells regeneration is possible

Research in regenerative medicine is somewhat skewed. Why, for example should it be required that we harvest stem cells from the bone marrow and implant them to stay, pancreatic tissue? What prevents their migration from the bone marrow to the pancreas? In the author's opinion the answer is, Oxygen!

Yes, Stem cells maintain their stem-ness in hypoxic environment. in the fetus they are found

in the blood circulation in large numbers. After birth, they disappear quickly from the circulation and stay only in their specified inches. When we talk of oxidative injury, it is the stem cells which are the most susceptible. Their transportation from the bone marrow to other site is difficult because of the prevalent high partial pressure of oxygen in the arterial blood. A few minutes of hypoxia everyday can help their migration to the desired site.

A patient affected with NIDDM gradually loses the β -cells mass. It is wise to expect that nature must have provided for the regeneration of β -cells through the use of stem cells. Some adult stem cells are present in every location, and additional stem cells can migrate from the bone marrow to the site of requirement.

Studies spanning about 50 years in the former USSR and later on in the commonwealth of communist countries has focused on the effects of hypoxia. It is now well recognized that hypoxia has hundreds of effects on the organism, including generation of the Hypoxia Inducible Factor1 (HIF-1) which leads to transcription of several genes like the Erythropoietin, Vascular Endothelial growth factor, (VEGF) and Nitric Oxide Synthase. The Russian scientist have used several methods to produce hypoxia, like use of hypobaric chambers, and hypoxia gas mixtures (HGM-10) containing Oxygen 10% and Nitrogen 90%). However, these modalities are costly and out of reach of the common individual.

In yoga treatment has been described for all illnesses. The hathpradeepika states as under:

‘If by some mistake a yogi’s Vayu gets derailed and enters or accumulates at one spot then various diseases may develop which obstruct the journey towards achievements (In yoga)’
hathpradeepika 5/5

‘Whenever any region (of the body) is affected with a disease, one should concentrate the mind

on the vayu stuck up in that region’.
hathpradeepika 5/9

‘With mind concentrated on the part concerned, one should fill in air by inhaling. Then a complete exhalation should be performed most effort fully to the fullest of one’s capacity’.
hathpradeepika 5/10

‘After making repeated inhalations and exhalations one should pull out the accumulated vayu in a way similar to taking out water from the ear’.
Hathpradeepika 5/11

At the Antar Prakash Centre for Yoga we have demonstrated that a specific sequence, i.e. Bhastrika- followed-by-Bhaya-Kumbhaka is capable of producing a hypoxia of about the grade of oxygen saturation 72-78%. (In modern physiology the nearest translation of Bhastrika- followed-by-Bhaya-Kumbhaka is ‘Hyperventilation followed by breath-holding-in-full-expiration’) A demonstration of the technique was given by the author at the V International conference on Yoga held at kaivalyadhaama in the year 2006 and may be found on the net¹².

References

1. <http://www.medscape.com/viewarticle/553890>
2. Zhang Y, Proenca R, Maffei M, barone M, leopold L, Friedman JM. Positional cloning of the mouse obese and its human analogue. *Nature*, 372:425-432.
3. Lonnqvist F, Arner p, Nordfors I, Schalling M Overexpression of the obese (ob) gene in adipose tissue of obese human subjects. *nat Med*. 1995 Sep;1(9):950-3
4. Wren Am, Small CJ, Abbott CR et al. Ghrelin causes hyperphagia and obesity in rats *Diabetes* 2001; 50:2540-7
5. English Pj, Ghatei MA, Mallik IA et. al., Food fails to suppress ghrelin levels in obese

- humans *J Clin Endocrinol Metab* 2002,87:2984.
6. Ritter RC. gastrointestinal mechanisms of satiation for food. *Physiol Behav* 81:249-273, 2004.
 7. Henry R., et al. 2006 Exenatide maintained glycemic control with associated weight reduction over 2 years in patients with type 2 diabetes. In 66th scientific Session of the American Diabetic Association, June 9-13, 2006. Washington DC, USA 485P.
 8. David E. Cummings and Joost Overduin, Gastrointestinal regulation of food intake, *The Journal of Clinical Investigation* volume 117 Number 1 January 2007. <http://www.jci.org>
 9. Jacyna M.R., Ross P.E. and Bouchier I.A.D. Biliary Cholesterol – Friend or Foe ?. *QJM*.1986;61:991-995
 10. Rangnath LR, Beetry JM, Morgon LM, Write JW, Howland R and Marks V. Attenuated GLP-1 secretion in obesity: Cause or consequence? *Gut* 38:916-919, 1996
 11. F Nervi, I Marinovic, A Rigotti, and N Ulloa regulation of biliary cholesterol secretion. Functional relationship between the canalicular and sinusoidal cholesterol secretory pathways in the rat. *J Clin Invest.* 1988 December; 82(6): 1818-1825.
 12. <http://www.youtube.com/watch?v=Vo=pwmuvVPI> or search Youtube>search>'Dr Malshe shows hypoxia through breath holding'.

The Role of Sweat in the Praxis of Pranayama

Dr. Chandramouli S. Naikar

Etymologically, Yoga is Sanskrit word; derives from the root युज् meaning to bind together, “hold fast”, “yoke”, “merge”, “join” or “unite” योग is the union of the soul with the eternal truth, a state of unalloyed bliss, arising from conquest of dualities. The term योग serves in general, to designate any ascetic technique, and any method of meditation. The ‘classical’ form of योग is a दर्शन expounded by iratfy in his योग सूत्र and it is from this ‘system’ that we must understand the position of योग in the history of Indian thought. There are also countless forms of Sectarian, Popular (magical) and Non-Brahmic योग such as Buddhist and Jain forms.

The योग system, however, being older than the योग सूत्र of पतंजलि, we find almost completely developed in the मैत्रेयोपनिषद् the technique prescribed in the योग or concentration of thought.

Mircia Eliade writing on योग, enlists the eight Yogic techniques as : “The Yogic technique implies several categories of physiological practices and spiritual exercises called अङ्ग— “member” or elements. The eight “members” of classical योग can be regarded

both as forming a group of techniques and as being stages of the ascetic and spiritual itinerary whose end is final liberation. Theare: 1. restraints (यम), 2. disciplines (नियम), 3. bodily attitudes and postures (आसन), 4. rhythm of respiration (प्राणायाम), 5. emancipation of sensory activity from the domination of exterior objects (प्रत्याहार), 6. concentration (धारणा), 7. Yogic meditation (ध्यान) and 8. enstasis (समाधि).

यमनियमासनप्राणायामप्रत्याहारधारणाध्यानसमाधयोऽष्टावङ्गानि, II.29).²

In addition to this classical योग comprising eight members : अष्टाङ्गयोग as formulated by iratfy, there exist a number of six limbed Yogic regiments known as षडङ्गयोग. The main characteristic is the absence of the first three अङ्गःपण्ण यम, नियम and आसन and the introduction of a new “member”, तर्क (reason, logic).⁴

The details of अष्टाङ्गयोग form the thesis for various aspects, nature, kinds and development etc., exhaustively, so it is impossible to give here an adequate idea within the limited space and restricted canvs at our disposal regarding

1. The Hindus have unanimously regarded पतंजलि as the founder of the योग system and as identical with iratfy, the grammarian, the author of the महाभाष्य, who lived in the 2nd Cent. B. C. But Hermann Jacobi has made it probable on philosophic-historical grounds that the योगसूत्र were composed after A.D. 450, vide : Journal of American Oriental Society XXXI 1911, 24 ff; Bruno Liebich, ‘Das Katantra’ Heidelberg 1919, p. 7ff.
2. The Encyclopedia of Religion, Vol. 15, New York, pp.519-529.
3. यमनियमासनप्राणायामप्रत्याहारधारणाध्यान समाधयोऽष्टावङ्गानि
पातंजल योग सूत्र II.29.
4. प्रत्याहारस्तथा ध्यानप्राणायामेऽथ धारणा तर्कश्चैवसमाधिश्च षडङ्गो योग उच्यते
योग उपनिषद्, 6

अष्टाङ्गयोग. Hence I propose to restrict the scope of my paper only to one technique namely प्राणायाम with a special reference to the effect of sweat in the praxis of प्राणायाम.

प्राणायाम is a Yogic exercise in respiration and according to पतंजलि (the exponent of योग सूत्र) a clear exposition of the spiritual values of प्राणायाम has been given through his two Sutras:

ततः क्षीयते प्रकाशावरणम् - P.Y.S. II.52

धारणासुच योग्यतामनसः - P.Y.S. II.53⁵

The natural tendencies of the mind and sense organs are condemned as evil because success in योग depends upon the introversion of the mind and the sense organs. A similar view is expressed by the author of हठप्रदीपिका who held that प्राणायाम alone would be sufficient to overcome the evil tendencies of the mind and the sense organs:

प्राणायामेनैव सर्वे प्रशुष्यन्ति मला इति ।⁶

Scholars and योगीस have held in high esteem the treatise on हठयोग by स्वात्माराम. His हठप्रदीपिका इमपदह one of the outstanding हठ texts fully describes the eight wellknown varieties of प्राणायामपद the II lesson entitled: प्राणायाम विधान

कथनानि - "The description of the technique of प्राणायाम". The two types of प्राणायामदंडमसल. 1. सगर्भ (with मन्त्रे and 2. निगर्भ or अगर्भ (without recitation of मन्त्रे) have been mentioned in the पुराणे and स्मृति, but स्वात्माराम does not prescribe the practice of प्राणायाम accompanied with recitation of a मन्त्र. The eight varieties of प्राणायाम or कुम्भक are: 1. सूर्यभेदन, 2. उज्जायि, 3. शीत्कारि, 4. सीतली, 5. भस्त्रिका, 6. भ्रामरी, 7. मूर्छा and 8. प्लाविनी. स्वात्मारामीवसके that by the practice of प्राणायाम alone all the impurities in the 'नाडि' can be removed:

प्राणायामेनैव सर्वे प्रशुष्यन्ति मला इति⁹

प्राणायाम means the breath control and the end product is mental calm and tranquillity of nervous system. The body and the mind become tolerant and the gains of प्राणायाम have been described thus: 'प्राणायामेन युक्तेन सर्वे रोगक्षयो भवेत्'.¹⁰ स्वात्माराम, after stating the technique of breathing and before explaining the eight¹¹ varieties of (कुम्भक) प्राणायाम mentions that one should perform कुम्भक four times a day i.e. in the morning, at noon, in the evening and at midnight, gradually increasing the number upto

5. Practice of breath control leads to a pure mind. It dissolves the covering that hides the effulgence within. Such a mind is fit for concentration. _____ II. 52-53.
6. i) हठ प्रदीपिका, II. 37.
ii) It is interesting to note that iratfy notices four types of प्राणायाम, the distinction being based upon the nature of the pause. 1. बाह्य कुम्भक, 2. अभ्यन्तर कुम्भक 3. केवल कुम्भक and 4. केवल कुम्भक of पातंजल योग सूत्र II. 50-51.
7. कुम्भक is a synonym of the word प्राणायाम according to the established facts. Vide
(i) पातंजल योग सूत्र I.34 and व्यास भाष्य too on पातंजल योग सूत्र
(ii) स्वामी कुवलयानंद, प्राणायाम Lonavala, pp.38.
8. सूर्यभेदनमुज्जायि शीत्कारि शीतली तथा भस्त्रिका भ्रामरी मूर्छा प्लाविनीत्यष्ट कुम्भकाः हठ प्रदीपिका, II. 44.
9. हठप्रदीपिका, II.38
10. हठप्रदीपिका, II.16
11. Vide foot-note No.8 above.



eighty¹² each time. Thus the number of प्राणायाम comes to three hundred twenty. Further स्वात्माराम holds that the प्राणायाम of a low degree of merit generates heat; that of an intermediate degree throbbing; and in all its intensity a condition is (will be) achieved i.e. the coveted blissful position in which it becomes easy for प्राण to rise to ब्रह्मरन्ध्र (the highest central point in the brain) by प्राणायाम:

कनीयसि भवेत्स्वेदः कम्पो भवति मध्यमे
उत्तमे स्थानमाप्नोति ततो वायुं निबन्धयेत् ।¹³

According to some योगीसि perspiration or sweat is the result of practicing प्राणायाम obviously because of the increase of the heat of the body. At this juncture it is interesting to note that प्राणायाम is defined in brief as follows:

प्रस्वेद कम्पनोत्थान जनकश्च यथाक्रमम्

This means perspiration is an unavoidable and inevitable part of प्राणायाम.

स्वात्माराम, further holds that the perspiration or sweat caused by exertion due to प्राणायाम, during प्राणायाम, should be smeared or rubbed to the body and by doing so, the body attains strength and lightness:

जलेन श्रमजातेन गात्रमर्दनमाचरेत्,
दृढता लघुता चैव तेन गात्रस्य जायते ।¹⁴

The speciality of these two couplets of स्वात्माराम, is the importance of perspiration or sweat. Here it

serves as the result of प्राणायाम in the first stage and then as the effect on the body when smeared or rubbed all over, giving strength, lightness to the body. This perspiration or sweat can be described as having medicinal value. Like the oil rubbed to the body before bath, the perspiration is to be rubbed to the body by doing which the body becomes sturdy and hence more active and light. गोरक्ष शतक too supports this view and states:

अङ्गानां मर्दनं शस्तं श्रम संजात वारिणा¹⁵

The rubbing of the body with the perspiration given out during exercise i.e. प्राणायाम is advisable. By consulting the Yogic texts only, we will not understand as to how this perspiration or sweat rubbed to the body gives sturdiness and lightness to the body. Therefore, to know more about the *modus oparendi* of perspiration, we are compelled to consult the medical texts which throw light on the functioning of perspiration or sweat of the body and the results.

The modern (medical) science (allopathic), we are surprised to note, considers the sweat that comes out from the body by any means, is a waste product¹⁶ and hence has seldom value like urine and stool.¹⁶ But at the same time, it is interesting to know that the urine therapy is still in practice and some of the centres are working to cure and heal the diseases and wounds. This, I think, needs no explanation, as there are a few

12. प्रातर्मध्यान्दिने सायं अर्धरात्रे च कुम्भकान् ।

शनैरशीतिपर्यन्तं चतुर्वारंसम्भसेत् ।।

हठ प्रदीपिका, II.11; Cf. पातंजल योगसूत्र II.53.

13. i) हठप्रदीपिका- II.12

ii) गोरक्षशतक also has endorsed this view:

‘अधमे च घनोघर्म कम्पो भवति मध्यमे’, 49

iii) ब्रह्मानन्द, the commentator on the हठप्रदीपिका has, it is said, dealt in detail in this regard.

14. हठप्रदीपिका, II.13.

15. गोरक्षशतक, 50.

16. Modern Medical Sciences.

books that throw light on this aspect. But when we consult the texts of आयुर्वेद शास्त्र, we come to know that the said शास्त्र endorses the view that the sweat is a waste product and when it goes out from the body, it helps the body to maintain its normal condition.¹⁷

The चरक संहिता चिकित्सास्थान a text on defines sweat as: “मलः स्वेदस्तु मेदसः”,¹⁸ meaning ‘sweat’ is the waste product of मेदो धातु and sweat is also described as one of the source of elimination of excess अप धातु from the body.¹⁹ As a matter of fact the Anatomy states as follows:

“The organs concerned with the function of स्वेदप्रवृत्ति are दृत्वक् (skin) and मेदो धातु (adipose tissue or subcutaneous fat). चरक counts मेदस् (fat) and लोम कूप (hair follicle) as a ewy of this system (c. विमर्शरू 5/8). The त्वक् (skin) is a thin sheet covering the entire body, not uniformly thick in all places (skin of palms and soles being very thick), studded with innumerable सूक्ष्म रन्ध्रे (minute perforations or pores) all over. These pores act as passage for movement of sweda and sprouting places for ykse (body hair) and so are call as ‘स्वेदमार्ग’ दक ‘लोमकूप’. These are invisible to the naked eyes अदृश्य.

Beneath the skin, embedded in the thick pad of मेदस (subcutaneous fat) there are innumerable स्वेद ग्रंथि (sweat glands), of the size of pea, spread all over the body, but found in large numbers in particular areas like the कक्ष (axilla) ग्रीवा (neck), पृष्ठ (back), उरस् (chest), वंक्षण (groin), हस्त and पादतल (palms and soles). These ग्रंथिs are connected with the स्वेद मार्ग (passages, tubes) which open upto the exterior of the skin, discharging the Losn, the watery fluid secreted

by these glands.

स्वेदात्पत्ति or production of sweat is a specialised function of the स्वेद ग्रंथि and is considered as important in maintenance of देहोष्म (body heat) in normal condition. The भ्राजक पित्त present in the त्वक् is to some extent responsible for this function, increasing the quantity of sweat when the body temperature rises high, there by cooling it. During cold season the quantity of sweat produced will be very less. To Losn is attributed the function of क्लेद धारण or maintenance of water balance also, but this function is not very prominent. In addition to स्वेद, these ग्रंथिs also produce a little quantity of an oily substance – the त्वक स्नेह (sebum) which helps in the nourishment of the hair and maintenance of स्निग्धत्व (softness and greasiness) of the skin. Probably it is with reference to this substance and close proximity of स्वेद ग्रंथि with fat tissue, that आयुर्वेद describes स्वेद as a मल (waste product) of मेदोधातु.

स्वेद is one of the source of elimination of excess अप धातु from the body, though the quantity of eliminated is small during health. On an average the quantity of स्वेद is about 500 c.c., but it varies from person to person; those of पित्त प्रकृति excreting the largest and those of कफ प्रकृति the least quantity. As soon as it comes to the exterior, it becomes visible. During health, sweat can be seen accumulating in drops in the कक्ष, भ्रू, ग्रीवा, उरस्, and वंक्षण, usually after physical exertion, exposure to sun and fire and in summer season. In some persons, a deposition of salt can be seen as fine white powder in these sites.

स्वेद is a thin watery fluid, पीत (pale yellow) in

17. Clinical Methods in आयुर्वेद, by K.S. Srikanta Murthy, p.261.

18. चरक संहिता चिकित्सा स्थान, 15.18.

19. Clinical Methods in आयुर्वेद, by K.S. Srikanta Murthy, p.261.



colour, लवण (saltish) in taste, with दुर्गन्ध (foul smell) and सस्नेह slightly (viscid to touch); thus it is considered a पित्त द्रव्य.

The factors which cause disorders are:

- आहार - foods which are उष्ण (hot), कटु (pungent), अतिमद्यपान (excessive alcoholic drinks), तृष्णानिग्रह (suppression of thirst i.e. not drinking fluids at all).
- विहार-अति व्यायाम (heavy exertion), अति संताप (high temperature) improper use of heat and cold, क्रोध (anger), शोक (grief), भय (fright) and other mental emotions.
- कर्म विभ्रम- Improper therapies such as अतियोग, अयोग, मिथ्यायोग of शोधन चिकित्सा स्नान (bath), उत्सादन मर्दन व्यायाम (massage and exercises), अशुचि, स्पर्श (contact with dirt, contaminated objects), भूत संस्पर्श (bacterial infection).
- विष - (poisoning) external application of poisonous materials, accidental or intentional, insect bites, stings, irritant cosmetics, soaps etc.
- औषध - drugs such as Losny (diaphoretics), रोमनाशक (depilatory), विषघ्न (anti-poisonous) and many other chemical drugs of the present day.²⁰

After consulting the आयुर्वेद texts, we come to know that when the body becomes hot during प्राणायाम the various physical symptoms manifest. The body becomes hot due to increased activities of the sympathetic nervous system and the sweat starts secreting so as to maintain the temperature of the body. When the body is unclean, impurities are excreted through the pores of the skin in the form of perspiration or sweat. When the body

becomes purified by way of Yogic आसन, षट्क्रिया and प्राणायाम, only water, salt and hormones are excreted through the skin by way of sweat. This sweat excreted through the skin has its own qualities and functions. i.e. गुणकर्म. A Yogi or a साधक or an aspirant who is strictly following the यम, नियम, आसन etc. along with the prescribed diet i.e. मिताहार²¹ will naturally be free from the diseases, and hence he will have a special energy which is very healthy. Thereafter, he becomes eligible for the practice of प्राणायाम and therefore in course of the praxis of प्राणायाम, he gradually gets away the dosas or कल्मष and any other such त्याज्य पदार्थ or waste products. Then he seldom possesses any dosas. Every minute particle of जीवकण will have subtle exercised by प्राणायाम and the sweat excreted as such will have proteins rather than the waste products. And such sweat containing more proteins, when goes out from the body, there is every possibility of losing the minimum proteins required to the body. Therefore, such kind of sweat needs to be reabsorbed in the body by way of rubbing that sweat again to the body so as to supply the required proteins and as a result of which the body becomes sturdy and the sweat glands too become powerful and the body becomes light also.²² In addition to this we may note that when the body becomes hot due to breath control (प्राणायाम), excess water may be lost during प्राणायाम. We may compare the शिव संहिता which supports this view from other angle. There it is said : “When the body perspires, rub it well into the body, otherwise the योगि loses his धातु²³ or the seven basic tissues namely ‘समधातु’ viz. रस (plasma), रक्त (blood),

20. Ibid.pp.260-262.

21. हठ प्रदीपिका, I.58.

22. हठ प्रदीपिका, II.13.

23. शिव संहिता, II.8.



मांस (muscular tissue), मेदस (adipose-tissue), अस्थि (bone tissue), मज्जा (marrow tissue) and शुक्र (reproductive tissue). To maintain these, certain chemical harmones are produced and when they cannot be stored, they are expelled from the system. If there is perspiration due to प्राणायाम, chemical harmones are released unnecessarily. Therefore, the perspiration should be rubbed back into the skin so that the harmones are reabsorbed through the pores. This also helps to rebalance the system and tone the nerves and muscles.

To sum up, after the performance of आसन and षट्क्रिया, the aspirant in the developing stage of practising प्राणायाम known as नाडीशोधन, attains a state of purification and starts sweating due to the heat produced in the body. This sweat helps the body to maintain the normal temperature of the body, by loss of accrued heat. In this process the body looses the दोष or dirt and becomes very

clean. The body which thus has lost the जडत्व or grossness attains लघुत्व and hence becomes लघु. Since the aspirant is in the advanced stage of प्राणायाम, the sweat contains the proteins that the दोषs because of his proper diet i.e. मिताहार and this sweat containing protein (when goes out from the body, the aspirant may lack the required proteins to the body) needs to be rubbed to his body so as to supply the required proteins to the body and thereby making the body sturdy and yet light. By doing this the harmones are reabsorbed in the body to keep the system balanced and to tone the nerves and muscles too. Thus स्वात्माराम states through the (above) two verses that the sweat has all the medicinal value and hence it need not be rubbed away and it out to be made use of as it plays an important role in the praxis of प्राणायाम by an aspirant. स्वात्माराम must have written these two couplets on the basis of his own experience.



Use of Solar Energy as a Cure for Common Ailments

*VK Gothecha, **Anita Sharma
and ***Anita Gautam

ABSTRACT

All life on earth derives its sustenance from the sun. Solar rays emitted from the sun help our bodies and plants to grow. So the rays of the "Sun god" can be used to help cure us and to keep diseases and infections away. The influence of sunlight upon the vital processes, and in keeping diseases and infections away was known to our ancient rishis and now research and development in this field has further led to its increasing popularity. Physicians place a high value upon exposure to sun as a means of stimulating the nutritive processes of the body in many chronic disease such as anemia, tuberculosis and in convalescence from fever and other similar conditions. Old Romans and Greeks employed sun bath or insolation frequently in the treatment of chronic maladies of all sorts. The natives of Mexico and South Sea islands practice exposure to sunlight on the sea beach partially covered with sand, as a treatment of syphilis, the patients thus treated being made to drink large quantities of infusions of leaves of various sorts while exposed to the sun. The sunbath is a valuable and an exciting practical measure and it owes its properties to the three sets of rays of which it is composed viz. thermal, luminous and actinic or chemical rays. The sunlight has the ability to destroy bacteria. Solar distillation inactivates the bacteria causing diarrhoea, cholera and typhus.

Keywords : solar, color, therapy, VIBGYOR, water

Introduction

All life on earth derives its sustenance from the sun. Solar rays that are emitted from the sun help our bodies and plants to grow. So the rays of the "Sun god" can be used to help cure us and to keep diseases and infections away. "*Anu surya mudayatam hrudhyo harimacate goro hitasya varnena tenatva paridadhmasi*" (Atharvanam 1-22) [1]. This means that leucoderma, heart diseases will be healed when exposed to the red rays of Sun. The influence of sunlight upon the vital processes has been recognized from the earliest times. In olden times, the "rishis" used to get up in the early morning and offer oblations to "Sun god". They took bath in any lake, pond or river. Standing opposite to Sun, they used to offer arghya (offer water to the sun) [2]. It was believed that the cosmic rays covering the

flowing water in arghya pradana will emanate the power received from the rays of sun and they would project on our body. Hence the infective germs in our body will die due to that and our body would receive the vital energy (pranic sakti). "*Arghya dana midam punyam pumsama rogya vardhanam*" [2]

It is mentioned in the Vedas that the colors embedded in the Sun rays cures all diseases. According to yoga guru Atul Vyas [3], doing regular 'sun salutation' detoxifies the body system and is good for heart and cardio-vascular system as it increases blood oxygenation. Different variations of sun salutation have been mentioned in the traditional yogic texts to cure diseases like osteoporosis, sinusitis, depression and others. It cures depression, anxiety and stress by reducing the cortisol (a key stress

* Associate Professor & HOD, Deptt. of Agad Tantra & Vyavahar Ayurveda, NIA Jaipur

** Assistant Professor, Deptt. of Agad Tantra & Vyavahar Ayurveda, NIA Jaipur

*** MD Scholar, Deptt. of Agad Tantra & Vyavahar Ayurveda, NIA Jaipur

hormone) in the body. It helps in increasing the secretion of the hormone of happiness (serotonin) [3]. They invite blood flow to all 72,000 nadis (energy channels) in the body and ease mental stress[4].

This science was known to our ancient saints and now research and development in this field has further led to its increasing popularity. Solar therapy has been defined as “treatment of disease by exposure to sunlight” in the medical dictionary. Solar therapy was also used by the old Romans and Greeks, who employed the sun bath or insolation frequently in the treatment of chronic maladies of all sorts [5]. This light energy affects all living cells [6] (as we all know, without light all living things are affected). Used in the right way, these different frequencies of light, i.e. color, can have a profound and healing effect on all creation, human or otherwise. It is a well known scientific fact that everything has a vibration, that is to say that all things have their own vibration/frequency.

The natives of Mexico and South Sea islands practice exposure to sunlight on the sea beach partially covered with sand, as a treatment of syphilis, the patients thus treated being made to drink large quantities of infusions of leaves of various sorts while exposed to the sun. The sunbath is a valuable and an exciting practical measure and it owes its properties to the three sets of rays of which it is composed viz. thermal, luminous and actinic or chemical rays [7]. The thermal and luminous rays are directly stimulating to the cells of the tissues, causing a development and accumulation of heat while the actinic rays act upon the nervous system in a powerful manner. Sunlight can be regarded not only as a source of radiant energy in the form of heat but also as a powerful tonic through its actinic rays. The calorific rays may be isolated by placing a red color glass screen between the patient and the sun so that the actinic rays are filtered out. For tonic effects, the calorific rays

may be separated by employing a blue color glass screen.

The sunlight has the ability to destroy bacteria. While protection against over-exposure to ultraviolet (UV) radiation is the main health concern, UV in small amounts is essential to good health as it leads to the production of vitamin D in the body. Vitamin D strengthens the bone and musculoskeletal system. The sun’s rays not only influence the skin, but pass through it into the body, thus exciting and stimulating the tissues and cells. The surface circulation is greatly accelerated, with free perspiration occurring, leading to increase in the functioning of the heart which promoted other vital functions of the body. In many cases, the patient experiences a very pronounced sensation of languor and drowsiness during the bath and falls asleep.

The UV rays in the sunlight are able to destroy microorganisms. In 1877 Arthur Downes and T P Blunt [7] showed that light had a bactericidal effect and in 1882 the German bacteriologist Robert Koch discovered the tubercle bacillus (*Mycobacterium tuberculosis*) [8] and proved that it caused the disease. In 1890 Koch carried out further experiments which showed that sunlight was lethal to the bacillus.

Research at Brace Research Institute in Canada has shown that 5 hours of normal sunlight will disinfect river water and make it safe for drinking. Solar distillation inactivates the bacteria causing diarrhea, cholera and typhus. The system can be used even when the water contains many more microorganisms than it contains normally. UV radiation is used in many developed countries with special equipment. Some of these rays can go through glass or clear plastic bottles. If the temperature gets over 50 degrees for just one hour many other parasites like worms and amoebae are also killed. This is why it is good to place the bottles on a black surface, or to paint the bottom of the bottle black [9].



Fig. 1



Fig. 2

Color Therapy aims to balance and enhance our body's energy centres/chakras by using the seven colors [9] (Fig. 1) of the light spectrum, which can help to stimulate our body's own healing process. Color as a Therapy is a truly holistic, non-invasive and powerful therapy which dates back thousands of years. Evidence of this can be found in ancient texts from India, China and Egypt. Color is simply light of varying wavelengths and as such, is a form of energy that is used in color therapy. Fig. 2. shows a light box which has a bulb inside it. When appropriate color filters are used, it gives the desired colored light treatment to the body. It is also called 'colored bathing' and the light box with filters is used by color therapists to treat seasonal affective disorders (SADs) [9].

The sun's light has seven colors (VIBGYOR):

Violet, Indigo, Blue (Cold Spectrum)

Green (Neutral Spectrum)

Yellow, Orange, Red (Warm Spectrum)

These colors are used for cure of different ailments as follows:

- i) Violet, Indigo or Blue (cold colors) are used to cure fever, accidental injuries
- ii) Green (neutral color) is used to remove or prevent infections
- iii) Yellow, Orange, Red or brown (warm colors) are used to cure cold and cough

MEDIUM

Water, granulated sugar or coconut oil can be turned into solar medicine by keeping them in different color bottles and exposing to the sun's rays as follows:

- i) Water for 4 to 6 hours
- ii) Granulated sugar for 4 to 6 weeks
- iii) Coconut oil for 4 to 6 weeks

Research has proved that people who have very low sun exposure – such as those in institutional care or are housebound, people with deeply pigmented skin living in high altitudes or those who, for religious or cultural reasons cover their entire body surface when they are outdoors – are deficient in vitamin D. They should, in consultation with their doctor, consider oral



vitamin D supplementation. A simple method for it is described below.

METHOD

One can easily find Blue, Green and Brown color bottles anywhere. These bottles should be washed and dried. The dried bottles are to be filled with any one of the three mediums - water, granulated sugar or coconut oil up to 2/3rd of the bottle only.

The lid should be closed tightly. Now these bottles are to be exposed to the sun's rays for the stated period of time. The longer the exposure the better it is. Sugar exposed to sun's rays for six months will be twice as strong as a six-week-old medicine. One year exposure will make it four times stronger. The same is true of coconut oil. Water, of course, should be used on the same day or on the very next day. Oil should be used for external application only. Sugar can be taken 3 times a day (two teaspoons for children and three for adults).

Now, fever can be treated by taking blue bottle sugar twice a day or applying a few drops of coconut oil to the parts of the body which are warm.

For cold and coughs, a few drops of brown oil can be applied to the nose, chest or neck and rubbed gently. It will lead to breathing becoming easier. For infection of any kind, green water should be drunk all day long or green sugar can be taken three times a day[10].

RESTRICTIONS

Care has to be taken while using this therapy. Some of the precautions are as follows:

- i) Green color should not be used one hour before or after meal. Its potency will affect digestion.

- ii) Brown bottled sugar or water should not to be taken on an empty stomach.

The sugar bottles should be shaken daily while exposing them to the sun's rays so that heat of sun can penetrate evenly.

CONCLUSION

Physicians place a high value upon exposure to sun as a means of stimulating the nutritive processes of the body in many chronic disease such as anemia, tuberculosis and in convalescence from fever and other similar conditions[11]. Sunlight stimulates and enlivens our body; it is of help in almost all conditions. It is the greatest of all natural tonics which invigorates and stimulates; but if indulged in to excess it intoxicates and poisons. In suitably graduated doses, which vary greatly in individual cases, cumulative and favorable effects are produced which are not accompanied by those unfortunate sequelns associated with many drugs.

Color Therapy can be used for any problem whether, physical, mental, emotional or spiritual for specific problems as well as an over all relaxation therapy. It can be used safely and effectively - either alone or along side any other therapy, whether complementary or orthodox medicine-for adults, children, babies and animals alike. Color energy can be the catalyst for our healing process that encourages normal and healthy workings of the body. Color is everywhere and should be utilized as part of our everyday life. A professional color therapist can explain and advise you on how you can use color at home for health and well being.



REFERENCES

1. http://www.mypurohit.com/Rituals/Aditya_Hrudayam10.asp. Accessed on 15.07.2010
2. <https://www.mindbodyhealing.com/index.php>. Accessed on 06.07.2010.
3. Atul Vyas, 'Sun salutation cures depression', Hindustan Times, 25 July 2010: 1-4, p1.
4. <http://www.arthaonline.com/Yoga/SunSalutationFinal.jpg>. Accessed on 25.07.2010.
5. RA Hobday, Sunlight Therapy and Architecture, Medical History. 1997. 42:455-472.
6. R A Hobday, 'Sunlight, health and energy efficient buildings', Int. J. Ambient Energy, 1992, 13(3): 125-31.
7. Arthur Downes, and T P Blunt, 'Researches on the effect of light upon bacteria and other organisms', Proc. R. Soc. Lond., 1877, 26: 488-500.
8. H J Gauvain, 'Light treatment in surgical tuberculosis', Lancet, 1927, i: 754-8, p. 754.
9. http://www.colourtherapyhealing.com/colour_therapy/. Accessed on 08.07.2010.
10. Anonymous, 'The sun cure-ailing children's new hope', The Times, 11 May 1922: 17-18, p.17.
11. Acharya Satyanand, Surya Chikitsa. Diamond Pocket Books Pvt. Ltd. 1998. Medical Genetics. 168pp.

Instructions to Authors

THE MATTER FOR PUBLICATION

- Original research papers
- Articles by eminent Yoga professionals
- Concise and mini reviews on topics of current interests
- Brief communications on all aspects of fundamental and clinical research on theory and philosophy of Yoga
- Case reports of special therapeutic interest
- Papers on normal metabolic process relevant to human diseases
- Book reviews

MANUSCRIPTS (English and Hindi) shall be complete with figures, tables and reference and be submitted in triplicate along with a soft copy of the article. Papers will be subjected to peer reviewing. Any comments of experts will be communicated to the authors. The Editor reserves the right to correct the grammar mistakes and necessary corrections even of accepted papers.

UNDERTAKING BY THE AUTHORS

An undertaking has to be signed by all the authors that:

- The contents in the whole or in part, for the paper entitled “.....” submitted to “Yoga Vijnana” have not already been published elsewhere in whole or in part.
- The contents in whole or in part, for the paper entitled “.....” submitted to “Yoga Vijnana” will not be published in any other journal unless the authors receive a rejection letter from the Editorial committee of “Yoga Vijnana”.
- The authorship of the paper will not be questioned by any one of us or by any other person whose name is not given and
- The Editor, the members of the Editorial Board, Associate Editors and Scientific Advisor Committee will not be responsible for either the views expressed by the authors or any possible controversy regarding the authorship of the paper.

Typed manuscripts should be double spaced and one side of the paper only, leaving 4 cm margin. Front page should have brief and precise title (all capitals); the names and addresses of authors and institutions at which the work was carried out; present address of the author(s) if different as a footnote; abstract key words (not more than 5) below the abstract for indexing and author for correspondence for papers with multiple authorship as footnote.



The paper should be divided into Abstract, Introduction, Materials and Methods, Results and Discussion, etc.

ABSTRACT should be restricted to summary of the important results and conclusions only without general statements. It should not exceed 150 words and be on first page without abbreviations.

INTRODUCTION mention must be made to the previous work on the subject if the paper briefly, quoting the reference by numbers within brackets in the order in which they are cited. Too many unnecessary details and very old references should be avoided. The reasons for carrying out the present investigations and the lacunae in our present knowledge have to be clearly pointed out.

MATERIALS AND METHODS should contain sources of material and all the actual methods employed in brief.

RESULTS AND DISCUSSION may be given separately or combined according to the discretion of the authors. Lengthy discussions and postulations not based on the actual findings of the study should be avoided. Authors are advised to avoid too many paragraphs.

ABBREVIATIONS: Standard abbreviation should be used after giving the full names first time introducing the terms along with the abbreviations in parenthesis.

FIGURES (LEGEND ALSO) AND TABLES should be on separate pages and numbered consecutively (1, 2, etc). the figures should be drawn clearly in Indian ink on good paper. One original drawing and the other two sets of photographs should be send. Computer generated graphics in black in good quality laser printer are also acceptable. Only standard symbols should be used for figures. Tables should have brief titles and without vertical lines. Statistical significance etc, have to be as footnote to the correspondence tables.

REFERENCE should be numbered in order of citation in the text appropriate place in brackets in line with the text. Reference in the end must be on separate sheets in serial order. They must be complete with names and initials of the authors, year, title of the paper, name of the journal, volume and first and last page numbers and place of publication have to be given. Titles of journals have to be abbreviated in conformity with the list of periodicals.

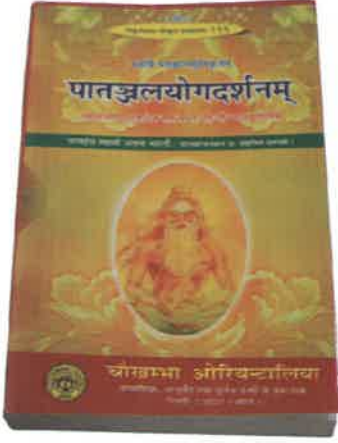
HONORARIUM TO AUTHORS

- A sum of Rs.1000/- as honorarium and Rs.100/- towards the postage shall be paid to the first author of the article.
- Total number of 05 free copies of the published article shall be provided to authors.

Manuscripts (both hard and soft copy) should be sent to Editor, Yoga Vijnana, Quarterly Journal, Morarji Desai National Institute of Yoga, 68, Ashoka Road, New Delhi – 110001. You can also mail us on mdniy@yahoo.co.in

समीक्षा / पुस्तक परिचय

पातञ्जलयोगदर्शनम्



पुस्तक नाम	: पातञ्जलयोगदर्शनम्
सम्पादक/व्याख्याकार	: स्वामी अनन्तभारती (म.म. डॉ. ब्रह्ममित्र अवस्थी)
पेज नं.	: 334
मूल्य	: 275
ISBN	: 978-81-89469-38-2
क्रय स्थान	: चौखम्बा पब्लिशर्स गोकुल भवन, के-37/109, गोपाल मन्दिर लेन वाराणसी-221001 (भारत)
अजिल्द प्रकाशन	: चौखम्बा पब्लिसर्स शाखा : चौखम्बा ओरियण्टलिया

परमहंस स्वामी अनन्त भारती के पिता एक सिद्ध योगी थे, जिनसे इन्हें योग विद्या उत्तराधिकार में प्राप्त हुई है, साथ ही इन्होंने सांख्य योग दर्शन में आचार्य परीक्षा भी उत्तीर्ण की। इसके अतिरिक्त इनमें स्वाध्याय की स्वाभाविक प्रवृत्ति है। परिणामतः सहज ही इनकी योगविषयक रचनाओं में गम्भीरता और स्वाभाविका होगी। इसकी साठ प्रकाशित रचनाओं में लगभग दस रचनाएं योगविषयक हैं जिनमें साधना विषयक दर्शन विषयक और व्याख्याएं तीनों हैं। योग दर्शन विषयक पातञ्जलयोगशास्त्र एक अध्ययन जिसका पुनः प्रकाशन मोरारजी देसाई राष्ट्रीय योग संस्थान से हुआ है, के संबंध में ब्रह्मलीन स्वामी कृष्णानन्द जी महाराज की टिप्पणी थी कि इस विषय में अब तक सर्वश्रेष्ठ पुस्तक डॉ. एस.एन.दास गुप्ता की थी। यह उससे भी अधिक श्रेष्ठ है। इसलिए यह स्वाभाविक है कि पातञ्जलयोगदर्शनम् के व्यास भाष्य के हिन्दी व्याख्यान प्रभा टीका में अनुवाद के अतिरिक्त मौलिकता के भी दर्शन हो।

आचार्य व्यास ने द्वितीय पाद के प्रारम्भ में “उद्दिष्टः समाहित चित्तस्य योगः, कथं व्युत्थित चित्तोऽपि योगयुक्तः रुशसदित्येतदारभ्यते” लिखा है। इसके आधार पर अनेक टीकाकारों ने प्रथम पाद में वर्णित योग को उत्तम अधिकारियों के लिए और क्रिया योग को मध्यम अधिकारियों के लिए माना है। इसका यह अर्थ हुआ कि अष्टांग योग अधम अधिकारियों के लिए है। जबकि वास्तविकता यह है कि प्रथम पाद में जिन सम्प्रज्ञात और असम्प्रज्ञात समाधियों की चर्चा हुई है उसकी साधना विधि ही अष्टांग योग है। अष्टांग योग की साधना करना सामान्य गृहस्थ के लिए सम्भव नहीं है वह न यम-नियम की साधना के प्रसंग में पूर्णतः लोभ-मोह का त्याग कर सकता है और न धारणा से असम्प्रज्ञात समाधि तक पहुंचने के लिए उसे समय मिल सकता है। इस प्रकार क्रिया योग अल्पकालिक साधक के लिए और अष्टांग योग पूर्णकालिक साधक के लिए पतञ्जलि ने निर्देशित किया है और यह मानना अधिक उचित है इसलिए वे स्पष्ट कहते हैं कि “समाधिभावनार्थः क्लेशतनूकरणार्थश्च” (पाद-2, 28

अर्थात् क्रिया योग से समाधि की तैयारी होती है समाधि सिद्ध नहीं। जबकि अष्टांग योग की साधना से योगी न केवल धारणा से उपर चढ़ता हुआ क्रमशः आठ सोपानों को पार करके असम्प्रज्ञात समाधि तक पहुंचता है और अंत में चित्रादि अंतःकरणों का विलय होने पर कैवल्य प्राप्त करता है।

स्वामीजी को प्रभा टीका में इस प्रकार के अनेक स्थलों का निर्देश हुआ है और उन सभी स्थलों पर स्वामी जी ने केवल योगदर्शन की सूत्रों की सहायता ली है। इस प्रकार मैं कहना चाहूँगा कि स्वामीजी की यह प्रभा व्याख्या न केवल योगशास्त्र के विद्यार्थियों के लिए अपितु विश्वविद्यालय के योग विभाग के वरिष्ठतम अध्यापकों के लिए भी पथ प्रदर्शन का कार्य करेगी।

Photo Gallery



Sh. Ghulam Nabi Azad, Hon'ble Union Minister of Health & Family Welfare, Govt. of India at the inaugural function of AYUSH Planet Health Museum. Also seen Dr. IV Basavaraddi, Director, MDNIY at the extreme right.



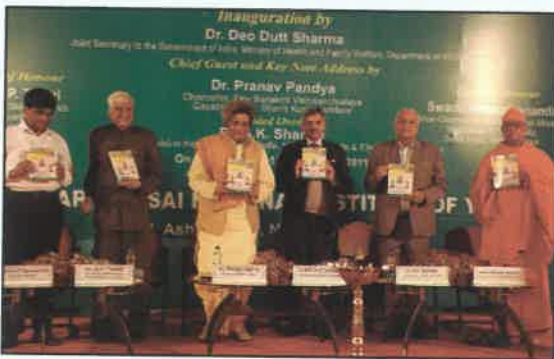
Sh. Ghulam Nabi Azad, Hon'ble Union Minister of Health & Family Welfare, Govt. of India trying his hand at the touch sensitive sculpture.



Dignitaries and Experts from Dept. of AYUSH visit the AYUSH Planet Health Museum



Sh. K.M. Chandrasekhar, then Hon'ble Cabinet Secretary at MDNIY Library during his visit to AYUSH Planet Health Museum.

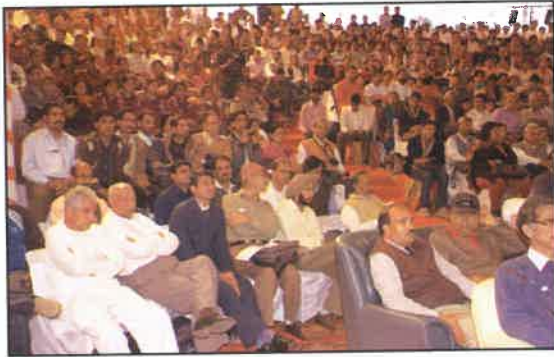


Dignitaries and Experts from left Dr. I V Basavaraddi, Director, MDNIY; Sh. O.P. Tiwari, Secretary, KMYM Samiti, Pune; Dr. Pranav Pandya, MD, Chancellor, Dev Sanskriti Vishwavidyalaya; Dr. D.D. Sharma, Joint Secretary to Govt. of India, Deptt. of AYUSH; Dr. S.K. Sharma, Adviser (Ayurveda); Swami Atmapriyananda, Vice Chancellor, Ramakrishna Mission Vivekananda University release Souvenir at the National Yoga Week-2011



Farewell Ceremony of Diploma in Yoga Science Students, 2009-10

Photo Gallery



A view of audience comprises experts, specialists and participants of National Yoga Week - 2010



Valedictory function of staff of Air Force Station, Palam after successfully completing their regular intensive Certificate Courses in Yoga Science (C.Y.Sc.) for 3 ½ months



Inaugural function of the Golden Jubilee National Seminar cum Workshop on Role of Yoga in Respiratory Tract Disorders by Advanced Centre for Yoga Education and Research (ACYER), GAU, Jamnagar, Gujarat



Eminent experts and audiences at the National Workshop-Cum-Seminar on Role of Yoga in prevention and management of Diabetes Mellitus by Advanced Centre for Yoga Therapy, Education and Research (ACYTER), JIPMER, Puducherry



Swami Mangalteertham, Director, Nutan Sanjeevani Sansthan, Deoghar, Jharkhand delivering his lecture during the 13th Bi-monthly lecture series



Yoga demo by participants during National Yoga Week - 2010

FORM – B

I, Dr. Ishwar V. Basavaraddi, declare that I am the publisher of the journal entitled "Yoga Vijnana" to be printed at New Delhi and published at New Delhi and the particulars in respect of the said journal given hereunder are true to the best of my knowledge and belief:-

- | | |
|---|---|
| 1. Title of the Journal | Yoga Vijnana |
| 2. Language (in which it is to be published) | Bi-lingual |
| 3. Periodicity of the Publication | Quarterly |
| 4. Publisher's Name
Nationality
Address | Dr. Ishwar V. Basavaraddi
Indian
Director
Morarji Desai National Institute of Yoga
68, Ashoka Road, New Delhi – 110001 |
| 5. Place of Publication/Postal Address | Morarji Desai National Institute of Yoga
68, Ashoka Road, New Delhi – 110001 |
| 6. Printer's Name
Nationality
Address | Dr. Ishwar V. Basavaraddi
Indian
Director
Morarji Desai National Institute of Yoga
68, Ashoka Road, New Delhi – 110001 |
| 7. Editor's Name
Nationality
Address | Dr. Ishwar V. Basavaraddi
Indian
Director
Morarji Desai National Institute of Yoga
68, Ashoka Road, New Delhi – 110001 |
| 8. Owner's Name | Morarji Desai National Institute of Yoga
68, Ashoka Road, New Delhi – 110001 |

Dr. Ishwar V. Basavaraddi
Editor

Copyright:

Copyright of the article belongs to MDNIY. We accept no responsibility for unsolicited articles. All objections, disputes, differences, claims and proceeding are subject to Delhi Jurisdiction.

The opinions expressed by the authors in the articles published in this magazine were authors and MDNIY is not responsible for their views. No responsibility is assumed by the publisher for any injury or damage to person or property as a matter of liability, negligence or otherwise or from any user or operation of any methods, products, instructions or ideas contained in the material herein, because of the rapid advancements in medical sciences, independent verification of diagnosis should be made.

Yoga Vijnana

The Science of Yoga

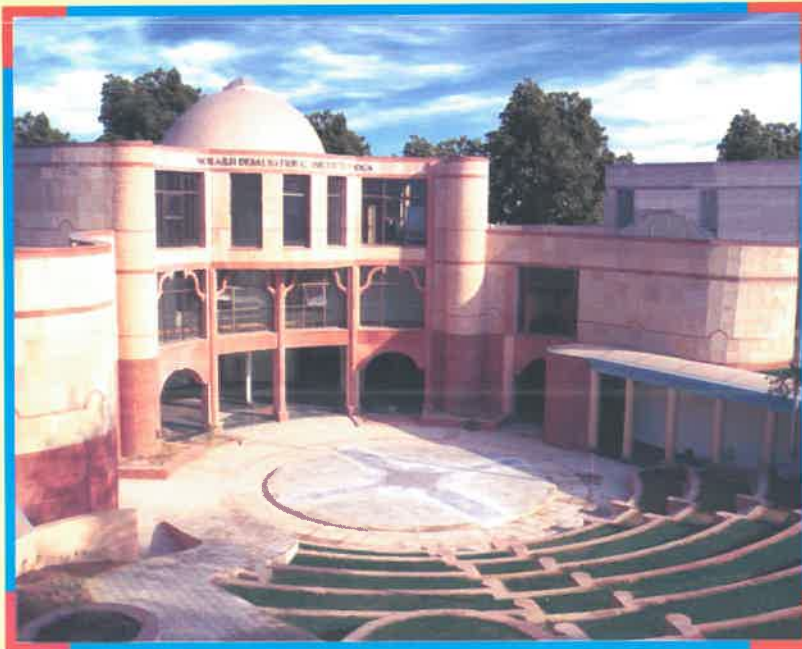
RNI NO. DELBIL/2007/21917

SUBSCRIPTION RATES

	PER COPY	ANNUAL
Indian Currency	₹ 30.00	₹ 120.00
US Currency	US \$ 2	US \$ 8

Mode of Payment :

By Bank Draft or by Money order payable to Morarji Desiasi National Institute of Yoga



MORARJI DESAI NATIONAL INSTITUTE OF YOGA, NEW DELHI

(An autonomous organisation under department of AYUSH, Ministry of Health & Family Welfare, Government of India)

68, Ashoka Road, New Delhi – 110 001

Ph: 011-23730417, 23730418, 23721472 Extn: 201; Telfax: 011-23711657

E-mail: mdniy@yahoo.co.in Website: www.yogamdniy.nic.in