



Yoga and Alternative Systems of Medicine

Yoga and Mental Health

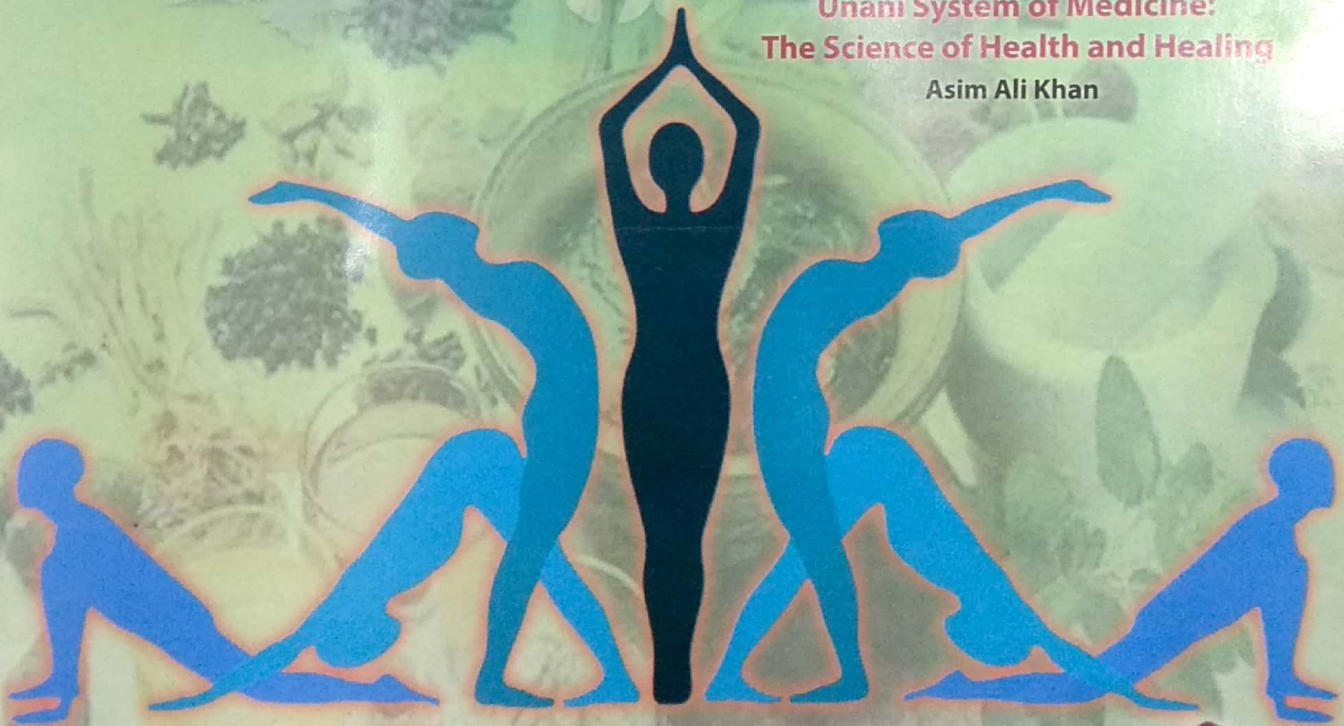
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Homeopathy Treats You in Person

Anil Khurana, Harleen Kaur

**Unani System of Medicine:
The Science of Health and Healing**

Asim Ali Khan



SPECIAL ARTICLE

Yoga : The Art of Being and Science of Well-Being

Ishwar V Basavaraddi

FOCUS

Alternative Systems of Medicine in India: An Overview

Chandrakant Lahariya





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Let noble thoughts come to us from all sides
Rig Veda

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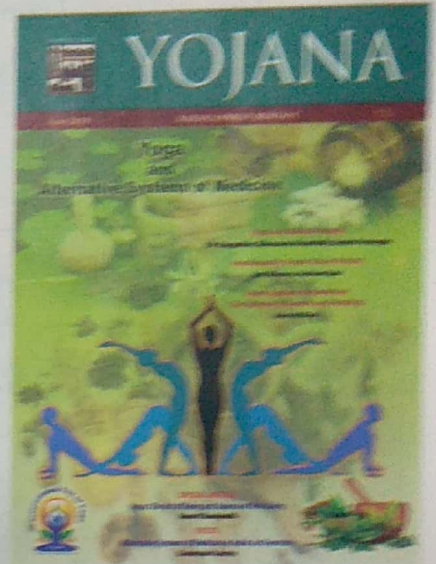
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Towards Holistic Health

Humans have actively engaged in medicine as well as in alternative systems of drugless healing over centuries, and across societies and civilizations. There has been a growing consciousness around the world for improving healthcare using alternative systems of medicine, lifestyle changes and mindfulness that can undo the effects of a stressful and fast-paced lifestyle that is increasingly being recognised as the root cause of a number of health and wellness challenges facing us today.

Yoga is an ancient practice and a spiritual discipline focussing on assimilating the mind, body and nature to establish an organic harmony between all forces. The word 'yoga' comes from Sanskrit which means to unite, and hence yoga is not just physical exercise but a means to achieve a balance between thoughts and actions and channelizing the body and energy as a holistic approach to well-being. Yoga has had various lineages, traditions and driving philosophies that have led to the emergence of different traditional schools of Yoga, each with its own set of principles, objectives and practices.



Yoga is recognised all over the world for its immensely uplifting values. Each year, June 21 is celebrated as the International Day of Yoga, and especially for India, Yoga has a cultural and heritage value too.

Naturopathy, Siddha system of medicine, Ayurveda, Unani, Homeopathy, Naturopathy and others, are also various practices in addition to the more popular system of medicine, i.e. Allopathy, which is the commonly followed system in India and most other parts of the world. It is in relation to Allopathy that these others systems are referred to as the alternative systems of medicine.

However, given the multitude of health issues that humanity is facing today, it is important to integrate the preventive, curative and uplifting aspects of the traditional as well as the modern systems of medicine in order to combat the challenges facing us today in a holistic and balanced manner, while combining the best of various streams of knowledge.



Yoga : The Art of Being and Science of Well-Being

Ishwar V Basavaraddi

Yoga is an inner science comprising of a variety of practices and methods through which human beings can achieve a union between the body and the mind to attain self-realisation. The aim of Yoga practice (*sādhana*) is to overcome and endure all kinds of sufferings that leads to a sense of freedom in every walk of life with holistic health, happiness and harmony.

One of the deep impulses of human mind is a craving to know. We wish to understand the world around us, its source, its meaning and its probable future. Founders of philosophical thoughts - Vedic seers, ancient Indian Yoga Gurus, Maharishis, Mahavir, Buddha, Christ, Mohammed and Sufis have dedicated their lives to the quest of understanding the source of suffering of mankind. All these masters have developed a common path, based on their concrete experiences which are practical, methodical and systematic for unfolding and culturing the unlimited potentialities of mankind which can be realised by the practice of Yoga. The roots of Yoga are in ancient India; its universal origin is the burning desire in the heart of the philosophers - the yearning to be happy and free of suffering. In Indian thought the term Philosophy stands for Darshana i.e. 'vision' as a means of self-realization through self-purification which claims to end the three-fold suffering of mankind forever. While minutely observing the life phenomenon, ancient Indian masters have concluded that so long as we do not pay any serious attention towards our day-to-day activities as well as the activities of Mother Nature, we go on performing all our actions mechanically in the form of reflexes

About the International Day of Yoga Logo

Folding of both hands in the logo symbolise Yoga, the union, which reflects the union of individual consciousness with that of universal consciousness, a perfect harmony between mind and body, man and nature; the holistic approach to health and well-being. The brown leaves symbolise the Earth element, the green leaves symbolise nature, blue symbolises the water element, brightness symbolises the fire element and the Sun symbolises the source of energy and inspiration. The logo reflects harmony and peace for humanity, which is the essence of Yoga.



The author is Director, Morarji Desai National Institute of Yoga, Ministry of AYUSH, Government of India.

in life and therefore, life seems to be full of pain and miseries. However, they have also observed that if we add our awareness to our activities we can understand life and phenomenon associated with it, we can overcome all kinds of pain and suffering, we can achieve total integration that can lead us to freedom.

Different social customs and rituals in India, the land of Yoga, reflect a love for ecological balance, tolerance towards other systems of thought and a compassionate outlook towards all creations. Yoga Sadhana of all hues and colours is considered a panacea for a meaningful life and living. Its orientation to a comprehensive health, both individual and social, makes it a worthy practice for the people of all religions, races and nationalities.

Nowadays, millions of people are practicing Yoga and have been benefitted by the practice of Yoga which has been preserved and promoted by the great eminent Yoga Masters from ancient times to this date. Yoga is being practiced as an art and science of well-being across the globe.

Traditional Schools/Kinds of Yoga

Different philosophies, traditions, lineages and guru-shishya paramparas of Yoga led to the emergence of different traditional schools. These include Jñāna Yoga, Bhakti Yoga, Karma Yoga, Pātanjala Yoga, Kundalini Yoga, Hatha Yoga, Dhyāna Yoga, Mantra Yoga, Laya Yoga, Rāja Yoga, Jain Yoga, Bouddha Yoga etc. Each school has its own approach and practices that lead to the ultimate aim and objectives of Yoga.

The Fundamentals of Yoga

Yoga works on the level of one's body, mind, emotion and energy. This has given rise to four broad classifications of Yoga: Karma Yoga where we utilize the body; Jñāna Yoga where we utilize the mind and intellect; Bhakti Yoga where we utilize the emotion and Kriya Yoga where we utilize the energy. Each system of Yoga we practice falls within the gamut of one or more of these categories.

Every individual is a unique

combination of these four factors. Only a guru (teacher) can advocate the appropriate combination of the four fundamental paths as it is necessary for each seeker. All ancient commentaries on Yoga have stressed that it is essential to work under the direction of a guru.

Yogic Practices for Well-Being

The widely practiced Yoga sadhanas are: Yama, Niyama, Āsana, Prānāyāma, Pratyāhāra, Dhāraṇa, Dhyāna, Samādhi, Bandhās and Mudras, Shatkarmas, Yuktāhāra, Mantra-japa, Yukta-karma etc.

Yama's are restraints and Niyama's are observances. These are considered to be pre-requisites for further Yoga practice. Āsanas, capable of bringing about stability of body and mind, "kuryattadasanam-sthairyam", involve adopting various psycho-physical body patterns and giving one an ability to maintain a body position (a stable awareness of one's structural existence) for a considerable length of time.

Prānāyāma consists of developing awareness of one's breathing followed by wilful regulation of respiration as the functional or vital basis of one's existence. It helps in developing awareness of one's mind and helps to establish control over the mind. In the initial stages, this is done by developing awareness of the "flow of in-breath and out-breath" (svāsa-prasvāsa) through nostrils, mouth and other body openings, its internal and external pathways and destinations. Later, this phenomenon is modified, through regulated, controlled and monitored inhalation (svāsa) leading to the awareness of the body space getting filled (puraka), the space(s) remaining in a filled state (kumbhaka), and it getting emptied (rechaka) during regulated, controlled and monitored exhalation (prasvāsa).

Pratyāhāra indicates dissociation of one's consciousness (withdrawal) from the sense organs which connect with



the external objects. Dhāraṇa indicates broad based field of attention (inside the body and mind) which is usually understood as concentration. Dhyāna (meditation) is contemplation (focussed attention inside the body and mind) and Samādhi (integration).

Bandhas and Mudras are practices associated with Prānāyāma. They are viewed as the higher Yogic practices that mainly adopt certain physical gestures along with control over respiration. This further facilitates control over mind and paves the way for a higher Yogic attainment. However, practice of dhyāna, which moves one towards self-realisation and leads one to transcendence, is considered the essence of Yoga Sādhanā.

Śatkarmas are detoxification procedures that are clinical in nature and help to remove the toxins accumulated in the body. Yuktāhāra advocates appropriate food and food habits for healthy living.

Yuktahara (Right Food and other inputs) advocates appropriate food and food habits for healthy living. However practice of Dhyana (Meditation) helping in self-realization leading to transcendence is considered as the essence of Yoga Sadhana. However, 'a judicious combination of practice of asana, pranayama and dhyana daily, keep individuals healthy and disease free'.

The knowledge aspect of Yoga Sadhana is being extensively researched, with advantage to Yoga practitioners. Psychological, Anatomico-physiological, Bio-chemical and philosophical phenomena underlying Yoga Sadhana have been commendably

understood by us today. It is a matter of satisfaction for the entire humanity. So also, elaborate and effective means of its transmission, such as internet across the globe, is a great stride for propagation of yogic knowledge. Teaching methodology in Yoga has also ingrained modern educational methodological rigours into it. There is also a worldwide growth of teaching schools of Yoga across the globe. An earnest scientific and philosophico-literary research has also caught up globally and is yet another encouraging sign of evolution of Yoga further.

Food for Thought

A few dietary guidelines can ensure that the body and mind are flexible and well-prepared for practice. A vegetarian diet is usually recommended, and for a person over 30 years, two meals a day should suffice, except in cases of illness or very high physical activity or labour.

How Yoga Works

The following are just a few of the mechanisms through which Yoga works as an integrated mind-body medicine:

1. Cleanses the accumulated toxins through various *shuddhikriyas* and generates a sense of relaxed lightness through Yogic *sukshmanayama* (simple micro movements for all joints and ligaments of body). Free flow in all bodily passages prevents the many infections that may occur when pathogen 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 creates psychosomatic harmony. In Yoga the physical body is related to *annamayakosha* (our anatomical existence) and the mind to *manomayakosha* (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, enhances energy flow and results in 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 for healing, repair, rejuvenation and reinvigoration.
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.

Thus, Yoga is a perfect wellness module as it is comprehensive and holistic in its nature. Yogic principles of wellness help to strengthen and develop positive health enabling us 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 the practice of various Yogic practices.

Scientific Studies on Yoga

Modern day lifestyle has brought in many challenges to health and has become a major cause for many ailments among people across the globe. Stress, improper dietary habits and sedentary living have led to decline in health, performance and led to diseases such as diabetes, asthma, cardio vascular diseases, metabolic disorders and cancer. Can yoga be a panacea for all these modern day problems?

Since most of the modern day health problems, particularly the chronic NCDs, are because of faulty life-style, Yoga is useful in combating these disorders and shows that science and spirituality need not always be treated as separate entities. Yoga has the potential to solve the lifestyle problems and psychosomatic diseases.

A series of research studies were carried out across the globe to scientifically evaluate and validate the

PROMOTION OF YOGA

- UNESCO inscribed Yoga in the representative list of Intangible Cultural Heritage of Humanity: Yoga was inscribed in the UNESCO's list of Intangible Cultural Heritage of humanity during the 11th session of the Intergovernmental Committee for the Safeguarding of the Intangible Cultural Heritage held in Addis Ababa, Ethiopia in December 2016.
- Inclusion of Yoga In National Health Policy 2017: In order to leverage a proper healthcare legacy, the National Health Policy 2017 recommended introduction of Yoga in school and at work places as part of promotion of good health.
- Yoga in School Curriculum: In order to promote Yoga as a part of school curriculum, Yoga Education was made compulsory by National Council for Teacher Education (NCTE), a statutory body under Ministry of Human Resource Development, through its 15 Teacher Education Programmes.
- Yoga Certification Board: Established by Ministry of AYUSH for certification of Yoga professionals and accreditation of Yoga Institutions and Personnel Certification Body.
- UGC has established Yoga Departments in Six Central Universities and framed Standard Yoga Syllabi for various courses e.g. B.Sc., M.Sc. and Ph.D. programmes in Yoga by constituting an Expert Committee.
- National Eligibility Test (NET) in Yoga has been conducted for Lectureship and Research Fellowship for the first time.
- Ministry of External Affairs (MEA) under auspices of Indian Council for Cultural Relations (ICCR) also deputed Yoga teachers to Indian Missions for imparting training to local students and teachers. MEA also provides publicity material including videos, documentaries, coffee table books, instructional manuals on the different aspects of Yoga and yogic practices to Indian Missions for display and distribution.
- The ICCR signed an MoU with Yunnan Minzu University, China for establishment of Yoga College named "India-China College of Yoga".
- Yoga Olympiad: NCERT has taken the initiative of "YOGA OLYMPIAD" for School Children.
- Yoga training to Central Armed Police Force (CAPF): Morarji Desai National Institute of Yoga (MDNIY), Ministry of AYUSH, Govt. of India has introduced Yoga training to Central Armed Police Force (CAPF) and more than 1385 Master Yoga Trainers have been trained by MDNIY.
- PM Awards on IDY: Four awards, Two National and Two International, have been announced in the field of Yoga.
- National AYUSH Mission: It inter-alia makes provision for the following:-
 - (i) Upgradation of exclusive State Government AYUSH Hospitals and Dispensaries including Yoga.
 - (ii) Setting up of upto 50 bedded integrated AYUSH Hospital including Yoga.
 - (iii) Under the flexible components of the scheme of NAM, provision has been made for Grant-in-aid to the Yoga Wellness centers.

beneficial effects of Yoga. Physiological, biochemical, psychological and clinical variables have been studied in controlled experiments to assess beneficial health effects of Yoga. The studies revealed that yoga through its effects on autonomic nervous system and endocrine system influence cellular and molecular aspects of health in Yoga practitioners. It was observed that yogic practice brings stability of autonomic equilibrium along with strengthening of parasympathetic system, thereby minimizing the wear and tear in different physiological systems and thereby slowing down the aging process. Yoga practice results in relative hypometabolic state, thereby providing greater

buffer for stress response. The studies indicate improvement in physical and cognitive performance, improvement in thermoregulatory efficiency, body flexibility and stress tolerance. It also strengthens our immunity thereby preventing diseases.

Conclusion

Yoga is a science and a way of healthy living, which helps to achieve a harmonious personality.

At present, global healthcare is dominated by modern medicine. Cost of medicine is going beyond the reach of poor and middle class people. On the other hand, communities need safe, effective, affordable and accessible

healthcare. The holistic wisdom of Yoga and other ancient health systems offers the necessary wisdom, experience and capabilities that are crucial for such transformational change.

As medicine experiences an explosion in its knowledge-base and genomic medicine opens a whole new approach to medical care, there seems to be an insatiable desire for ancient philosophies and approaches to medical care by the general public. Yoga is proving to be the most desirable traditional system of health and well-being in the present scenario. □

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YOJANA June 2019

Yoga and Mental Health

BN Gangadhar, Shivarama Varambally,
Rashmi Arasappa

The word “yoga” comes from a Sanskrit root “yuj” which means ‘union’ or ‘to yoke’ or ‘to join’. This union is the merger of the individual consciousness with the universal one, through the proper performance of duties in everyday life. Yoga is a psycho-somatic spiritual discipline for achieving union and harmony between the mind, body and soul. Its relevance in mental health has been mentioned in ancient texts as well. Patanjali in his Yoga sutras says “Yogah chitta vritti nirodhah” which means the primary aim of Yoga is removal of fluctuations of the mind. “Samatvam Yoga Uchyate” which translates to ‘yoga is equanimity of mind in any situation’ is cited in the Bhagavad Gita (5000 BC).

Yoga has been shown to help improve symptoms in several physical disorders, like diabetes, hypertension, asthma and also in mental disorders like anxiety, depression and psychosis. Yoga practice has been reported to help depressive symptoms since a long time. It lifts the mood and improves interest in activities, attention/concentration/memory, sleep and appetite.



Figure 1: Panchkosas

Yoga is described as a holistic health system in the *Yoga Sutras*, credited to Patanjali (circa 300 CE). Yoga is a life style rather than just asana/pranayama. Also, yoga/asana is not same as exercise. One of the important differences is that in yoga there is always a synchronisation between body movements and breathing along with awareness of self. Also, in exercise, movements are dynamic, speedy and isotonic whereas in asanas it is steady, slow and isometric. During exercise, there is increase in heart rate, blood pressure, respiratory rate and basal metabolic rate whereas in yoga all these parameters decrease.

Yoga is generally understood, particularly in the west, as asana or pranayama but in reality consists of many more components. ‘Ashtanga

Yoga’ as outlined by Patanjali, consists of eight limbs. These are as follows:

1. Yama (universal ethics)
2. Niyama (individual ethics)
3. Asana (physical poses)
4. Pranayama (breath control)
5. Pratyahara (control of the senses)
6. Dharana (steadiness of mind)
7. Dhyana (meditation)
8. Samadhi (bliss)

As per this model, yoga if practiced in the sequence as mentioned above leads to bliss which is the ultimate state.

Concept of Disease as per Yoga

Taittiriya Upanishad describes the five sheaths (pancha-kosas) or layers

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of existence in the body from gross to fine level. This is also called as Anatomy of Yoga (Figure 1). They are, namely:

1. Annamaya kosha, "food" sheath (Anna)
2. Pranamaya kosha, "energy" sheath (Prana)
3. Manomaya kosha, "mind" sheath (Manas)
4. Vijnānmāyā kosha, "discernment" sheath (Vijnana)
5. Anandamaya kosha, "bliss" sheath (Ananda)

As per the yogic understanding, diseases are caused by 1. Stress, 2. Wrong diet, 3. Wrong exercise, 4. Bad habits.

The pathology begins in Manomaya Kosha. Imbalance between likes and dislikes in this level will result in mental illnesses called "Adhis". At this stage there is no symptom at the physical level. Increase in Ajnana (ignorance about one's real state of bliss) leads one to perform wrong actions such as eating of unwholesome food, living in unhealthy dwellings, association with wicked, evil thoughts, inflicting injuries etc. which further lead to physical diseases called "Vyadhis".

Yoga and Mental Health

Yoga brings about positive health by causing the relaxation of the whole body, slowing down the respiration (making it quiet and deep) and calming the mind, thereby helping in improving attention and concentration. It improves awareness of body, emotions and mind; and the flow of healing 'Pranic Life Energy'. It increases self-reliance and self-confidence, thereby improving the ability to handle stress. It improves self-regulation thereby helping us take the responsibility of our own health. Improvement in dietary habits and facilitating natural emanation of wastes is also an important part of yoga.

In general, yoga helps reduce anxiety and improve the sense of well-being. It leads to better interpersonal relationships, increased attentiveness,

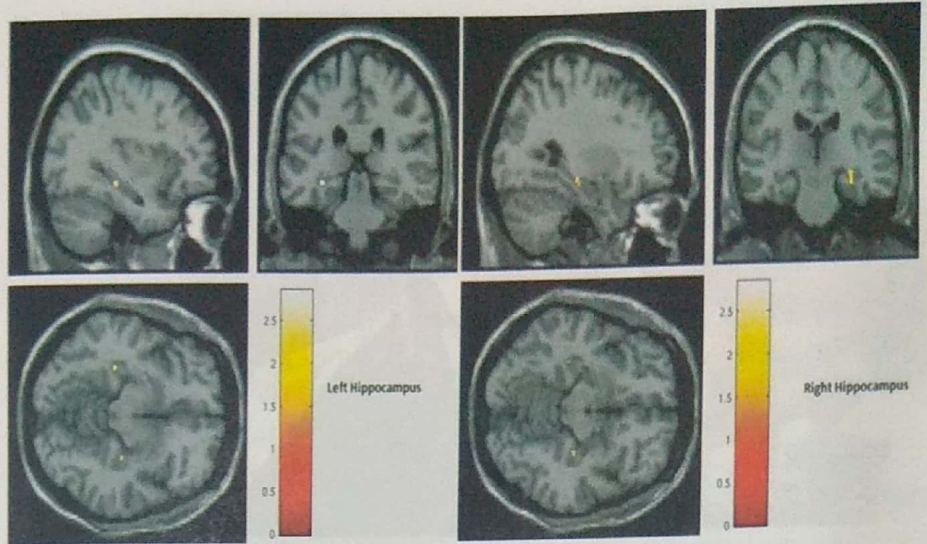


Figure 2: Increase in brain volume (hippocampus - yellow colour highlighted areas) with yoga practise in elderly subjects

lowered irritability levels, and an optimistic outlook in life in healthy individuals.

Yoga has been shown to help improve symptoms in several physical disorders, like diabetes, hypertension, asthma and also in mental disorders, like anxiety, depression and psychosis. Yoga practice has been reported to help depressive symptoms since a long time. It lifts the mood and improves interest in activities, attention/concentration/memory, sleep and appetite. It has been found to have effect on the cognitive/ behavioural aspects due to its mindfulness component. Research at the National Institute of Mental Health and Neurosciences has also shown that the practice of yoga has effects on biological parameters like

increasing the parasympathetic tone, reducing cortisol levels and decreasing the neuro-inflammation in patients with depression. In fact, yoga has been used as a sole treatment for patients with mild to moderate depression in several recent studies in India and abroad. In patients with psychotic disorders such as schizophrenia, yoga practice has been shown to improve socialization, motivation to do activities, occupational functioning, ability to recognize others emotions/feelings, and cognitive abilities. This is probably brought about by the increase in the 'cuddle hormone', namely oxytocin, by yoga.

Yoga holds promise as a complementary therapy in cases of tobacco, alcohol and opioid dependence along with routine medical intervention

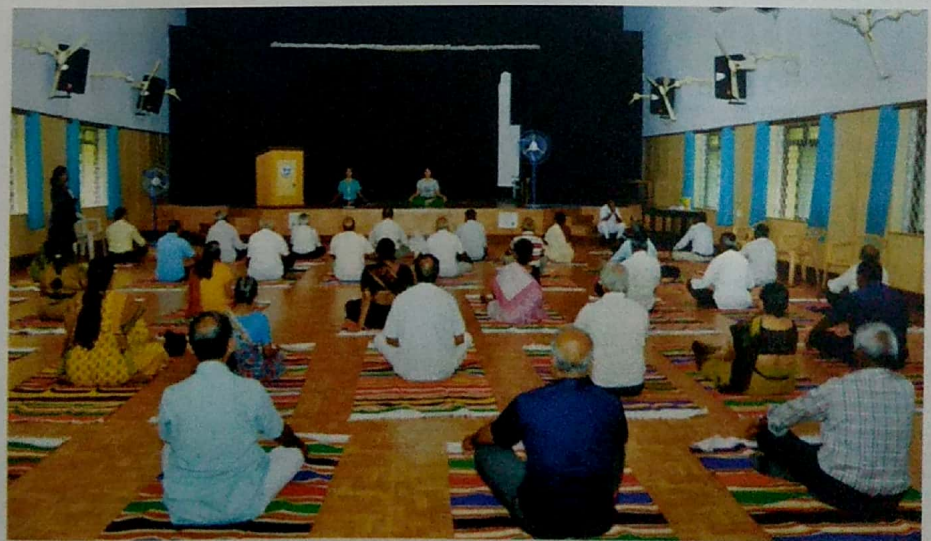


Figure 3: The elderly practising yoga

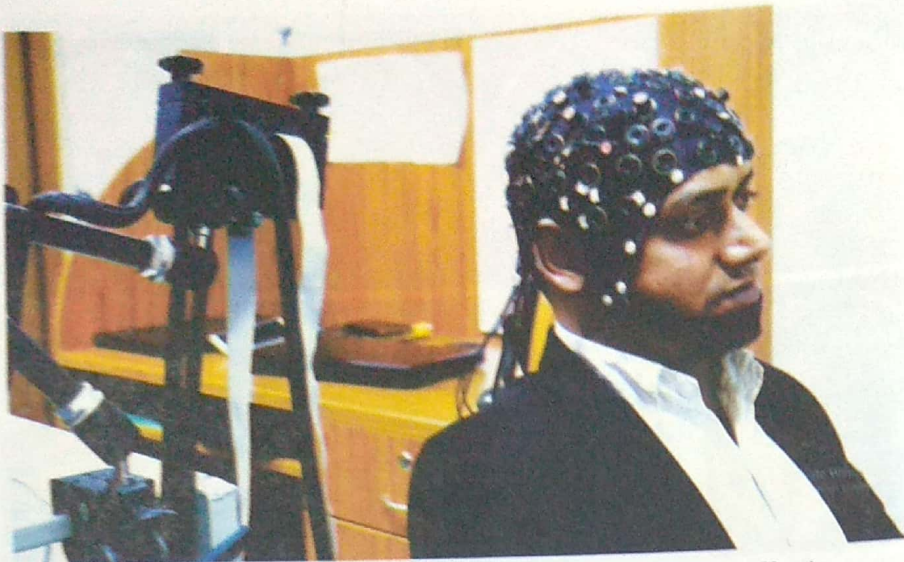


Figure 4a: Brain Mapping tool - to measure the activity of brain following yoga practise

Yoga was practiced in ancient times for overall general well-being and spiritual progress. Current research evidence suggests that yoga can be used as an add-on therapy or in some instances as a sole therapy for psychiatric disorders as well. It not only improves the symptoms, but brings about holistic change in an individual.

and psychosocial interventions, with effects during both the acute withdrawal phase and long term relapse prevention. The mechanisms include direct decrease in sympathetic discharge that accompanies the withdrawal state as well as improvement in negative mood states and stress reduction during the long term maintenance phase that may prevent a relapse.

The systematic methods of concentration taught in yoga practice have been thought to potentially help reduce attention deficits. In addition, yoga may produce a state of calmness and contentment which is lacking in children with Attention-Deficit Hyperactivity Disorder. Yoga may offer benefits as an effective tool to increase imitation, cognitive skills and social-communicative behaviours in children.

In healthy elderly individuals, yoga has been found to be effective in improving the domains of quality of life and sleep quality along with memory. Also, there was a small increase in hippocampal volume in brain, indicating that yoga can have neuroplastic effects (better wiring of brain) in elderly (Figure 2). In elderly patients with minimal memory disturbance, yoga has been found to improve perceived stress, mood, sleep and memory (Figure 3).

At the NIMHANS Integrated Centre for yoga, specific yoga

modules have been designed for patients with specific psychiatric disorders based on traditional and contemporary yoga literature and these have been later validated and finalized after consultation with yoga experts. Modules have been developed for depression, schizophrenia, elderly with cognitive problems, Obsessive Compulsive Disorders, and Opioid Dependence Disorder. The Centre is also dedicated to carry out research in the field of yoga and neuro-psychiatric illness (Figure 4a and 4b).

Guidelines for Practice of Yoga

Yogic practices should be practised on an empty or on a very light stomach. Ideal time for practice would be in the early morning but it can also be

practised in the evening. Patience is an important requirement for yoga. Regularity of practice is an essential both in the physical and mental aspects of yoga.

Classically, yoga practices are started with the prayer by salutation or invocation to the object of interest. This will be followed by slow movements with breathing awareness and loosening exercise to prepare the lungs and muscles for asanas and pranayama practices, and also to avoid muscle soreness.

Then, there will be practice of Asanas/Bodily postures with mindfulness. The type of asana depends on the need of the subject. Generally, the *asanas* are practised in the sequence of standing, sitting, prone-lying and supine-lying position asanas. It should not be practised in haste or by applying any sort of undue force and under any urgency. Jerks should be avoided. It should be performed

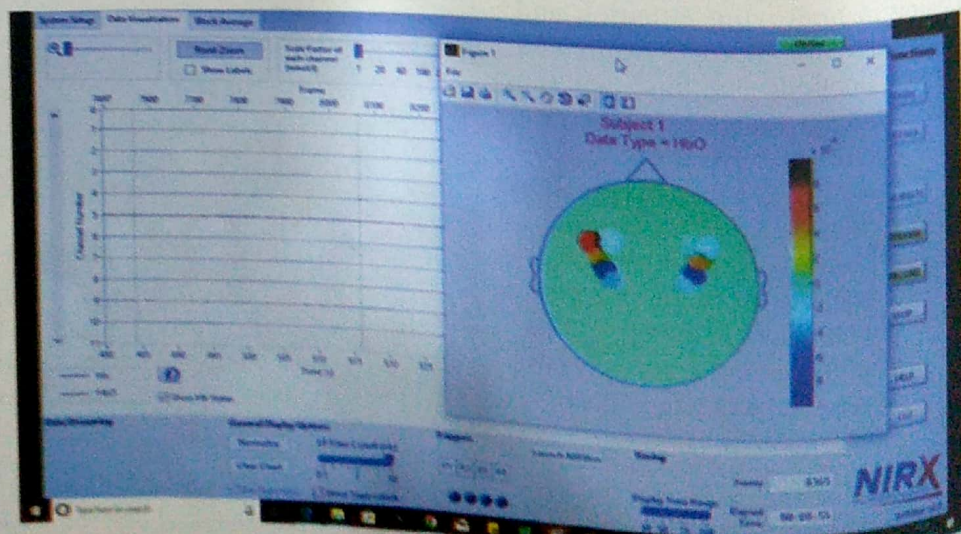


Figure 4b: Brain Mapping - Brain activity recording

with body and breath awareness. There should be coordination between breath and movement of body parts. Final position of asanas should be attained slowly step-by-step and should be maintained with closed eyes for developing an inward awareness within the body. It must be maintained for as long as one is comfortable. Breathing should be as normal/natural as possible unless instructed specifically otherwise.

Asana practice is followed by Pranayama/Regulated breathing practice. Then, direct contemplative practices/Meditation (Dharana and Dhyana) may be done. Post meditative relaxation with positive suggestion will be the penultimate step. The practice is usually ended by making a wish/praying with good wishes and pure feelings for all beings of the universe.

The Components of Yogic Way of Life for Positive Mental Health Are As Follows:

- Ahara (Food) – Mitahara should

be practiced. The quantity should be enough to fill two quarters of the stomach, another one quarter should be filled with liquid and the remaining quarter (one-fourth) should be left empty for free flow of air. Food needs to be eaten with positive state of mind with utmost concentration. We need to consume freshly cooked, nutritious, nourishing food in the natural form.

- Vihara (Relaxation) - Yogic practices of asana, pranayama and meditation relaxes body and mind. Sound sleep, recreational activities are also important for relaxation.
- Achara (Conduct) - Positive emotions, positive attitudes, good habits and control on desires help in making us strong, both, individually and socially. Yogic principles of Yama (restraint) and Niyama (observance) help to develop control on our desires


and emotions and bring about peace and harmony.

- Vichara (Thinking) - Yogic practices like pratyahara and dhyana (meditation) help us in controlling our thoughts and thereby promoting optimism in life.
- Vyavahara (Behaviour or actions) – Karma Yoga proposes that we should perform right actions with full dedication without worrying about the results.

Conclusion

Yoga was practiced in ancient times for overall general well-being and spiritual progress. Current research evidence suggests that yoga can be used as an add-on therapy or in some instances as a sole therapy for psychiatric disorders as well. It not only improves the symptoms, but brings about holistic change in an individual. □

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Increasing Relevance of Yoga in Modern Times

HR Nagendra

Yoga is one of the most ancient Indian Philosophical system propounded by sage Patanjali (150BCE). The practice of eight limbs of Patanjali Yoga enhances the potentialities of the people. Hence one should control the mind and practice the moral and ethical disciplines before attempting serious Yoga. Yoga should become a lifestyle and people should control their food habits, entertainment, trade and commerce in order to be good citizens of the country.

Ever since UNO declared June 21st as International Day of Yoga (IDY), celebration of this IDY has become a global phenomenon.

The Union Government with advice from Yoga Gurus in the country has

developed a common Yoga Protocol, which can be used worldwide by people. IDY was organized last year in 193 countries in which 30 crore people participated irrespective of racial, national, religious and gender barriers. The Union Government through the Ministry of AYUSH is promoting Yoga for integrated health of people, irrespective of cultural, racial and religious barriers. The aim of the Government is to promote and encourage the youth who have excelled and achieved in the disciplines of Yoga and sports. Hence there is a serious effort to popularize Yoga from school to university levels.

Yoga - Indian Ethos: Yoga should become a part of our everyday life. Yoga is an ancient Indian science having a scientific background which has an

India is in the frontline of information technology, biotechnology, nano-science and other types of research. The internal and external stresses of people in these fields can be relieved by practicing Yoga and also for attaining peace and comfort.

Various Yoga organizations and NGOs and several central universities have popularized Yoga worldwide with untiring efforts.

antiquity of 11,500 years. Practice of Yoga can enhance physical, mental, emotional, intellectual and spiritual powers of people. Sage Patanjali says: 'Yoga can control the modifications



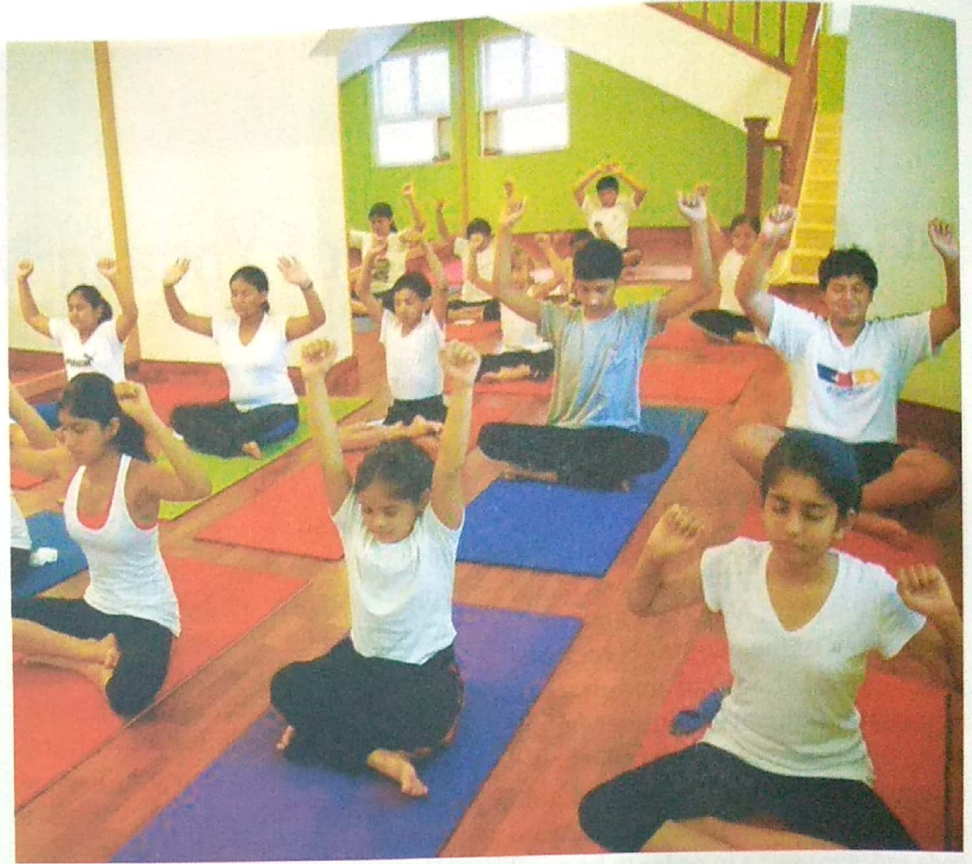
The author is Chancellor SVYASA Yoga University, Bangalore.

of our mind-stuff' (*Yogaha chittavritti nirodhaha I*). Sage Vasista, while imparting Yoga to Sri Rama, says in Yoga Vasista treatise that 'The means for calming the mind is called Yoga' (*Manaha prashamanopayaha Yogaha iti abhidheeyate I*). Krishna declares in the Bhagavad-Gita that 'Balance or equipoise of the mind is Yoga' (*Samatvam Yogam Ucchyate*) and 'Skill in actions is Yoga' (*Yogaha karmasu kaushalam I*).

India is in the frontline of information technology, biotechnology, nano-science and other types of research. The internal and external stresses of people in these fields can be relieved by practicing Yoga and also for attaining peace and comfort. Various Yoga organizations and NGOs and several central universities have popularized Yoga worldwide with untiring efforts.

Yoga and Health: The systems of Ayurveda, Veda and Yoga have enhanced the health and longevity of Indians since time immemorial. Charaka while elaborating on the issue of health of an individual says that complete health means the totality of healthy body, sense organs and pleasant mind (*Prasanna atmendriya manaha svasthamityabhidheeyate I*), which has been incorporated in the motto of World Health Organization. In this context, the great contributions of ancient Indian medical doctors like Charaka, Sushruta, Vagbhata, Madhava, Nagarjuna, vedic sages and others merit our attention. Those concepts have been tested scientifically by modern researchers, through Inter and multi – disciplinary research thus earning name and fame all over the world.

Yoga - A Panacea for Modern Diseases: Yoga and meditation are very important tools in controlling Diabetes which has spread like an epidemic disease the world over and India is soon emerging as a second Diabetic capital of the world. It is a matter of immense pride that the world



renowned scholars and research centers have accepted that Yoga can cure diseases such as Diabetes, Obesity, Cancer, Hypertension and other non-communicable diseases. The practice of Yoga would help people to live healthily, happily, harmoniously and people can be free from various ailments and diseases.

Yoga and Youth: Yoga should be imparted to children from the very young age and it should become their lifestyle. Yoga would become a powerful means for promoting ageless Indian culture and tradition. The practice and perfect understanding of four streams of Yoga such as knowledge (*Jnana Yoga*), action (*Karma Yoga*), devotion (*Bhakti Yoga*) and meditation (*Raja Yoga*) would calm down body, mind and release stress. Indian youth who form more than 50% of total Indian population should practice Yoga for the overall development of their personalities. One can learn good habits, become model citizens on the country by practicing Yoga ethics and this alone can bring holistic health for people.

Culled out from the ancient wisdom of the Upanishads and Yoga lore are the principles and techniques that are practically applied in the SMET (Self-Management of Excessive Tension) program, which has received global popularity for its effectiveness in stress reduction. Especially the super-busy Executive world has been finding great value in regular SMET practice; as it brings about 'expansion of awareness' and 'depth of perception' through cyclic pattern of stimulation & relaxation. Thus, worldwide people, irrespective of caste, creed, religion etc., have been finding a fundamental solution to the problem of stress and tension, through Yoga.

Yoga could promote the concept of 'Earth is but one Family' (*Vasudhaiva kutumbakam*). India can emerge in yogic and spiritual planes and earn the encomium of *Yoga Vishwa Guru* (World Yoga Preceptor) among the comity of nations in the coming years. □

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Yoga for Lifestyle Changes

R Elangovan

"If you must be mad, be it not for the materialistic things of the world, be mad with the love of Yoga."

B.K.S. Iyengar

The purpose of life is to lead a happy life. Yoga promotes lifestyle for happiness. Maintaining good health is the very foundation of a happy life. Physical inactivity, smoking, alcohol, stress and unhealthy food are the major reasons for all lifestyle problems. The problems may be related to health, finances, relationships or emotions. Bad lifestyle can raise levels of cortisol secreted in adrenal gland which in turn affect the secretion of dopamine, the mood elevating hormone in the brain. Over secretion of cortisol trigger physiological changes such as spikes in blood pressure, heart rate and blood sugar. Yoga is a way of life and the main remedy for all sufferings. Today, lifestyle changes are the need of the hour.

According to the 2019 edition of the Bloomberg Healthiest Country Index, India is placed at 120th rank among 169 countries related to measures such as mortality by communicable and non-communicable diseases and life expectancy. India spends less per person in comparison to US. Sri Lanka, Bangladesh and Nepal ranked better than India.

Physical inactivity is now identified as the fourth leading risk factor for global mortality. Unhealthy diet was the second biggest factor in India driving most deaths and disability combined, after malnutrition. Food borne diseases cost India \$ 15 billion. According to World Health Organization, there is

no improvement in global levels of physical activity since 2001. People with a sedentary lifestyle are twice at risk than the physically active ones.

Lifestyle Changes Include

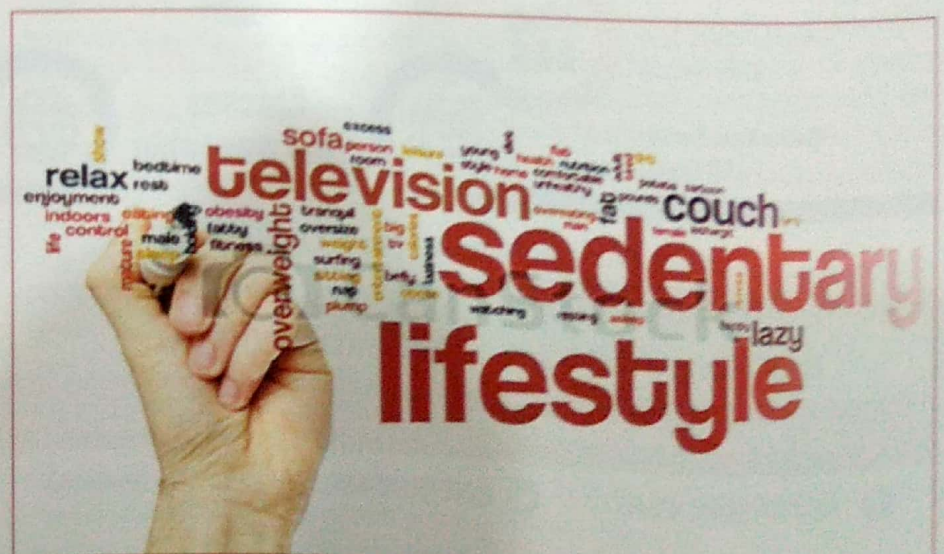
- Absence of disease
- Optimal physical fitness
- Proper nutrition
- Spirituality
- Smoking cessation
- Stress management
- Substance abuse control
- Health Education
- Environmental support

Yoga is the science of a being's evolution. It is the science of activating inner energies; blossoming of human potential to its fullness is yoga; the balance of intellectualism is yoga; Yoga is health insurance at Zero budget; Yoga is a passport to health assurance;

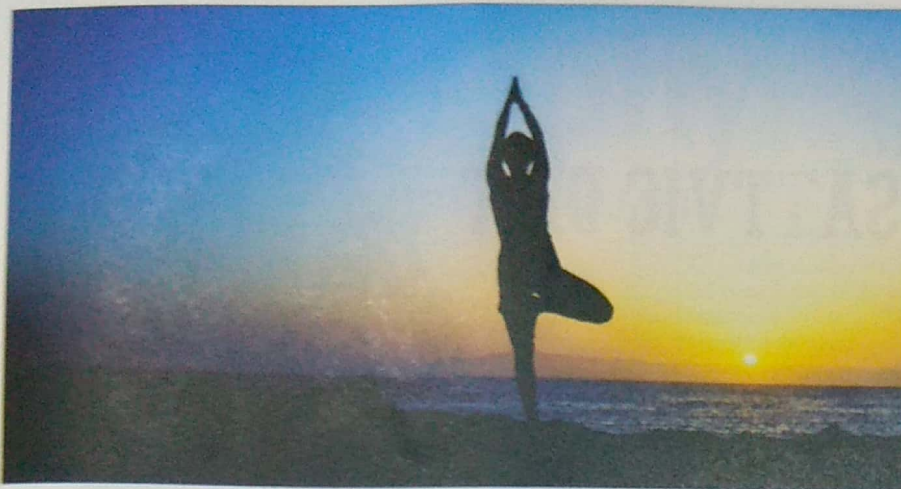
Yoga is secular nature and science; Yoga is technology or science of inner evolution for total well-being. Yoga is a well- balanced and perfect process for success and peace in life. Yoga is an integral part of the total healthcare approach. Yoga is a powerful antidote to the stresses of modern daily life. Yoga has three principles: purification, concentration and liberation. According to Yoga Sutras, "Yoga sutures the wounds of life."

Assessing Fitness

There is strong evidence to demonstrate that adults between the ages of 18 to 64 years should do at least 150 minutes of moderate intensity aerobic physical activity throughout the week. Children and youth aged 6-17 years should accumulate at least 60 minutes of moderate physical activity daily. We have to keep in mind that 65 per cent of India's population is



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under the age of 35; 50 per cent of India's population is under the age of 25. Future India should be healthy and fit.

The present trend of assessing fitness is known as metabolic fitness like: Blood Glucose level should be around 85mg/dl; Blood Pressure should be around 115/76 mm; Body Mass Index should be between 18.5 and 24.9 units; Total cholesterol at 200 mg/dl or less; HDL at 60 mg/dl or above; LDL under 100 mg/dl; Triglycerides at 100 mg/dl or less; Pulse rate should be below 72 counts; Genetic fitness test (40 genes) helps to improve fitness, health and nutrition.

Special Features of Yogic Practices

- Prayer cleanses the blockages in the small intestine through brain signals and activates the vibrations in the brain particularly the hypothalamus; increases blood flow to the brain and promotes gamma waves;
- Kriyas perfect autonomous nervous system; balance three doshas (vata- nervous system; pita – digestive system; Kapha – respiratory system); eliminate toxins;
- Pawanmuktasana Series (simple physical exercises)
 - ✓ increase synovial fluid;
 - ✓ stretch ligaments and tendons;
 - ✓ promote immunity power and brain function;

- ✓ flush out excess free radicals;
- ✓ thickness and quality of cartilage improved;
- ✓ flush out excess calcium-oxalate solidness.
- Surya Namaskar and asanas balance the secretion of hormones (regulates specific human systems);
- Mudras perfect cerebro spinal fluid to flush out waste products
- Pranayama maximizes endurance and removes toxins; cures all diseases; balances earth, water, fire and air elements and activates electrical activity
- Bandhas activate central nervous system
- Meditation is for the purification of mind; it activates space elements; leads to thoughtless stage; blood flow increases; set right biological clock; genes perfected by activating hypothalamus
- Yoga helps to get the qualities of total well-being
- Blessings activate the dopamine system in the brain.

Benefits of Eight Limbs of Ashtang Yog

Yama and Niyama promote the psychological qualities (siddhis) such as Clair Voyance (future), Clair audience (sound), Premonition (unpleasant

incident) bad happening, Clair empathy (sensing emotion), Intuition (inner knowledge), Telepathy (reads others thoughts), Psychic healing (curing), Auric sight (other colors), Psycho kinetics (move objects), Mental influence (influencing others), Psychometry (getting information of others). Asanas give steel like body; promote immunity power.

Pranayama Awakens Kundalini Sakthi.

Pratyahara, Dharana, Dhyana and Samadhi focus to get

- the strength of an elephant
- the glow of the sun
- the beauty of the moon
- working of internal organs
- ability to become invisible and
- even weightless and more

The signs of Samadhi state (higher consciousness) include

- fewer breaths
- fewer thoughts
- a sense of inner peace and joy
- reduced extremes of emotions
- a feeling that they were not encased within the limits of a physical body
- enhancement of strength of will and perseverance
- appreciable behaviour

Yogic practices are considered as perfect exercises because they are more natural by using the stored energy from the body itself.

Scientific findings on Yoga are: Yogic practices enhance gray matter for cognition and white matter for



communication; Enhance white matter to avoid depression which is the number one reason for ill-health; Yogic practices promote Neurogenesis in which stem cells become matured cells; Yogic practices improve the responsiveness of immune cells called neutrophils to a bacterial challenge; Optogenetics-A technique that uses light to erase bad memory and to enhance good ones by controlling Neuron activity. Yoga acts as the natural process of optogenetics; Metabolic process of food and exercise is known as thermogenesis. Yoga promotes natural thermogenesis; Period gene, timeless gene and double time gene are to control circadian rhythm (biological clock). Circadian disruptions lead to obesity and autism. Yogic practices switch over on and off the gene. The process of changing the shape and functioning of genes is known as epigenetics; Yogic practices activate the natural process of preventing DNA damage as cells ageing and death is known as Chromatin silencing; Natural autophagy (cell recycling) occurs due to yoga; Yogic practices help to have more cortical thickness in the left prefrontal cortex of the brain to promote cognitive functions like memory and attention; Yogic practices help to form new angiogenic blood vessels in the body; maintains different parts of the body in a stable and balanced way to reverse aging (homeostatis); Promotes bio-energetics (transforms energy to the brain and the neurons).

SATTVIC DIET



Samadhi state in Ashtanga Yoga is nothing but activating blissfulness that is happiness. Yoga promotes happiness. Amritha is a deep red liquid secreted by the pineal gland which produces and stimulates the blissful state called Anandam. Anadamide, the bliss molecule and a neurotransmitter in the brain creates a state of accentuated happiness. This neurotransmitter is activated by yogic practices. It is not constantly active. A sadhana using special techniques of personal evolution could activate production of anadamide. Balanced secretion of hormones lead to proper electrical activities, in turn proper electrical activities keep our biological clock intact. Biological clock is perfected by genes also; Genes are purified by Yogic practices. Biological clock is the heart of one's life. Yogic

practices perfect biological clock to lead a happy life.

Notable Benefits of Sattvic Diet

Sattvic diet promotes life, virtue, strength, health, performance, happiness, purification of inner being and satisfaction- Bhagavad Gita.

Half cup of beans provide as much protein as an ounce of meat. Nuts (mainly almonds and walnuts), seeds, pumpkin seeds and avocados contain omega-3 fatty acids, which are in nerve sheaths, to protect nerves and cognitive functioning (memory) as in fish and chicken and to overcome neurological disorders. Milk, curd and dal provide as much protein as in chicken. Soya beans contain twice as much protein as beef. Jack fruit is as good as pork and meat. Groundnuts have two and half times more protein than eggs. Vitamin B12 which is mainly gained from non-veg items can also be gained from curd, butter milk, cereals and other dairy products to make red blood cells.

General Yogic Practices for Proper Lifestyle

Suryanamaskar, Trikonasana, Sirsasana, Halasana, Sarvangasana, Suptavajrasana, Dhanurasana, Ushtrasana, Navasana, Ardha matsyendrasana, Paschimottanasana, Kapalbhati in Padmasana, Bhastrika Pranayama in Vajrasana, Nadi Shodhana Pranayama in Siddhasana and Meditation.

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Alternative Systems of Medicine in India: An Overview

Chandrakant Lahariya

Traditional Medicine (TM) along with Complementary Medicine (CM) and Alternative Medicine (AM) are terminologies that are often used interchangeably for a broad range of healthcare practices, theory, service delivery and systems in both Eastern and Western parts of the world (including for Ayurvedic medicine, naturopathy, traditional Chinese medicine and homeopathy etc.) that have developed separately from the conventional system of medicine (Box 1). These systems, all put together are referred to as Traditional and Complementary Medicine (T&CM).

India has a rich culture of T&CM, hereafter used interchangeably in this article, the alternative systems of medicine (ASM), which include both Indian/indigenous systems i.e., Ayurveda and Siddha as well as

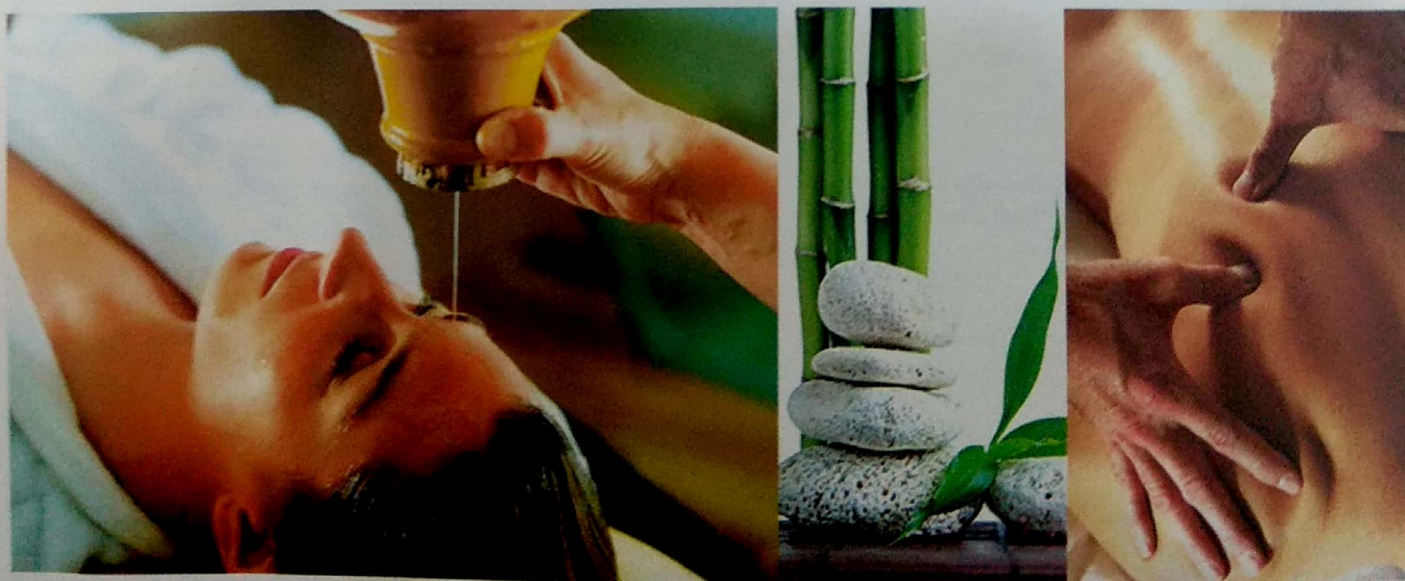
those not originated in India, i.e. Homeopathy. This article aims to (a) summarize the evolution of different types of medicine since antiquity; (b) provide an overview of ASM in India; and (c) suggest a way forward as the country intends to progress towards Universal Health Coverage (UHC).

Evolution of Medicine Since Ancient Times

The history of medicine indicates that almost every major civilization and culture had developed their own system for curing diseases, though the approaches varied. From the very beginning of the human civilization, there has been an interest in controlling diseases, ensuring good health and prolonging life. Medicine in ancient form was practiced in all societies and civilizations—Egyptian, Chinese, Indian, Mesopotamian, Greek, Roman and Arab/Unani—and is referred to and recognized by the

The history of medicine indicates that almost every major civilization and culture had developed their own system for curing diseases, though the approaches varied. From the very beginning of the human civilization, there has been an interest in controlling diseases, ensuring good health and prolonging life.

names of the civilization. The early medicine practices, around 3000 BC to 3500 BC, started independently in every culture, which then started influencing each other starting 200 BC, with a major convergence around 800 AD onwards with the evolution



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of Arab medicine (Box 2). The dawn of scientific or modern medicine started in the mid of the 15th century. It evolved on the foundation created by the ancient systems of medicine over a period of 4500 years (2500 BC-1500 AD). In the mid of the twentieth century, the stream of medicine based upon the concept of 'treatment of diseases by use of a drug which produces a reaction that itself neutralizes the disease condition or disease-causing agents' started getting popular and is now known as Allopathy or Allopathic Medicine. Allopathy is the most commonly used system of medicine in India and most other parts of the world. Most often, it is Allopathic medicine compared to which other systems are termed as traditional, complementary or alternative systems of medicine.

India and Alternative Systems of Medicine

In the last three decades, there have been focused initiatives to mainstream traditional and alternative systems of medicine in healthcare services in India. The first full-fledged department for Indian Systems of Medicine and Homeopathy (ISM&H) was created under the Ministry of Health and Family Welfare, Government of India, in March 1995 to promote and regulate the practice of alternative systems of medicine in the country (Box 3). This department was, in November 2003, renamed as Department of Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy (AYUSH). A fully independent Ministry of AYUSH

was formed in November 2014. In 2002, the Government of India also formulated the National Policy on Indian Systems of Medicine and Homeopathy.

Sustained efforts over the years have resulted in an increased availability of providers in alternative systems of medicine. By the end of March 2017, there were 3,943 hospitals and 27,698 dispensaries under AYUSH systems, under different administrative controls ranging from State and Union governments, local bodies and others (i.e. Central Government Health Services (CGHS); Railway, Coal and Labour Ministry and also run by research councils and national institutes). In March 2018, there were

773,668 already registered AYUSH practitioners, most of them being in Ayurveda followed by Homeopathy. There were 622 institutions offering under-graduate courses (annual intake of 40,151) and 201 institutes offering post-graduate courses (annual intake of 5,486) in AYUSH systems (Table 1).

The current National Health Policy of India has proposed functional linkage of AYUSH at all levels of health systems, including service delivery as well as work force. The policy proposal focuses on inclusion of Yoga at workplace, in schools and in the community as an important form of promoting health and wellness. The utilization of AYUSH services, ranges from 5-10 per

Table 1: Human resource availability and production capacity for traditional and alternative systems of medicine in India (March 2017)

	Already Registered practitioners	Under Graduate course		Post Graduate courses	
		No of Institutions	Annual intake	No. Institutions	Annual intake
Ayurveda	428,884	338	21,387	135	4,122
Unani	49,566	49	2,705	11	127
Siddha	8,505	09	520	02	94
Naturopathy	2,242	25	1,630	03	45
Homeopathy	284,471	201	13,909	50	1098
Total AYUSH	773,668	622	40,151	201	5,486

Source: National Health Profile of India, 2018.

Box 1: Traditional and Complementary Medicine-Definitions

- **Traditional Medicine (TM):** The sum-total of the knowledge, skill and practices based on the theories, beliefs and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health as well as in the prevention, diagnosis, improvement or treatment of physical and mental illness.
- **Complementary Medicine (CM) or Alternative Medicine (AM):** A broad set of healthcare practices that are not part of that country's own tradition or conventional medicine and are not fully integrated into the dominant healthcare system. In some countries, the term Traditional Medicine (TM) is used interchangeably with CM and AM and also together as 'Complementary and Alternative Medicine' (C&AM) and are used interchangeably. These systems typically use a variety of methods that fall under the CAM umbrella (herbal remedies, manipulative practices).
- **Traditional and Complementary Medicine (T&CM):** T&CM merges the terms TM and CM, encompassing products, practices and practitioners.

The current National Health Policy of India has proposed functional linkage of AYUSH at all levels of health systems, including service delivery as well as work force. The policy proposal focuses on inclusion of Yoga at workplace, in schools and in the community as an important form of promoting health and wellness.



Box 2: Evolution of Medicine Since Antiquity

- Indian Medicine:** Medicine in India originated around 3000 BC, when the practice of Ayurveda is considered to have started. In addition, the Siddha system of medicine is also Indian in origin. The period of 800 BC to 600 AD is regarded as the golden period for Indian medicine, a period which coincides with widely accepted authorities in Ayurvedic medicine, such as Atreya, Charaka and Sushruta. Of them, Atreya (about 800 BC) is considered as the first great Indian physician and teacher. Charaka (200 AD; also written as Caraka) wrote *Charaka Samhita* and was the most popular physician of the time. Sushruta is referred to as the father of Indian surgery. He wrote *Sushruta Samhita*, a treatise on surgery (between 800 BC and 400 AD). Around 800 AD, the *Charaka* and *Sushruta Samhitas* were translated into Persian and Arabic and Indian medicine had spread to Indo-China, Indonesia, Tibet, central Asia and Japan.
- Egyptian Medicine:** Egyptian civilization had well-advanced medicine, which is reported to have reached its peak in the days of Imhotep (2800 BC).
- Chinese Medicine:** There are well-documented records of Chinese medicine since 2700 BC. Some of the medicinal practices of those times are still followed in various forms.
- Mesopotamian Medicine:** The Codes of Hammurabi, in name of King of Baby Lone, were formulated around 2000 BC in the Mesopotamian civilization to govern the conduct of physicians to guide health practices.
- Greek Medicine:** Greek Medicine was most evolved between 460 BC-136 BC and Aesculapius (around 1200 BC) and Hippocrates (460-370 BC) were amongst the leaders in Greek Medicine. Hippocrates is often termed as "Father of Medicine" and the oath drafted by him guides medical ethics even now.
- Roman Medicine:** Roman Medicine emerged from Greek Medicine. Roman Medicine was more about overall health with focus on disease prevention and control (and not restricted to curing illnesses, as was the predominant feature of some other medicines prevalent at that time or earlier). Galen (130-205 AD) was a famous Roman medical teacher, whose teaching lasted till mid of sixteenth century when some recent knowledge on anatomy and physiology emerged.
- Arab Medicine (Unani Medicine):** From 500 AD to 1500 AD, Grecko-Roman medical literature was translated into Arabic. The local adaptation gave birth to the Unani system of medicines in schools of medicines and hospitals in Baghdad, Damascus and Cairo. The period of 800-1300 AD is often referred to as the golden period in Arabic medicine. Abu Becr (865 AD-925 AD; also known as Rhazes) and Ibn Sina (980 AD-1037 AD; also known as Avicenna) are known as two leaders of Arab medicine.



cent of total health service utilization with variations across Indian states (Government of India, 2014). In the year 2015-16, people in India spent around INR 63,000 crore on AYUSH health services (public and private sector put together), which amounts to nearly 12 per cent of total health expenditure of INR 528,484 crore in the country as reported in National Health Accounts (MOHFW, 2018).

Discussion and Way Forward

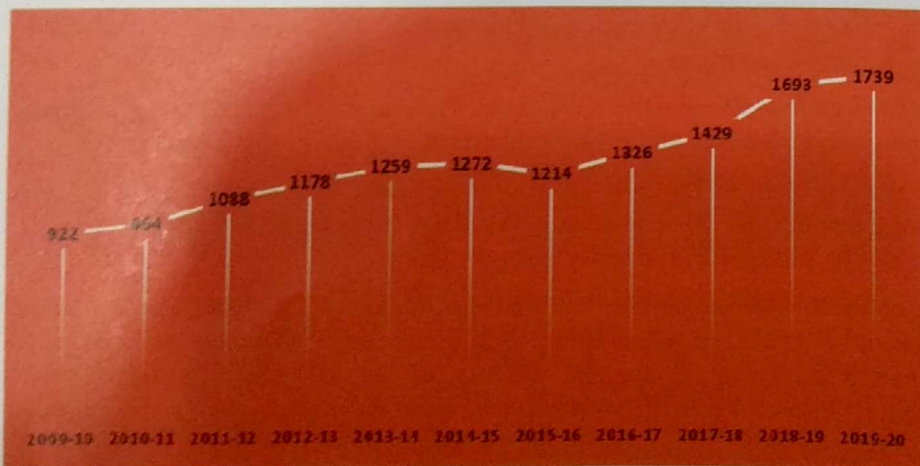
The current and predicted increasing burden of chronic and Non-

Communicable Diseases (NCDs) is often considered the most urgent reason for developing and strengthening collaboration between conventional and T&CM health sectors. The study of state level burden of diseases in India has highlighted the emerging burden of NCDs, which mandates higher provision of preventive and promotive health services, along with curative and diagnostic services. Many T&CM (especially Ayurveda, Yoga and Naturopathy) largely focus on principles of wellness and health promotion. There is a vast infrastructure

and plenty of providers in these systems and it is a great opportunity to tackle NCDs as well as other emerging health challenges in the country.

The global evidence has pointed towards the need for task shifting (assigning some of the tasks done by allopathic doctors to other cadres of healthcare providers) in health systems. A lot of such approaches are the standard of care in many resource poor settings and countries. The discourse is aligned with dialogues for moving from 'doctor-centric' to a 'team-based' approach to health service delivery, where each type

Figure 1: Financial allocations for Dept/Ministry of AYUSH (2009-2019)



*Ministry of AYUSH was created in Nov 2014. The budget of the Dept. of AYUSH is shown prior to Financial year (FY) 2015-16.

The values are Indian Rupee in Crores and are actual expenditure till FY 2017-18; for FY 2018-19 Revised Estimates (RE) and for FY 2019-20 Budget Estimates (BE). These are values for budgetary allocation in union budget of India.

The state government spending is not part of the figures shown here.
Source: Union Budget of Govt of India; www.indiabudget.gov.in

There is a need for extending similar research on additional systems of medicine. More strategic approaches are needed in this area including building the knowledge base for T&CM through facilitating national policies; capacity building; further strengthening of quality assurance, safety, proper use and effectiveness of T&CM by-products, practices and practitioners and by integrating T&CM services into healthcare service delivery and self-healthcare.

of provider (doctors, nurse, alternative system of medicine, pharmacist, counsellor) play different and complementary roles. India is making some progress in this area through MLHP under HWCs, yet more is needed and is possible through engagement of already available human resources under alternative systems of medicine in delivery of personal, population and public health services.

The ongoing initiatives at all levels need support through government leadership and financing. The research on different aspects of T&CM and the use of proven methods and approaches need to be promoted in addition to ensuring the availability



Box 3: Traditional/Indigenous/Alternative Systems of Medicine in India

Ayurveda: The Ayurvedic System of Medicine evolved nearly 5000 years ago (3000 BC). The word Ayurveda means 'Science of Life' and employs treatment modalities, such as purification, palliation, prescription of various diets, exercises and the avoidance of disease causing factors. The Ayurvedic medicine, though practiced for a wide range of health needs, is more commonly used for preventive and health and immunity boosting activities. Ayurveda is widely used in India and is more popular in Kerala, Himachal Pradesh, Gujarat, Karnataka, Madhya Pradesh, Rajasthan, Uttar Pradesh and Orissa.

Unani Medicine: Unani Medicine originated in the Arab world, though over a period of time it imbibed some concepts from other contemporary systems of medicines in Egypt, Syria, Iraq, Persia, India, China and other Middle East countries. Unani medicine treats a patient with diet, pharmacotherapy, exercise, massages and surgery. Unani Medicine was introduced in India around the 10th century AD and at present it is popular in the states of Andhra Pradesh, Karnataka, Tamil Nadu, Bihar, Madhya Pradesh, Maharashtra, Uttar Pradesh, Delhi and Rajasthan.

Homeopathy: The word 'Homeopathy' is derived from the Greek words, 'Homois' meaning 'similar' and 'pathos' means 'suffering'. It originated in Germany and was introduced in India around 1810-1839. Homeopathy is based on the law of healing- 'Similia Similibus Curantur' which means 'likes are cured by likes'. It uses highly individualized remedies selected to address specific symptoms or symptom profiles. It is practiced in many countries and in India, where it is the second most popular system of medicine. Homeopathy is practiced all over the country and is popular in Uttar Pradesh, Kerala, West Bengal, Orissa, Andhra Pradesh, Maharashtra, Punjab, Tamil Nadu, Bihar, Gujarat and North-Eastern States. In the recent years, the popularity of homeopathy has witnessed some decline.

Siddha: This system has originated in India and is amongst the oldest systems of medicine in the country. It takes into account the patient, his/her surroundings, age, sex, race, habitat, diet, appetite, physical condition etc. to arrive at the diagnosis. Siddha System uses minerals, metals and alloys and drugs and inorganic compounds to treat the patients. Unlike most T&CM, this system is largely therapeutic in nature. Siddha literature is in Tamil and it is practiced largely in Tamil speaking part of India, i.e. Kerala and abroad.

Sowa-Rigpa: The word combination means the 'science of healing' and is considered one of the oldest living and well-documented medical traditions of the world. It originated from Tibet and is widely practiced in India, Nepal, Bhutan, Mongolia and Russia. In India, this system is practiced mainly in Sikkim, Arunachal Pradesh, Darjeeling (West Bengal), Dharamshala, Lahaul and Spiti (Himachal Pradesh), Ladakh region (Jammu and Kashmir) and in parts of Delhi.

Yoga & Naturopathy: The concepts and practices of Yoga are reported to have originated in India. Yoga is now being adapted to correct lifestyle by cultivating a rational, positive and spiritual attitude towards all life situations. The role of Yoga techniques in the prevention and mitigation of diseases and promotion of health are being studied. Yoga is widely practiced across India and has spread to many other parts of the world. The United Nations (UN) has designated 21st June as 'International Yoga Day'. Naturopathy or the naturopathic medicine is a drugless, non-invasive system of medicine imparting treatments with natural elements based on the theories of vitality, toxemia and the self-healing capacity of the body, as well as the principles of healthy living. The common naturopathy modalities include counseling, diet and fasting therapy, mud therapy, hydrotherapy, massage therapy, acupressure, acupuncture, magnet therapy and yoga therapy.

of these services for the people. There has been increasing research published in peer reviewed sources on effect of Yoga and other T&CM, which have shown beneficial effects on select health conditions. There is a need for extending similar research on additional systems of medicine. More strategic approaches are needed in this area including building the knowledge base for T&CM through facilitating national policies; capacity building; further strengthening of quality assurance, safety, proper use and effectiveness of T&CM by products, practices and practitioners; and by integrating T&CM services into healthcare service delivery and self-healthcare.

Conclusion

There is a focus, both globally and in India, on strengthening primary healthcare (PHC) and advancing UHC, which would require interventions at all levels of health systems. This is possible if the potential contribution of T&CM to improve health services and health outcomes is fully used and by ensuring that users are able to make informed choices about self-healthcare. The renewed attention on strengthening PHCs and advancing UHC, the recognition of epidemiological shift towards burden of non-communicable diseases and the availability of trained health resources and extensive infrastructure in T&CM are opportunities on which India can embark upon for becoming a healthy nation. This would also need the right mix of preventive, promotive and curative health services and increasing integration of traditional, complementary and alternative systems of medicine (T&CM) in conventional health system. It is time to strategize in order to optimally utilize the knowledge, expertise and resources in T&CM to improve health outcome for citizens and advance UHC in India.

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DO YOU KNOW?



World Environment Day June 5, 2019



World Environment Day (WED) is celebrated on the 5th of June every year. WED was established in 1972 during the United

Nations Conference on the Human Environment, which led to the creation of the **United Nations Environment Programme (UNEP)**. Its aim is “encouraging worldwide awareness and action for the protection of our environment”. World Environment Day is the ‘people’s day’ for doing something to take care of the Earth.

Each World Environment Day is organized around a theme that focuses attention on a particularly pressing environmental concern. Every World Environment Day has a different global host country, where the official celebrations take place.

In 2018, India was the host for World Environment Day and the theme was focussed on **Plastic Pollution**, which is one of the most challenging environmental concerns today.

In 2019, China is the host for World Environment Day celebrations on the theme, ‘**Air Pollution**’.

According to a new UN report, millions of lives could be saved and one billion people living in Asia could be breathing clean air by 2030 if 25 simple and cost-effective measures are implemented. Currently, about 4 billion people – 92 per cent of Asia and the Pacific’s population – are exposed to levels of air pollution that pose a significant risk to their health.

The report, **Air Pollution in Asia and the Pacific: Science-based Solutions**, is the first comprehensive scientific assessment of the air pollution outlook in Asia and the Pacific. It details 25 policy and technological measures that will deliver benefits across sectors. These are as follows-

25 CLEAN AIR MEASURES

1. Strengthen emission standards for road vehicles

- a. Strengthen all vehicle emissions standards with a special focus on regulation of light and heavy-duty diesel vehicles. This will require collaboration between environmental agencies, transport agencies, oil companies and vehicle manufacturers, among others.

2. Regularly maintain and inspect vehicles

- a. Introduce legislation and enforcement of regular mandatory emission checks and maintenance. This includes random tests to prevent extended use of vehicles with failed emissions abatement systems.
- b. Centralize inspection and maintenance systems and establish self-funding mechanisms for regular audits at test centres.

3. Mainstream electric vehicles

- a. Develop fiscal and non-fiscal policies to promote electric mobility.
- b. Invest in required infrastructure to encourage quicker uptake of electric vehicles

4. Provide better mobility options

- a. Improve public transport system to encourage shift from private passenger vehicles to public transport and integrate with sustainable urban planning.
- b. Invest in walking and cycling infrastructure (sidewalk and bike-paths, sufficient lighting, bike sharing options, etc.)

5. Control dust from construction and roads

- a. Suppress construction and road dust through dust control measures including road washing and cleaning, road paving, water spraying, installation of barrier protection, avoiding dust-

generating work during windy days, etc.

- b. Increase green spaces and areas especially in cities. This includes public parks, gardens, etc.

6. Reduce emissions from international shipping

- a. Require low-sulphur fuels and control of particulate emissions.
- b. Collaborate with the International Maritime Organization to widen the ratification and implementation of International Convention for the Prevention of Pollution from Ships.

7. Improve post-combustion control

- a. Introduce state-of-the-art end-of-pipe measures to reduce sulphur dioxide, nitrogen oxides and particulate emissions at power stations and in large-scale industry.
- b. Examples include flue gas desulphurization for sulphur dioxide, selective catalytic reduction for nitrogen oxides, and high efficiency particulate matter controls like fabric filters, multistage electrostatic precipitators.

8. Strengthen industrial process emissions standards

- a. Introduce advanced emissions standards in industries, e.g., iron and steel, cement, glass production, chemicals, etc.
- b. Strengthen production, performance and emission standards to control end-of-pipe emissions and fugitive emissions. This will stimulate investment in pollution control and/or cleaner technologies.

9. Introduce efficient brick kilns technology

- a. Improve efficiency and introduce emissions standards to stimulate shift to more efficient brick kiln technologies (such as zig-zag, vertical shaft brick kiln or tunnel

kilns). This requires collaboration among kiln owners, technical experts, and government to demonstrate benefits of cleaner kiln technology.

10. Control methane from oil and gas production

- a. Encourage recovery of oil production and associated petroleum gas.
- b. Stop routine flaring and either utilize or convert to liquids that can be sold at higher value.
- c. Improve leakage controls in gas production and distribution networks.

11. Improve solvent use and refinery controls

- a. Introduce low-solvent paints for industrial and do-it-yourself applications.
- b. Improve solvents recovery in industry. If not feasible, incinerate flue gas rich in hydrocarbons.
- c. Establish leak detection and repair programs at refineries. Install double seal systems, vapour recovery unit, fixed covers and monitoring at refineries and fuel depots.

12. Use environmentally-friendly refrigerants

- a. Ensure full compliance with Kigali Amendment to phase-down hydrofluorocarbons which are commonly used in air conditioning, refrigeration and a host of industrial products.
- b. Establish regulations to support shift to low- global warming potential cooling agents.

13. Provide clean cooking and heating options

- a. Use clean fuels – electricity, natural gas, liquefied petroleum gas in cities, and liquefied petroleum gas and advanced biomass cooking and heating stoves in rural areas.
- b. Substitute coal with briquettes for cooking and heating.

14. Strictly enforce bans on household waste burning

- a. Strictly enforce bans on open burning of household waste. Burning ban needs to be complemented

with comprehensive solid waste management plan including proper waste collection system, recycling, waste treatment, and awareness raising.

15. Provide incentives for improved energy efficiency in households

- a. Provide incentives to improve energy efficiency of household appliances, buildings, lighting, heating and cooling.
- b. Encourage rooftop solar installations.

16. Increase renewable electricity generation

- a. Establish renewable energy targets and supporting policies to achieve target. This includes providing incentives to foster extended use of wind, solar and hydro power for electricity generation and phase out least efficient plants.
- b. Leverage public pressure to switch from fossil fuels to renewables.



Beat Air Pollution

17. Improve energy efficiency for industry

- a. Introduce ambitious energy efficiency standards for industry.
- b. Include energy efficiency targets for industry in national development plans.

18. Recover coal mining gas

- a. Encourage pre-mining recovery of coal mine methane gas.
- b. Provide fiscal incentives, well-defined gas property rights and unsubsidized free gas market.

19. Improve livestock manure management

- a. Introduce covered storage (floating or permanent covers) and efficient application of manure (when plants need fertilizers, rapidly incorporate manure in soil or as narrow bands in canopy or grassland).
- b. Consider low emission options for new animal housing: regular floor scraping, air ventilation cleaning, closed storage tanks.

20. Strengthen management of nitrogen fertilizer application

- a. Establish efficient nitrogen fertilizer application (right timing and amount). Substitute urea and ammonium bicarbonate with e.g. ammonium nitrate fertilizer.
- b. Promote alternative formulations, e.g., neem coated urea, or use of urease inhibitors, where available and affordable.

21. Better management of agricultural crop residues

- a. Manage agricultural crop residues, including strict enforcement of bans on open burning. Complement burning ban with measures that use the residues. This includes alternative off-site use, technologies that plough residue into fields, no-till agricultural practice, or using residues as bedding for livestock or biogas digesters.

22. Prevent forest and peatland fires

- a. Improve and enforce forest, land and water management and fire prevention strategies. This includes fire spread protection zones, fire alarm and brigade system, prohibit access to forests during droughts, and ban on land clearing.

23. Promote more efficient rice production practices

- a. Encourage intermittent aeration of continuously flooded rice paddies (e.g. alternative wetting and drying – practice of allowing the water table to drop below the soil surface at one or multiple points during a growing season).

24. Stop biogas leakage from wastewater treatment

- a. Introduce well-managed two-stage treatment with biogas recovery.
- b. Promote decentralized wastewater treatment units.

25. Improve solid waste management

- a. Encourage centralized waste collection with source separation and treatment, including gas utilization.

Sources- United Nations Environment Programme & Climate and Clean Air Coalition (CCAC)

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The variety of life on the earth, its biological diversity, is commonly referred to as Biodiversity. The number of species of plants, animals and micro-organisms, the enormous diversity of genes in these species, the different ecosystems on the planet such as deserts, rainforests and coral reefs, are all part of a biologically diverse earth. Biodiversity boosts ecosystem productivity where each species, no matter how small, has an important role to play. Preserving species and their habitats is important for ecosystems to sustain themselves. It has long been feared that human activities are causing massive extinctions. Despite increased efforts for conservation, sustainability eludes.

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"It is in our own interest that the ecosystems are conserved. However, conservation should not be misunderstood as total 'No Use'. For our day to day survival, the biological and other ecosystem resources have to be used. Hence, it is essential that conservation takes into account the use of the biological resources. On the face, it seems impossible. We want to use the resources and also want to conserve them. But it is possible. We have to adopt the philosophy of sustainable use of biodiversity."

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LIVING with **OTHERS**
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M.A. HAQUE



Siddha System of Medicine In A Nutshell

Kanakavalli K, Eugene Wilson and Vinayak S

Traditional Indian Medicine (TIM) is referred by the acronym 'AYUSH' representing 'Ayurveda', 'Yoga', 'Unani', 'Siddha', and 'Homeopathy'. The aforesaid medical systems are codified and recognized under the Ministry of AYUSH, Government of India. The Ministry of AYUSH was formed on 9th November 2014. Earlier it was known as the Department of Indian System of Medicine and Homeopathy (ISM&H) which was created in March 1995 and renamed as Department of Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy (AYUSH) in November 2003, with a view to provide focused attention for the development of Education and Research in Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy.

Siddha Medicine

The term 'Siddha' is derived from the root word 'Siddhi' which means 'an object to be attained' or 'perfection'. As 'Siddhi' means perfection, the practitioners of Siddha medicine aimed at perfection of health. The Siddha system of medicine owes its origin to medicinal ideas and practices of a class of Tamil sages called the Siddhars —“perfected” or “holy immortals”—who were, and are still, believed to have superhuman powers as the word Siddhi itself also refers to supernatural powers. They had firm faith in the “deathless” physical

body being in tune with the spiritual immortal “soul”. Significantly, one of the definitions of Siddha medicine is conquest of death: “that which ensures preventive against mortality”. Siddhars were men of highly cultured intellectual and spiritual faculties. They were well aware that the physical body is transient, that is, the only instrument by which a person can reach the ultimate goal, is to become one with the Lord. So they found Siddha system of medicine. It will not be wrong to say that Siddha medicine is the result of their search for reaching God.

Basic Human Principles – 96
Thathuvas

Five Elements

The primordial elements are called *panchamaha bootham*, namely *mann* (earth), *neer* (water), *thee* (fire), *katru* (air) and *aagayam* (space). The five elements form the basis of the cosmos and are in a subtle state. They manifest into a gross state and become visible. We can understand the contribution of five elements in human beings for example, through five sense organs, motor organs and their functions and by the process of fertilization. The role of the five



The term 'Siddha' is derived from the root word 'Siddhi' which means 'an object to be attained' or 'perfection'. As 'Siddhi' means perfection, the practitioners of Siddha medicine aimed at perfection of health

Kanakavalli K is Director General, Eugene Wilson is Research Officer and Vinayak S. is Research Associate (Siddha) at Central Council for Research in Siddha, Chennai.

elements does not end in giving just the skeletal framework to the human body but at the same time, it is indispensable in the prescription of therapeutic regimen.

Three Humours

To regulate the living body easily the five primordial elements were concised into three humours namely *vazhi* (*vadham* or air), *azhal* (*pittam* or heat) and *Iyyam* (*kapha* or cold). When humours are in natural equilibrium and harmony, a person enjoys the best of health. Any alteration in the rhythm leads to disease condition. The three humours is a golden line continuous in physiology, pathology and treatment or management.

The first one third of one's life is considered as *vazhi* period where a person grows physically, psychologically, emotionally, spiritually, etc. Because it is said that the space element came to existence first from creative power and last was the earth element, so *vazhi* is always regarded as the generative phase in physiological condition. On the other hand, it is common that children and youth are inflicted with respiratory disorders such as primary complex, asthma and so on that *Iyyam* is vitiated during the first period of life. The second third of ones life is considered as *azhal* period where life is considered to be in the maintenance phase in physiological condition. At the same time, *azhal* is deranged during this period, due to erratic, over or under activity of an individual and is exposed to enormous stress, which in turn produces symptoms such as Irritable bowel syndrome or acid peptic disorders. Finally, the last one third of one's life is physiologically attributed to *Iyyam* period or the destructive / senile phase of one life. But during this last phase of life, *vazhi* is imbalanced and hence an individual suffers from pain and degenerative disorders like spondylitis, osteoarthritis, etc.

Five Sheaths (Kosham)

The nature of being human encompasses physical and

psychological aspects that function as one holistic system. The *kosham* system refers to different aspects as layers of subjective experience. Layers range from the dense physical body to the more subtle levels of emotions, mind and spirit. They are *paruva udambu - annamaya kosham* (food-apparent-physical sheath), *vali udambu - pranamaya kosham* (air-apparent-sheath), *mana udambu - manomaya kosham* (mind-apparent-sheath), *arivudambu - vijnanamaya kosham* (wisdom-apparent - Intellectual sheath) and *inba udambu - anandamaya kosham* (bliss-apparent-sheath). Many a times, different therapies fail, because it only addresses the physical cause or outer sheath only.

Ten Pranic Air (Vayus)

Apart from the 5 fundamental *pancha vayus* such as *pranan*, *udanan*, *abanan*, *viyanan*, *samanan*, there are five more ancillary *vayus* namely *nagan*, *koorman*, *kirugaran*, *devathatan* and *thanajeyan*. These ancillary *vayus* are not just responsible for physiological function but also contribute to the psychological and spiritual component. Other *thathuvas* include 10 major channels (*nadi*), 8 passions (*ragam*), 6 chakras (*atharam*), 5 major cavities (*asaayam*), 5 states of consciousness (*avathai*), 4 Inner faculties (*anthakaranam*), 3 qualities (*gunas*), 2 acts (*vinai*), etc.

Siddha Diagnosis

In Siddha system of medicine, eight tools are mentioned in the armamentarium of the Siddha



Figure 1. Siddha Pulse Diagnosis

physicians. They are as follows: *Naadi* (Siddha way of Pulse examination - Figure 1), *Sparisam* (Touch and palpation), *Naa* (Tongue examination), *Niram* (Colour, complexion, discoloration etc.), *Mozhi* (Voice examination), *Vizhi* (Eyes examination), *Malam* (Stools examination) and *Moothiram* (Urine examination) including Oil on Urine Sign - Figure 2 (*Neikkuri*).

Oil on Urine Sign (Neikkuri Examination)

Neikkuri or Oil on urine sign is a unique method in Siddha system of medicine to arrive at the diagnosis and prognosis of the disease conditions. In this test an oil drop preferably of sesame oil is instilled over the surface of the urine sample surface and the spreading pattern of the oil drop is observed over a minute and viewed. Basically, this test is done to identify the vitiated humour(s) in the body. *Vazhi* when affected it is reflected in the *Neikkuri* sign as an elongation of the oil drop in a serpentine fashion. *Azhal* when affected is manifested as a ring like or sea like spreading of the oil drop. *Iyyam* manifests itself in the pattern of oil drop staying like a pearl over the sample surface. Examination of pulse and urine are very important because they are helpful in arriving at the diagnosis and also in assessing the prognosis of the disease.

Siddha Therapy

The word "*marunthu*" (drug) in Tamil language itself denotes scented 'root' or 'leaf'. The foremost



Figure 2. Oil on Urine Sign (Neikkuri)



substance given for an imbalance of three humours or illness is of herbal origin. The commendable usage of herbs can be understood by a special method popularly known as *ega mooligai prayokam*. It means selecting and administering a single herb on the basis of five elements that is present in the herb to neutralize the affected humour. Moreover, the selection of herbs is based on many properties such as: taste, potency, class and action. In the armoury of *Siddha Pharmacopoeia*, 32 types of Internal and 32 types of external medicines are used to combat the imbalance of humours/disease.

Line of Treatment

To tackle the disease effectively and easily, *Siddhars* primarily dealt with the causative factor i.e., vitiated humour. To achieve this, following therapies were carefully employed. Purgative therapy provides relief from deranged *vazhi* humour. Emetic therapy is used to get rid the body of *azhal* humour. Nasal and ophthalmic application helps to reduce vitiated *Iyya* humour. Nasal application is essential for the prevention of *Iyya* diseases affecting head and neck. Blood letting therapy by leech application is preferred, if all three humours are vitiated and for chronic diseases. Moreover, all the eight steps of *Yoga* dealt by *Siddhar Thirumoolar* help to lead a healthy life and prevent illness. In addition, according to the *Siddha* maxim "Food itself is medicine and Medicine itself is food" incorporating a balanced healthy diet is also considered as medicine.

Above all, *Siddha* medicine uses several mineral and animal products as second line of treatment for chronic intractable diseases.

Varmalogy


The science of *Varmalogy* was introduced by *Siddha* sages - realized souls. Available written evidence support this, especially in Tamil Nadu, South India. *Varmam* can be understood as follows "Wherever *vasi* touches, there is *varmam*. Wherever the breath reaches, there is *varmam*". In general, *varmam* is used as a general word to cover '*vasi*', vital air and breath. These are all words that denote energies that operate in the body. Therefore, we must infer that *varmam* is an extremely subtle energy that operates inside the body.

Varmam treatment can cure a whole range of ailments – from headaches, lumbar disc prolapse, cervical problems and even heart & brain related disorders. *Varmalogy* has several special features that make it truly unique. For example, more than 8000 *Varmam* points are described in *varmam* texts. Very detailed study of nearly 360 nerves is available. Fundamental treatment procedures such as purgation, vomiting and nasal application can be induced by stimulating *varmam* points alone. At the same time, even the most extreme medical emergencies can be handled through the use of life-saving techniques. In addition, *Varmalogy* has its own extensive herbal medicine repository.

Thus, *Siddha* Medicine is a unique blend of therapies which provide

holistic care and offer advice for a more natural healthy lifestyle.

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Homeopathy Treats You in Person

Anil Khurana, Harleen Kaur

Homeopathy is an age-old system of healing, with its discovery dating back to 1796. It was discovered by a German doctor, Dr. Samuel Hahnemann, in his discontentment with the then medical practices and lack of cures. He firmly believed that treatment should restore the sick to health gently, permanently and without accompanying side effects. Homeopathy is a nature-based system that treats holistically as well as individually, by way of stimulating one's own immunity capable to fight an illness. It is a much sought after method of treatment worldwide, and in India, it is a part of the medical systems recognized and promoted by the Government.

Why Choose Homeopathy?

World over, there is a renaissance of natural treatments that treat a person as a whole and heal not only the disease. Homeopathy considers this 360°-approach for healing process of your disease as the most integral aspect of treatment. Unless your treatment is individualized, or so to say, unless you are treated in person (customized for you), recovery cannot be long lasting, or devoid of side effects. The principles that Homeopathy works on include such nature-based, pragmatic facts, like treating a person *holistically*, through a *single, simple medicine*, prepared in a *dynamic manner*, and prescribed in a *dosage that is just enough* to stir up the self-healing mechanism of your own body. It is these principles that set

Homeopathy apart from other systems of medicine, as well as ensures that homeopathic treatment makes a person feel better as a whole as soon as one starts with it.

Many people who took resort to Homeopathy after failed treatments in other systems, report of general feeling of well-being soon after their first few doses. Further, many of them admit of being convinced of the healing power of Homeopathy only after they recovered from their long-standing illnesses without recurrences. These people have gone on to recommend Homeopathy to their family and friends and have become regular users of this gentle science of healing.

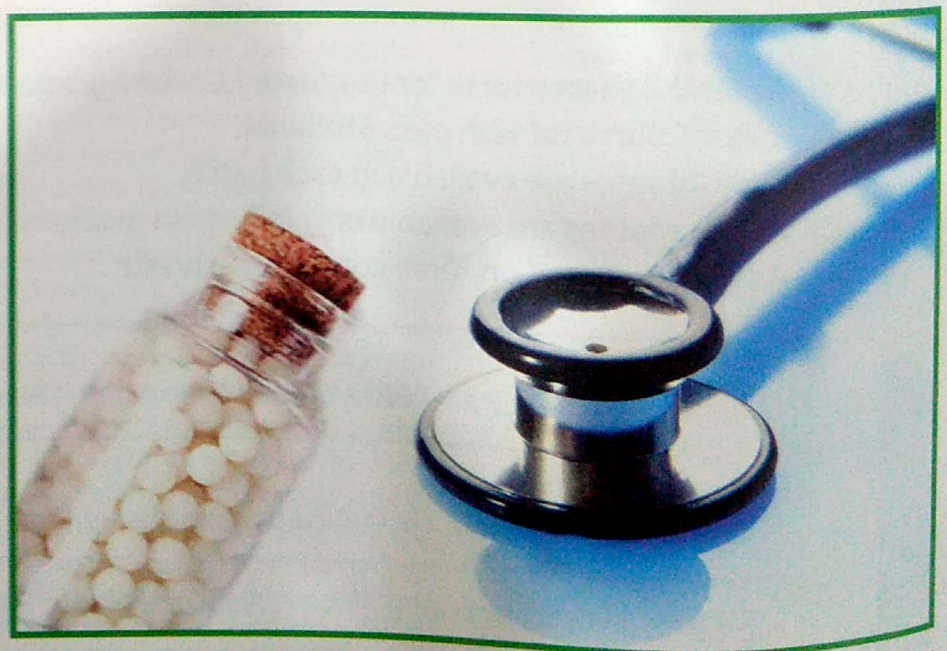
Homeopathy Addresses Multi Morbidity Successfully

These days people do suffer from two or more illnesses concurrently

The principles that Homeopathy works on include such nature-based, pragmatic facts, like treating a person holistically, through a single, simple medicine, prepared in a dynamic manner, and prescribed in a dosage that is just enough to stir up the self-healing mechanism of your own body.

especially as age advances. It is common to find arthritis pains, hypertension, thyroid disease as well as diabetes.

Such conditions are called multi-morbid conditions. One of the potential aspects of Homeopathy is that it addresses these conditions in a patient successfully, that too



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with single, or at the most with two medicines. Even long-term treatment with these medicines does not lead to any side effects or dependence. As much challenging as it may sound, Homeopathy treats the multi-morbid person as a whole, which works on bringing back the biological functions in order, thereby addressing them all, and thus helping the patient holistically and simultaneously improving his/her general well-being.

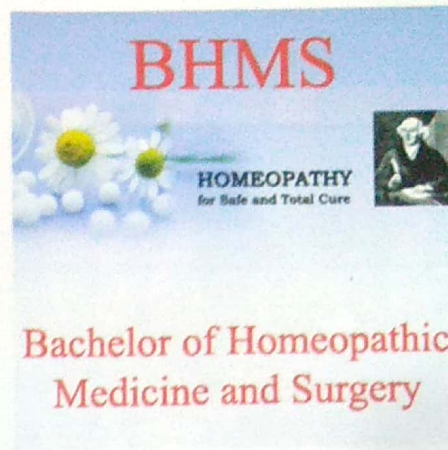
Homeopathy is A Science as well as Art.

Finding the right homeopathic medicine for a person who is sick requires taking into account his individualistic response to the disease agent, as well as understanding the person as a whole, which is certainly a work of art. A homeopathic doctor tries to understand the person who is suffering, the personality and psychological aspects of that person, and pays enough time to analyze this information, which eventually leads him to finding a correct remedy. Such a carefully chosen medicine brings lasting response, and prevents recurrence many a time.

Despite the evident effectiveness of Homeopathy, some people question the ultra-diluted nature of homeopathic

For diseases of chronic or prolonged nature, like various types of arthritis, diabetes mellitus, migraine, sinusitis, respiratory and cardiovascular problems, Homeopathic treatment is very popular due to its known effectiveness.

medicines. Dr. Samuel Hahnemann, once said to such skeptics, "Try this science before you write it off." Many a scientist, who set out to disprove Homeopathy, could not do it once they themselves saw the effect of homeopathic medicines on various kinds of patients, as well as in the petridishes and microscopes of their laboratories. And this is not a blast from the past. Even today, the scientists who are working on the plausibility of homeopathic medicines, have found results that have astonished them to work more on this area. Even Nobel Laureates – Emeritus Professor of Physics, University of Cambridge (UK) Brian D Josephson and the French virologist Prof. Luc Montagnier endorsed the credibility of Homeopathy through their understanding of science.



What Illnesses are Best Treated with Homeopathy?

Homeopathy can be your first line of treatment in many day to day illnesses like seasonal viral fevers, allergic cold, gastric troubles, minor cuts and injuries, headache, skin diseases like acne, warts, rashes and muscular pains caused by muscle spasms.

For diseases of chronic or prolonged nature, like various types of arthritis, diabetes mellitus, migraine, sinusitis, respiratory and cardiovascular problems, Homeopathic treatment is very popular due to its known effectiveness. A recent paper in a leading international journal reported that given the present health trends in India, 7 out of the top 10 diseases recognized as a national burden have





a considerable overlap with the top 10 diseases that patients reported to the homeopathic clinics. The seven conditions common in both sets comprised cardiovascular diseases, gastric disorders, respiratory diseases, endocrine/genitourinary diseases, musculoskeletal disorders, anaemia and pediatric diseases (Homeopathy 2019;108:76–87).

Finding a Homeopathic Doctor

If you plan to choose Homeopathy for treatment of regular illnesses of your family, it is important to have a good, qualified doctor as your family doctor. Homeopathic doctors are given BHMS (Bachelors of Homeopathic Medicine & Surgery) after their graduation. This is a five and half years' course, including one-year mandatory internship. These doctors are trained with the same subjects that are taught to allopathic students during their graduation, apart from the homeopathic ones, which means the knowledge of medicine of a homeopathic doctor is no less than a conventional medicine doctor. These days, many BHMS doctors are advancing their knowledge by doing M.D. in Homeopathy after which they mention M.D. (Hom.) against their names.

Following their degrees, the Homeopathy doctors are registered under the statutory registration boards of their respective states, and/or under a central registration body, Central Council of Homeopathy, which is an autonomous body of Government of India.

Your search for a good, reliable homeopathic doctor should have the degree BHMS/MD and registration number of the doctor as quick check points.

Buying OTC Homeopathic Products

Although many chemists and homeopathic pharmacy shops are selling Over-The-Counter (OTC) homeopathic medicines, it is recommended to take them after prescription by a doctor only. Usually, these OTC medicines may provide relief only for a short duration. For long term benefits, it is advisable to always consult a homeopathic practitioner before buying any OTC homeopathic products.

Homeopathy Treatment on Internet

In today's era of internet, it seems very easy to get a prescription for your illness through just a few clicks, without personally meeting a doctor. While in some cases this can help,

it is most recommended to resort to this medium when no other option is available. Despite this being the era of gadgets and virtual world, a personal visit to a doctor and personal examination still tops the ways of getting the best treatment possible.

Take Home Points

There were times when our grandparents and their parents relied on nature's own way of treating diseases. With the evolution of medicine in the last few decades, we have given that charge to the drugs. We have drugs for mostly everything, and yet, we have all the hospitals and clinics full of diseased people. It is about time we revisit our understanding of our own body and what may be ailing it. And in that revisit, we will find Homeopathy fits the bill perfectly. It is not drugging your system, in fact, it is de-drugging your system, and helping your body take charge of its own system, through minimum doses of gentle medicines.

Homeopathy could be your window to holistic health that will rekindle your love for nature's own way of fighting back, just as our forefathers asserted.

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Unani System of Medicine: The Science of Health and Healing

Asim Ali Khan

Unani System of Medicine is a comprehensive medical system, which meticulously deals with the various states of health and disease. It provides promotive, preventive, curative and rehabilitative healthcare. The fundamentals, diagnosis and treatment modalities of the system are based on scientific principles and holistic concepts of health and healing. Its holistic approach considers individual in relation to environment and stresses on health of body, mind and soul. Temperament (Mizāj) of a patient is given great importance in diagnosis and treatment of diseases with natural remedies derived mostly from plants. Temperament is also taken into consideration for identifying the most suitable diet and lifestyle for promoting the health of a particular individual.

Unani System of Medicine considers the entire universe including human beings, disease, drugs, environmental factors etc. to be intrinsically defined by four primary qualities – Hot, Cold, Dry and Wet. These qualities are reflected in all the basic concepts of Unani System of Medicine such as elements, temperament and four humours, which are used for describing and correlating human health and disease with promotive and curative factors e.g. diet and drugs.

Concept of Health Promotion and Disease Prevention

In Unani system, health is divided into three states: stable optimum



In Unani system, health is divided into three states: stable optimum health, vulnerable optimum health, and debility without disease.

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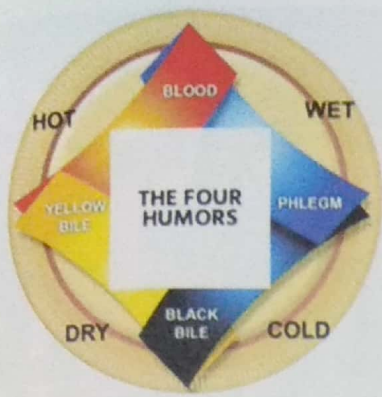


Fig. 1:- The concept of four humours



diet, specially tailored according to the temperament of the individual, which is determined not only by their innate temperament but also by their occupation, region, habitation etc.

The second and third states additionally require special diets, regimens (massage, exercise etc.) and even drugs. For maintenance of health, Unani System of Medicine specially emphasizes the six essential factors (asbābsitta Ddarūriyya) i.e. air, food and drink, bodily movement and repose, psychic movement and repose, sleep and wakefulness, and evacuation and retention, whose appropriate deployment in the life of a person, determined by their temperament, ensures health. These six essential factors are used not only for promotion and preservation of health and preventing diseases, but also for treating diseases.

While diagnosing and treating a disease, Unani System of Medicine looks holistically into the overall physical, mental and spiritual aspects of a person. The health is restored by adopting various treatment modalities like Regimenal therapy ('Ilājbi'l-Tadbīr), Dietotherapy ('Ilājbi'l-Ghidhā'), Pharmacotherapy ('Ilājbi'l-Dawā') and Surgery ('Ilājbi'l-Yad). Regimenal therapy along with Dietotherapy is considered the best approach for promotion of health and treatment of disease.

Unani System of Medicine has also emphasized on the importance of psychiatric treatment ('IlājNafsānī)

in the management of various diseases. Surgical interventions and procedures are elaborately described and practised in conditions, which are not amenable to drug treatment.

Management of Diseases

In Unani System of Medicine, the management of diseases focuses on the pathology involved in the disease process and works towards removal of the causative factor (Izāla-iSabab), normalization of the morbid temperament (Ta'dīl-iMizāj) and evacuation of morbid material (Tanqiya). While managing the diseases the entire lifestyle and the constitution of the patient is taken into account for making the diagnosis and prescribing the correct treatment. A thorough assessment of habits, habitat, physical, emotional, temperamental and humoral status of the patient and condition of system/organ of the body involved is done.

The concept of Heterotherapy ('Ilājbi'l-Ḍidd) is used for treating disease by applying drugs and non-drug



Fig. 2:- Cupping (Hijamah) - A type of Regimenal therapy

health, vulnerable optimum health, and debility without disease. The first state should be maintained by a minutely described healthy lifestyle – both physical and psychic and by a healthy environment and



Fig. 3 Unani Scientists working in Laboratories

factors with opposite temperament. The drugs used are obtained from three primary sources (MawālīdThalātha) i.e. herbal, animal and mineral. Single drugs are preferably used as a first line of treatment and later compound formulations are opted for managing the disease.

Regimenal therapy ('Ilājbi'l-Tadbīr): It is one of the most popular methods of treatment, practiced by Unani physicians. They have described various regimens for the management of diseases, either independently or in combination with other therapies. These include changes in diet, physical exercise, lifestyle modification and measures to eliminate the morbid humours (Tanqiya) from the body or divert them (Imāla) by Cupping (Ḥijāmah), Massage (Dalk), Leeching (Ta'liq), Venesection (Faṣd), Purgation (Ishāl), Emesis (Qay'), Diuresis (Idrār-I Bawl), Enema (Ḥuqna), Diaphoresis (Ta'rīq), Expectorant (Tanfīth), Counter Irritation (Īlām), Sitz Bath (Ābzan) etc. Some other regimens are also used for elimination/diversion of morbid material or resolution of the inflammation, e.g. Turkish bath (Ḥammām), Irrigation (Natūl) and Fomentation (Takhmīd) etc.

Research and Development

Central Council for Research in Unani Medicine (CCRUM) under the Ministry of AYUSH, Government of India has, over the past three and a half decades, emerged as the leading research organization in Unani Medicine. The Council has brought out significant scientific outcomes and documents for reference and use in this field. The Council has

successfully built a research base for the system with focused objectives and plans. The research programme of the CCRUM mainly comprises of Clinical Research including safety and efficacy studies of Unani drugs, validation of the Fundamentals and Regimenal Therapies, Drug Standardization and Quality Control, Survey and Cultivation of Medicinal Plants, and Literary Research. Information, Education and Communication (IEC), International Cooperation and Human Resource Development (HRD) are also part of the Council's activities in addition to extension of health services.

These research programs are implemented through a peripheral network of 24 centres of the Council. Under its clinical research program, the Council has established scientifically the therapeutic efficacy of various Unani drugs, which were in use for centuries.

The Council also undertakes research in collaboration with other prestigious institutes.

The Council has published many monographs, research reports, success stories and more than 300 scientific papers in reputed national and international journals. Under the literary research program, classical books and manuscripts originally written in Arabic and Persian have been collated, edited, translated into Urdu and got published.

Patents have been granted on drugs used in conditions viz., Bronchial Asthma, Haemorrhage, Fever, Common cold, musculo-skeletal disorders, joint pains, Constipation, helminthiasis and on scar (Sequence Characterized Amplified Region) markers and a kit for

scar primers for authentication of some Unani single drugs.

At international level, CCRUM has engaged in fruitful dialogue with many countries.

Educational and Other Infrastructure

The country has adequately growing infrastructure of academic, research and healthcare institutions of Unani System of Medicine. There are 52 teaching institutions for under graduate level education with admission capacity of approximately 3000 students and around 14 Institutes/ colleges offer postgraduate courses in different specialties. There are 259 Unani hospitals, 1621 Unani dispensaries, 625 Unani drug manufacturing units and around 51,110 Unani practitioners in the country as on 1st April, 2018.

Conclusion

Unani system of medicine has been developed scientifically, nurtured and systematically integrated in the healthcare delivery system over the years by Government of India. The fundamentals, diagnosis and treatment modalities of the system are based on scientific principles. India has emerged as the world leader in Unani System of Medicine with its note-worthy network of well-developed quality educational institutions, comprehensive healthcare facilities, state of the art research and quality drug manufacturing industries. The development of Unani System of Medicine in India has reached such a stage, where many countries are approaching for cooperation and support in this field. □

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Homeopathy in India – An Overview

VK Chauhan

The World Health Organization (WHO) data suggests that Homeopathy is currently the second largest system of medicine in the world.

A rough study states that about 10 per cent of the Indian population uses Homeopathy for their healthcare needs and is considered as the second most popular system of medicine in the country.

Homeopathy:

The word 'Homeopathy' is derived from two Greek words, 'Homois' meaning similar and 'pathos' meaning 'suffering'. Homeopathy simply means treating diseases with remedies, prescribed in minute doses, which are capable of producing symptoms similar to the disease when taken by healthy people. It is based on the natural law of

healing- "Similia Similibus Curantur" which means "likes are cured by likes".

All over the world 10th April is celebrated as 'World Homeopathic Day'.

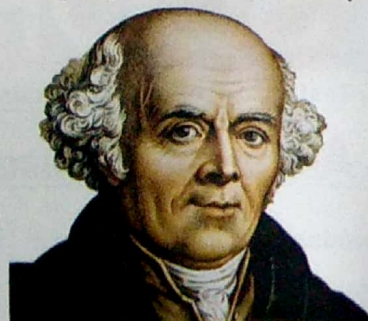
Founder of Homeopathy:

Dr. Christian Friedrich Samuel Hahnemann (10 April 1755–2 July 1843), a German Physician articulated its basic principles and organized Homeopathy as a new medical system

in 1796. Born on 10th April 1755 at Meissen, a small town in Germany, he was MD from Leipzig University.

The term "homeopathy" was coined by Hahnemann and first appeared in print in 1807.

During his practice he became disillusioned by the treatments of the day, which were purgatives, bleeding, blistering plasters, herbal preparations and emetics. They were often more harmful than effective.



...effective drugs produce symptoms in healthy people that are similar to the diseases they are expected to treat. This principal is now known as the "Law of Similars" and is the basis for the use of the term homeopathy, i.e. similar suffering.

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Hahnemann quit his practice and started to work as translator of scientific and medical textbooks for livelihood. He was proficient in English, French, Italian, Greek and Latin.

During his work he came across the claim in William Cullen's 'A Treatise on the Materia Medica' that the Peruvian tree bark was effective in treating malaria because of its astringency.

Hahnemann did not like this explanation. He experimented by taking "four good drams of Peruvian bark, twice a day for several days" to attempt to characterize the action of the quinine-containing bark. He wrote that he began to develop symptoms identical to those of malaria.

Thus he concluded from this personal experiment that effective drugs produce symptoms in healthy people that are similar to the diseases they are expected to treat. This principal is now known as the "Law of Similars" and is the basis for the use of the term homeopathy, i.e. similar suffering.

Homeopathy in India:

Homeopathy came to India in 1810 when Dr. John Martin Honigberger, a French traveler who learnt homeopathy from Dr Hahnemann, visited India and treated patients. He treated Maharaja Ranjit Singh, the-then-ruler of Punjab, with a homeopathic remedy Dulcamara while he suffered from paralysis of the vocal cords.

Homeopathy continued to spread and Indians found in its philosophy and principles a reflection of their belief and culture. It flourished in Bengal at first and then spread all over India. Babu Rajendra Lal Dutt (1818-1889) may be called the Father of Indian Homeopathy. He was a great philanthropist. He was treated for a chronic disease by an amateur Homeopath in India and was cured. Therefore, he developed interest in Homeopathy. He decided to practice Homeopathy by himself in 1861.



Recognition of Homeopathy in by Government of India:

Central Council of Homeopathy:

The Central Council of Homeopathy Act was made in 1973 and the then Health Minister Dr. Karan Singh on behalf of Government of India constituted the Central Council of Homeopathy (C.C.H.) in December, 1974.

This Council is responsible for maintaining the minimum standards of education in Homeopathy.

The Homeopathic Pharmacopoeia Laboratory (HPL):

The Homeopathic Pharmacopoeia Laboratory (HPL) has been established in the year 1975 as the standard setting-cum-drug testing laboratory at a national level. It has been declared as Apex Drug Testing Laboratory for the purpose of quality control. It combines contemporary advanced technology with indigenous know how and needs. This laboratory is functioning in the Central Government Office complex at Kamla Nehru Nagar, Ghaziabad.

The National Institute of Homeopathy

The National Institute of Homeopathy was established in December, 1975 as an autonomous organization under the Ministry of Health and Family Welfare, Govt. of India, registered under the West Bengal Society Registration Act of 1961.

Central Council for Research in Homeopathy:

Central Government established 'Central Council for Research in Homeopathy' in Delhi on 30th March, 1978 under Society's Registration Act XXI of 1960. The Council is carrying out clinical research in various diseases, clinical verification of lesser-known drugs, drug proving researches on new medicines, carrying out drug standardization, surveys of medicinal plants etc.



Formation of Separate Department for all existing alternative systems of medicine:

All the alternative systems of medicine were given a separate identity by creating separate department as ISM & H (The Indian Systems of Medicine and Homeopathy) in the Ministry of Health and Family Welfare, Government of India in 1995, which was renamed as AYUSH (Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homeopathy), in November, 2003.

On 29th September, 2014, The Government launched the National AYUSH Mission with the objectives

of providing cost effective AYUSH Services, with a universal access through upgrading AYUSH Hospitals and Dispensaries, co-location of AYUSH facilities at Primary Health Centres (PHCs), Community Health Centres (CHCs) and District Hospitals (DHs), strengthening institutional capacity at the state level through upgrading AYUSH educational institutions, State Government.

Manpower and Institutional profile of Homeopathy in India:

Manpower and Institutional Profile of Homeopathy in India		
(i)	No. of Registered Medical Practitioners	246772
(ii)	Number of dispensaries	6732
(iii)	Number of hospitals	240
(iv)	Bed strength	9466
(v)	Number of institutions conducting UG courses	186
(vi)	Number of institutions conducting PG courses	44
(vii)	Number of specialties in Post-graduation	7

Non-Government Organizations in Homeopathy

NGOs are playing a key role in the education, research and development of Homeopathy in India. Some of these are R&D sections of pharmaceutical industry and others are acting independently. They are popularizing and providing Homeopathic health care not only in the urban areas but also to the remotest areas in rural sector.

Admission to Undergraduate and Post graduate courses in Homeopathy:

A. Undergraduate:

Admission to BHMS is done on the basis of valid score in NEET UG.

B. Post Graduate:

Candidates with a BHMS degree from a recognized institution and one year of compulsory internship are eligible to apply for the MD in Homeopathy.

Admission to MD is done on the basis of performance in the AIAPGET.

Homeopathy as a Career Option:

- After completion of Degree one can have one's own private practice.
- Homeopathic Pharmaceutical companies also hire homeopathic doctors in different wings.
- A well trained Homeopathic doctor can get employment as a Medical Officer/ Assistant Professor/ Reader/ Professor at various private and Government Homeopathic Hospitals/ Medical College.
- They can work as research officer, Research associate, research fellow in organizations like CCRH.

Homeopathy as a Popular System:

Homeopathy is followed by over 10 crore people in India. The country has a Rs 3,600 crore organized Homeopathy market. There are over 2.25 lakh registered Homeopathy practitioners with 20,000 new Homeopaths being added every year.

Homeopathy is Safe:

Homeopathic medicines are not harmful because the crude substances used for preparation of medicines are processed through a process called drug dynamisation, wherein the toxicological effects are removed and the dynamic properties are enhanced. They are safe, non-toxic and non-addictive.

Homeopathy is Accepted by Masses:

Homeopathic medicines seek to stimulate the diseased system so that the body will overcome the disease naturally. People prefer to be benefited through natural treatments rather than by conventional drugs or surgery. They are also anxious about side effects of drugs, or about its long continued use, especially where children are involved. Homeopathy is as effective for animals as it is for humans.

Homeopathy has proven strength in the treatment of allergic disorders, skin diseases, children's problems, several so-called surgical problems like piles, tonsillitis, sinusitis, menstrual disorders, life style diseases and common mental and emotional disorders.

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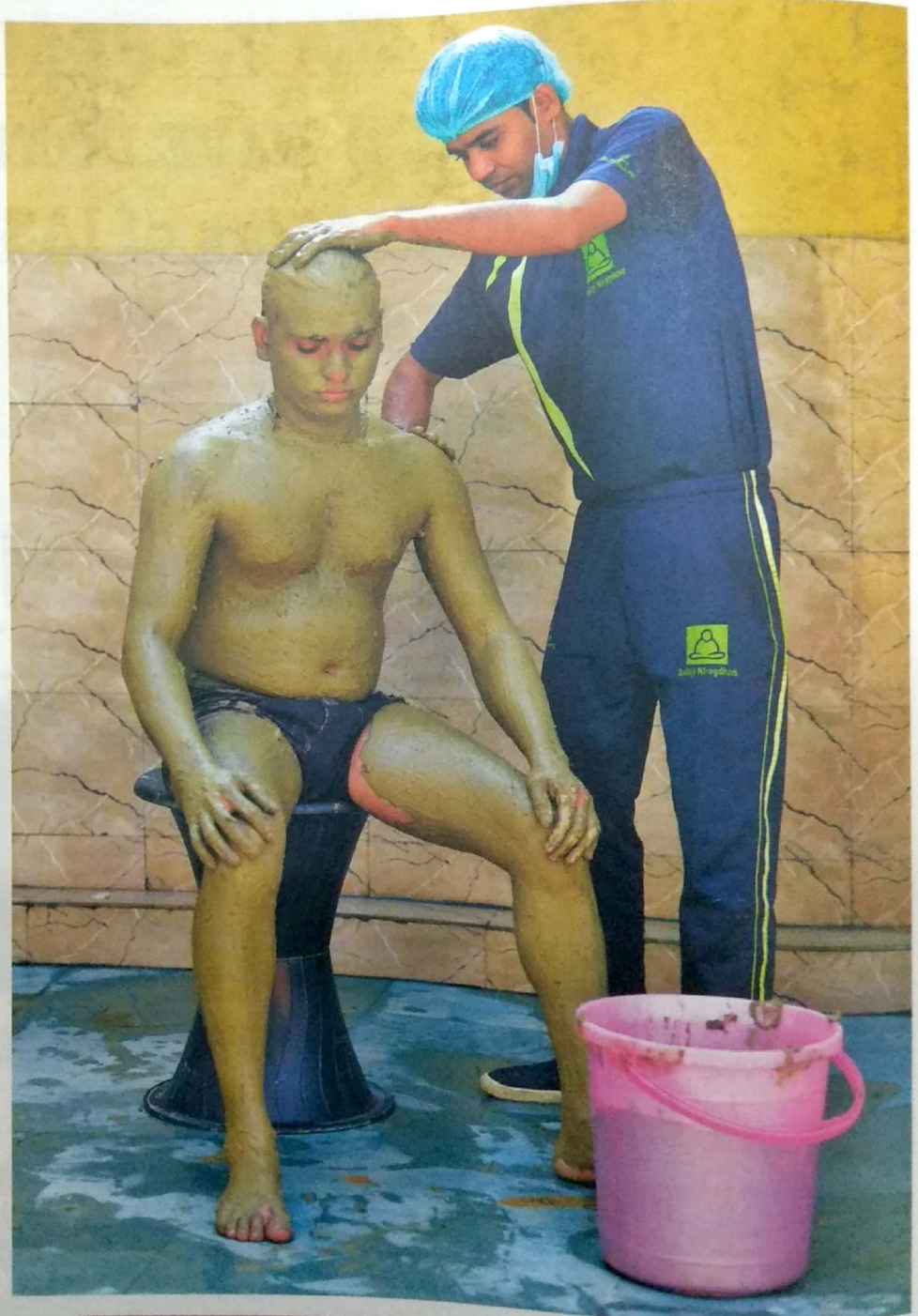
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Naturopathy: The Science of Health and Wellness

Rajiv Rastogi

Yoga and Naturopathy are traditional Indian sciences practiced for health and wellness. These are the drugless systems of healthcare. These systems are by and large used as complementary or alternative to conventional healthcare in India as well as in the occidental world. The healthcare researches have determinately shown that many prevalent disease conditions emerging today are actually the outcomes of a faulty lifestyle. It is presumed that the lifestyle diseases result from an inappropriate relationship between man and his environment. In recognition of this fact, an increasing awareness about health and wellness among the masses is felt which is further growing. Those who have experienced drug based health care have lately been convinced that possibly the drugs do not have the key for health and besides, they bring more unwanted new diseases or adversities. As a consequence, Yoga and Naturopathy have become prominent players of healthcare for their promises of managing the lifestyle induced illnesses by simple corrections in lifestyle and not treating them synthetically through the drugs of chemical origin. These practices which focus upon correction of lifestyle and bringing harmony between body and mind, also have a promise of showing the way to a stress free, peaceful and happy life.

Yoga is the science of self realization. It is popular for helping towards healthy living through a focus on bringing harmony between body and mind. Yoga is now recognized globally for its spiritual values and its role in the prevention of disease besides promotion of health. International Day of Yoga celebration on 21st June every year is a formal recognition of the positive benefits of Yoga.



Naturopathy believes that all living beings in nature stay healthy as long as they are tuned with the natural laws. Man is the only creature in the universe that has the ability to defy nature and has a freedom to choose and act.

The author is Assistant Director (Naturopathy), Central Council for Research in Yoga and Naturopathy.

Yogic practices for Health and Wellness:

Yoga is the science of health and wellness. The widely practiced Yoga measures are:

- Yama (Self-restraints);
- Niyama (Observance);
- Asana (Psycho-physical postures);
- Pranayama (Control of vital energy-breath);
- Pratyahara (Withdrawal of senses);
- Dharana (Concentration);
- Dhyana (Meditation);
- Samadhi (Absorption or State of liberation);
- Bandhas and Mudras;
- Satkarmas;
- Yukta-hara;
- Mantra-japa;
- Yukta-karma etc.

Yoga comprises of several techniques and postural exercises to be performed with objectives of bringing a control on body and mind. Each step of Yoga not only enlightens the soul but also increases physical strength and endurance, enhances power of mind, establishes emotional stability and social security. The practice of Yoga results in promotion of health, prevention of disease, effective management of lifestyle disease conditions and better understanding of higher level of consciousness.

Concept of Health and Wellness in Naturopathy:

Naturopathy is a traditional system of healing based upon natural principles that govern life, living and health. These principles of healthy living, prevention of disease and healing were firmly integrated as the customs in the ethnic culture of people in India since ancient times. The references of such principles can be found in the scriptures like Vedas, Upanishads and Epics like Ramayana and Mahabharata.

Naturopathy is called a drugless system of healthcare based on well-founded philosophy and practices. It is a science of health and wellness having its own concepts of health and disease. Its main emphasis is on holistic approach to health, covering not only physical but also the mental, moral and spiritual aspects. Naturopathy advises

various practices of healthy living for promotion and maintenance of health and prevention of disease. The salient feature of Naturopathy practice is that it educates the patient in health matters. Naturopathic practices are easy to follow and can be integrated systematically in the daily routine of people. The simplicity and ease of Naturopathy methods has made it acceptable globally.

Naturopathy believes that all living beings in nature stay healthy as long as they are tuned with the natural laws. Man is the only creature in the universe that has the ability to defy nature and has a freedom to choose and act. Eventually, those who choose to disobey the laws of nature, acquire the conflicts between internal and external environment emerging as disease. Naturopathy believes the nature as the supreme healer. Disobeying natural laws therefore results in delayed healings.

Naturopathy recommends following a proper diet and other laws of health as under:

- fresh air and sun shine;
- deep breathing exercise;
- correct posture;
- rest;
- recreation;
- relaxation;
- sleep;
- right mental attitude;
- internal cleanliness;
- proper elimination.

Naturopathy is recognized and promoted as an independent system of healthcare under the ambit of AYUSH. Naturopathy believes that entire universe is composed of five basic elements Panmahabhutas viz. Ether (akasha), Air (vayu), Fire (agni), Water (jala) and Earth (prithvi) and so is the human body. Imbalance of these elements creates disease. The diseases can, therefore, be treated by the appropriate use of these elements and such treatments are called Prakritik Chikitsa or Naturopathy.

Therapeutic Modalities Used in Naturopathy:

The main therapeutic modalities of Naturopathy employed for preventive, promotive and curative purpose are following:

1. Upvas Chikitsa (Fasting Therapy)
2. Aahar Chikitsa (Diet Therapy)



3. Mitti Chikitsa (Mud Therapy)
4. Jala Chikitsa (HydroTherapy)
5. Malish Chikitsa (Massage Therapy)
6. Surya Kiran Chikitsa (Helio Therapy)
7. Vayu Chikitsa (Air Therapy)
8. Yoga Chikitsa (Yoga Therapy)

1. Upvas Chikitsa (Fasting Therapy):
Upvas (Fasting) is considered as the primary treatment modality in Naturopathy. Therapeutic fast recommends a complete rest of physical, physiological, sensory and mental acts including voluntary abstinence of food demanding digestion. Water is purposefully allowed here. Before fasting one should be prepared for it physically as well as mentally. Prolonged fasting can also be advised on the basis of disease condition but should always be done under the monitoring of a competent Naturopathy physician. Research studies have shown the beneficial effects of fasting in the management of many disease conditions.

2. Aahar Chikitsa (Diet Therapy)
Aahar (diet) is an important component of Naturopathic plan of disease management. Right food is so important to health that it alone is regarded as medicine. Naturopathy recommends the food to be consumed keeping its natural condition intact and without processing it too much. The emphasis is given on the components like what to eat? How much to eat? And how to eat?

Naturopathy gives more emphasis on eating less in order to minimize the burden on the system and to reduce the oxidative stress.

Naturopathy believes that accumulation of waste due to its increased production and reduced elimination is the cause of most diseases. Therefore, it is important to have sufficient amount of neutralizing and eliminating food in the routine diet. Hence, Naturopathy recommends increased use of fruits and vegetables in the daily diet.

3. Mitti Chikitsa (Mud Therapy):

Mitti Chikitsa represents the Prithvi which is one among the five great elements of nature having immense impact on the body both in health and sickness. It is externally used in the form of mud. Mud packs and bath are among most popular and effective treatments of Naturopathy.

4. Jala Chikitsa (Hydrotherapy):

Jala Chikitsa (Hydrotherapy) treats the body with application of Jala (water) in all its forms - solid (ice), liquid and vapor, internally and externally. Water is a well known most ancient remedial agent and used in Naturopathy in many ways and forms both externally as well as internally. The proper and scientific use of water gives relief in various ailments. Some most commonly prescribed water treatments are:

External Treatments:

A. Compresses and Fomentation:

- Cold Compress
- Heating Compress
- Hot and Cold Compresses
- Fomentation

B. Baths:

- Hip Bath
- Sitz Bath
- Spinal Bath
- Spinal Spray Bath
- Foot Bath
- Foot and Arm Bath
- Steam Bath
- Sauna Bath
- Full Immersion Bath
- Sponge Bath
- Steam Inhalation
- Jet Baths

- Underwater Massage (Jacuzzi, Whirlpool)

C. Jet Spray Massage:

- Cold, Neutral, Hot, Alternate, Circular Jet Spray Massage
- Affusion Baths
- Cold Shower

5. Malish Chikitsa (Massage Therapy):

Malish Chikitsa (Massage Therapy) is an important treatment modality under Naturopathy which includes various types of massages. Depending upon the condition of the patient, different types of massages are prescribed to the patients. The aim of massage therapy is to influence sympathetic and parasympathetic nervous systems, to improve the blood circulation, to reduce body pains and aches, and to strengthen body organs and finally restoring sense of well being.

6. Surya Kiran Chikitsa (Helio Therapy):

It is an important therapy under Naturopathy. Seven colors of Sun rays i.e. Violet, Indigo, Blue, Green, Yellow, Orange and Red have different therapeutic effects. These colors work very effectively in the treatment of different disease conditions. Water and oil exposed to Sun rays in colored bottles and colored glasses for specified hours are used as tools of this therapy for treating different disorders and for maintaining health in a very effective manner.

7. Vayu Chikitsa (Air Therapy):

Vayu Chikitsa (Air Therapy) represents the Vayutatva i.e. fresh air, which is most essential for a perfect health. In Naturopathy, the advantage of air therapy is achieved by taking the air bath. The benefits of air bath is also obtained by practice of Pranayama, Surya Namaskar or while taking Sun Bath.

8. Yoga Chikitsa (Yoga Therapy):

Yoga Chikitsa is an inseparable and important component of Naturopathy treatment. Various Yogic practices such as Yogic Shatkarmas (Cleansing techniques), Yogasanas (Psycho-physical postures), Pranayama (Control of vital energy-breath) and Dhyana (Meditative practices) are

prescribed in combination with other Naturopathy treatments in prevention of disease, promotion of health, and management of different lifestyle related disease conditions.

Internal Treatments: Enema

Role of Yoga and Naturopathy in Promotion of Health and Wellness:

It can be said that Yoga and Naturopathy are the science of health and wellness. These are cost effective, easy to follow, simple and affordable at the same time. They promote health and wellness; prevent diseases, and help in the management of various lifestyle related diseases. They help in transforming the attitude of a person by making him positive towards life, developing patience and changing the mind set. They help in inculcating good habits, and bring us closer to nature and make us responsible for our own health. Research studies have found that these sciences have a definite role in the management of various disease conditions.

It has been declared that 18th November will be observed as 'Naturopathy Day' every year. It is believed that this will motivate the people to adopt Naturopathy for their good health and wellness.

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Ayurveda – Fifty years of Transforming Research & Development in India

*Vaidya KS Dhiman, N Srikanth,
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Ayurveda, the science of life, is one of the oldest and comprehensive systems of healthcare. It was discovered through suitable sources of acquiring knowledge and producing evidence (*Pramana*), viz. (1) *Pratyaksha* (Direct perception), (2) *Anumana* (logical inference), (3) *Aptopadesha* (verbal & authentic documentary testimony), (4) *Yukti* (experimental evidences), etc. These *pramanas* are very well comparable with the present research methodology. Proper research and documentation has always been an indispensable part of Ayurveda.

It is the oldest system of medicine, being practiced in India since ages, though its patronage decreased during the medieval period. After Independence in 1947, the movement for revival of Indigenous Systems of Medicine gained momentum.

The Chopra Committee in 1948 identified the objectives and areas for research in the Indian Systems of Medicine, and based on its recommendations the Central Research Institute for Ayurveda was established at Jamnagar in 1953. A Post Graduate Training Course was also started there in 1956. The Udupa Committee in 1958 further streamlined the research priorities with establishment of the

India has a long history and strong base of traditional medicine and Ayurveda is poised to get globalized for the benefit of humanity. The health promotive, disease preventive, rehabilitative and recuperative roles of Ayurveda coupled with its holistic approach is a force that has taken the world by a storm.

Post Graduate Institute of Indian Medicine at Banaras Hindu University Varanasi in 1963.

Later for undertaking integrated and coordinated Research, Composite Drug

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Research Scheme (CDRS) was initiated in 1964. In 1969 Central Council for Research in Indian Medicine and Homeopathy (CCRIM&H) was established for systematic research in Indian systems of medicine after Vyas Committee recommendations in 1966. Gradually over time all AYUSH system of medicines were made into separate research councils and in 1978 CCRAS (Central Council for Research in Ayurveda and Siddha) was formed, which later bifurcated further into Central Council for Research in Ayurvedic Sciences (CCRAS) and Central Council for Research in Siddha in 2011. In 2014, for further strengthening of AYUSH systems, Department of AYUSH (under MoHWF) was upgraded to a full-fledged Ministry of AYUSH.

Presently Ayurveda has well-regulated undergraduate, post graduate

and doctorate education in India. Commendable network of practitioners and manufactures exists. Infrastructure development in private and public sectors has improved the outreach to the community in a commendable way. Due to insurgence of interest globally in Ayurveda, R&D activity is very rapidly progressing through national and international multidisciplinary collaboration through various Research Institutes, like CCRAS, CSIR, DST, ICMR etc., academic institutes like IPGT&RA Jamnagar, NIA Jaipur, AIIA New Delhi and BHU Varanasi etc. and through various other research institutes in private sector and through independent researchers.

To strengthen the R&D in this sector at policy level, the Government of India has taken initiatives to address the basic demands of healthcare delivery, mainstreaming of

S. No.	Issue	Initiatives
1	Policy	National Policy - 2002, NHP 2017
2	Quality	Drug and Cosmetics Act 1940 Ayurvedic Pharmacopoeia Committee (APC)-1962 Pharmacopoeia Commission for Indian Medicine (PCIM&H) - 2010
3	Safety and Efficacy	Drug and Cosmetics Act 1940 R&D Support Validation and Drug trials Experimental and Clinical trials
4	Accessibility and Rational Use	R&D Support Feasibility Operational Studies Level of integration Acceptability studies Intervention efficacy studies

AYUSH, quality, safety and efficacy, accessibility and rational use, which are summarized below:

AYUSH Research Portal (www.ayushportal.nic.in): A web-based AYUSH Research Portal has been initiated by Ministry of AYUSH, to showcase published research works in AYUSH systems of medicine cataloging about 26873 research abstracts as on May 2019.

R&D in Ayurveda

CCRAS is an apex organization for the formulation, coordination, development and promotion of Research in Ayurveda and Sowa Rigpa systems of medicine. The research activities of the Council are carried out through its 31 institutes located all over India and also through collaborative studies with various universities, hospitals and institutes. These include Clinical Research, Medicinal Plant Research, Drug Standardization, Pharmacological Research and Literary Research.

The Council has generated scientific evidence on safety and efficacy of approximately 100 classical Ayurvedic formulations different diseases/conditions of National Importance and further 40 more studies are under progress.

Ayurveda gives utmost importance to patient's safety during treatment through rational use of medications. These are recurrent themes of Ayurvedic pharmacology (*dravyaguna*), pharmaceutics (*rasa shastra and bhaishjya kalpana*), and therapeutics (*chikitsa*). The Ayurvedic literature gives details of drug-drug and drug-diet incompatibilities based on elaborately described qualitative differences in ingredients or quantitative proportions. The pharmaceutical procedures starting from the collection of ingredients (like place, season and time of collection of plant materials, the hygienic considerations, contamination), cleaning, processing, packing and storage, dose of the medicine, *anupana* (*vehicle*), diet, exact indication of



treatment which respect condition of the patient and stage of the disease etc. are recommended in detail in Ayurvedic ancient texts. When therapies are used incorrectly or abused or administered improperly or are prescribed by unqualified practitioners it may produce undesired effects. Ayurvedic practice involves the use of medications that typically contain plants, metals, minerals, or other materials. In Ayurveda special focus is given to purification and other processing of potentially toxic plants and metallo-mineral materials.

Integration of Ayurveda with Modern System of Medicine

Ayurveda defines health as a state of equilibrium of *dosha* (regulatory and functional entities of the body), *dhatu* (structural entities), *mala* (excretory entities) and *agni* (digestive and metabolic factors) along with healthy state of sensory and motor organs and mind with their harmonious relationship with the soul. The strength of Ayurveda lies in its three fold holistic approach of prevention of disease, promotion of health and cure of disease. This is achieved through care of body, mind and soul where physical, mental and spiritual aspects of health are considered.

India has a long history and strong base of traditional medicine and Ayurveda is poised to get globalized for the benefit of humanity. The health promotive, disease preventive, rehabilitative and recuperative roles of Ayurveda coupled with its holistic

approach is a driving force that has taken the world by a storm. Global community is looking towards Ayurveda for solutions to the emerging health problems, which are otherwise not manageable with concurrent medical approach. Now the time is to harness the benefits of AYUSH with its rational, affordable, evidence based and discriminate use. The core aspects for integration comprise education, health care and research.

Research in Ayurvedic Fundamentals

Ayurveda is built on the foundations of basic concepts which were impervious to change. It is unique in its comprehensive and individualized approach.

The promotion of Ayurveda as evidence based global system demands for science based approaches for validation of fundamental as well as therapeutic principles. Trans-disciplinary and integrated approaches are essential for positioning Ayurveda as potent Health Care system across the globe. The fundamental diagnostic approaches, Ayurveda based predictive medicine are some of the important areas where the science of Ayurveda could make a significant impact in the context of preventive medicine.

CCRAS has developed a comprehensive *Prakriti* (a major parameter to assess health and disease in individualized form) Assessment Scale based on Ayurvedic texts along with *Ayur Prakriti Web Portal*.

Further works are under progress for **Validation and Reliability Testing of Ayurveda Diagnostic Tools** (*Roga Pareeksha* and *Rogi Pareeksha*) which is a unique aspect of Ayurveda.

This will certainly address the challenge of Research in Ayurveda, as Ayurveda has a unique individualized approach based on its fundamental diagnostic and therapeutic principles. Further the new initiative of *Ayurveda biology programme* will also pave the way toward better understanding and interdisciplinary approach for validation of Ayurvedic fundamentals.

National AYUSH Morbidity and Standardized Terminology E-Portal (NAMASTE Portal)

In order to enhance the global footing of Ayurveda, Siddha, and Unani systems of medicine, the Ministry of AYUSH has been actively pursuing efforts to include AYUSH systems of medicine in the Traditional Medicine chapter of the International Classification of Diseases (ICD). In this regard, CCRAS has been involved in the development of Standardized Ayurveda Terminologies. The National Ayurveda Morbidity Codes (NAMC) is an important part of this document which is also being used for morbidity data collection under NAMASTE Portal. This portal has the potential to revolutionize morbidity statistics data collection. □

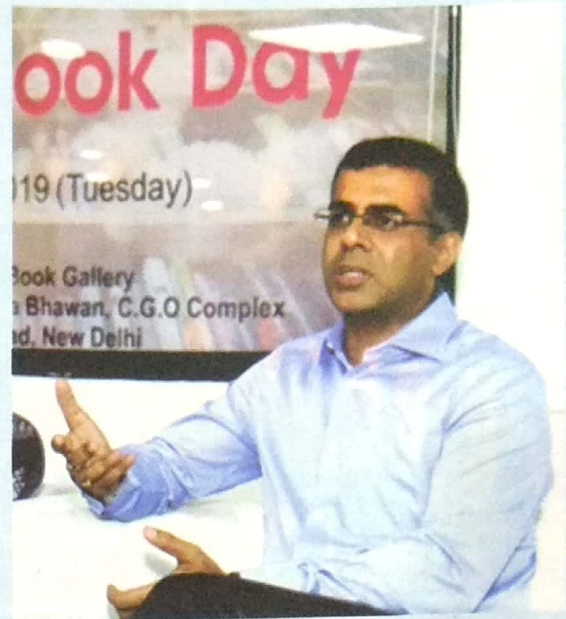
(E-mail: dg-ccras@nic.in)

WORLD BOOK DAY 2019

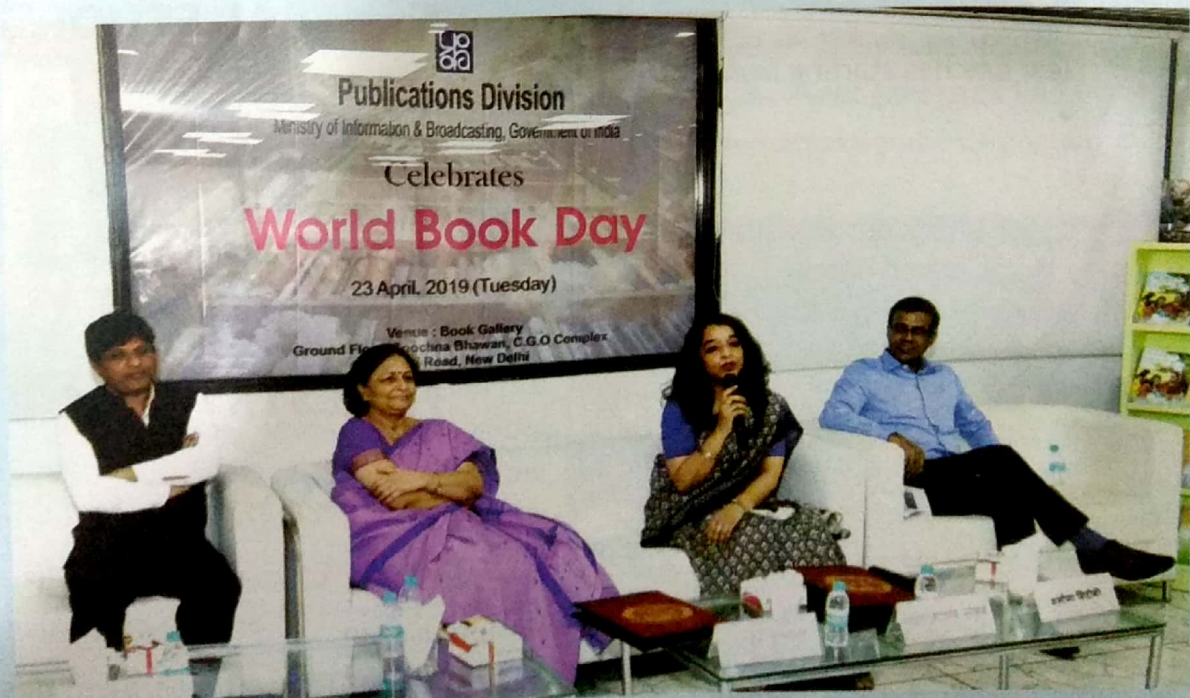
Publications Division celebrated the World Book Day on April 23, 2019. UNESCO, in its General Conference held in 1995, chose this day as the World Book Day to be celebrated every year. It is a tribute to the value that authors and books add to our knowledge and ideas, transcending beyond boundaries of space and time. On this occasion, Publications Division organised a presentation on 'Future Trends of Publishing in India' which was led by Shri Vikrant Mathur – Director, India & Asia Pacific, Nielsen Book.

Shri Mathur shared valuable insights on the publishing industry in India and presented a comparative analysis with other countries of the world along with the needs of the market, emerging technological aspects related to book publishing and the demographic variations that impact book readership and hence the market. He presented data to showcase how not just the trade books that include popular fiction and non-fiction titles but other segments in publishing like K-12 (Kindergarten to 12th Grade), higher education and test preparation books are also an integral part and form the core of the publishing industry in India. He emphasised the need of vernacular publishing and highlighted its potential market. For instance, he stated that, within the English trade books segment, Adult Non-Fiction contributes maximum followed by Adult Fiction and Children's Literature and for Vernacular Trade Books, Hindi contributes maximum, followed by books in Malayalam and Bengali languages. He said that it is pertinent to note how books are also fast becoming one of the top choices for web series, television series and other digital platforms in addition to cinema, which has always had a long-standing relationship with books for its stories. Shri Mathur said that digital publishing and reading on Kindle is fast catching up. Analysing data and going by the trends, he also shared how audio books and e-versions are fast increasing. He however reiterated that print books, nevertheless, are here to stay.

Poet Shri Moin Shadaab, concluded the seminar by engaging the audience in a few couplets on books and the love for reading. The seminar was a success that engaged audience and readers from various age-groups and reading habits.



Shri Vikrant Mathur speaking on publishing trends

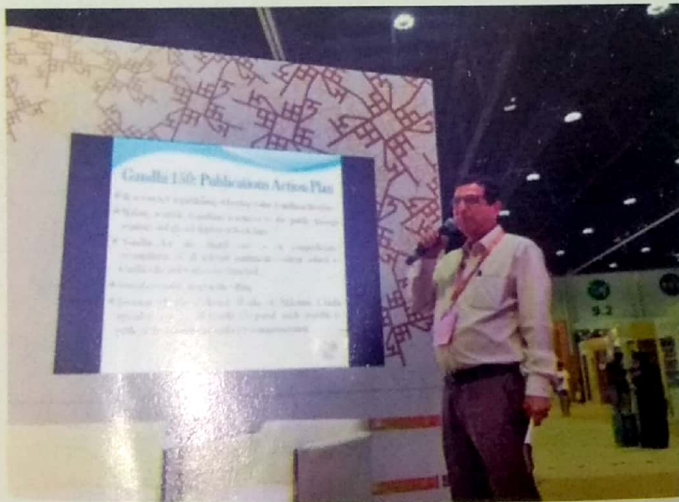


Abu Dhabi World Book Fair - 2019

Abu Dhabi International Book Fair (ADIBF) 2019 was held from 24th to 30th April, 2019 at ADNEC - Abu Dhabi National Exhibition Centre, United Arab Emirates. India was the Guest of Honour and Publications Division participated in the Fair as part of the Ministry of Information and Broadcasting's delegation under the overall coordination of National Book Trust. The India Pavilion, comprising around 20 publishers, was accorded a



prominent position in the Book Fair which was jointly inaugurated by Deputy Prime Minister of UAE, Hon'ble Saif bin Zayed Al Nahyan, Indian Ambassador, H. E. Navdeep Suri and Chairman, National Book Trust, Shri G.P. Sharma. As the activities of the Indian delegation were pivoted around the 150th birth anniversary of Mahatma Gandhi, Publications Division displayed its wide array of Gandhian publications and also actively established bonds with the NRI community.



Publications Division also made a presentation on the topic 'Making of the Collected Works of Mahatma Gandhi' at the Book Fair on April 28, 2019. The voluminous CWMG and its e-version brought out by Publications Division, is a monumental document of Gandhiji's words which he spoke and wrote, day after day, year after year, till his assassination on January 30, 1948. The event generated lot of interest among the international audience present.

Books on Indian heritage and cultural values were presented to dignitaries who visited the Publication Division's stall. Large number of visitors, including Indian expatriates to international visitors, enthusiastic school children and distributors of books visited the stall. They got acquainted with the rich repository of books available ranging from Indian history and freedom movement to art and culture, issues of contemporary importance and children's literature.

