

UNDERSTANDING THE SCIENCE OF YOGA

Yogacharya Dr ANANDA BALAYOGI BHAVANANI

MBBS, ADY, DPC, DSM, PGDFH, PGDY, FIAY

Chairman: ICYER at Ananda Ashram, Pondicherry, India. E-mail: ananda@icyer.com

Websites: www.icyer.com and www.rishiculture.org

ABSTRACT: Yoga is an in-depth, wholistic, science of man and indeed the only science that deals simultaneously with all aspects of the philosophy, psychology and practicality of conscious evolution. While modern science tends to look outward through an experimental model, the science of Yoga enables us to search the depths of our own self, thus realising the ultimate truth through an experiential model. This body of knowledge gained through intense, systematic, introverted investigation into the workings of the human mind has been handed down from master to disciple through millennia. This paper discusses different methods and characteristics of science and finds that all of them have equivalents in Yoga. Views of eminent medical scientists and Yogis are quoted in support of the science of Yoga with examples from various scriptures. The tools and technology of Yoga are discussed along with important aspects of the integration of Yoga and modern scientific medicine. It is suggested that a two way integration of the experimentally tempered modern science with the experientially modeled 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 a way of life, an experiential science of human nature that enables us to realise our real selves. Swami Vivekananda said, “Yoga is really one of the grandest sciences...take up the study of this science as you would any other science of material nature and remember there is no mystery and no danger in it.” Yes, Yoga is the original, timeless, science of the “Self”. Yoga could be rightly termed the science of infinite human possibilities as it enables us to manifest in totality, our inherent potentiality. It is an in-depth, wholistic, science of man and indeed the only science that deals simultaneously with all aspects of the philosophy, psychology and practicality of conscious evolution. Yoga not only has the concepts but also the tools and technology needed for us to find out and realise “Our Self”. While modern science tends to look outward through an experimental model, Yoga enables us to search the depths of our own self thus realising the ultimate truth of reality through an experiential model.

According to Yogamaharishi Dr Swami Gitananda Giri Guru Maharaj, one of the foremost authorities on Rishiculture Ashtanga Yoga in the last century, Yoga is not only a science but is also the mother of all Science. He extolled Yoga as the “Mother of All Sciences” because it contains within its vast ambit of ancient wisdom, amazing knowledge that has been subsequently pursued by all major branches of modern science. This includes astronomy and cosmology (the nature of the universe), physics (the fundamental science of matter), the

world of chemistry, biology (the science of life) and the science of man including the science of health (mental, emotional and physical).

No wonder that Dr. Dean Ornish, the eminent American doctor who has shown that Yogic lifestyle can reverse heart disease says, “Yoga is a system of perfect tools for achieving union as well as healing” while Dr. IK Taimni, known for his great analytical works on Yoga, goes to the extent of calling Yoga the “Science of Sciences”.

YOGA AS A SCIENCE

Yoga can be understood as a body of knowledge (Vidya) handed down through millennia from Guru to Chela. This has been gained through intense, systematic, introverted investigation into the workings of the human mind. These results have been logically arranged in the form of the scriptures with the major hypothesis that the human in essence is the ‘Divine Being’ in potential form thus fully capable of experiencing Sat-Chit-Anandam. This hypothesis further postulates that mind controls matter and hence, by controlling mind the human being may control matter. This further suggests that health and happiness are our birthright and that Moksha or freedom from all limitation, is the goal of human existence. General Laws governing mind, emotions and body have been discovered though the thousands of years that this introverted investigation has been taking place thus discovering that living in conformity to these Cosmic Laws of Sanatana Dharma produces peace of mind, health, happiness and spiritual evolution. The truth of this is proven as fact by the example of great Yogis who have lived in obedience to these laws. These laws were then taught to their disciples by these illustrious Yogis and passed on through various Parampara. Furthermore, the existence of these laws and the benefits of living in obedience to these laws may be discovered by all sincere disciplined aspirants by experimenting with the techniques taught by the Gurus.

Ammaji (Yogacharini Meenakshi Devi Bhavanani), one of the eminent Yoginis of modern times has described the science of Yoga as a distillation and sublimation of all the finest, most noble attitudes bequeathed as the legacy of the Rishis, a treasure trove of thoughts. The ancient scriptures of India such as the Vedas and Upanishads are the treasury house wherein are stored these precious thought forms for safe keeping. She has rightly pointed out that the wise soul knows how to approach the keeper of this treasure and avail himself of the wealth of wisdom contained therein.

Ammaji’s is truly a practical mystic and makes every theoretical concept manifest practically. Hence, she created an excellent presentation for the science day exhibition at her granddaughter Dhivya Priya Bhavanani’s school on “Yoga: the Science of Holistic Health’. In this presentation she brought out a clear understanding of Yoga as a science by quoting the dictionary definition of science and then showing how Yoga fulfilled all of the criteria.

According to the Funk & Wagnall’s Standard College Dictionary science can be defined as:

1. Any department of knowledge in which the results of investigation have been logically arranged and systematized in the form of hypotheses and general laws subject to verification.
2. Knowledge of facts, phenomena, laws, and proximate causes, gained and verified by exact observation, organized experiment, and ordered thinking.
3. An orderly presentation of facts, reasonings, doctrines, and beliefs concerning some subject or group of subjects: the science of theology.

Ammaji explained that upon careful analysis we can see that all the methods of science are followed in Yoga. We have the terminology in the form of Sanskrit terms used to describe different phenomena as well as the technology in the form of excellent instruments (Asanas, Pranayama, Kriyas, Mudras, Bandhas, Shat Karma etc) to discover the ultimate truth and put these truths into practice to produce results. We have the methodology of an experiential and experimental approach where one performs various physical and mental actions (Abhyasa) and observes the resultant effects with a dispassionate sense of objectivity (Vairagya). Yoga also has an accumulated body of knowledge through millennia, the results of experiential and experimental studies by our great the Rishis as recorded in the Vedas, Upanishads, Puranas, Itihasas, Shastras etc. The final aspect, the ‘proof of the pudding’ is that all of these experiences are open to verification. The findings may be verified by each sincere individual who decides to undertake the practices (Sadhana) advocated by the Rishis.

	<u>CHARACTERISTIC OF SCIENCE</u>	<u>CHARACTERISTIC OF YOGA</u>
1	Objectivity	Vairagya – dispassionate objectivity
2	Intelligent inquiry and careful detailed observation	Pariprasna or enquiry coupled with Viveka or discerning intellect
3	Rigorous controlled experimentation	Abhyasa – systematic practice
4	Burning desire to know truth	Mumukshutva– burning desire for liberation
5	Direct perception	Pratyaksha – direct perception
6	Correct knowledge or cognition	Pramana – accurate knowledge
7	Reliable testimony from previous experimental work	Vedas, Agamas, Upanishads, Parampara
8	Verification and repeatability of the phenomena	Sadhana – individual experience to realise the reality of the teachings

The characteristic of a science or Vidya is the approach and not merely content or quality of knowledge. Though Yoga has its foundations more than 5000 years ago and is principally an oral tradition, the verbal basis of Yoga-Vidya (Yogic Science) is found in the Upanishads (especially the Katha-Upanishad, Shvetashvatara-Upanishad and Maitrayaniya-Upanishad), the Yoga Sutras of Patanjali and the Bhagavad Gita.

According to Prof. TR Anantharaman, Founding President of the Indian Academy of Yoga, all of these Yoga scriptures are pre-Buddhistic in nature and share a systematic and broad scientific basis. Katha Upanishad, one of the first written works on Yoga mentions the Yoga-Vidya (science of Yoga) and Yoga-Vidhi (the technological know how) of Yoga. The pure science of Yoga is Adhyatma Vidya (science of man in depth) while, the technology or applied science (rules of Yoga practice) that is, the technology of unification or integration, is called Yoga-Vidhi. The scientific attitude of Yoga can be seen from the firm insistence on Pariprasna (enquiry or dialogue) as a pre-requisite to higher knowledge as enunciated in the Bhagavad Gita (IV.34).

Similarly the Yoga Sutras of Patanjali display a scientific attitude towards the acquisition of Pramana (true knowledge). Patanjali says that true knowledge can be acquired (Yoga Darshan I: 7) by direct perception (Pratyaksha), rational inference (Anumana) and from

reliable testimony (Agama). This use of the intellect (Buddhi) endowed with discernment (Viveka) is typical of all Yoga traditions and their teachings. The Bhagavad Gita, often referred to as the Yoga Shastra, shows the exchange between Arjuna and Yogeshwar Krishna to be of a genuine spirit of enquiry and a keen desire for truth, as one would expect from a modern scientist and his guide.

The Shiva-Samhita (V.26-30) lists the characters of a fully qualified disciple (Sishya) as follows. “Endowed with great energy and enthusiasm, intelligent, heroic, learned in the scriptures, free from delusion...” Aren’t these very same qualities required by a true scientist (a seeker of true knowledge)?

TOOLS AND TECHNOLOGY OF YOGA (YOGA-VIDHI)

The process of Yoga is one of the understanding and achievement of Mind Control. The Yogis discovered that the mind has many levels such as Mudha (dull and inert mind), Kshipta (distracted mind), Vikshipta (partially distracted mind), Ekagrata (concentrated mind) and Niruddha (controlled mind). They also found that the whirlpool like mental patterns (Chitta-Vritti) were five fold; namely Pramana (conception), Viparyaya (misconception), Vikalpa (imagination), Nidra (sleep) and Smrithi (memory). They realized that without controlling these mental fluctuations there was no hope of conscious spiritual evolution. This is why Maharishi Patanjali says in the Yoga Darshan, “Yoga is the stilling of the whirlpools of the mind (*yogash chittavritti nirodhah-I: 2*). Once this is achieved the Yogin rests in his essential self (*tada drishtu swarupavasthanamI: 3*). The method to achieve this state is through dedicated and determined practice and dispassion (*abhyasa vairagyabhyam tannirodhah-I: 12*).

The Yogi views his being as a manifestation of the Divine and realizes that he is not only the physical existence but also has four other levels of existence including the energy body, the mental body, the body of wisdom and the body of eternal cosmic bliss. This concept is known as the Pancha Kosha. The Yogi follows a systematic practice (Abyasa) of the eight fold path of Ashtanga (Raja) Yoga consisting of the moral restraints (Yama), ethical observances (Niyama), firm and comfortable postures (Asana), expansion of the vital life force (Pranayama), control of the senses (Pratyahara), contemplative concentration (Dharana) leading into meditation (Dhyana) and ultimately transcending the individual self into the state of cosmic consciousness (Samadhi). This conscious evolution may take years and years (even lifetimes) of disciplined and dedicated practice (Abyasa), detachment or dispassion (Vairagya) and loads of discrimination (Viveka). Through such a systematic manner, the Sadhaka (sincere and dedicated seeker of Truth) attempts to unite (Yuj) his individual self (Jivatma) with the universal self (Paramatma).

VIEWS ON YOGA-VIDYA BY EMINENT YOGIS AND SCIENTISTS

Dr. I K Taimni, an eminent scholar known for his excellent work on the Yoga Sutras of Patanjali (The Science of Yoga) says, “This science of sciences is too comprehensive in its nature and too profound in its doctrine to be fitted into the framework of any particular philosophy-either ancient or modern. It stands in its own right as a science based upon the eternal laws of the higher life and does not require the support of any science or philosophical system to uphold its claims. Its truths are based in the experiences and experiments of an unbroken line of mystics, occultists, saints and sages, who have realized and borne witness to them through the ages.”

Sri RR Diwakar, one of the founding fathers of the modern Indian political state, has the following to say. “While modern science (that is of an experimental nature) has brought us to the brink of a nuclear war, the Yoga-Vidya (that is experiential in nature) on the other hand brings about peace, harmony, love, friendliness and cooperation.” This experiential nature of Yoga is well brought out by Vyasa’s Yoga-Bhashya wherein he says, “Yoga must be known through Yoga. Yoga grows through Yoga. He who is attentive towards Yoga long delights in Yoga.”(III.6). The Yoga-Shikha-Upanishad warns us of the “snare of textbooks” (Shastra-Jala) referring to bookish learning without accompanying experience.

Dr. Georg Feuerstein Ph.D., Director of the Yoga Research Centre USA says in his excellent book ‘The Shambala Guide to Yoga’, “Long before physicists discovered that matter is energy vibrating at a certain rate, the Yogis of India had treated this body-mind as a playful manifestation of the ultimate power (Shakti), the dynamic aspect of Reality. They realized that to discover the true Self, one had to harness attention because the energy of the body-mind follows attention. A crude example of this process is the measurable increase of blood flow to our fingers and toes that occurs when we concentrate on them. The yogis are very careful about where they place their attention, for the mind creates patterns of energy, causing habits of thought and behavior that can be detrimental to the pursuit of genuine happiness”.

Dr VSSM Rao writes that, “The tradition of Yoga is so perfect that we have to seek ways of expounding it in modern scientific terminology instead of simply evaluating it in terms of current concepts of science, which is expanding so rapidly that a time may come when man would like to live by his intuition rather than by scientific planning, bristling with conflicts and balancing a number of variables not completely understood.”

According to Dr B Ramamurthy, eminent neurosurgeon, Yoga practice re-orientes 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.

Professor Dr SV Rao, an eminent medical doctor says, “Yoga is a science because it is verifiable. Yoga as a science of living is also an art. Yoga, therefore, may be defined as the science and art of optimum living. Yoga has the capacity to move, either side by side with medical science or independently. This is because Yoga has a sound system of etiology, diagnosis and pathogenesis of disease. Thus we have a complete system by itself in Yoga.”

Yogamaharishi Dr Swami Gitananda Giri Guru Maharaj 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.”

INTEGRATING YOGA AND MODERN MEDICINE

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.

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:

1. **Anatomy and Physiology:** The study of anatomy and physiology is a great meeting point for modern medicine and Yoga. Yoga therapists and practitioners can benefit from the intricate and detailed 'break-down study' of modern medicine where the body is broken down into many systems, then into many organs, many tissues and finally into billions of cells. On the other hand the Yogic "wholistic" view of the Pancha Kosha (the five sheathed existence) can help modern doctors realise that we are not just, 'one-body' organisms but have four more bodies that are equally if not more important. We are a manifestation of the Divine and have, not only the physical body but also an energy body, a mental body, a body of wisdom and a body of eternal bliss. An understanding of the psychic anatomy and physiology of Nadis, Chakras and Bindus when coupled with the practical understanding of the details of the physical body can inspire real knowledge of the self in all health care personnel.
2. **Prevention of disease:** Modern medicine has come to realise the importance of prevention only in recent times but the role of preventive medicine is still very limited. The Yogic lifestyle that includes the Yama and Niyama can help prevent a great many of the modern diseases like Hepatitis B and AIDS. Cleanliness that is taught through Saucha can help prevent and limit the spread of contagious and infectious diseases. Mental peace and right attitudes of Yoga such as Pratipaksha Bhavanam (taking the opposite view), Samatvam (equanimity of mind) and Vairagya (dispassionate detachment) can help prevent many of the psychosomatic ailments running wild in the modern world. If these

Yogic values as well as practices such as Asanas, Pranayamas, Kriyas and Dhyana are inculcated in the modern human race, we can prevent virtually all diseases that abound today. Communicable diseases as well as degenerative disorders of the body can be well prevented in a true manifestation of the adage, “A stitch in time saves nine”. However the ‘will’ to do so is also of paramount importance as there is no money or fame in prevention and we don’t know what we have prevented because we have prevented it from happening!

3. **Promotive 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 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 siddhisidhyoh 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.
4. **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.

5. **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.

6. **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 aaru*-Tirukkural 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).
7. **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.
8. **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”.

9. **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.
10. **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 its is possible to grow old without losing any of the physical or mental faculties of youth.
11. **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 psycho analysts 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.

12. **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)
13. **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.
14. **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. Dr VSSM Rao writes that, "The tradition of Yoga is so perfect that we have to seek ways of expounding it in modern scientific terminology instead of simply evaluating it in terms of current concepts of science, which is expanding so rapidly that a time may come when man would like to live by his intuition rather than by scientific planning, bristling with conflicts and balancing a number of variables not completely understood."

IN 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.

Though the interest for Yoga-Vidya in the west is growing day by day and more and more people are turning towards Yoga, this is not the same in our country. Lack of proper infrastructure and absence of a proper systematized approach in the propagation of Yoga are still drawbacks in our nation. The youngsters are being drawn away from our culture and blindly ape the hedonistic western lifestyle.

Unless we change our mindset we cannot understand our wonderful culture and the great science of "Total Man" that has arisen from it. This is why it is imperative that the youth of our nation are awakened to the greatness inherent in our beloved nation and given the proper and systematic training in Yoga and our cultural heritage. Catch them young must be our aim if we are to educate them about the greatness of our cultural heritage.

"Health and happiness are your birthright, claim them and develop them to your maximum potential". This message of Swamiji Gitananda Giri Guru Maharaj is a firm reminder that the goal of human existence is not health and happiness but is Moksha (liberation). Most people today are so busy trying to find health and happiness that they forget why they are here in the first place. Yoga is the best way for us to regain our birthrights and attain the goal of our human existence.

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YOGACHARYA DR. ANANDA BALAYOGI BHAVANANI

MBBS, ADY, DPC, DSM, PGDFH, PGDY, FIAY

Yogacharya Dr. ANANDA BALAYOGI BHAVANANI is Chairman of the International Centre for Yoga Education and Research at Ananda Ashram, Pondicherry, India (www.icyer.com). He is also chairman of Yoganjali Natyalayam, the premier institute of Yoga and Carnatic Music and Bharatanatyam in Pondicherry (www.rishiculture.org). He is son and successor of the internationally acclaimed Yoga team of Yogamaharishi Dr. Swami Gitananda Giri Guru Maharaj and Yogacharini Kalaimamani Ammaji, Smt Meenakshi Devi Bhavanani.

He is a Gold Medalist in Medical Studies (MBBS) with postgraduate diplomas in both Family Health (PGDFH) as well as Yoga (PGDY) and the Advanced Diploma in Yoga under his illustrious parents in 1991-93. A Fellow of the Indian Academy of Yoga, he has authored 18 DVDs and 18 books on Yoga as well as published six dozen papers, compilations and abstracts on Yoga and Yoga research in National and International Journals.

He is a Classical Indian Vocalist, Percussionist, Music Composer and Choreographer of Indian Classical Dance in addition to his duties as Programme Co-ordinator of the Advanced Centre for Yoga Therapy Education and Research (ACYTER), JIPMER, Pondicherry.

In recent years he has traveled abroad eight times and conducted invited talks, public events, workshops, retreats and been major presenter at Yoga conferences in the UK, USA, Italy, Germany, Switzerland, Australia and New Zealand. He is an Honorary International Advisor to the IAYT (International Association of Yoga Therapists), USA and various Gitananda Yoga Associations all over the world.