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तदेकोऽवशिष्टः शिवः केवलोऽहम् ।  
I alone persist : Blissful : Absolute.

ॐ

सोऽहम् ।

# YOGA-MĪMĀMSĀ

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## KAIVALYADHAMA

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शरीरमाद्यं खलु धर्मसाधनम् ।

Surely Health is the primary requisite of spiritual life.

सर्वं खल्विदं ब्रह्म ।

All this is, indeed, Brahman

There is nothing here apart from it

नेह नानास्ति किञ्चन ।

## YOGA AS A THERAPY : A PERSPECTIVE

BHAVANANI ANANDA BALAYOGI \*

### ABSTRACT

*The study aims at understanding the traditional view of health and disease with the help of Yoga Vaśiṣṭha, Bhagavadgītā, Pañca Kōśa theory of Upaniśad, as well as, of Patañjali and Haṭha Yoga and also discusses the Scientific basis of using Yoga as Therapy along with its therapeutical modalities. Article also deals with current situation of Yoga Therapy and emphasizes that there is a need to develop a integrated approach towards all forms of therapy wherein Yoga should be a part and parcel.*

**Key words** - Yoga therapy, health, ādhi, vyādhi.

### Introduction

The art and science of Yoga is first and foremost a Mokṣa Śāstra meant to facilitate the individual to attain the final freedom, liberation or emancipation or Kaivalya. However, one of the important by-products of the Yogic way of living is attainment of health and wellbeing. This is brought about by right-use-ness of the body, emotions and mind with awareness and consciousness. This must be understood to be as healthy a dynamic state that may be attained in spite of the individual's Sabīja Karma that manifests as their genetic predispositions and the environment into which they are born. Yoga also helps us to maintain and sustain this dynamic state of health after it has been attained though disciplined self effort and conscious awareness of life itself.

Yogamaharishi Dr Swami Gitananda Giri Guru Maharaj, the visionary founder of Ananda Ashram at the International Centre for Yoga Education and Research (ICYER) in Pondicherry and one of the foremost authorities on Yoga in the past century, has explained the concept of Yoga Cikitsā (Yoga as a therapy) in the following lucid manner.

*"Yoga Cikitsā is virtually as old as Yoga itself, indeed, the 'return of mind that feels separated from the Universe in which it exists' represents the first Yoga therapy. Yoga Cikitsā could be termed as "man's first attempt at unitive understanding of mind-emotions-physical distress and is the oldest holistic concept and therapy in the world."*

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To achieve this Yogic integration at all levels of our being, it is essential that we take into consideration the all encompassing multi dimensional aspects of Yoga that include the following: a healthy life nourishing diet, a healthy and natural environment, a holistic lifestyle, adequate bodywork through Āsanas, Mudrās and Kriyās, invigorating breath work through the use of Prāṇāyāma and the production of a healthy thought process through the higher practices of Jñāna Yoga and Rāja Yoga.

Yogi Svātmārāma in the Haṭhayoga Pradīpikā, one of the classical Yoga texts gives us the assurance, "One who tirelessly practices Yoga attains success irrespective of whether they are young, old decrepit, diseased or weak". He gives us the guarantee that Yoga improves health of all alike and wards off disease, provided we properly abide by the rules and regulations (*yuvā vṛddho ativriddho vā vyādhito durbalo pi vā abhyāsāt siddhimāpnoti sarvayogeśvatandritaḥ*-Haṭhayoga Pradīpikā I:64).

### **Yogic Perspective on Health and Disease**

Yoga understands health and well being as a dynamic continuum of human nature and not a mere 'state' to be attained and maintained. The lowest point on the continuum with the lowest speed of vibration is that of death whereas the highest point with the highest vibration is that of immortality. In between these two extremes lie the states of normal health and disease. For many, their state of health is defined as that 'state' in which they are able to function without hindrance whereas in reality, health is a part of our evolutionary process towards Divinity. The lowest point on the dynamic health continuum with lowest speed of vibration may be equated with lowest forms of life and mineral matter while the highest point with highest speed of vibration may be equated with Divinity.

Yoga aims at enabling the individual to attain and maintain a dynamic Sukha Sthānam that may be defined as a dynamic sense of physical, mental and spiritual well being. The Bhagavad Gītā defines Yoga as Samatvam meaning thereby that Yoga is equanimity at all levels (*yogasthaḥ kurukarmāṇ saṅgaṃ tyaktvā dhanañjaya siddiyāsidoḥ samobūtvā samatvaṃ yoga ucyate* - Bhagavad Gītā II: 48). This may be also understood as a perfect state of health wherein physical homeostasis and mental equanimity occur in a balanced and healthy harmony.

Tiruvalluvar the great Dravidian mystic says in his 1330 verse Tirukkural, a treatise on righteous living, "Look for the disease, look for its primary cause, find the remedy for that primary cause and then apply that remedy" (*noinādi noimudhal nādi athuthanikkum vāi nādi vaippach cheyal-Tirukkural 948*). Most modern doctors and even modern Yoga therapists seem

to have lost their way in the maze and are content managing the manifest symptoms without understanding the real cause. As long as we are only giving symptomatic management through Yoga, it is then merely Yogopathy and not Yoga Cikitsā at all.

Mahariṣi Patañjali, the codifier of the Yoga Darśana has explained the primary causation of psychosomatic stress based disorders through the concept of Pañca Kleśa (five-fold psychological afflictions). These are Avidyā (ignorance of the ultimate reality leading to bodily identification), Asmitā (a false sense of identification), Rāga-Dveṣa (addiction and aversion), Abhiniveśa (clinging on to life or fear of death), (*avidyā asmitā rāga dveśa abhiniveśa kleśaḥ - Yoga Sūtra* II: 3). Avidyā as the root cause enables other Kleśa to manifest in different forms from time to time. They may be dormant, attenuated, manifest or overpowering in their causation of pain and suffering (*avidyā kṣetraṃ uttareṣāṃ prasupta tanu vicchinna udārāṅām - Yoga Sūtra* II: 4).

Dvaitam or the misplaced sense duality (due to Avidyā, the mother Kleśa) is the main initial cause of the imbalance at the higher level that may then manifest into the lower through psychosomatic stress mechanisms. This occurs through the Pañca Kośa (five fold nature of human existence) as various disorders depending upon the propensity (due to Sañcita Karma) of the individual. He prescribes Kriyā Yoga (consisting of Tapa, Svādhyāya and Īśvara Praṇidhāna) as the means to reduce Kleśa influences (*samādhībhāvanārthaḥ kleśatanukaraṇārthaśca - Yoga Sūtra* II: 2).

Yoga Vasiṣṭha one of the great classical Yoga texts describes the causation and manifestation of disease (Vyādhi) in an admirable manner. (I often joke with my students that this text is the first recorded counseling session in human history- the Bhagavad Gītā is of course the second!) In the dialogue between the great sage Vasiṣṭha and Prince Rāma, it describes both psychosomatic (Adhija Vyādhi), as well as, non-psychosomatic ailments (Anādhija Vyādhi). Sāmānya Adhija Vyādhi are described as those arising from day-to-day causes while Sāra Adhija Vyādhi is the essential disease of being caught in the birth -rebirth cycle that may be also understood in modern terms as congenital diseases (caused due to Sañcita Karma). The former can be corrected by day-to-day remedial measures such as medicines and surgery whereas Sāra Adhija Vyādhi doesn't cease until knowledge of the self (Ātma Jñāna) is attained.

The Guru Stotra from the *Viśvasārātantra* also takes a similar line in saying that the ultimate 'wisdom of the self' gained through the Guru destroys Kārmic bondages from many births (*anekajanma samprāpta karma bandha vidhāhine ātmaññāna pradānena tasmai śrigurave namaḥ - Guru Stotra, verse 9*). It is interesting to note that traditional Indian thought views the very

occurrence of birth on this planet as a disease and a source of suffering! Tiruvalluvar reiterates this when he says, "It is knowledge of the ultimate truth that removes the folly of birth" (*pirappu ennum pedaimai neenga chirappu ennum chem porul kaanbadhu arivu- Tirukkural 358*).

Yogamaharishi Dr Swami Gitananda Giri has written extensively about the relationship between health and disease. He says, "Yoga views the vast proliferation of psychosomatic diseases as a natural outcome of stress and strain created by desire fostered by modern propaganda and abuse of the body condoned on all sides even by religion, science and philosophy. Add to this the synthetic "junk food" diet of modern society and you have the possibility of endless disorders developing... even the extinction of man by his own ignorance and misdeeds".

He explains the root cause of disease as follows. "Yoga, a holistic, unified concept of oneness, is Advaitam or non-dual in nature. It suggests happiness, harmony and ease. Dis-ease is created when duality or Dvaitam arises in the human mind. This false concept of duality has produced all conflicts of human mind and the vast list of human disorders. Duality (dis-ease) is the primary cause of man's downfall. Yoga helps return man to his pristine, whole nature. All diseases, maladies, tensions, are manifestations of divisions of what should be man's complete nature, the Atman or 'Self'. This 'Self' is "ease". A loss of "ease" creates "dis-ease". Duality is the first insanity, the first disease, the unreasonable thought that "I am different from the whole... I am unique. I am me."

He goes on to say, "The ego is a manifestation of disease. Only a distorted ego could feel alone, suffer from "the lonely disease", in a Universe, a Cosmos totally filled with the 'Self'. It is interesting that the one of the oldest words for man is "*insane*". Man is "*insane*". A return to sanity, "going sane," is the subject of real Yoga Sādhanā and Yoga Abhyāsa. Yoga Cikitsā is one of the methods to help insane man back onto the path of sanity. A healthy man or woman may be known by the term-Yogi". A very strongly worded yet very true statement indeed from the Lion of Pondicherry!

### **Application of Yoga as a Therapy:**

The Tridoṣa theory of health and disease that developed during the late Vedic period is common to virtually all traditional Indian systems of medicine. Tridoṣa concept has correlation with Pañca Mahābhūta (elements of the manifest universe), as well as, Triguṇa (inherent qualities of nature). Health is understood to be the balanced harmony of the three humours in accordance with individual predisposition while disease results from an imbalanced disharmony. Tirumandiram of Tirumoolar, the 3000 versed Tamil treatise by the Dravidian saint has prescribed the practice of Yoga at different times of day to relieve disorders arising from Tridoṣa imbalances. According to him, practice of Yoga at dusk relieves Kapha, practice at noon relieves Vāta and

practice in morning relieves Pitta disorders (*anjanam pondruda laiyaru mandiyile vanjaga vatha marumaddi yaanattir senjiru kaalaiyir seithidir pittarum nanjara sonnom naraitirai naasame - Tirumandiram 727*).

To live a healthy life it is important to do healthy things and follow a healthy lifestyle. The modern world is facing a pandemic of lifestyle disorders that require changes to be made consciously by individuals themselves. Yoga places great importance on a proper and healthy lifestyle whose main components are:

1. *Ācāra* - Yoga stresses the importance of healthy activities such as exercise and recommends *Āsana*, *Prāṇāyāma* and *Kriyās* on a regular basis. Cardio-respiratory health is one of the main by-products of such healthy activities.
2. *Vicāra* - Right thoughts and right attitude towards life is vital for well being. A balanced state of mind is obtained by following the moral restraints and ethical observances (*Yama-Niyama*). As Mahatma Gandhi said, "there is enough in this world for everyone's need but not enough for any one person's greed".
3. *Āhāra* - Yoga emphasizes need for a healthy, nourishing diet that has an adequate intake of fresh water along with a well balanced intake of fresh food, green salads, sprouts, unrefined cereals and fresh fruits. It is important to be aware of the need for a *Sāttvika* diet, prepared and served with love and affection.
4. *Vihāra* - Proper recreational activities to relax body and mind are essential for good health. This includes proper relaxation, maintaining quietude of action-speech-thoughts and group activities wherein one loses the sense of individuality. Karma Yoga is an excellent method for losing the sense of individuality and gaining a sense of universality.

The application of Yoga as a therapy can be correlated with the *Pañca Kośas* (the five aspects of our existence) and various Yoga practices may be used as therapeutic interventions at different levels in this respect.

At the *Annamaya Kośa* (anatomical level) *Jattis* (simple units of movements), *Mudrās* (gestures for energy generation and conservation), *Kriyās* (structured movements), *Āsanas* (steady and comfortable postures) along with the dietary modifications are useful. At the *Prāṇamaya Kośa* (physiological level) *Ṣaṭ Karmas* (cleansing actions), various *Prāṇāyāmas*, development of breath awareness and working on breath-movement coordination with emphasis on balancing *Prāṇic* energy is to be done. Work on reenergizing and integrating the energies of the *Pañca Prāṇa* and *Upa*

Prāṇa Vāyus needs to be done at this level. At the Manomaya Kośa (psychological level) there are numerous practices such as Trāṭaka (concentrated gaze), Dhāraṇā (concentration), Dhyāna (meditation), Japa and Japa-Ajapa practices that are useful. Various aspects of concentration such as the Maṇḍala Dhāraṇā and other Yoga Dṛṣṭi techniques are also available in the Gitananda tradition for this purpose. An awareness of all aspects of the Antaḥ Karaṇas needs to be developed at this level.

When trying to deal with the Vijñānamaya Kośa (intellectual level) Svādhyāya (self analysis), Satsaṅga (lectures and spiritually uplifting exchange) along with the wonderful Jñāna Yoga and Rāja Yoga relaxation and concentration practices of Yoga are useful. We must remember that according to Swamiji, we thankfully cannot disturb the Vijñānamaya and Ānandamaya Kośas! However what can happen is that we get the other three bodies out of sync with the higher two and so suffer consequences of such ignorant actions.

To understand and work with the Ānandamaya Kośa (universal level) it is important to loose sense of the limited individuality. Learning to implement principles of Karma Yoga (Yoga as skilled action performed without expectation) and following the principle of action in relaxation help us to achieve a sense of joy in all activities. A realization that we live in a blissful universe and that all life is joy is to be brought about in this intervention through use of Bhakti Yoga, Karma Yoga and other aspects like Bhajana, Yogic counseling and Satsaṅga.

Yoga is basically a preventive life-science (*heyam duḥkham anāgatam*- Yoga Darśana II: 16) and hence Yogic counseling is a vital component of Yoga Cikitsā when dealing with all lifestyle disorders. The counseling process is not a 'one off' matter but is a continuous process that starts from the very first visit and continues with every session at different levels. Helping the patients understand their condition, finding the root cause of the problem and creating a healthy opportunity for them to change themselves, is the Dharma of the therapist. My beloved Ammaji (Yogacharini Meenakshi Devi Bhavanani) has defined Dharma as doing the right thing for the right person at the right place and at the right time in the right manner. It may take many months before we start to witness benefits of these Yogic lifestyle changes and Yoga Cikitsā practices. We must continue to motivate the patient (and ourselves too!) to keep up their (our) efforts without allowing any slackening to occur.

### **Scientific Basis of Using Yoga as a Therapy**

Numerous studies have been done in the past few decades on psycho-physiological and biochemical changes occurring following practice of Yoga. A few clinical trials have also been

done that have shown promise despite Yoga not being ideally suited for the scientific gold standard of 'double-blind' clinical trials.

It is virtually impossible for subjects to be taught Yoga without their knowing it is Yoga! The difficulty of finding right methods and apparatus to study higher aspects of Yoga is still to be overcome as there doesn't seem to be much money in it and as we know, money makes the world go round!

Some of the researched benefits that are quite well proven are given below to facilitate an understanding of how Yoga works at least at the physical level though we are yet to research and understand subtler effects of Yoga.

### **Physiological benefits of Yoga**

It has been found that Yoga produces stable autonomic nervous system equilibrium, with a tendency toward parasympathetic nervous system dominance rather than the usual stress-induced sympathetic nervous system dominance. This is of great potential in psychosomatic stress related illness abounding in populations worldwide. Cardiovascular and cardio-respiratory efficiency increases. Heart rate and blood pressure decrease implying a better state of relaxation leading to reduced load on the heart. Respiratory rate decreases with improved respiratory efficiency. The amplitude and smoothness of respiration increases, along with all parameters of pulmonary function such as tidal volume, vital capacity and breath-holding time. EEG - alpha waves increase. Theta, delta, and beta waves also increase during various stages of meditation. Gastrointestinal function and endocrine function normalizes with improvement in excretory functions. Musculoskeletal flexibility and joint range of motion increase. Posture improves with improvement in strength, resiliency and endurance. Body weight normalizes and sleep improves with increased energy levels and the immunity increases with improved ability of pain tolerance.

### **Psychological benefits of Yoga**

It has been found that somatic and kinesthetic awareness increase with better self-acceptance and self-actualization. There is better social adjustment with decrease in anxiety, depression and hostility. Psychomotor functions such as grip strength, balance, dexterity and fine motor skills, eye hand coordination and reaction time, steadiness and depth perception, and the integrated functioning of body parts improve. Mood improves and subjective well-being increases while cognitive functions such as attention, concentration, memory, and learning efficiency improve

### **Biochemical effects of Yoga**

The biochemical profile improves, indicating an anti-stress and antioxidant effect which is important in the prevention of degenerative diseases. There are decreased levels of blood glucose, total white blood cell count, total cholesterol, Triglycerides, LDL and VLDL. At the same time it has been reported that there are increased levels of: HDL cholesterol, ATPase, hematocrit, hemoglobin, thyroxin, lymphocytes, vitamin C and total serum protein following Yoga.

### **Therapeutic Modalities of Yoga Cikitsā**

There are numerous therapeutic modalities used in the application of Yoga as a therapy. Pujya Swamiji Gitananda Giri has enumerated 52 aspects of Yoga Cikitsā in an encyclopedic manner. His exposition of Yoga Cikitsā is unparalleled yet this is a small attempt of mine to put some of these ancient ideas into a modern context for us all to work together towards and harmonious and healthy world. Some of the commonly used modalities are as following:

#### **Physical Therapies**

Āsanas (static postures), Kriyās (systematic and rationale movements), Mudrās (seals of neuromuscular energy) and Bandhas (locks for neuromuscular energy) gently stretch and strengthen the musculoskeletal system in a healthy manner. They improve mobility and flexibility of the different joints and groups of muscles. There is also concomitant improvement in the systemic function such as respiration, circulation, digestion and elimination. A general sense of health and well being is also promoted by these aspects of Yoga that help release feel good hormones like endorphins and encephalin.

#### **Emotional Therapies**

Svādhyāya (introspectional self analysis), Prāṇāyāma (techniques of vital energy control), Pratyāhāra (sensory withdrawal), Dhāraṇā (intense concentration), Dhyāna (meditational oneness) and Bhajana (devotional music) stabilize emotional turmoil and relieve stress and mental fatigue. They bring about an excellent sense of emotional balance that is vital for good health. Group work such as this is important to achieve proper emotional balance that is essential to good health.

#### **Development of Proper Psychological Attitudes**

Yoga encourages us to step back and take an objective view of our habitual patterns of behaviour and thoughts. This enables us to cope better with situations that normally put our bodies and minds

under strain. Patañjali emphasized the need to develop following qualities in order to become mentally balanced humane beings: Vairāgya (detached, dispassionate attitude), Citta Prasādanam (acceptance of the Divine Will), Maitri (friendliness towards those who are at peace with themselves), Karuṇā (compassion for the suffering), Mudita (cheerfulness towards the virtuous) and Upekṣāṇām (indifference and avoidance of the evil) etc. Adoption of the right attitude is one of the most important aspects of Yoga as a therapy and if this is not done it is again more or less Yogopathy and not Yoga Cikitsā.

### **Mental Therapies**

There are a great many Jñāna and Rāja Yoga techniques of relaxation and visualization that are useful. Other practices such as Trāṭaka (concentrated gaze), Prāṇāyāma, Pratyāhāra, Dhāraṇā as well as Dhyāna may also be utilized. Relaxation is a central element in Yoga as it is the body's own way of recharging its cells and helps to ease physical, emotional and mental tensions.

### **Spiritual Therapies**

Svādhyaya, Satsaṅga (spiritual gathering seeking knowledge of the reality), Bhajana sessions and Yogic counseling are important aspects of Yogic therapy that are often neglected in favor of physical therapies alone. It is important to help patients understand their inner spiritual nature and realize that "Oneness" is health whereas "Duality" is disease. We cannot remain lonely, depressed and diseased if we realize that we are part of this bountiful and wholesome, wonderful, happy and healthy Universe.

### **Preventive and Rehabilitative Therapies**

Yoga has numerous preventive benefits especially when it is started early in childhood. It helps in prevention of accidents by increasing awareness as well as agility. Improved immunity helps in preventing infectious and contagious diseases. The added benefit of starting early is that the person knows the technique so that they can do it if needed at a later stage in life. Psychosomatic, stress related and lifestyle disorders may be effectively prevented by adoption of a Yogic way of life. Yoga also offers rehabilitative therapies for most musculoskeletal conditions as well as in recovery for debilitating illnesses. The practice of Yoga also goes a long way towards prevention of disability and improving quality of life in numerous chronic conditions.

### **Pain Relief Therapies**

Yoga is a useful addition to the pain relief therapies as it improves pain tolerance and provides an improved quality of life. It can be safely said that Yoga helps us endure conditions that it may not

be able to cure. This is vital in end life situations where it is important that the patient has a sense of improved quality of life during their end days. Yoga can also benefit caretakers of such terminal patients who are under great stress themselves.

The right-use-ness of these modalities according to condition and needs of patients will enable us to strike at the root cause of the disease and by correcting its origin. If this is done properly, the manifestation of the disease corrects itself and health and harmony can manifest once again.

### **Current Situation of Yoga Therapy:**

Modern Yoga therapy seems to have lost touch with the real essence of Yoga. The art and science of Yoga aims to help us regain our psycho-physiological balance, by removing the root cause of the disharmony (*duḥkhasaṃyogaviyogayogasamjñtam* - Bhagavad Gītā VI: 23). Yet, as Yoga therapists, unless we aim to correct the manifest psycho-somatic disassociation as well as the underlying ignorant, jaundiced perception of reality in the individual, we are really not practicing Yoga Cikitsā.

Managing and suppressing the manifest symptoms with Yoga techniques is just as good or bad as modern Allopathic medicine that focuses primarily on symptomatic management without ever getting close to the "real" cause of most disorders. How many doctors look at the emotional and psychological issues that are the primary cause of the problem in so many of their patients? Remember, the concept of psychosomatics is not older than a hundred years in modern medicine and any doctor talking about 'mind affecting body' disease a couple of hundred years ago risked getting labeled a quack and may have even been crucified at the altar of science!

When today we find our Yoga therapists making the same mistake in merely treating manifesting symptoms without remedying the 'real' cause, I prefer to call it Yogopathy! It may be useful for many but please do understand that it loses the special wholesome nature of Yoga and is no longer Yoga Cikitsā anymore.

An example of this Yogopathy trend is when we use Śavāsana to manage patients of hypertension quoting research that has shown that Śavāsana reduces blood pressure. We seem happy just to bring the blood pressure down for the time being! Real Yoga Cikitsā would try to look for the primary cause of the patient's hypertension and try to tackle that along with Śavāsana for symptomatic management. Without an attempt to remedy the root cause, it remains merely Yogopathy.

Another common example is of using the left nostril Candra Nāḍī Prāṇāyāma to lower the

blood sugar or using the right nostril Sūrya Nāḍi Prāṇāyāma to relieve brochospasm without looking for the real cause of the patient's diabetes or asthma. When we do this, how are we any different than the modern doctors who prescribe anti-diabetic and sympatho-mimetic agents for these patients? Where is the real Yoga in this type of therapy? Where is the effort to find and deal with the primary cause? Without a positive change in attitude or lifestyle, can it be Yoga Cikitsā?

In the application of Yoga Cikitsā it is vital that we take into consideration all the following aspects that are part of an integrated approach to the problem. These include a healthy life nourishing diet, a healthy and natural environment, a holistic lifestyle, adequate bodywork through Āsanas, Mudrās and Kriyās, invigorating breath work through the use of Prāṇāyāma and the production of a healthy thought process through the higher practices of Jñāna and Rāja Yoga.

Extensive research on Yoga being done all over the world has shown promise with regard to various disorders and diseases indicating scientifically the feasibility of them being amiable to the application of Yoga as a therapy. However we must remember to try and deal with the root cause for if not, we are going to only be practicing Yogopathy and not Yoga Cikitsā!

As Yoga Cikitsā starts to be introduced into mainstream health care, we must not fall into the dangerous trap of claiming that Yoga is a miracle that can cure everything under the sun for that "puts off" the modern medical community more than anything. They then develop a stiff resistance to Yoga instead of becoming more open to this life giving and health restoring science. As the use of Yoga Cikitsā in medical centers is still in its infancy we must be cautious about the after-effects we may produce by our conscious and unconscious thoughts, words and actions. Better to err on the side of caution than be true to the adage, "fools rush in where angels fear to tread".

I am not downplaying the potentiality of Yoga for it **DOES** have a role in virtually each and every condition. We must however realize that though Yoga can improve the condition of nearly every patient, it doesn't necessarily translate into words such as cure. Modern medicine doesn't have a cure for most conditions and so when Yoga therapists use such words, it creates a negative image that does more harm than good.

I would like to reiterate at this point the need of the modern age which is to have an integrated approach towards all forms of therapy. We must try to integrate concepts of Yoga in coordination and collaboration with other systems of medicine such as Allopathy, Āyurveda, Siddha and Naturopathy. Physiotherapy, osteopathy and chiropractic practices may be also used with the Yoga Cikitsā as required. Don't forget that advice on diet and adoption of a healthy lifestyle is very important irrespective of the mode of therapy employed for the patient.

Yoga can for sure, help regain the ease we had lost earlier through dis-ease (as implied by *sthira sukham āsanam*- Yoga Darśana II: 46). It can also enable us to attain a dynamic state of mental equanimity (*samatvam yoga ucyate*- Bhagavad Gītā II: 48) where the opposites cease to affect us any more (*tato dvandvā nabhighāta*- Yoga Darśana II: 48). This enables us to move from a state of illness and disease to one of health and wellbeing that ultimately allows us to move from a lower animal nature to a higher human nature and finally reach the highest Divine Nature that is our birthright.

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# Role of yoga in prevention and management of lifestyle disorders

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## ABSTRACT

The modern world is facing a pandemic of lifestyle disorders that require changes to be made consciously by individuals themselves, and as yoga is the best lifestyle ever designed, it has potential in the prevention, management, and rehabilitation of prevalent lifestyle disorders. Yogic lifestyle, yogic diet, yogic attitudes, and various yogic practices help humans to strengthen themselves and develop positive health, thus enabling them to withstand stress better. This yogic “health insurance” is achieved by normalizing the perception of stress, optimizing the reaction to it, and by releasing the pent-up stress effectively through various yogic practices. This review paper summarizes important findings of a recent research on yoga in lifestyle disorders including a series of studies at Puducherry, India, documenting positive effects. The majority of studies on yoga and cardiovascular and metabolic health show positive trends and this augurs well for the future of health care in general and the use of yoga as a part of integrative health care in particular. Major benefits of yoga may occur due to its lifestyle components (healthy diet, activity, relaxation, and positive attitude) as well as psychosomatic harmonizing effects of pranayama and yogic relaxation. Yoga places a great importance on a proper and healthy lifestyle whose main components are achar (healthy activities), vichar (healthy relationships), vichar (healthy thoughts), ahar (healthy food), and vihar (healthy recreation). The basic yogic principles useful in the management of lifestyle disorders are discussed including psychological reconditioning and development of appropriate attitudes; stress management normalization of metabolism; and relaxation, visualization, and contemplative practices.

**Key Words:** Lifestyle disorders, stress, yoga

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## INTRODUCTION

The World Health Organization defines health as “The state of complete physical, mental and social well-being and not merely absence of disease or infirmity.” The yogic way of living is a vital tool that helps attain that “state” of health. We must not forget that it is more important to have both a sense of “being” healthy as well as “feeling” healthy. Hence, the qualitative aspect of health, the spiritual nature of the human life, is rightly considered more important in yoga and other Indian systems of traditional medicine.

The holistic art and science of yoga is the best lifestyle ever designed and is effective in managing prevalent lifestyle disorders such as diabetes and hypertension. Interestingly, modern research has begun to focus on the psycho-physiological beneficial effects of yoga which need to be understood as more than merely a form of physical exercise (Innes, Bourguignon & Taylor, 2005; Innes & Vincent, 2007).

Yogic lifestyle, yogic diet, yogic attitudes, and various yogic practices help humans to strengthen themselves and develop

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positive health, thus enabling them to withstand stress better. This yogic “health insurance” is achieved by normalizing the perception of stress, optimizing the reaction to it, and by releasing the pent-up stress effectively through various yogic practices. Yoga is a holistic and integral science of life dealing with physical, mental, emotional, and spiritual health of the individual and the society.

## RESEARCH STUDIES ON YOGA AND LIFESTYLE DISORDERS

Comprehensive reviews have suggested that yoga reduces the cardiovascular risk profile by decreasing the activation of sympatho-adrenal system and hypothalamic-pituitary-adrenal axis and also by promoting a feeling of well-being along with direct enhancement of parasympathetic activity (Innes, Bourguignon & Taylor, 2005; Innes & Vincent, 2007). The authors also suggested that yoga provides a positive source of social support that may also be one of the factors reducing risk for cardiovascular diseases. In fact, all the studies reviewed by the authors suggested that yoga improves lipid profile, and as this is an important risk factor for heart disease, such a possibility needs further exploration in greater detail. Their 2005 review covered seventy eligible studies investigating the effects of yoga on risk indices associated with insulin resistance syndrome, cardiovascular disease, and possible protection with yoga, and they reported that most had a reduction of systolic pressure (SP) and/or diastolic pressure.

Most lifestyle disorders adversely impact functioning of the autonomic nervous system (ANS) and hence research on yoga focusing on this aspect is noteworthy. Studies have shown that central nervous system processing is also affected in diabetes mellitus and that a comprehensive 6-week yoga therapy program produces a significant shortening in auditory reaction time in diabetic patients (Madanmohan, Thombre, Das, Subramanian & Chandrasekar, 1984; Madanmohan, Bhavanani, Dayanidy, Sanjay & Basavaraddi, 2012). It has also been reported that yoga improves nerve conduction (Malhotra et al., 2002) and biochemical profile (Gordon et al., 2008) in patients of diabetes mellitus.

It has been reported that even a short lifestyle modification and stress management education program based on yoga reduces risk factors for cardiovascular disease and diabetes within a period of 9 days (Bijlani et al., 2005) while a systematic review of 32 articles published between 1980 and 2007 found that yoga interventions are effective in reducing body weight, blood pressure (BP), glucose level, and high cholesterol (Yang, 2007).

Yogic practices may have a role in the prevention and management of diabetes and in comorbid conditions such as hypertension and dyslipidemia (Sahay, 2007). Long-term yoga practice is associated with increased insulin sensitivity and attenuation of negative relationship between body weight or waist circumference and insulin sensitivity (Chaya et al., 2008).

The cardiovascular health-promoting benefits of yoga have been studied in a literature review that reported significant

improvements in overall cardiovascular endurance of young participants who were given varying periods of yoga training (Raub, 2002). Physical fitness increased as compared to other forms of exercise and longer duration of yoga practice produced better cardiopulmonary endurance. Another detailed review of yoga in cardiac health concluded that yoga is beneficial in the primary and secondary prevention of cardiovascular disease and that it can play a primary or a complementary role in this regard (Jayasinghe, 2004).

Other prominent studies (Ornish et al., 1990; Manchanda et al., 2000; Yogendra et al., 2004) conducted prospective, randomized controlled trials on angiographically proven coronary artery disease patients with yoga intervention and demonstrated that yoga-based lifestyle modification helps in regression of coronary lesions and improvement in myocardial perfusion. The effect of yogic lifestyle on some of the modifiable risk factors could probably explain the preventive and therapeutic beneficial effect observed in coronary artery disease.

A series of studies conducted at Puducherry, India (Bhavanani, Sanjay & Madanmohan, 2011; Bhavanani & Ramanathan, 2012; Bhavanani, Madanmohan & Sanjay, 2012; Bhavanani, Madanmohan, Sanjay & Basavaraddi, 2012; Bhavanani, Madanmohan & Sanjay, 2012; Bhavanani, Madanmohan, Zeena & Vithiyalakshmi 2012; Madanmohan, Bhavanani, Sanjay, Vithiyalakshmi, & Dayanidy, 2013), have documented the immediate effects of various pranayamas in hypertension where yoga has been shown to be an effective adjunct therapy. Different pranayamas were studied in patients of hypertension and postulated mechanisms behind healthy reductions in heart rate, SP, diastolic pressure, mean pressure, and BP indices such as rate–pressure product and double product were determined. Beneficial immediate results of sukha (inhalation = exhalation), savitri (6:3:6:3 rhythm for inhalation: held in: exhalation and held-out breath in sitting and supine positions), chandra nadi (exclusive left nostril breathing), and pranava pranayamas (using audible AUM chanting during prolonged sequential exhalation in sitting and supine positions) were reported. These changes were attributed to a normalization of autonomic cardiovascular rhythms as a result of increased vagal modulation and/or decreased sympathetic activity and improved baroreflex sensitivity along with an augmentation of endogenous nitric oxide production. The prolonged exhalation phase of pranava pranayama was hypothesized to mimic Valsalva maneuver, resulting in decreased venous return, cardiac output, and SP. These findings have potential therapeutic applications in day-to-day as well as clinical situations where BP needs to be brought down at the earliest. These simple and cost-effective techniques may be added to the management protocol of hypertension in addition to regular medical management.

Yoga may be able to have a positive influence in even a single session and a retrospective review from Centre for Yoga Therapy, Education and Research (CYTER) (Bhavanani, Ramanathan & Madanmohan, 2013) analyzed clinical data to determine

cardiovascular effects of a single yogic session in 1896 normal individuals as well as patients of different medical conditions. The CYTER team found a healthy reduction in heart rate, BP, and derived cardiovascular indices following a single yogic session. The magnitude of this reduction depends on the preexisting medical condition as well as the yoga therapy protocol adopted. These changes were attributed to enhanced harmony of cardiac autonomic function as a result of coordinated breath–body work and mind–body relaxation due to yoga.

## ROLE OF YOGA IN MODULATING THE STRESS RESPONSE

Stress plays a vital role in inducing, precipitating, or worsening all lifestyle disorders and hence it is imperative to understand that we can manage it better through yoga. Streeter et al. proposed a theory to explain the benefits of yogic practices in diverse, frequently comorbid medical conditions based on the concept that yogic practices reduce allostatic load in stress response systems such that optimal homeostasis is restored (Streeter, Gerbarg, Saper, Ciraulo & Brown, 2012).

They hypothesized that stress induces an:

1. Imbalance of the ANS with decreased parasympathetic and increased sympathetic activity
2. Underactivity of the gamma aminobutyric acid (GABA) system, the primary inhibitory neurotransmitter system, and
3. Increased allostatic load.

They further hypothesized that yoga-based practices (1) Correct underactivity of the parasympathetic nervous system and GABA systems in part through stimulation of the vagus nerves, the main peripheral pathway of the parasympathetic nervous system and (2) reduce allostatic load.

According to the theory proposed by Streeter et al., the decreased parasympathetic nervous system and GABAergic activity that underlie stress-related disorders can be corrected by yogic practices, resulting in amelioration of disease symptoms.

## YOGIC MANAGEMENT OF LIFESTYLE DISORDERS

Basic yogic principles that are used in the management of lifestyle disorders include the following (Giri, 1976; Bhavanani, 2013):

1. Psychological reconditioning and development of appropriate attitudes such as yama-niyama, chaturbhavana, and pratipaksha bhavanam
2. Stress management through counseling, jathis (loosening techniques), asanas (postures), kriyas (systematic rational breath–body coordination movements), and pranayama (breath–energy harmonizing techniques)
3. Helping normalize metabolic activity through physical activity such as surya namaskar, asanas, kriyas, and pranayama

4. Relaxation, visualization, and contemplative practices to induce a sense of inner calmness and well-being.

According to Swami Kuvalayananda, founder of Kaivalyadhama, positive health does not mean mere freedom from disease but is a jubilant and energetic way of living and feeling that is the peak state of well-being at all levels – physical, mental, emotional, social, and spiritual (Kuvalayananda & Vinekar, 1971). Accordingly, one of the aims of yoga is to encourage positive hygiene and health through development of inner natural powers of body and mind. In doing so, yoga gives special attention to various eliminative processes and reconditions inherent powers of adaptation and adjustment of body and mind. Thus, the development of positive powers of adaptation and adjustment, inherent to the internal environment of humans, helps them enjoy positive health and not just mere freedom from disease. He emphasizes that yoga produces nadi shuddhi (purification of all channels of communication) and mala shuddhi (eradication of factors that disturb balanced working of body and mind).

According to Swami Kuvalayananda (Kuvalayananda & Vinekar, 1971), yoga helps cultivation of positive health through three integral steps as follows:

1. Cultivation of correct psychological attitudes (maitri, karuna, mudita, and upekshanam toward those who are sukha, dukkha, punya, and apunya)
2. Reconditioning of neuromuscular and neuroglandular system – in fact, the whole body – enabling it to withstand stress and strain better
3. Laying a great emphasis on appropriate diet conducive to such a peak state of health, and encouraging the natural processes of elimination through various processes of nadi shuddhi or mala shuddhi.

To live a healthy life, it is important to do healthy things and follow a healthy lifestyle. The modern world is facing a pandemic of lifestyle disorders that require changes to be made consciously by individuals themselves. Yoga places a great importance on a proper and healthy lifestyle whose main components are as follows (Giri, 1976; Bhavanani, 2013):

1. Achar – Yoga stresses the importance of healthy activities such as exercise and recommends asanas, pranayamas, and kriyas on a regular basis. Cardiorespiratory health is one of the main by-products of such healthy activities
2. Vichar – Right thoughts and right attitude toward life is vital for well-being. A balanced state of mind is obtained by following the moral restraints and ethical observances (yama-niyama). As Mahatma Gandhi said, “there is enough in this world for everyone’s need but not enough for any one person’s greed”
3. Ahar – Yoga emphasizes the need for a healthy, nourishing diet that has an adequate intake of fresh water along with a well-balanced intake of fresh food, green salads, sprouts, unrefined cereals, and fresh fruits. It is important to be aware of the need for a satwika diet, prepared and served with love and affection

4. Vihar – Proper recreational activities to relax body and mind are essential for good health. This includes proper relaxation, maintaining quietude of action-speech-thoughts, and group activities, wherein one loses the sense of individuality. Karma Yoga is an excellent method for losing the sense of individuality and gaining a sense of universality.

## A YOGIC APPROACH TO PREVENTION AND MANAGEMENT OF LIFESTYLE DISORDERS

### Cultivation of right attitudes

The most important part of tackling lifestyle disorders is the cultivation of right attitudes by the development of yogic attitudes toward every part of life. This is vital to reduce the stress that is more often an inner over-reaction than the response to any external stimuli. The attainment of clarity of mind (chitta prasadhanam) through the attitudes extolled by Maharishi Patanjali (maitri, karuna, mudita, and upekshanam) is to be inculcated by the therapist. The therapists need to stress the importance of the individual taking the opposite view toward negative thoughts and actions (pratipaksha bhavanam) as well as emphasis on the cultivation of Karma Yoga, Raja Yoga, and Bhakti Yoga principles in daily life.

### Healthy heart-friendly diet

It is important to have a diet that is of a healthy nature. Meals should be taken regularly and there should be adequate amounts of green vegetable salads, sprouts, fenugreek, turmeric, bitter gourd, and neem. There should be the minimum possible amount of salt in the diet and it should have adequate potassium and calcium that are present in fruits and low-fat dairy products. It is important to maintain good hydration, and therapists need to stress that a loss of a few kilograms of body weight will help reduce the BP and enhance insulin sensitivity. Some good pointers are: eat when hungry and after the previous meal has been digested, take regular small meals with complex carbohydrates, and avoid refined foodstuffs and junk foods.

### Breath–body movement coordination practices

Practices that enhance mind–body harmony through the use of “breath-linked movements” should be emphasized. Sukshma vyayama and sheetalikarana vyayama practices as well as the enjoyable jathis of the Gitananda tradition are useful in this regard. The surya namaskar when done slowly with breath awareness can also produce psychosomatic harmony and the postures can be held without strain for a short period with meditative awareness of the surya mantras (names of the sun).

### Yoga asanas

Modified versions of the following asanas as per physical condition and other associated health problems of the patient may be used. Standing postures such as tada asana, trikona asana, padottana asana, hasthapada asana, padangushta asana, and mehru asana are useful. Prone postures that are of benefit include bhujanga asana and ardha shalaba asana while useful sitting postures include vakra asana, gomukha asana, ushra asana, shashaha asana, and yoga

mudra asana. The supine postures include matsya asana, pavana mukta asana, and eka and dwipada uttanpada asana. Topsy turvy postures may help in resetting baroreceptor reflex mechanisms that regulate BP. This may also be achieved by “head-below-heart” postures that do the same if the patient cannot do postures such as sarvanga and sethubanda sarvanga asana.

### Pranayamas

Vibhaga and pranava pranayama are beneficial as also chandra bhedana and chandra nadi pranayamas help reduce sympathetic overactivity. Savitri, nadi shuddhi (aloma viloma in the Gitananda tradition), and bhrumari pranayama are excellent practices to reduce stress. Pranayamas such as sheetali and sitkari also produce a sense of relaxation.

### Kriyas to cleanse the toxins

For patients who are able to do them, cleansing practices such as kunjai, nauli, kapalabhati, agnisara, shanka prakshalana may be done as deemed fit for the individual predisposition.

### Mudras

Viparita karani, shanmuki mudra, and brahma mudra are all useful in various ways. Viparita karani helps by virtue of being “head-below-heart” and also has a profound effect on the psycho-neuro-endocrine axis. Shanmuki mudra produces a sense of inner calm while brahma mudra by virtue of working with breath and vibration (nada) induces a sense of relaxation and reinvigoration in the head and neck region that reduces stress and normalizes reflex mechanisms.

### Yogic relaxation

Hatha Yoga relaxation practices that can be done from shavasana include spandha nishpandha kriya (alternate tension and relaxation), marmanasthanam kriya (part-by-part relaxation), and kaya kriya (dynamic body relaxation). Jnana Yoga relaxation practices such as anuloma viloma kriya and yoga nidra can help reduce stress levels and create psychosomatic harmony. Even simple makara asana offers an excellent antidote to stress and benefits the patients of all psychosomatic disorders.

### Dharana and dhyana

Concentrative practices that induce a state of meditation include the popular om japa and ajapa japa. Chakra dhyana is another useful practice while mandala dharana may be done on all chakras with special emphasis on anahata chakra to harmonize prana vayu that is based in the heart region and on the navel center to harmonize the samana vayu at manipura chakra.

### Yogic counseling

This is a vital component of Yoga Chikitsa when dealing with any lifestyle disorder as yoga is basically a preventive life science (heyam dukhkam anagatham - Yoga Darshan II: 16). The counseling process is not a “one off” matter but is a continuous process that starts from the very first visit and continues with every session at different levels.

## CONCLUSION

Yoga has a great potential in preventing and managing lifestyle disorders and diseases, and yogic lifestyle can make an appreciable contribution to improvement of health of our masses. Yoga has the potential to prevent progression of the disease and if started early, maybe even possibly manifest a cure.

The majority of studies on yoga and cardiovascular health show positive trends and this augurs well for the future of health care in general and the use of yoga as part of integrative health-care system in particular. The major benefits of yoga may occur due to its lifestyle components (healthy diet, activity, relaxation, and positive attitude) as well as the psychosomatic harmonizing effects of pranayama and yogic relaxation. According to tradition, yoga implies both the process as well as the attainment of a state of psychosomatic, harmony, and balance (samatvam yoga uchyate - Bhagavad Gita) and this restoration of physical, mental, emotional, and spiritual balance may be the prime factor behind the changes seen across all short- and long-term studies.

It has been aptly stated that with no appreciable side effects and multiple collateral benefits, yoga is generally safe, simple to learn, and can be practiced by even ill, elderly, or disabled individuals. It has also been recommended that it should be considered as a beneficial adjuvant for patients of such disorders as it is a safe, simple, and economical therapy (Jain, Uppal, Bhatnagar & Talukdar, 1993).

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There are no conflicts of interest.

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## Bhavanani: Yoga in lifestyle disorders

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# YOGA IN HEALTH CARE

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**ABSTRACT:** We are today faced with numerous debilitating chronic illnesses related to aging, environment, and hedonistic lifestyle, such as cancer, diabetes, osteoporosis, and cardiovascular diseases as well as many incurable diseases such as AIDS. Modern medical advancements provide the rationale for the integration of various traditional healing techniques including Yoga to promote healing, health, and longevity. It is imperative that advances in medicine include the wholistic approach of Yoga to face the current challenges in health care. The antiquity of Yoga must be united with the innovations of modern medicine to improve quality of life throughout the world. While modern medicine has a lot to offer humankind in its treatment and management of acute illness, accidents and communicable diseases, Yoga has a lot to offer in terms of preventive, promotive and rehabilitative methods in addition to many management methods to tackle modern illnesses. While modern science looks outward for the cause of all ills, the Yogi searches the depth of his own self. This two way search can lead us to many answers for the troubles that plague modern man. It is suggested that a two way integration of the experimentally tempered modern science with the experientially modelled science of Yoga can lead us to many answers for challenges plaguing modern humankind such as debilitating chronic illnesses related to aging, environment, and hedonistic lifestyle. Modern medical advancements provide the rationale for the integration of various traditional healing techniques including Yoga to promote healing, health, and longevity. It is imperative that advances in medicine include the wholistic approach of Yoga to face the current challenges in health care. The antiquity of Yoga must be united with the innovations of modern medicine to improve quality of life throughout the world.

## INTRODUCTION:

Yoga is the original mind-body medicine that has enabled individuals to attain and maintain *sukha sthanam*, a dynamic sense of physical, mental and spiritual well being. Bhagavad-Gita defines Yoga as *samatvam* meaning thereby that Yoga is equanimity at all levels, a state wherein physical homeostasis and mental equanimity occur in a balanced and healthy harmony. Yogamaharishi Dr Swami Gitananda Giri Guru Maharaj, the visionary founder of Ananda Ashram at the International Centre for Yoga Education and Research (ICYER) in Pondicherry and one of the foremost authorities on Yoga in the past century, has explained the concept of Yoga Chikitsa (Yoga as a therapy) in the following lucid manner. “Yoga Chikitsa is virtually as old as Yoga itself, indeed, the ‘return of mind that feels separated from the Universe in which it exists’ represents the first Yoga therapy. Yoga Chikitsa could be termed as “man’s first attempt at unitive understanding of mind-emotions-physical distress and is the oldest wholistic concept and therapy in the world.”

To achieve this Yogic integration at all levels of our being, it is essential that we take into consideration the all encompassing multi dimensional aspects of Yoga that include the following: a healthy life nourishing diet, a healthy and natural environment, a wholistic lifestyle, adequate bodywork through Asanas, Mudras and Kriyas, invigorating breath work

through the use of Pranayama and the production of a healthy thought process through the higher practices of Jnana Yoga and Raja Yoga.

#### PSYCHOSOMATIC DISORDERS:

From the Yogic viewpoint of disease it can be seen that psychosomatic, stress related disorders appear to progress through four distinct phases. These can be understood as follows:

1. **Psychic Phase:** This phase is marked by mild but persistent psychological and behavioural symptoms of stress like irritability, disturbed sleep and other minor symptoms. This phase can be correlated with *vijnanamaya* and *manomaya koshas*. Yoga as a mind body therapy is very effective in this phase.
2. **Psychosomatic Phase:** If the stress continues there is an increase in symptoms, along with the appearance of generalized physiological symptoms such as occasional hypertension and tremors. This phase can be correlated with *manomaya* and *pranamaya koshas*. Yoga as a mind body therapy is very effective in this phase.
3. **Somatic Phase:** This phase is marked by disturbed function of organs, particularly the target, or involved organ. At this stage one begins to identify the diseased state. This phase can be correlated with *pranamaya* and *annamaya koshas*. Yoga as a therapy is less effective in this phase and may need to be used in conjunction with other methods of treatment.
4. **Organic Phase:** This phase is marked by full manifestation of the diseased state, with pathological changes such as an ulcerated stomach or chronic hypertension, becoming manifest in their totality with their resultant complications. This phase can be correlated with the *annamaya kosha* as the disease has become fixed in the physical body. Yoga as a therapy has a palliative and quality of life improving effect in this phase. It also has positive emotional and psychological effects even in terminal and end of life situations.

#### POTENTIALITIES OF YOGA:

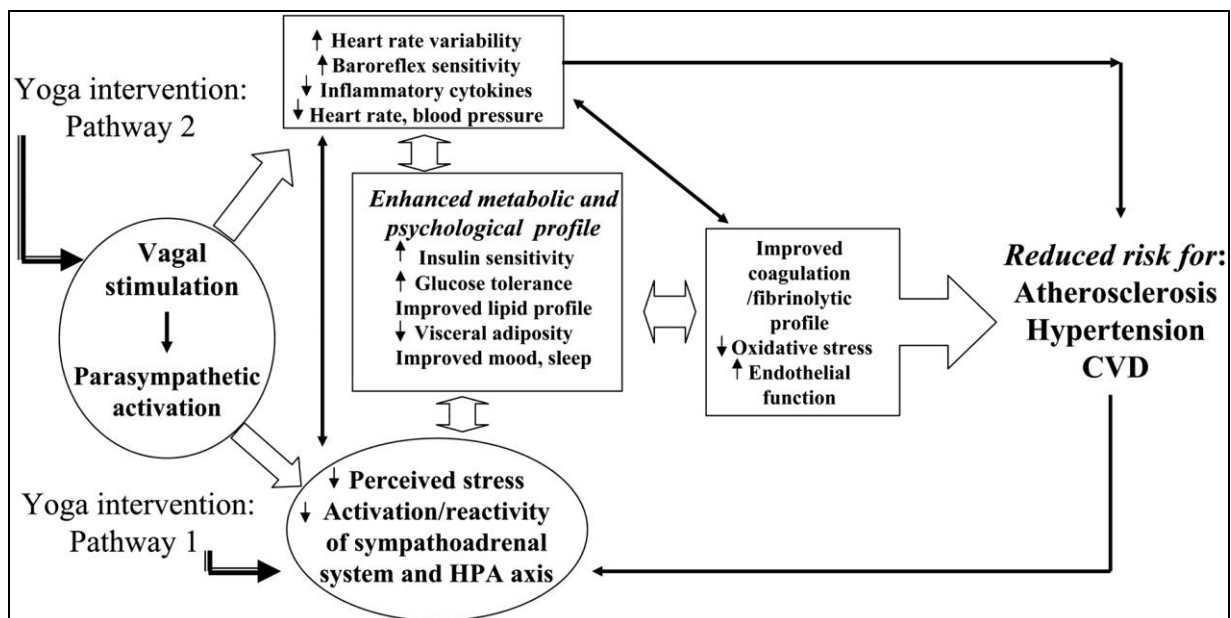
Extensive research on Yoga being done all over the world has shown promise with regard to various disorders and diseases that seem to be amiable to Yoga therapy ([www.iayt.org](http://www.iayt.org), [www.icyer.com](http://www.icyer.com), [www.svyasa.org](http://www.svyasa.org) ). These include psychosomatic, stress disorders such as bronchial asthma, diabetes mellitus, hypertension, irritable bowel syndrome, gastro intestinal ulcer diseases, atherosclerosis, seizure disorder and headache. It also includes physical disorders such as heart disease, lung disease, and mental retardation. Psychiatric disorders such as anxiety disorders, obsessive-compulsive disorder, depression and substance abuse can also be managed along with other therapies. Musculoskeletal disorders such as lumbago, spondylosis, sciatica and carpal tunnel syndrome can be tackled effectively with Yoga practices that offer a lot of hope in metabolic disorders such as thyroid and other endocrine disorders, immune disorders, obesity and the modern metabolic syndrome.

According to Dr B Ramamurthy, eminent neurosurgeon, Yoga practice re-orientates the functional hierarchy of the entire nervous system. He has noted that Yoga not only benefits the nervous system but also the cardiovascular, respiratory, digestive, endocrine systems in addition to bringing about general biochemistry changes in the yoga practitioners. Dr. Dean Ornish, the eminent American doctor who has shown that Yogic lifestyle can reverse heart

isease says, “Yoga is a system of perfect tools for achieving union as well as healing”. Dr Swami Gitananda Giri says, “Yoga is scientific and many of its practices can be measured by existing scientific methods. As a science of mind it offers a safe method of concentration and meditation educating a practical application of the power of the human mind. Its entire process is centered in awareness that is why I call it the science of awareness.”

It is well established that stress weakens our immune system. Scientific research in recent times has shown that the physiological, psychological and biochemical effects of Yoga are of an anti-stress nature. Mechanisms postulated included the restoration of autonomic balance as well as an improvement in restorative, regenerative and rehabilitative capacities of the individual. A healthy inner sense of wellbeing produced by a life of Yoga percolates down through the different levels of our existence from the higher to the lower producing health and wellbeing of a holistic nature. Streeter et al (Med Hypotheses 2012;78: 571-9) recently proposed a theory to explain the benefits of Yoga practices in diverse, frequently comorbid medical conditions based on the concept that Yoga practices reduce allostatic load in stress response systems such that optimal homeostasis is restored. According to the theory proposed by Streeter and colleagues, the decreased parasympathetic nervous system and GABAergic activity that underlies stress-related disorders can be corrected by Yoga practices resulting in amelioration of disease symptoms. HRV testing has a great role to play in our understanding intrinsic mechanisms behind such potential effects of Yoga.

Innes et al had earlier (J Am Board Fam Pract 2005; 18: 491-519) also postulated two interconnected pathways (given below) by which Yoga reduces the risk of cardiovascular diseases through parasympathetic (vagal) activation coupled with reductions in perceived stress and decreased reactivity of sympathoadrenal system and HPA axis. Innes and Vincent (eCAM 2007; 4: 469-86) also postulated similar mechanisms to be operating in reducing risk for Type 2 Diabetes mellitus (DM 2) and for complications related to DM 2.



#### PSYCHOSOMATIC MECHANISMS OF YOGA:

Yoga understands the influence of the mind on the body as well as that of the body on the mind. This is the principle of *adhi-vyadhi* elucidated in the *Yoga Vasishtha* more than 5000

years ago! It is interesting that modern medicine has only realised this connection in the last hundred years whereas Yogis of India were teaching and practising it for thousands of years. No wonder Yoga may be considered as the original mind-body medicine.

We are what we think, yet we also start to think that which we do. Yogic concepts and techniques enable the development of right attitudes towards life and enable us to correct the numerous internal and external imbalances we suffer due to our wrong lifestyle/ genetic potential. Yoga enables us to take responsibility for our own health and happiness and as Swami Gitananda Giri would say, “If you want to be healthy do healthy things, if you want to be happy do happy things”.

The following are just a few of the mechanisms through which Yoga can be said to work as an integrated mind-body medicine:

1. Cleanses the accumulated toxins through various *shuddhi kriyas* and generates a sense of relaxed lightness through *jathis* and *vyayama* type activities. Free flow in all bodily passages prevents the many infections that may occur when pathogens stagnate therein.
2. Adoption of a Yogic lifestyle with proper nourishing diet, creates positive antioxidant enhancement thus neutralizing free radicals while enabling a rejuvenative storehouse of nutrients packed with life energy to work on anabolic, reparative and healing processes .
3. Steadies the entire body through different physical postures held in a steady and comfortable manner without strain. Physical balance and a sense of ease with oneself enhance mental / emotional balance and enable all physiological processes to occur in a healthy manner.
4. Improves control over autonomic respiratory mechanisms through breathing patterns that generate energy and enhance emotional stability. The mind and emotions are related to our breathing pattern and rate and hence the slowing down of the breathing process influences autonomic functioning, metabolic processes as well as emotional responses.
5. Integrates body movements with the breath thus creating psychosomatic harmony. In Yoga the physical body is related to *annamaya kosha* (our anatomical existence) and the mind to *manomaya kosha* (our psychological existence). As the *pranayama kosha* (our physiological existence sustained by the energy of the breath) lies in between them, the breath is the key to psychosomatic harmony.
6. Focuses the mind positively on activities being done, thus enhancing energy flow and resultant healthy circulation to the different body parts and internal organs. Where the mind goes, there the *prana* flows!
7. Creates a calm internal environment through contemplative practices that in turn enable normalization of homeostatic mechanisms. Yoga is all about balance or *samatvam* at all levels of being. Mental balance produces physical balance and vice versa too.
8. Relaxes the body-emotion-mind complex through physical and mental techniques that enhance our pain threshold and coping ability in responding to external and internal stressors. This enhances the quality of life as seen in so many terminal cases where other therapies are not able to offer any solace.

9. Enhances self confidence and internal healing capacities through the cultivation of right attitudes towards life and moral-ethical living through *yama-niyama* and various Yogic psychological principles. Faith, self confidence and inner strength are most essential if at all we wish for healing, repair, rejuvenation and re-invigoration.
10. Yoga works towards restoration of normalcy in all systems of the human body with special emphasis on the psycho-neuro-immuno-endocrine axis. In addition to its preventive and restorative capabilities, Yoga also aims at promoting positive health that will help us to tide over health challenges that occur during our lifetime. This concept of positive health is one of Yoga's unique contributions to modern healthcare as Yoga has both a preventive as well as promotive role in the healthcare of our masses. It is also inexpensive and can be used in tandem with other systems of medicine in an integrated manner to benefit patients.

#### INTEGRATING YOGA AND MODERN MEDICINE:

At first glance, allopathic medicine and Yoga may seem to be totally incompatible and in some ways even antagonistic to each other. Practitioners of either system are often found at loggerheads with one another in typical modern one-upmanship. However it is my humble endeavor as a student of both these life giving, life changing and life saving sciences, to find the similarities that exist between them and build a bridge between these two great sciences of today's world. It would of course be much easier to build a bridge between Yoga and Ayurveda as both share many similarities of concepts such as the Trigunas, Tridoshas, Chakras and Nadis. They also understand that a healthy balance between body, mind and soul leads to total health. Diet and behavior are given importance in both systems and the ultimate goal of both is the attainment of Moksha. Though modern medicine may not share all of these concepts with Yoga, it is to be seen that there are a great many 'meeting points' for the construction of a healthy bridge between them. Both modern medicine and Yoga understand the need for total health and even the World Health Organization has recently added a new dimension to the modern understanding of health by including spiritual health in its definition of the "state of health". Spiritual health is an important element of Yoga and now that even the WHO has come around to understanding this point of view, there is hope for a true unification of these two systems. Modern medicine has the ultimate aim and goal of producing a state of optimum physical and mental health thus ultimately leading to the optimum well being of the individual. Yoga also aims at the attainment of mental and physical well being though the methodology does differ. While modern medicine has a lot to offer humankind in its treatment and management of acute illness, accidents and communicable diseases, Yoga has a lot to offer in terms of preventive, promotive and rehabilitative methods in addition to many management methods to tackle modern illnesses. While modern science looks outward for the cause of all ills, the Yogi searches the depth of his own self. This two way search can lead us to many answers for the troubles that plague modern man.

The potential and manifest integration of Yoga and modern medical science can be discussed under different sub headings as follows:

**PROMOTION OF POSITIVE HEALTH:** Yoga is an excellent tool of promotive health that can enrich modern medicine. The practice of Yoga leads to the efficient functioning of the body with homeostasis through improved functioning of the psycho-immuno-neuro-endocrine system. A balanced equilibrium between the sympathetic and parasympathetic wings of the autonomic nervous system leads to a dynamic state of health. Yogi Swatmarama

in the Hathayoga Pradipika, one of the classical Yoga texts gives us the assurance, “One who tirelessly practises Yoga attains success irrespective of whether they are young, old decrepit, diseased or weak”. He gives us the guarantee that Yoga improves health of all alike and wards off disease, provided we properly abide by the proper rules and regulations (yuvaa vrddho ativrddho vaa vyaadhito durbalo pi vaa abhyaasaat siddhimaapnoti sarvayogeshvatandritah-Hathayoga Pradipika I:64). The World Health Organization (WHO) defines health as a state of complete physical, mental, and social well being and not merely absence of disease or infirmity. WHO has also in recent times suggested a fourth dimension of spiritual health but has fallen short of defining it without confusing it with religion. From a Yogic perspective it is heartening that the WHO definition gives importance to ‘well being’ that is a vital aspect of ‘being’ healthy as well as ‘feeling’ healthy. There is no use in a doctor telling patients that all their investigations are ‘normal’ when the patients themselves are not feeling ‘well’. This qualitative aspect of health is something that Yoga and Indian systems of medicine have considered important for thousands of years. The definition of asana given in the Yoga Sutra as sthira sukham implies this state of steady well being at all levels of existence (sthira sukham asanam- Yoga Darshan II:46). Patanjali also tells us that through the practice of asana we can attain a state that is beyond dualities leading to a calm and serene state of well being (tato dvandva anabhighata- Yoga Darshan II: 48). Yoga aims at enabling the individual to attain and maintain a dynamic sukha sthanam that may be defined as a dynamic sense of physical, mental and spiritual well being. The Bhagavad Gita defines Yoga as samatvam meaning thereby that Yoga is equanimity at all levels. (yogasthah kurukarmani sangam tyaktva dhananjaya siddhiyasidhyoh samobutva samatvam yoga uchyate – Bhagavad Gita II: 48) This may be also understood as a perfect state of health wherein physical homeostasis and mental equanimity occur in a balanced and healthy harmony.

One of the main lacunae of the WHO definition lies in the use of the term ‘state’ that implies health is something to be achieved ‘once and for all’ with no need for care about it thereafter! It is definitely not so. We need to keep working on our health with great vigour and dynamic enthusiasm for the entire span of our life. If health is to be understood as a ‘state’, then it must be understood as a dynamic state that varies from day-to-day and often from minute-to-minute! It is often actually more challenging to maintain this dynamic state of health than to even attain it in the first place. Ask any World No.1 sports champion and they will testify to this inherent truth that applies to sports as well as to life itself.

**MANAGEMENT OF DISEASES AND DISORDERS:** Yoga doesn’t negate the use of drugs and other methods of modern medicine. Maharishi Patanjali in his Avatar as Charaka didn’t shy away from the need to use medicinal herbs as well as surgical methods when necessary for the benefit of the patient. The system of Ayurveda is more in tune with the Yogic views of healing in this regard but definitely the modern antibiotic treatment of infectious diseases as well as the emergency medical and trauma management techniques of modern medicine must be understood to be life-savers in times of need. No Yoga therapist in his or her right mind should try to treat an acute myocardial infarction or an unconscious accident victim by Yoga alone. A symbiotic relationship between the techniques of modern medicine and Yoga can help the patient more than a dogmatic refusal to see the ‘other side’. Yoga has a lot to offer in terms of psychosomatic disorders and in stress related disorders such as diabetes, asthma, irritable bowel syndrome, epilepsy, hypertension, back pain and other functional disorders. Yoga can help reduce and in some cases eliminate drug dosage and dependence in patients suffering from diabetes mellitus, hypertension, epilepsy, anxiety, bronchial asthma, constipation, dyspepsia, insomnia, arthritis, sinusitis and dermatological disorders.

To quote Dr Steven F Brena, “Yoga is probably the most effective way to deal with various psychosomatic disabilities along the same, time-honored, lines of treatment that

contemporary medicine has just rediscovered and tested. Asanas are probably the best tool to disrupt any learned patterns of wrong muscular efforts. Pranayama and Pratyahara are extremely efficient techniques to divert the individual's attention from the objects of the outer environment, to increase every person's energy potentials and 'interiorize' them, to achieve control of one's inner functioning. Moreover, in restoring human unity, the Yoga discipline is always increasing awareness and understanding of ourselves, adjusting our emotions, expanding our intellect, and enabling us not only to function better in any given situation, but to perform as spiritual beings with universal values." Yoga therapists must work in tandem with medical doctors when they are treating patients who have been on allopathic treatment. There are many instances where the patient stops medical treatment thinking that it no more necessary as they have started Yoga. This leads to many catastrophes that could be easily avoided by tandem consultations with a medical specialist. Similarly many modern doctors tend to tell the patient to take up Yoga or relaxation and forget to mention to the therapist what they actually want the patients to do. Most allopathic medications need to be tapered off in a progressive manner rather than being stopped suddenly. We often find this mistake in regard to corticosteroids as well as cardiac medications where sudden stoppage can be harmful. We must remember Plato's words when he said, "The treatment of the part shouldn't be attempted without a treatment of the entirety," meaning that the treatment of the body without treating the mind and soul would be a useless waste of time.

**REHABILITATION:** Yoga as a physical therapy has a lot to offer patients of physical and mental handicaps. Many of the practices of physiotherapy and other physical therapies have a lot in common with Yoga practices. Mentally challenged individuals can benefit by an improvement in their IQ as well as in learning to relate to themselves and others better. As their physiological functions improve with Yoga, the combination of Yoga and physical therapies can benefit such patients as well as those with learning disabilities. Musculoskeletal problems can be treated by the combination to improve function as well as range of movement, strength and endurance abilities. Balance and dexterity can also be improved by the combination therapy. The use of Yoga can help those recovering from accidents and physical traumas to get back on their feet faster and with better functional ability. An example of this was Dr Swami Gitananda Giri who managed to get back on his feet and function normally after a debilitating stay in a full body cast for more than six months. Swamiji used to say, "Modern medicine kept me alive, but Yoga gave me back my life as otherwise I may have been a cripple for life". Yoga also has a lot to offer those suffering from drug and substance abuse in assisting them to get back to a normal life. Yoga helps develop their self-control and will power and also gives them a new philosophy of living. This is vital as otherwise they will lapse into their old negative habits.

**HEALTHY DIET:** This is a place that modern medicine and Yoga can help give a patient as well as normal person the proper wholistic values of a proper diet. Modern research shows us the benefits of the 'break-down' study of foods on the basis of their physical and chemical properties. This is important for the person to know how much of each constituent of food is to be taken in the proper quantity. Yoga can help a person to learn the right attitude towards food as well as understand concepts based on the Trigunas and Tridoshas for better health. Yoga teaches us that the cause of most disease is through under (Ajjeeranatvam), over (Atijeeranatvam) or wrong (Kujeeranatvam) digestion. Yoga also teaches us about the approach to food, the types of food as well as the importance of timings and moderation in diet. A combination of the modern aspects of diet with a dose of Yogic thought can help us eat not only the right things but also in the right way and at the right time thus ensuing our good health and longevity. Yoga emphasizes the importance of not only eating the right type of food but also the right amount and with the right attitude. Importance of not eating alone,

as well as preparation and serving of food with love are brought out in the Yogic scheme of right living. Guna (inherent nature) of food is taken into consideration to attain and maintain good health. Modern dietary science of diet can learn a lot from this ancient concept of classification of food according to inherent nature as it is a totally neglected aspect of modern diet. We are what we eat! The great Tamil poet-saint Tiruvalluvar offers sane advice on right eating when he says, “He who eats after the previous meal has been digested, needs not any medicine.” (marunthuena vaendaavaam yaakkaikku arundiyathu atrathu poatri unnin-Tirukkural 942). He also says that life in the body becomes a pleasure if we eat food to digestive measure (attraal alavuarinthu unga aghduudambu pettraan nedithu uikkum aaruTirukkural 943). He also invokes the Yogic concept of Mitahara by advising that “eating medium quantity of agreeable foods produces health and wellbeing” (maarupaaduillaatha undi marutthuunnin oorupaadu illai uyirkku -Tirukkural 943).

**PSYCHOSOMATIC RELAXATION:** Most medical doctors understand that it is important to relax in order to get better. The problem is that, though the doctor tells the patient to relax, they don't tell them how to do so and maybe in fact they don't know the answer themselves in the first place. Hatha Yoga and Jnana Yoga Relaxation practices help relax the body, emotions and mind. Relaxation is a key element of any Yoga therapy regimen and must not be forgotten at any cost. Shavasana has been reported to help a lot in hypertensive patients and practices such as Savitri Pranayama, Chandra Pranayama, Kaya Kriya, Yoga Nidra, Anuloma Viloma Prakriyas and Marmanasthanam Kriya are also available to the person requiring this state of complete relaxation. It is important to remember that relaxation on its own is less effective than relaxation that follows active physical exertion.

**COPING SKILLS:** Yoga has a lot to offer those who unable to cope with death and dying as well as those suffering from incurable diseases. The Yoga philosophy of living sees death as an inevitable aspect of life that cannot be wished away. Swami Gitananda Giri used to tell us that the whole of life is, but a preparation for the moment of death, so that we can leave the body in the right way. Those who are taking care of the dying as well as those taking care of patients of incurable diseases and major disabilities are under an extreme amount of stress and Yoga practice as well as its philosophy helps them gain the inner strength necessary to do their duty. Yoga can help break the vicious spiral of pain-drug dosage-pain and by doing so help reduce the drug dosage in patients suffering chronic pain. It has been reported that Yoga helps improve the quality of life in patients suffering from cancer and also helps them cope better with the effects of treatment. It relaxes them and helps them sleep better. As someone rightly said, “Yoga may not be able to always cure but it can surely help us to endure”.

**REDUCING EXPENDITURE:** Modern medicine is often criticized for the cost involved in its methods of treatment. Yoga offers an inexpensive method of health that can be added to the medical armory when required. Yoga only requires the patient's own effort and really doesn't need any paraphernalia. Of course the modern Yoga industry would rather have us believe that we need tons of Yoga equipment to start Yoga, but they are awfully of the mark in this case. Reduction in drug dosage and avoidance of unnecessary surgeries in many cases can also help reduce the spiraling cost of Medicare.

**HEALTHY AGING:** Aging is inevitable and Yoga can help us to age gracefully. Modern medicine tries to help retard aging and help people look better by costly surgical methods that are only an external covering over the underlying aging process. Healthy diet, regular exercise, avoidance of negative habits and cultivation of the positive habits and a healthy lifestyle can help us to age with dignity. Yoga can also help our 'silver citizens' retain their mental ability and prevent degenerative disorders such as Parkinson's disease, Alzheimer's and various other dementias. Physical accidents such as falls can be minimized and many an

artificial hip, knee or shoulder replacement surgery can be avoided. My own revered father-Guru Swami Gitananda Giri, Yogashri T Krishnamacharya, Sri Kannaiah Yogi, Swami Suddananda Bharathi, Sri Yogeshwarji, Sri Yogendraji, Sri pattabi Jois and Padma Bhushan BKS Iyengarji are but a few of the Yogis who have shown us that it is possible to grow old without losing any of the physical or mental faculties of youth.

**PSYCHOTHERAPY:** In the field of psychotherapy and psychoanalysis we can find a lot of ancient Yogic concepts being reiterated time and again. Many modern psychotherapeutic concepts such as identification, projection, and transference are similar to concepts in Yoga psychology. Yoga psychology integrates diverse principles within a single body. CG Jung had a great interest in Yoga and the eastern thought and said, "Chakras represent a real effort to give a symbolic theory of the psyche". His 'Centre of Personality' concept based on dream analysis is very similar to the Yogic concept of a central psychic or spiritual personality. He also correlated Chakras to the archetypes that abound in the collective unconscious. Yoga helps the psychotherapist in training self awareness, and in the self regulation of body, diet, breath, emotions, habit patterns, values, will, unconscious pressures and drives. It also helps in relating to the archetypal processes and to a transient being. It offers an integrated method rather than one that is found in isolation in many different therapies. The theory of Kleshas is an excellent model for psychotherapy while emotional therapies of Yoga include Swadhyaya, Pranayama, Pratyahara, Dharana, Dhyana and Bhajans. Development of proper psychological attitudes is inculcated via the concepts of Vairagya, Chitta Prasadnam as well as Patanjali's advise on adopting the attitudes of Maitri, Karuna, Mudita and Upekshanam towards the happy, the suffering, the good and the evil minded persons. Yoga also has a lot to offer in terms of spiritual therapies such as Swadhyaya, Satsangha, Bhajans and Yogic counseling. It is also interesting to note that both Yoga and psychoanalysis share common ground in understanding that symptoms of the disease are often willed by the patients. While all psychoanalysts must undergo psychoanalysis themselves, it is taught in Yoga that one must first undergo a deep Sadhana, before attempting to guide others on the path. However while psychoanalysis searches the unconscious, Yoga attempts to understand and explore the super conscious.

**LIFESTYLE CHANGES:** Yoga helps patients take their health in their own hands. They learn to make an effort and change their life style for the better so that their health can improve. Life style modification is the buzzword in modern medical circles and Yoga can play a vital role in this regard. Yogic diet, Asanas, Pranayamas, Mudras, Kriyas and relaxation are an important aspect of lifestyle modification. To live a healthy life it is important to do healthy things and follow a healthy lifestyle. The modern world is facing a pandemic of lifestyle disorders that require changes to be made consciously by individuals themselves. Yoga places great importance on a proper and healthy lifestyle whose main components are Achar (healthy activities on a regular basis), Vichar (right thoughts and attitude towards life), Ahar (healthy, nourishing diet) and Vihar (proper recreational activities to relax body and mind)

**WOMEN'S HEALTH:** Women are the chosen ones blessed with the responsibility of the future of our human race. Healthy mothers give birth to healthy babies and a healthy start has a great future ahead. Yoga has a lot to contribute in combination with modern medicine to the health status of womankind. Puberty and menopause become easier transitions with the help of Yoga and many eminent Yoginis have said that they were not even aware of a single menopausal symptom as they went through this difficult period in a woman's life. Similarly our young girls can vouch for the fact that their pubertal changes and menarche has been relatively smoother than their counterparts who don't practice Yoga. The benefits of Yoga in terms of family planning are also an important aspect that needs further study, as they can be

an effective part of the contraceptive armory. The risk of side effects is negated and the entire control restored to the individuals themselves. The Oli Mudras as practiced in the Gitananda Yoga tradition have great potential in this regard and also the Swara Yoga theories of conception have a lot of exciting possibilities. Once conception occurs, Yoga helps the young mother to be, to prepare herself physically and mentally for the upcoming childbirth. Yoga helps open the joints of the pelvis and hip as well as strengthen the abdominal muscles for childbirth. Later, simple Pranayamas and relaxation techniques help the new mother relax and enjoy the new experience of her life. Post partum introduction of simple practices along with breathing, relaxation and a lot of crawling helps her come back to normal earlier and this can be used in all maternity hospitals along with allopathic management. Yoga practices can also help reduce the drug dosage in medical problems that often complicate a normal pregnancy such as diabetes, asthma and hypertension.

**RESEARCH:** The positive benefits of Yoga research are of vital significance and an understanding of how the various practices work in different conditions and in normal situations are of great value for both the science of Yoga as well as for the world of medicine. Yoga therapists can benefit a lot by a scientific understanding of Yoga postures and other techniques. This will bring about a rational approach to Yoga therapy rather than a haphazard application of individualistic knowledge. Under the department of AYUSH, Morarji Desai National Institute of Yoga has created advanced centers for Yoga in JIPMER, NIMHANS, AIIMS and DIPAS to promote all aspects of Yoga in these premier medical institutions of India. Various private institutions are running in our country and doing their best to propagate Yoga-Vidya. Yoga therapy is being used both in conjunction with modern medicine or alternative systems of medicine as well as on its own in various centers. Various conditions such as diabetes, hypertension, arthritis, mental depression, bronchial asthma etc have been found to be relieved by Yoga Therapy and centers such as ICYER at Ananda Ashram, sVYASA, Kaivalyadhama, The Yoga Institute and Krishnamacharya Yoga Mandiram are doing a great deal of work in this field. Though there is a lot of research on Yoga being done by medical doctors these days but it is important to remember Swami Gitananda Giri's words when he said, "We must research Yoga and not the lack of Yoga". Many studies are badly constructed and many-a-time we find that the Yoga practices performed by the patients have no real relation to Yoga at all. The higher aspects of Yoga are still not in the 'researchable' realm of modern science.

#### **NEED FOR COORDINATION:**

The need of the modern age is to have an integrated approach towards therapy and to utilize Yoga therapy in coordination and collaboration with other systems of medicine such as Allopathy, Ayurveda, Siddha and Naturopathy. Physiotherapy and Chiropractic practices may be used with the Yoga if needed. Advice on diet and lifestyle is very important irrespective of the mode of therapy that is employed for a particular patient.

#### **PRESENT SCENARIO:**

The therapeutic potential of yoga has been recognized world over and studies have shown its beneficial effects in numerous psychosomatic disorders like diabetes, hypertension, asthma, arthritis and other chronic diseases that are a great burden on our health care delivery system. The International Association of Yoga Therapists in the USA ([www.iayt.org](http://www.iayt.org)) is doing a lot of work to make Yoga Therapy acceptable to the medical community worldwide.

They have given details of hundreds of research studies done all over the world with regard to yoga as a novel and adjunct therapy to be used along with modern medicine.

In India Yoga Therapy is under Dept of AYUSH in Ministry of Health and Family Welfare and through its Morarji Desai National Institute of Yoga ([www.yogamdniy.nic.in](http://www.yogamdniy.nic.in)) five Advanced Centers for Yoga have been set up in our country. The Advanced Centre for Yoga Therapy, Education and Research (ACYTER), a collaborative venture between JIPMER and MDNIY is functioning since June 2008 and focusing primarily on the role of Yoga in the prevention and management of cardiovascular disorders and diabetes mellitus. More than 30,000 patients have benefited from the Yoga therapy consultations and practical sessions till date. The centre also aims to popularize the science of yoga among medical professionals (Yoga Vijnana 2008; 2: 71-78) and general public and has conducted workshops and awareness programmes to this effect.

Central Council for Research in Yoga and Naturopathy in the Ministry of Health and Family Welfare ([www.ccryn.org](http://www.ccryn.org)) funds research studies in Yoga and ran a National Programme on Yoga and Naturopathy in 2010-2011. Yoga therapists have been appointed under the NRHM programmes in government hospitals all over the country and most major private medical hospitals have established Yoga and Healthy Living Centers.

Though there are many private hospitals hosting Healthy Lifestyle Centers for their patients, it is only in recent times that the Public Sector Hospitals have started such centers. AIIMS was one of the first centers to have such a unit (Indian J Physiol Pharmacol 2008; 52: 123-31) but today numerous units are functioning all over the country under the patronage of the Ministry of Health and Family Welfare, Government of India.

The Centre for Yoga Therapy, Education and Research (CYTER) is running at MGMC&RI under the patronage of Sri Balaji Vidyapeeth and a scientifically sound Yoga therapy programme is running since 2010. Awareness programmes have been conducted for medical and paramedical personnel and more than 5000 patients have benefited till date and many studies under publication.

#### A WORD OF CAUTION:

A word of caution is also required. Though Yoga and Yoga therapy are very useful in bringing about a state of total health it is not a miracle cure for all problems. It needs a lot of discrimination on the part of both the therapist as well as the patient. It may not be useful in emergency conditions and there is a strong need to consult a qualified medical doctor where in doubt. Each patient is different and so the therapy has to be molded to suit the individual needs rather than relying on a specific therapy plan for patients suffering the same medical condition. A very true problem is that there is a different approach of the different schools of Yoga to the same condition. It is better to follow any one system that one is conversant with, rather than trying to mix systems in a "Yogic Cocktail". One must also be vigilant as there is a strong presence of numerous quacks pretending to be Yoga therapists and this leads to a bad name for Yoga therapy as well as Yoga in general.

#### CONCLUSION:

The art and science of Yoga has infinite possibilities for providing answers to most health problems troubling modern humankind. However we often misunderstand this science and want it to be a miracle pill. A pill that we take only once, and want all the problems to vanish into thin air! Yoga is a wholistic science and must be learnt and practiced with a holistic

view. The dedicated practice of Yoga as a way of life is no doubt a panacea for problems related to psychosomatic, stress related physical, emotional and mental disorders and helps us regain our birthright of health and happiness. It is only when we are healthy and happy that we can fulfill our destiny. With the adoption of a proper attitude and lifestyle through the Yogic way of life, we can rise above our own circumstances and our life can blossom as a time of variety, creativity, and fulfillment. Yoga helps us regain the ease we had lost through dis-ease (as implied by *sthira sukham asanam-PYS*). It also produces mental equanimity (*samatvam yoga uchyate-BG*) where the opposites cease to affect (*tato dhwandwa anabhigatha-PYS*). This enables us to move from a state of illness and disease to one of health and wellbeing that ultimate allows us to move from the lower animal nature to the higher human nature and finally the highest Divine Nature that is our birthright.

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# A brief qualitative survey on the utilization of Yoga research resources by Yoga teachers

Ananda Balayogi Bhavanani

## ABSTRACT

**Introduction:** Yoga has become popular worldwide with increasing research done on its therapeutic potential. However, it remains to be determined whether such findings actually percolate down into teaching and practice of Yoga teachers/therapists. **Materials and Methods:** The aim of this survey was to document awareness of Yoga research findings in the Yoga community and find out how these were utilized. It was undertaken with a select group of 34 international Yoga teachers and therapists utilizing email and social media between August and December 2015. Majority of responders had well-established reputation in Yoga and were from diverse lineages with 30 of them having more than 5 years of experience in the field. A set of eight questions were sent to them related to essentiality of Yoga research, how they updated themselves on research findings and whether such studies influenced their teaching and practice. Responses were compiled and appropriate statistics determined for quantitative aspects while feedback, comments and suggestions were noted in detail.

**Results and Discussion:** About 89% agreed that it was essential to be up-to-date on Yoga research but only 70% updated themselves regularly with average papers read fully per year being < 10. Most accessed information through general news reports, emails from contacts, and articles on internet sites whereas only 7% were through PubMed. About 60% felt these studies helped them in general teaching whereas 20% said that such studies had not really influenced it in any way. **Conclusion:** This survey provides a basic picture of a general lack of awareness of Yoga research amongst practicing Yoga teachers and therapists. Though a majority agree research is important, few seriously update themselves on this through scientific channels. With regard to future studies, most wanted “proof” that could be used to convince potential clients and felt that more qualitative methods should be applied.

**KEY WORDS:** Health, survey, wellness, Yoga research

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## INTRODUCTION

Yoga has become increasingly popular worldwide with many taking it up professionally thus helping many more benefit from this health enhancing ancient art and science of humanity. A number of scientific studies have been done in the past five decades, and a recent extensive review has reiterated its therapeutic potential with scientific evidence for a wide range of psychosomatic conditions [1].

However, it remains to be determined as to how much such research findings actually percolate down into the day-to-day classroom teaching and clinical practice of the Yoga teachers/therapists.

Important questions that come to mind in this regard are:

1. Are Yoga teacher/therapists aware of recent updates in Yoga research?
2. Are these updates influencing their day to day teaching/clinical practice?

3. Are they satisfied with past and current research being done?
4. What are “priority needs” they wish from researchers?

This is important as a two-way dialog between them and researchers would enhance the focus, objectives as well as methods and ultimate direction of future research in the best productive manner.

In an attempt to determine answers for these pertinent questions, and foster understanding between “the lab and the field,” this survey was done by this author amongst his international contacts in the field of Yoga and Yoga therapy.

## Aim and Objectives

The aim of this survey was to understand the awareness of Yoga research findings in the Yoga teacher/therapist community and to find out how these findings were utilized by them in their day to day practice and teaching.

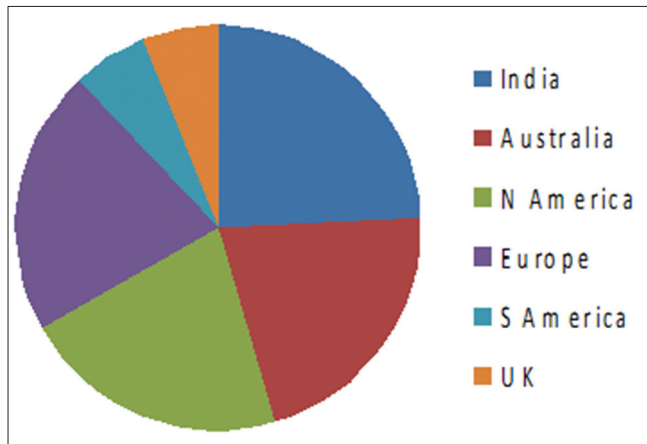
The secondary objective was to see what they felt would be more useful in the context of future research as this author feels such research efforts should be guided by needs of those who are to use it the most.

**MATERIALS AND METHODS**

This survey was undertaken in the months between August 2015 and December 2015. Emails were sent to potential participants and awareness of the survey carried out through social media including Twitter, Facebook, and SlideShare.

**Survey Participants**

This survey was conducted on a select group of 34 international Yoga teachers and therapists known to the author and included 8 from India, 7 from Australia, 8 from North America, 7 from Europe, and 2 each from South America and the UK.



The age of participants in the survey of which 18 were females and 16 males ranged from 28 to 77 (51.08 ± 12.84) years.

Majority of responders had well-established reputation as Yoga teachers/therapists and were from diverse lineages with 30 of them having more than 5 years of experience in the field. Four of them had more than 30 years of professional standing in the field of Yoga. Five of the other respondents who had <3 years of experience in the field were excluded from the survey.

Four of the respondents were medical doctors, 4 nursing professionals, 5 physical therapists, 3 psychologists, whereas the rest were all qualified Yoga teachers/therapists with diplomas/degrees in Yoga from eminent Yoga schools. Traditions represented included the Krishnamacharya-Desikachar tradition, Kaivalyadhama tradition, Gitananda tradition, Iyengar tradition, and Satyananda tradition.

**How long have you been teaching Yoga?**

<5 years	4
5-10 years	6
10-20 years	13
20-30 years	7
More than 30 years	4

Questions asked: The following questions were asked to the participants in the survey and responses obtained from them via email.

1. Do you think it is essential for Yoga teachers to be up-to-date on Yoga research?
2. Do you update yourself on research in Yoga regularly? If yes, how many papers on an average do you read fully per year?
3. Where/how do you access these studies?
4. Have these research studies influenced your teaching? If yes, how?
5. Is/are there any specific study/studies that has/have influenced you the most in the past 3-5 years? If yes, which one/s?
6. Are you satisfied with the quality of Yoga research at present?
7. What type of studies do you wish to see in the future?
8. Any other comments?

Compilation and analysis of responses: Responses from all participants were compiled and statistics (percentage and mean ± standard deviation) determined for quantitative aspects such as demographic parameters (country wise distribution, age, gender, and years of teaching/therapy). Qualitative analysis of important responses was done for other answers and important feedback, comments, and suggestions noted in detail.

**RESULTS AND DISCUSSION**

All the participants were eager to take part in this survey and expressed their support for such an endeavor. In this section, we shall take a look at the important responses given by them for each of the questions with appropriate details discussed in detail.

The first of the questions was as follows:

1. Do you think it is essential for Yoga teachers to be up-to-date on Yoga research?

About 89% of the teachers/therapists agreed that it was essential for Yoga teachers/therapist to be up-to-date on Yoga research. Some felt that it was not essential for teachers but that it was for therapists.

As a Yoga therapist trainer of 18 years from North America put it, “To move the profession forward into modern culture? Yes. To maintain the highest level of Ahimsa? Yes. Can someone support many people without doing so? Probably most of time.”

Another Yoga therapist trainer of 15 years said, “My answer to this is twofold. In the realm of what Dr. Bhavanani calls Yogopathy [2], Yes I think it is essential. In today’s world of “evidence-based medicine” being able to scientifically “prove” that Yoga Therapy is effective enables it to be more widely accepted as a valid treatment. In my experience, sharing this Yoga research as evidence is what opens both physicians and patients to trying it with respect versus skepticism. On the other hand, research whittles down factors to attempt to isolate that which is clinically relevant. As we know, Yoga is beyond the physical and is broad in its application and effects thus it is difficult to “prove” what exactly is happening through a research study. We can hypothesize; however, how the effects

are obtained may be beyond current scientific understanding. Thus, we do not want to fall into a trap of narrowing our focus of approach to that which is scientifically provable. All of this said, my thoughts are that Yoga Therapist should be up-to-date on Yoga research and have a clear understanding of its limitations.

The right means produces the right end, hence outcome of the Yoga practices become better “structured” said a senior Australian Yōgacharya while another respondent from the UK suggested, “No, but it helps and is interesting.”

A senior Yoga therapist from Australia mentioned that this was most essential and that the Standards Committee in both International Association of Yoga Therapists (IAYT) and Australasian Association of Yoga Therapists (AAYT) had made it part of their educational standards for Yoga therapists for the same reason [3].

The next question was as follows:

2. Do you update yourself on research in Yoga regularly? If yes, how many papers on an average do you read fully per year?

Though a vast majority accepted the importance of research in Yoga, only 70% said they updated themselves on research in Yoga regularly with the average papers read fully per year being as follows. Only 9 of them read more than 10 papers a year, whereas 14 said they read less than 5 papers a year.

< 5 papers per year	14
5-10 papers per year	10
10-20 papers per year	3
20-30 papers per year	2
More than 30 papers per year	4

3. Where/how do you access these studies?

It was found that most respondents were accessing their information on Yoga research through the internet and that general news reports, emails from their contacts, and articles on different internet sites were main sources. Only 7% were accessing their information through PubMed, whereas 10% still relied on various books on the subject.

General news reports, emails, and internet sites	72%
PubMed	7%
Google scholar	5%
Books	10%
Research Journals	4%
Research gate	2%

One has to be very careful with the information available on the net and this overreliance on unverified sources is something that needs correction as there is often a vast difference between what has been done in the actual study and what is popularized in the lay press.

An example is a recent study in the Journal of Neuroscience on how sleeping on the side influences clean-up of brain’s metabolic waste products and halts neurological diseases [4].

Many started to talk about it in social media mentioning possible benefits of humans sleeping on their side and how they did it or did not do it. It seemed to this author that most had not even bothered to go to the original source and read the full paper as rodent models were used in the study and not humans. Speak about how having access to more information may not actually result in our being better informed!

4. Have these research studies influenced your teaching? If yes, how?

About 60% felt that these studies had helped them in their general teaching while 55%, 45%, and 40% stated that it helped in their teaching of asanas, pranayama, and relaxation, respectively. About 20% said that such studies had not really influenced their teaching in any way.

General teaching	60%
Asana aspects	55%
Pranayama aspects	45%
Relaxation aspects	40%
Safety aspects	20%
Scientific understanding	20%
Confirmation of ancient wisdom	10%
Nutritional aspects	5%
Not really	20%

As one of the senior trainers noted, “When I can offer a patient a study that “shows” positive benefits of Yoga (cancer research, telomere research, etc.), they are much more open to following the recommendations I make to lifestyle changes and to our treatment approach [5-7].”

It was also noted that showing patients the positive effects of various techniques has encouraged them to be more compliant with what they are taught. A special mention was made of a recent study on the side plank pose (Vasisthasana), in idiopathic and degenerative scoliosis by Fishman and colleagues [8].

However, it was well brought out that one should look at the methodology when it comes to safety precautions as some of the studies on asanas to avoid have methodology concerns. It was noted that an article states that Sarvangasana causes strokes. However, when one reads the article fully we find that the person held it with his head rotated [9]. As the therapist responded, “I don’t know anyone who would do that so I disregard such studies.” She, however, continued, “Osteoporosis studies have influenced my approach with avoiding flexion [10].”

A senior Yōgacharini from Berlin explained that the research findings enabled clearer thinking for the teacher and therapist and helped develop an ability to compare Yōga knowledge with allopathic medicine. It was also essential to understand and point out differences in the therapeutic principles.” She also felt that it enabled the teachers and therapists to be, “on the more safe side.”

An Indian Yoga teacher in the USA stressed the importance of being clear in the aim of one’s research. The focus should be

Yoga, and this should be applied as per the tradition involved. “When it is done in such a manner, it becomes easier for me as a teacher to serve ‘ready material’ to my clients when they have health problems” said she. “The bridge between Yoga and modern science as manifested through research and literary works of Swami Gitananda Giri and his successors strengthens our conviction. When such authentic knowledge is combined with the fact research has been done by medical doctors, it truly helps us convince prospective and current clients about benefits of Yoga” she continued.

A senior Yogacharya responded that he had personally applied concepts of Swarodaya Vignan (study of nasal cycle) learned about through his studies of research in Yoga and been motivated to do a verified analysis of these concepts in relation to staying alert while driving his motor vehicle [11,12]. He attached a detailed report of his personal study of the nostril dominance during different phases of the day and with regard to diverse activities, he was undertaking on a daily basis. He had also practiced the right or left uni-nostril breathing techniques and noted in detail the effects he felt immediately. This author is personally heartened to see such feedback “from the field” as this is actually the “spirit of research” that Yoga research findings should be motivating in all sadhakas. They should be motivated to “see for themselves” whether the findings of the research studies as “true or not” by applying the methodology in their own personal sadhana and life.

5. Is/are there any specific study/studies that has/have influenced you the most in the past 3-5 years? If yes, which one/s?

Most of the respondents did not point out any specific study/studies that has/have influenced them recently but gave more generalized replies. The few that were mentioned by name included recent publications from Kaivalyadhama ([www.kdham.com](http://www.kdham.com)), SVYASA ([www.svyasa.edu.in](http://www.svyasa.edu.in)), Patanjali Yogpeeth ([www.divyaYoga.com](http://www.divyaYoga.com)), ICYER at Ananda Ashram ([www.icyer.com](http://www.icyer.com)), Krishnamacharya Yoga Mandiram ([www.kym.org](http://www.kym.org)), ACYTER at JIPMER ([www.jipmer.edu.in](http://www.jipmer.edu.in)), and CYTER at Sri Balaji Vidyapeeth ([www.sbv.ac.in](http://www.sbv.ac.in)) along with specific mention of iRest in PTSD [13], GABA [14,15], neuroplasticity changes after mindfulness [16], and telomerase studies [6,7]. Studies on fast and slow Surya namaskar, uninostriil pranayamas, cancer, depression, and dementia were also mentioned [15,17-19].

An Australian Yogacharya passed on the feedback from his student who said that the use of well researched and scientifically explained protocol [12] used when she was pregnant gave her a positive feeling of control up to and including the delivery of her baby.

As a Canadian Yogacharya responded, “hard to single one out, but studies on alternative nostril breathing [18,20-22], for instance, have influenced my own practice, and have allowed me to consider gradually incorporating these techniques, which I normally would have deemed too advanced, into some of my classes.”

6. Are you satisfied with the quality of Yoga research at present?

The answers were equally divided between yes and no and a few actually said they were not sure. Some felt they did not have the required expertise to comment on it. Comments received included the noting of more prolific research coming out in recent times but at the same time bemoaning mediocre methodologies adopted. Though it was wholeheartedly accepted that research is a valuable tool, some felt that it was really only proving information handed down to us from the Yogis of yore. Over emphasis of quantitative rather than qualitative aspects of research were mentioned and a need felt for more studies combining both aspects. Longterm longitudinal studies were also suggested through it was at the same time mentioned that this may be highly ambitious.

As said by a senior Yoga therapist in the USA, “I’m satisfied with the rapid trajectory but much more work is needed to bring in mixed methods and participatory action research methodology to capture local, community change as well versus the Asmita of the individual “subject’s” suffering.

An Indian Yoga therapist responded saying, “I am satisfied but there are many Gurus and many traditions of Yoga. Whenever we talk about Yoga education, therapy and especially research, a question always arises about ‘which Yoga’ was done? This leads to confusions in the minds of teachers, patients and students. We should try and research a model syllabus that brings the best of all traditions together” said she.

7. What type of studies do you wish to see in the future?

A senior leader in Yoga therapy from Australia responded “well-designed case studies that allow for individualizing of the protocol, and that can eventually be meta-analyzed.”

A senior trainer from Canada suggested that studies should look at supporting evidence for Yoga as an aid to overcoming addictions, as well as the impact of physical postures in aiding peace of mind and emotional stability. Populations that meditate are said to have better grades, lower crime rates, and selfless behavior and this aspect needs further study. He also suggested orienting research around benefits of Seva and Karma Yoga.

One of the most senior Yoga therapist trainers in India remarked, “Studies should be oriented toward finding out the risks attended with the practice of Yoga.” He went on to suggest that Yoga therapy research should be “individual specific” and look at the individual and their tendencies leading to illness rather than being focused on “illness” per se.

Another USA-based therapist mentioned, “With the increase in lifestyle diseases across the world and the positive effects Yoga has on reducing such diseases, producing more research to ‘prove’ what we know is critical for Yoga’s acceptance as an effective and valid and necessary treatment for a majority of the population today.”

Another Australian Yoga teacher suggested, “I’d like to see comparative studies between traditional classical Yoga (as a health and wellness practice) and say the gym, Pilates, cross-training, etc., and all the other new fads of ‘Yoga’ (Hot Yoga, power Yoga, and the plethora of new wave so-called Yoga fads). It would be interesting to see how effective other exercise modalities are in comparison to the ancient wisdom of Yoga: is the ancient wisdom holding its own in the modern world of technoexercise programs, gyms with so-called instructors, etc.? I would also like to see comparative analysis between Western medicine and Yoga therapy and Ayurveda.”

#### 8. Any other comments?

A dedicated Yogacharya from Bangalore suggested Yoga teaching and therapy curricula should include studies on characterization of humans, ethical, and moral values, the study of Sanskrit as part of life, the study of yogic as well as spiritual textbooks written by the ancient Yogis and Rishis, as well as an overall spiritual education during adolescence.

A Swiss Yogacharini wisely commented, “If science really wants to understand Yoga and its relationship with the human being, it should not stick to just the pieces of the puzzle but attempt to see the bigger picture of Yoga and its holistic effects on humankind.”

A European Yoga teacher of 19 years mentioned an interesting meeting with her GP who is also a Homeopath and works with Chinese meridians. After a brief discussion on Yoga that she was doing, he said, “In all the thousands of people I see, you are the most balanced, do you understand Yin and Yang?” “We both confirmed the powerful results of the regular practice of Yoga and I felt very happy when I left his surgery because I felt like he was amazed and honest,” wrote she.

## CONCLUSION

This survey provides a basic picture of the general lack of awareness about Yoga research among practicing Yoga teachers and therapists. Though a majority agree that research is important, few are seriously updating themselves on such research findings through scientific channels. Most are updating themselves through general articles on the net and such information seems to have minimal influence on their day-to-day teaching and practice in most cases. With regard to future studies, most wanted ‘proof’ that could be used to convince potential clients and felt that more qualitative methods should be applied. It was also felt that comparative studies should be done between traditional/classical methods of Yoga practice as compared with newer innovative styles.

A major limitation of the present work is that the sample size is small and that the author personally knows most of the respondents for a lengthy period of time. However, this direct connection and nonblinding is deemed essential in order to get a “first-hand grassroots” qualitative perspective that is otherwise

lost in studies considering large samples and quantitative statistical analyses.

The overall picture was well summarized by a dedicated Yoga therapy trainer from the USA when she said, “I feel it is ideal for Yoga teachers to follow research however not essential. My experience in teaching Yoga Therapy to Yoga Teachers is that most have no idea how to read a study and how to discern valid information. Thus, they often draw incorrect conclusions from reading simply the abstract or from not understanding the bigger picture. In order for them to obtain value from reading Yoga research, they need training in how to read research.”

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## Understanding Yoga as a Therapy

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### Perspective

Yoga may be said to be as ancient as the universe itself, since it is said to have been originated by *Hiranyagarba*, the causal germ plasm itself. This timeless art and science of humanity sprouted from the fertile soil of *Sanathana Dharma*, the traditional pan-Indian culture that continues to flourish into modern times [1-4]. Today, Yoga has become popular as a therapy, and most people come to it seeking to alleviate their physical, mental and emotional imbalances. We must understand, however, that the use of Yoga as a therapy is a much more recent happening in the wonderful long history of Yoga which has historically served to promote spiritual evolution. Yoga helps unify all aspects of our very being: the physical body, in which we live our daily life; the energy body, without which we will not have the capacity to do what we do; the mind body, which enables us to do our tasks with mindfulness; the higher intellect, which gives us clarity; and finally, the universal body, which gives us limitless bliss [5,6].

All aspects of our life physical, energetic, mental, intellectual and universal are unified through the practice of Yoga, which may also be described as the science of right-use-ness, that is, of using our body, emotions, and mind responsibly and in the most appropriate manner. One of the best definitions of Yoga given by Swami Gitananda Giri is that it is a 'way of life' [7,8]. It is not something you do for 5 minutes a day or 20 minutes a day. It is indeed a 24x7x365 lifestyle.

Illness, disease and disorders are so common in this world, and people everywhere are desperately seeking relief from their suffering. Yoga helps us to think better and to live better; indeed, it helps us improve ourselves in everything we do. Hence it holds out the promise of health, well-being and harmony. According to the Bhagavad Gita, an ancient text which can be said to be a *Yoga Shastra* (seminal textual source of Yoga), Lord Krishna the Master of Yoga (Yogeshwar) defines Yoga as "*dukkhasamyogaviyogam yoga samjnitham*" meaning thereby that Yoga is the disassociation from the union with suffering. Pain, suffering, disease -Yoga offers a way out of all of these [5,6,9,10].

One of the foremost concepts of Yoga therapy is that the mind, which is called *adhi*, influences the body, thus creating *vyadhi*,

the disease. This is known as the *adhi vyadhi* or *adhija vyadhi*, where the mind brings about the production of disease in the physical body. In modern language, this is called psychosomatic illness [11]. Virtually every health problem that we face today either has its origin in psychosomatics or is worsened by the psychosomatic aspect of the disease. The mind and the body seem to be continuously fighting each other. What the mind wants, the body won't do, and what the body wants, the mind won't do. This creates a dichotomy, a disharmony, in other words, a disease. Yoga helps restore balance and equilibrium by virtue of the internal process of unifying mind, body and emotions. The psychosomatic stress disorders that are so prevalent in today's world can be prevented, controlled and possibly even cured via the sincere and dedicated application of Yoga as a therapy.

Psychosomatic disorders go through four major phases. The first is the psychic phase, in which the stress is located essentially in the mind. There is jitteriness, a sense of unnatural tension, a sense of not being 'at ease'. If the stress continues, the psychic stage then evolves into the psychosomatic stage. At this point, the mind and body are troubling each other and fluctuations, such as a dramatic rise in blood pressure, blood sugar or heart rate, begin to manifest intermittently. If this is allowed to continue, one reaches the somatic stage, where the disease settles down in the body and manifests permanently. At this stage, it has become a condition that requires treatment and therapy. In the fourth, organic stage, the disease settles permanently into the target organs. This represents the end stage of the disease.

Yoga as a therapy works very well at both the psychic and psychosomatic stages. Once the disease enters the somatic stage, Yoga therapy as an adjunct to other therapies may improve the condition. In the organic stage, Yoga therapy's role is more of a palliative, pain relieving and rehabilitative nature. Of course the major role of Yoga is as a preventive therapy, preventing that which is to come. Maharishi Patanjali tells us in his *Yoga Darshan*, "*heyamdukkhamanagatham*"-prevent those miseries that are yet to come [1,11].

If the practice of Yoga is taken up during childhood, we can prevent so many conditions from occurring later on in life. This is

primary prevention. Once the condition occurs, once the disease has set in, we have secondary prevention, which is more in the nature of controlling the condition to whatever extent we can. Tertiary prevention is done once the condition has occurred, as we try to prevent the complications, those that affect the quality, and even the quantity, of a patient's life [9].

I would like to conclude this perspective with a word of caution. Yoga therapy is not a magic therapy! It is not a 'one pill for all ills'. There should be no false claims or unsubstantiated tall claims made in this field. Yoga therapy is also a science and must therefore be approached in a scientific, step-by-step manner. It should be administered primarily as a 'one on one' therapy that allows the therapist to modify the practices to meet the needs of the individual. It is not a "one size fits all" or "one therapy fits all" approach

When we use Yoga as a therapy, we need to consider both the nature of the person-his or her age, gender and physical condition and the nature and stage of the disorder. A step-by-step approach must include a detailed look at all aspects of diet, necessary lifestyle modifications, attitude reconditioning through Yogic counseling, as well as the appropriate practices. All of these are integral components of holistic, or rather, wholesome Yoga therapy. When such an approach is adopted, tremendous changes will manifest in the lives of the patients and their families. The quality of life improves drastically and, in many cases, so does the quantity.

As human beings, we fulfill ourselves best when we help others. Yoga is the best way for us to consciously evolve out

of our lower, sub-human nature, into our elevated human and humane nature. Ultimately, this life giving, life enhancing and life sustaining science of humanity allows us to achieve in full measure the Divinity that resides within each of us.

I wish you a happy, healthy and fruitful Sadhana in Yoga. May your potential manifest in a wholesome, harmonious manner.

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