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INTRODUCTION

India is a developing country, scaling new heights every day in both domestic as well as international facade. Since independence our country has progressed immensely and comprehensively in all fields like Economy, Industry, Agriculture, Health and Medicine, Information Technology, Overseas Trade, International Politics and Diplomacy, and various other aspects which have brought our nation amongst the few most potential powers of the world.

But this is just the one side of coin; picture is slightly different on the other side, particularly regarding degrading health indices of the citizens. Whereas the spread and penetration of Urbanization, Industrialization and Corporate world into the deeper and inner roots and regions of country, has raised the living standards of common Indian citizen and the per capita income of the nation, On the other hand the very same urbanization and modern fast life has given us some unwanted and inadvertent gifts particularly regarding the generalized overall decline in average health and mental peace of an individual.

People today have least time to get relaxed and to give “minimally required care” to their bodies and minds, which gradually has led to increased incidences of cardiac and psychological problems, among which the most prevalent and alarming these days is HYPERTENSION. Tension can be both physical and mental and therefore our approach to prevention and cure of heart disease should be base on the principles of physical and mental harmony and therefore we have to look back to the treasure of knowledge available to us in the annals of Yoga.

HYPERTENSION AND INDIAN SCENARIO

Hypertension is an important public health concern not in India only but around the world. Anand and Goyal (1978) it is the most common risk factor for cardiovascular and cerebrovascular disease in developed and developing countries. Cunningham and Woods (2000). During the past 25 years in India, the morbidity associated with hypertension has increased, mostly due to changes in the socioeconomic environment and the lifestyle of the Indian people. Hypertension is a
leading cause of coronary artery disease, cerebrovascular accident, and renal failure in India, resulting in disability and increased healthcare system cost. Beyea (1999)

Decade’s back great hearts used to sit and relax under the shade of banyan tree and they could solve their problems as it provides a positive atmosphere of peace and contentment. People were close to nature, they were healthy and they analyzed the life deeper. But those practices have become rare in today’s fast life. When we think of our self to be healthy even in this running age, the first thing what we require is peaceful environment.

In India heart disease was relatively uncommon 50 years ago. However, there has been an alarming increase in the incidence of hypertension and coronary artery disease among the affluent sections during this period. Ministry of health and family welfare (2002).The most important cause is stress and strain of “modern” life characterized by competition, great speed and greater greed.

Other causes include:-

- Change in family structure leaving no cushion for one’s day to day problems.
- Opting for time-saving high fat, high calorie, nutrient-poor junk foods.
- Sedentary lifestyle, increase in automobile use and lack of physical exercise.
- Increase in elderly population.

Hypertension is reported to be the fourth contributor to premature death in developed countries and the seventh in developing countries like India. Cardiovascular diseases caused 2.3 million deaths India in the year 1990; this is projected to double by the year 2020 and out of which Hypertension is directly responsible for 57% of all stroke deaths in India. Gupta (2004) The worst part of the disease is that mostly it goes undiagnosed, thus it is often referred as “Silent Killer” Thus, Early and Prompt diagnosis of heart disease is essential but is limited by its protean manifestations.
HYPERTENSION AN ALARMING DISEASE

What is hypertension?

According to WHO guidelines 2003, a persistent elevated blood pressure exceeding over a systolic pressure above 140 and a diastolic pressure above 90 is termed as hypertension.

Blood Pressure

Blood pressure refers to the amount of outward pressure exerted on the walls of arteries and vein by the blood inside them. Hypertension occurs when the blood pressure in the system gets high enough to start causing problems in the body. Conditions that cause the blood pressure to rise are usually related to the blood vessels being either constricted or overfilled; in both cases, it takes more force to pump the blood through the vessels.

Systolic and Diastolic Blood Pressure

The blood pressure is measured with an instrument called a sphygmomanometer in millimeters of mercury. The highest pressure reached during each heart beat is called systolic pressure and lowest between two beats is known as diastolic pressure. The first gives the pressure of the contraction of the heart as it pushes the blood on its journey through the body and indicates the activity of the heart. The second represents the pressure present in the artery when the heart is relaxed and shows the condition of the blood vessels. Theoretically, the blood pressure is considered normal when it is 120/80, but practically when it goes up to 140/90, may still be normal. Within this range, the lower the reading, the better the metabolism of the body. Blood pressure between 140/90 and 160/94 is considered border line area. From 160/96 to 180/114, it is classed as moderate hypertension, while 180/116 and upwards is considered severe. Chobanian et al. (2003).

A raised diastolic pressure is considered more serious than raised systolic pressure as it has a serious long term effect. When blood pressure rises above normal, the blood's normal pulsating is replaced by pounding; even a very slight rise in blood pressure is significant, since the heart beats over one hundred thousand times per day. This relenting battering is hard on the walls of the blood vessels and weakens them.
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The high pressure can also cause damage to various organs. In the kidneys, the excess pressure can damage the vessels that filter waste products from the blood, making the kidneys ineffective and leading to kidney failure. In the brain, a type of stroke can result when the damaged vessels rupture. Stroke is the third leading cause of death in India (after heart disease and cancer), and high blood pressure is the main risk factor. In the heart, the hammering damages the arterial linings, hastening cholesterol buildup which can lead to a heart attack. Uncontrolled hypertension also causes the heart muscle itself to work harder and eventually lose its ability to pump effectively, a condition that can lead to congestive heart failure.

Prevalence of Hypertension in Indian population

After a comprehensive search of various articles, previous journals and government censuses MEDLINE\(^1\), EMBASE\(^2\) and INDMED\(^3\) databases from 1940-2005, were selected best to obtain prevalence studies on hypertension in Indian population.

Using the above literature search techniques, we identified fifty-two epidemiological Studies published between 1940 and 2005. All the studies identified were cross sectional in nature. However, prevalence of hypertension based on JNC V criteria was available from 22 studies across India.

Dubey (1954) carried out one of the earliest study in India, documented 4% prevalence of hypertension (criteria: >160/95) amongst industrial workers of Kanpur.

\(^1\) MEDLINE is a free resource developed and maintained by the National Center for Biotechnology Information (NCBI) at the National Library of Medicine, USA. It contains journal citations and abstracts for biomedical literature from around the world.

\(^2\) EMBASE is an online information source of published literature designed to support information managers and pharmacovigilance in complying with the regulatory requirements of a licensed drug. It is, a bibliographic database in the area of biomedicine, is the most current biomedical database available today.

\(^3\) IndMED is a bibliographic database covering prominent peer reviewed Indian biomedical journals. Database designed to provide medical professionals/researchers/students and the medical library professional quick and easy access to Indian literature.
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In 1984, Wasir HS. Ramachandran, R. Nath, LM. reported 3% prevalence of hypertension (criteria: \(\geq 160/95\)) in Delhi. During 1984-87 Gopinath, N. Chadha, SL. Jain, P. Shekhawat, S. Tandon, R. (1994) reported the prevalence of hypertension in Delhi (criteria: \(\geq 160/90\)) to be 11% among males and 12% among females in the urban areas and 4% and 3% respectively in rural areas. Another two studies carried out in rural areas of Haryana. Malhotra, P. Kumari, S. Kumar, R. Jain, S. Sharma, BK. (1994-95) demonstrated 4.5% prevalence of hypertension (JNC V criteria) while urban areas of Delhi had a higher prevalence of 45% during 1996-97. Ahlawat, SK. Singh, MM. Kumar, R. Kumari, S. Sharma, BK. (2002). In the ICMR Task force project on collaborative study of coronary Heart study in 1994 involving 5537 individuals (3050 urban residents and 2487 rural residents) demonstrated 25% and 29% prevalence of hypertension (Criteria: \(\geq 140/90\) mm of Hg) among males and females respectively in urban Delhi and 13% and 10% in rural Haryana.

Further, Gupta, R. Prakash, H. Majumdar, S. Sharma’s. Gupta, VP. (1995) from Jaipur, through three serial epidemiological studies (Criteria: \(\geq 140/90\) mm of Hg) carried out during 1994, 2001 and 2003 demonstrated rising prevalence of hypertension (30%, 36% and 51% respectively among males and 34%, 38% and 51% among females).

From south India, Kutty, VR. Soman, CR. Joseph, A. Kumar, KV. Pisharody, R. (1993) carried out hypertension prevalence study (criteria: \(\geq 160/95\) mm of Hg) in rural Kerala during 1991 in the 20+ age group and the prevalence was found to be 18%. Later studies in Kerala (Criteria: JNC VI) reported 37% prevalence of hypertension among 30-64 age group in 1998 and 55% among 40-60 age group during 2000. A higher prevalence of 69% and 55% was recorded among elderly populations aged sixty and above in. Zachariah, MG. Thankappan, KR. Alex, SC. Sarma, PS. Vasan, RS. (2003) the urban and rural areas.

Few studies on prevalence on hypertension are available from eastern Indian population. In 2002, Hazarika, nc. Biswas, D. Narain, K. Kalita, HC. (2002) reported 61% prevalence (criteria: =JNC VI) among man and women aged 30 and above in Assam. The Sentinel Surveillance Project102, documented 28% overall prevalence of hypertension (criteria: =JNC VI) from 10 regions of the country in the age group 20-69. Another study carried out in 1998 among Industrial population in the Bharat
Electronics Limited (BEL), India using the same criteria illustrated a prevalence of 30% among men.

Few studies were carried out comparing different socio economic groups also. The initial study from urban Chennai, Mohan, V. Shanthirani, S. Deepak, R. Premalatha, G. Sastry, NG. Saroj, R. (2001) reported 8.4% prevalence of hypertension among men and women aged 20 years and above and belonging to the low socio economic group (based on household income, occupation and dietary pattern). Similarly, in the middle socio economic group had a higher prevalence (15%) during 1996-97. A study conducted in the urban areas of Chennai during 2000-73 (age group >=40) reported a higher prevalence of hypertension (54%) among low income group (monthly income <Rs30000/annum and 40% prevalence among high-income group (monthly income > Rs60000/annum). Moreover a direct relation between age and blood pressure has been observed in various studies, consolidating the fact that patients with age 45 plus suffer most from hypertension. That is why we selected middle aged subjects for research.

![Graph showing maximum, average and minimum systolic blood pressure in different age groups](image_url)
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Fig. 2 Graph showing maximum, average and minimum diastolic blood pressure in different age groups


Causes of Hypertension

Although the cause of essential hypertension is unknown, multiple risk factors predispose persons to develop hypertension. Risk factors can be assessed, with preventive treatment initiated for modifiable risk factors. Stress is a modifiable risk factor in hypertension. Sympathetic nervous system reactions from stress cause vasoconstriction, which increases arterial blood pressure (BP). In addition, stress increases the production of neurotransmitters, such as epinephrine, which place physiologic stress on the heart and increase oxygen demand. Sritirakul et al. (1999) Thus the most important cause is stress and strain of “modern” life characterized by competition, great speed and greater greed.

Other noticeable causes of hypertension include:-

- Sedentary life style
- Lack of physical exercise and activities.


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- Obesity
- Mental stress and Tension
- Improper diet including high intake of sodium salts and unsaturated fatty acids.

Thus teaching patients, stress management techniques effectively reduces stress and therefore, Blood Pressure. Thus, yoga shows a promise as a stress management tool in patients with hypertension. Panjawani et al. (1995) and is theorized to have a positive effect on BP because, by calming the mind, it breaks the stress cycle. Murugesan et al. (2000)

Effects of Hypertension

It is a complex disorder affecting various organs such as brain, retina of eye, kidneys, nerves.

Health problems in the hypertensive don’t occur over days, weeks, or even months but are rather found to occur over many years and affects nearly every part of the human body. That is why this syndrome is well known as Silent Killer. By adding strain to walls of the blood vessels, hypertension makes them more likely to develop atherosclerosis with a buildup of fat and cholesterol and "hardening" of arteries that in turn puts extra strain on the heart as it pumps blood through the narrowed arteries. Over time this increases the risk of heart disease, stroke, heart attack and kidney damage.

When blood pressure is not well controlled, patient is at risk for:

- Bleeding from the aorta, the large blood vessel that supplies blood to the abdomen, pelvis, and legs
- Chronic kidney disease
- Heart attack and heart failure
- Poor blood supply to the legs
- Stroke
- Problems with your vision
How effective is the existing Treatment of Hypertension?

Hypertension using modern medication is not curable. Modern medicines just reduce the blood pressure and keep it under control. Probably no more than 3% of all hypertensive patients can be cured by allopathic medicines, which mainly includes Diuretics, Calcium channel blockers, Beta blockers and vasodilators. Of interest though is that approximately half of the diuretic effect could in turn be ascribed to Placebo. Meterson et al. (1993) However due to a number of side effects and contraindications of these drugs, rest of the affected population should be treated with Dietary measures, Alterations in life style, Meditations. Thus, Naturopathy and Yoga will come out to be a definite, affirmative and permanent Adjunctive Therapy in Control and treatment of this systemic hypertension disorder.
YOGA

The term yoga comes from the Sanskrit root yuj meaning "to yoke, to bind together" Jess (2009), providing the most common translation of yoga as a state of union or the process of unifying the individual self (jiva-atman) with the transcendental self (parama-atman). On the broadest level, yoga refers to that enormous body of spiritual values, attitudes, precepts and techniques that have been developed in India over three millennia that may be regarded as the very foundation of the ancient Indian civilization (Feuerstein, 1989:15).

Yoga is an ancient art form that has its roots in meditation, breathing, and movement. Yoga is a way of life. It is predominantly concerned with maintaining a state of equanimity at all costs. According to Yoga philosophy, by cleansing one’s mind and controlling one’s thought processes one can return to that primeval state, when the individual self was nothing but a part of the Divine Self. Payne et al. (2002). This is the sense encapsulated in the term Samadhi. The aim of the yogi is to be able to perceive the world in its true light and to accept that truth in its entirety. ---Yoga, an ancient but perfect science.

Yoga is often presented as a complex of different paths leading to a common goal of union. Some of these paths, or margas, include jnana yoga (scriptural knowledge), bhakti yoga (devotion), karma yoga (action or selfless work), raja yoga (meditation), mantra yoga (sound) and hatha yoga (purification of the body-mind).

Yoga means union - the union of body with consciousness and consciousness with the soul. "Yoga cultivates the ways of maintaining a balanced attitude in day-to-day life and endows skill in the performance of one's actions." (B.K.S. Iyengar, Astadala Yogamala) A yogi’s ultimate aim is to be able to attain this `union` with the Eternal Self with the help of certain mental and physical exercises.

Yoga uses purposeful physical actions in order to strengthen the body. Therefore, a yoga participant will have an enhanced ability to deal with situations involving physical challenges. For example, yoga can relieve some of the stress on the joints through increasing strength in flexibility, thereby, making daily living less strenuous. Parshad (2004) When you do yoga - the deep breathing, the stretching, the movements that release muscle tension, the relaxed focus on being present in your
body - you initiate a process that turns the fight-or-flight system off and the relaxation response on. That has dramatic effects on the body. The heartbeat slows, respiration decreases, blood pressure decreases.

The word Yoga automatically calls to mind Sage “Patanjali” the founder and father of Yoga. He lived around three centuries before Christ, and was a great philosopher and grammarian. He was also a physician and a medical work is attributed to him. However this work is now lost in the pages of time. Patanjali (about 200 BC) codified the ancient marvel of yoga as ashtanga (8-limbed) yoga which is one of the six schools of Indian philosophy and is known as Yoga Darshan. Yoga is defined in the Patanjali Yoga Sutra as "annulling the ripples of the mind (शरीर निरोग: दिनंत्रिकृति निरोद्यय)".

A Brief History of the Evolution of Yoga

The archaeological record for the evidence of yoga asanas as an aboriginal practice is traced back to the indigenous Harappan culture (2500-1 800 B.C.), an organization of city- states in present-day Pakistan, Feuerstein (1989); Eliade (1958); McEvilley (1981). A number of soapstone and terra cotta seals were found depicting figures seated in positions similar to yoga asanas. One of the seals has been accepted by many scholars to be the prototype of the Hindu God Shiva, the Mahayogin or Great yogi.. The indigenous cultural practices that included these early origins of yoga were eventually submerged by the invading Aryan pastoralists, but continued to survive in the villages through the Aryan caste system which made all indigenous peoples lower caste or shudras and thus not able to practice many elements of the new Aryan religion. These Aryan tribes which gradually invaded the Indus valley civilization between 1800 and 1300 B.C. heralded the beginning of the historical roots of yoga. As the composers of the Vedas, the Aryans introduced Sanskrit in the form of both an oral and written tradition that became the basis for the sacred texts of yoga. Ritual sacrifice, or yajna, was the center of the Aryan religious practices which formed around the recitation of Sanskrit and offerings in order to connect the individual and the community with the cosmic order of the absolute creator, Brahman. Within this ritual structure, the earliest forms of meditation emerged.
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Through the long ritual practice of the yajna, the beginnings of the use of bodily posture (asana), breath control (pranayama), and ritual hand posture (mudras) were suggested as a means to effect the concentration, and therefore the efficacy, of the practitioner. These sacrificial rituals are still performed today by priests known as Brahmins. In the Vedic practices, priests and householders are also using asanas to perform the sacrificial yoga. These asanas are simple but the most important for meditation: padmasana (lotus position) or siddhasana (simple cross-legged). The other asanas grew out of these positions. In this way, everyone started practicing asanas.

The importance of yoga asanas during several thousand years of development, from the time of the Vedas to the emergence of hatha yoga texts in 1000 A.D., is difficult to assess. There are a number of texts within this period that contain the teachings of yogic masters who made contributions to the evolution of yoga and the use of yoga asanas. One of the most important of these is Patanjali (circa 200 A.D.), author of the Yoga Sutras, the first text to codify the practice of yoga. Patanjali’s Yoga Sutras outlines the eight limbs of yoga with "asana" as the third limb.

Scientific Basis of Yoga

New research suggests a regular practice of yoga may lower an inflammatory protein that is normally linked to aging and stress. The study, done by Ohio State University researchers and just reported in the journal Psychosomatic Medicine, showed that women who routinely practiced yoga had lower amounts of the cytokine interleukin-6 (IL-6) in their blood. The women also showed smaller increases in IL-6 after stressful experiences than did women who were the same age and weight but who were not yoga practitioners. IL-6 is an important part of the body’s inflammatory response and has been implicated in heart disease, stroke, type 2 diabetes, arthritis and a host of other age-related debilitating diseases.

Reducing inflammation may provide substantial short- and long-term health benefits, the researchers suggest. “In addition to having lower levels of inflammation before they were stressed, we also saw lower inflammatory responses to stress among the expert yoga practitioners in the study,” explained Janice Kiecolt-Glaser, professor of psychiatry and psychology and lead author of the study. “Hopefully, this means that
people can eventually learn to respond less strongly to stressors in their everyday lives by using yoga and other stress-reducing modalities."

For the study, the researchers assembled a group of 50 women, age 41 on average. They were divided into two groups – "novices," who had either taken yoga classes or who practiced at home with yoga videos for no more than 6 to 12 sessions, and "experts," who had practiced yoga one of two times weekly for at least two years and at least twice weekly for the last year. Each of the women was asked to attend three sessions in the university’s Clinical Research Center at two-week intervals. Each session began with participants filling out questionnaires and completing several psychological tests to gauge mood and anxiety levels. Each woman also was fitted with a catheter in one arm through which blood samples could be taken several times during the research tasks for later evaluation. Participants then performed several tasks during each visit designed to increase their stress levels including immersing their foot into extremely cold water for a minute, after which they were asked to solve a series of successively more difficult mathematics problems without paper or pencil.

Following these “stressors,” participants would either participate in a yoga session, walk on a treadmill set at a slow pace (.5 miles per hour) designed to mirror the metabolic demands of the yoga session or watch neutral, rather boring videos. The treadmill and video tasks were designed as contrast conditions to the yoga session.

Once the blood samples were analyzed after the study, researchers saw that the women labeled as “novices” had levels of the pro-inflammatory cytokine IL-6 that were 41% higher than those in the study’s “experts.”

“In essence, the experts walked into the study with lower levels of inflammation than the novices, and the experts were also better able to limit their stress responses than were the novices,” Kiecolt-Glaser explained. The researchers did not find the differences they had expected between the novices and experts in their physiological responses to the yoga session. Co-author Lisa Christian, an assistant professor of psychology, psychiatry and obstetrics and gynecology, suggested one possible reason:
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“The yoga poses we used were chosen from those thought to be restorative or relaxing. We had to limit the movements to those novices could perform as well as experts.

“Part of the problem with sorting out exactly what makes yoga effective in reducing stress is that if you try to break it down into its components, like the movements or the breathing, it’s hard to say what particular thing is causing the effect,” said Christian, herself a yoga instructor. “That research simply hasn’t been done yet.”

Ron Glaser, a co-author and a professor of molecular virology, immunology and medical genetics, said that the study has some fairly clear implications for health.

“We know that inflammation plays a major role in many diseases. Yoga appears to be a simple and enjoyable way to add an intervention that might reduce risks for developing heart disease, diabetes and other age-related diseases” he said.

“This is an easy thing people can do to help reduce their risks of illness.”

Bill Malarkey, an professor of internal medicine and co-author on the study, pointed to the inflexibility that routinely comes with aging.

“Muscles shorten and tighten over time, mainly because of inactivity,” he said. “The stretching and exercise that comes with yoga actually increases a person’s flexibility and that, in turn, allows relaxation which can lower stress.”

Malarkey sees the people’s adoption of yoga or other regular exercise as one of the key solutions to our current health care crisis. “People need to be educated about this. They need to be taking responsibility for their health and how they live. Doing yoga and similar activities can make a difference.” As a clinician, he says, “Much of my time is being spent simply trying to get people to slow down.” The researchers’ next step is a clinical trial to see if yoga can improve the health and reduce inflammation that has been linked to debilitating fatigue among breast cancer survivors. They’re seeking 200 women to volunteer for the study that’s funded by the National Cancer Institute.
Basic Rules for Yoga Practice

The yoga postures are very different from ordinary calisthenics. It is a mistake even to call these postures exercise, as their purpose is not to strengthen the muscles. They emphasize relaxation quite as much as they do tension, unlike most physical exercise, they do not excite; rather, they eliminate excitement from the system.

With these thoughts in mind, the practitioner will understand that he has not done a posture once he has succeeded in assuming it. It is only at this point that he can begin truly to derive the benefits of that pose.

An important difference between these postures and calisthenics is that in yoga practice one must never strain. Relax; never force yourself, into the prescribed positions. Iyengar (1984) Stretch only slightly, if at all, beyond the point of comfort. Practitioner will be astonished to see how many poses he/she can accomplish by progressively deeper relaxation.

Yogis illustrate their teaching of relaxation by the example of the cat. Observe this self-contained creature. It never uses more of its body at any given moment than it needs. Lift it up when it is resting, and observe how it hangs, limp, in your hands. Yes, so poised is it that, from a position of complete repose, it can leap to its feet in an instant, ready to defend itself against sudden danger.

The yogi, similarly, should act always from a center of poise and calmness, of mental and physical relaxation. The yoga postures, then, are not only a series of physical positions, but exercises in mental awareness. The yogi must be very deliberate in every movement. He must feel every muscle. Above all, he must try to become conscious of the energy as it directs the muscular movements. He must try to develop an awareness of his body as consisting primarily of energy.

Between poses, he should calm withdraw his energy from the periphery of his body, he should rest within himself. Shavasana, the Corpse Pose, is particularly recommended for these peaceful interludes.

Diet plays an important, though not an essential, part in the life of the yogi. He should avoid foods that irritate or excite the system, and should eat mainly those which have calming, harmonizing effect. Foods are rated by yogis according to whether they ‘heat’ or ‘cool’ the system. Fresh fruits, nuts, raw or lightly cooked
vegetables, whole grains, milk and fresh milk products fall into the category of foods that have a cooling influence. Excessively spiced food, alcoholic beverages, too many carbohydrates, stimulants, and salt devitalized foods are unnatural to the body, and are said to have a heating effect on it.

Meat, similarly, is considered unnatural to the human system. Swami Sri Yukteswar, the spiritual teacher of Parmahansa Yogananda, pointed out that man’s tooth structure is not that of a carnivorous animal, but rather that of a frugivorous, or fruit-eating, animal. In fact the yoga postures should always, if possible, be practiced out-of-doors, or by an open window. They should be practiced on an empty stomach, or at least three hours after eating. It is preferable that the body be warm when performing them. But don’t practice immediately after strenuous activity. Don’t practice so long, moreover, that the postures themselves result in over-exertion and women should use caution if they wish to do yoga postures during the first day or two of the menstrual period. Pregnant women who want to continue their practice of the postures are advised to find one of the growing numbers of people who are specially trained in pre- and postnatal yoga. The postures should not be practiced, save with the greatest of caution, when the body is unwell. Any posture that gives rise to a feeling of pain (other than muscular) in the chest, abdomen, or brain should be abandoned until the cause of pain has been ascertained. Both Yoga postures and Pranayam should be performed under proper guidance. Pranayama is the science of breath. It is the hub round which the wheel of life revolves."As lions, elephants and tigers are tamed very slowly and cautiously, so should prana be brought under control very slowly in gradation measured according to ones capacity and physical limitations. Otherwise it will harm the practitioner, iyengar (1999)"warns the Hatha yoga pradipika.

**Yoga for Healthy Life**

Yoga promotes health and well-being through physical exercise. The regular practice of asanas, and breathing exercises (pranayama), makes the body strong, supple and healthy.

It has a profound effect on the circulation and on the functioning of the inner organs, glands and nerves, keeping all systems in radiant health and leading to greater energy, better concentration, and a happier, more fulfilling life. Yoga and Health are
closely related. Yoga is a popular aid in improving both physical and mental health. This is basically the most common goal of people who practice Yoga - for health reasons. Some of the important Yoga benefits include anti-ageing, balance and flexibility of body, increase in knowledge and wealth, improvement in mental health and development of personal and social values.

Yoga also helps in improving strength, sexual life and reducing weight. Yoga makes you feel good. Yoga is relaxing. It's energizing and it's strengthening. Yoga has a sound and practical philosophy, scientific basis and universal, non-sectarian approach. It is a physical-mental-spiritual discipline for improving overall health and achieving union and harmony between our body, mind and soul. Thus Present society the world over is now releasing the Importance of Yoga as an ancient technique of drugless therapy after seeing the sufferings of the side effect of drugs. Recently, there has been an increased awareness and interest in health and natural remedies among the general public as well as scientific community. Scholl et al. (1994)

**Eight Limbs of Yoga**

The true purpose of yoga is to facilitate the development of self awareness not self enclosure, but as a doorway to an expanded awareness of surrounding universe this can be achieved through various limbs of yoga

Yoga basically is divided into eight categories, the “eight limbs”

These 8 limbs may be divided into two Ethical, three External and three Internal as shown below:-

**Ethical**

1. Yama, Five abstentions
2. Niyama, Five observances

**External**

1. Asana, balanced posture
2. Pranayama, regularity of breath
3. Pratyahara, withdrawal of senses
Yoga for Hypertension

The scientific – spiritual discipline of yoga is an effective and time-tested method for improving our health as well as prevention and management of diseases, including hypertension. More recently, modern research has established the scientific basis of yogic techniques and yoga has gained international acclaim and acceptance. As far as treatment of Hypertension is concerned, Yoga so far has emerged as the most effective non-pharmacological method of controlling and treating this ailment. A growing body of research evidence supports the belief that certain yoga techniques may improve physical and mental health through down-regulation of the hypothalamic–pituitary–adrenal axis and the sympathetic nervous system.

Though a wide range of yogic practices are available for hypertensive patients but following are supposed to be the most effective once in controlling the elevated blood pressure:

**Asanas:** Sukhasana, bhujangasana, vajrasana, shavasana, padamasana, trikonasana, ushtrasana, vakrasana, gomukhasana, ardha matsyendrasana, Bidalasana, Pavanmuktasana.

**Pranayamas:** Anuloma viloma pranayama, nadi shodan pranayama, sitali, sitkari, bhramari pranayama.

**Shat kriyas:** Jal neti, Trataka (dot trataka and candle trataka)

**Dhyanas:** Om Chanting, Yoga Nidra.

**Mudras:** pran mudra, hridya mudra

Asana steadies the body; Bandhas and Mudras make the mind firm; Pranayama makes the body light; Nadi-suddhi produces steadiness of the mind.
Many participants of yoga will state that yoga has many healthful benefits. There have been a number of yoga studies examining the positive effects yoga has on health (e.g., Gura, 2002; Parshad, 2004). Pinpointing the causal factor in the improvements in wellness related outcomes is a challenge. The whole secret is in practicing. First you have to hear, then think, and then practice.

Part of this complexity stems from the broad range of outcomes. Yoga has shown to have improvements in physical variables, such as strength (Jatiya et al. 2003), as well as psychological variables, such as depression (Woolery et al. 2004). Despite this complexity, few will argue against yoga’s ability to improve wellness related outcomes. Yoga uses purposeful physical actions in order to strengthen the body. Therefore, a yoga participant will have an enhanced ability to deal with situations involving physical challenges. For example, yoga can relieve some of the stress on the joints through increasing strength in flexibility, thereby, making daily living less strenuous.

**Concept of Chakras and Yoga**

Chakra is a concept referring to wheel-like vortices which, according to traditional Indian medicine, are believed to exist in the surface of the subtle body of living beings. The chakras are said to be "force centers" or whorls of energy permeating, from a point on the physical body, the layers of the subtle bodies in an ever-increasing fan-shaped formation. Rotating vortices of subtle matter, they are considered the focal points for the reception and transmission of energies. Different systems posit a varying number of chakras; the most well-known system in the West is that of seven chakras.

The concept of chakra originates in Hindu texts, featured in tantric and yogic traditions of Hinduism and Buddhism. Its name derives from the Sanskrit word for "wheel" or "turning".

During meditation the yogis direct their attention to certain subtle centres called chakras. These are responsible for the equal distribution of energy to the body. Each chakra in your spinal column is believed to influence or even govern bodily functions near its region of the spine.
The following seven primary chakras along with their respective positions described below:

1. Muladhara Base or Root Chakra (ovaries/prostate)
2. Swadhisthana Sacral Chakra (last bone in spinal cord, the coccyx)
3. Manipura Solar Plexus Chakra (navel area)
4. Anahata Heart Chakra (heart area)
5. Vishuddha Throat Chakra (throat and neck area)
6. Ajna Third Eye Chakra (pineal gland or third eye)
7. Sahasrara Crown Chakra (top of the head; 'soft spot' of a newborn)
According to Dr. Christiane Northrup, a medical doctor and holistic practitioner, hypertension or high blood pressure is associated with a blocked **fourth chakra**. Other medical conditions attributed to problems with the fourth chakra (Anahat) include heart disease, lung cancer, pneumonia and high cholesterol. Northrup says the energy flowing through this chakra can become blocked when emotions such as anger or joy are not expressed appropriately or dealt with completely. To believers in the chakra system, medical problems such as hypertension are seen as physical manifestations of the underlying energy blockage.

**Anahata Chakra**

Anahata, or Anahata-puri, or padma-sundara is symbolised by a circular flower with twelve green petals. Within it is a yantra of two intersecting triangles, forming a hexagram, symbolising a union of the male and female. The seed mantra is Yam, the presiding deity is Ishana Rudra Shiva, and the Shakti is Kakini. Physically Anahata governs circulation, emotionally it governs stress and love for the self and others, mentally it governs passion, and spiritually it governs devotion.
PRANAYAMA

“Bahya-abhyantar-stambha-vritti-desaa-kala
Sankhyabhih patidtishto deergha-sukshmah.” ----- Yoga Sutras—Chap. II, SA. 50

Pranayama is control of Breath or bio energy in the body. On subtle levels prana represents the pranic energy responsible for life force and ‘ayama’ means control. So Pranayama and achieve healthy body and mind. Steady Practice of Pranayamaa arouses the inner spiritual force and brings in ecstatic joy, inner spiritual light and peace of mind. Its essence lies in the modifications of our normal process of breathing. Breathing is an act in which we take air from the atmosphere into our lungs, absorb the oxygen from it into our blood, and expel the air again into the atmosphere together with exhalation is repeated every four to five seconds. Thus normally we breathe about fifteen times every minute each time taking about 500ml of air into the lungs. So we inhale and exhale approximately seven liters of air per minute. Every modifications of this normal breathing process would not count as Pranayama. The lungs are intimately related to the heart. Pranayama aims at suspending the functions of physical and mental bodies and that it tries to do so by reducing the beating of heart through restraining the breath.

The vital forces of the entire body and the entire nervous system are connected with breath and therefore Pranayama consists in controlling the entire nervous system by having controlled the breath. Gopal et al. (1973)

Scientific basis of Pranayama

A study was conducted by Tapas Pramanak et.al at Nepal Medical College Kathmandu in 2007 for evaluating the effect of Bhasrika Pranayama on Heart Rate and Blood Pressure. It was noted that Pranayam reduces both the systolic and diastolic pressure significantly. They concluded that pranaya increases the frequency and duration of inhibitory neural impulses by activating pulmonary stretch receptors during above tidal volume inhalation which bring about withdrawal of sympathetic tone in the skeletal muscle blood vessels. Leading to white spread vasodilation. Thus causing decrease in peripheral resistance and hence lowering the blood pressure.
Types of Pranayama

Five types of prana are responsible for various pranic activities in the body; they are prana, Apana, Vyan, Udana and Samana. Out of these Prana and Apana are most important. Prana is upward flowing and Apana is downward flowing practice of Pranayama achieves the balance in the activities of these pranas, which results in healthy body and mind.

Thus pranayama is of following types

- Quiet Breathing
- Deep Breathing
- Fast Breathing
- Tribandha and Pranayama
- Nadi Shuddhi Pranayama
- Ujjayi Pranayama
- Bhramari Pranayama

Preparation for Pranayama

In Patanjali’s ‘Ashtanga Yoga’, Pranayama appears at the fourth stage. This means unless one observes Yama-Niyama and does Asanas well, he cannot reach this fourth stage. Even the Asanas discussed here are presented in their preliminary form. Therefore, for doing Pranayama, it is not enough to have done the Asanas and having mentioned here. Even after learning these Asanas and having practiced them, one needs some preparation before actually taking up Pranayama.

Why do we breathe at all?

Before examining the exercises of breathing it is necessary to understand the process of breathing. The breathing process chiefly involves two activities, viz., inhaling and exhaling. Of these the former is called ‘Puraka’ and the latter ‘Rechaka’ in Yogashastra. These two activities continue non-stop right from the birth to the death of a person. These two processes transport oxygen from external environment to
our lungs for further distribution to various cells and organs of our body via heart and secondly to throw out the carbon dioxide collected from various body cells to the external environment. It may be observed that wherever we are required to go into action at once, such as while taking a long or high jump, or lifting a heavy weight with all our might, or hitting a hard blow, and so on, we automatically stop the breath. (Joshi, 1983).

The state when these two activities are made to halt is given the name ‘Kumbhaka’ in Yoga Studies. The halt after inhaling, i.e., Puraka is called ‘Abhyantara Kumbhaka’. Two more types of Kumbhaka are mentioned. But instead of talking of them in detail, let us turn to the process of breathing. According to the speed of breathing, it is divided into three parts:

The smooth breathing that continues naturally without any effort (Quiet Breathing), the protracted breathing which is caused by deliberate slowing down of the breathing (Deep Breathing), and the quick breathing which is caused by deliberate increase in the speed of breathing (Fast Breathing).

**TYPES OF BREATHING**

**Quiet Breathing**

The speed of the breathing is increased in accompaniment to the speed of the movements of the body. Therefore it is noticed that the breathing is smooth or quiet, when there is no bodily movement or when it is in its normal or relaxed state. Such breathing is called Quiet Breathing. No control of any sort is kept on this breathing. Normally after taking up the final position of any Asana and then stabilising, this position for some time, the quiet breathing of this type becomes natural.

**Deep Breathing**

We do not control the process of quiet breathing. But the control is to be exercised while practicing deep breathing. For this, two things are to be considered chiefly: First, the movements concerned with inhaling and exhaling are to be controlled in order to further slow down the breathing, at the same time the need of oxygen for the body is to be lessened, so that the speed of breathing can further, slowdown. The easy way to reduce the need of oxygen is to stop the movements of the body and try to relax all the muscles. And this is possible in any sitting position of
meditation. However, Padmasana is the best Asana position. The other preferable Asanas in sitting position are Vajrasana and Swastikasana. The hands should be in Dhyana Mudra. The straight upright position of the neck, the spine and closed eyes help in attaining concentration without making any movements. Relax the muscles and concentrate fully on breathing. This will slow down the breathing and bring it to a particular point of speed and will get stabilised at that point. The practice of deep breathing begins after deliberately having inhaling and exhaling at ease initially one should practice prolonged inhaling and prolonged exhaling. Practicing deep breathing in this way for some days, attempt should be made to bring time limit to the period of inhaling and exhaling. That is, the time given to inhaling, the same amount of time is given to exhaling. This is called deep breathing, with equal time and speed. ‘Samakal, Samagati, Deergh Shwasan’. The practice of deep breathing not only strengthens the lungs but also greatly helps in increasing the concentration of the mind. Then, there is a tremendous increase in zeal in day-to-day work owing to the good breathing and nice blood circulations, the twin gifts of deep breathing. Besides one starts acquiring control over the process of breathing. Regular practice of abdominal breathing and shavasan will give lasting relief in angina pectoris as well as other coronary diseases such as hypertension by dilating the obstructed coronary arteries and increasing blood flow to heart muscles.

**Fast Breathing**

When the speed of quiet breathing reduced, the result is deep breathing; on the contrary, if that speed is willfully increased, then the result is fast breathing. However, here the short timed inhaling-exhaling is not implied. It is expected that one should increase the speed of breathing by inhaling and exhaling fully. The fast breathing clears the nasal passage and gives a good exercise to the parts involved in the breathing system. This breathing is also practiced in Padmasana or Vajrasana.

**TRIBANDHA AND PRANAYAMA**

As Kumbhaka is important in Pranayama, so also is the Tribandha.

When the Pranayama is to be practiced for increased duration, the use of these three bandhas is unavoidable. If Kumbhaka is observed without the bandhas, it may be detrimental to health. Thus it is necessary to practice.
• Jalandhar Bandh,

• Uddiyan Bandh and

• Mul Bandh while studying pranayama

Jalandhar Bandh

While performing Jalandhar Bandh, we fold the neck a little bit forward. The pressure of the neck is felt on the pipe, hence the bandh is not observed while inhaling or exhaling, but after inhaling i.e., after Pooraka and it should be released before exhalting i.e., after Rechaka. The bandh also exerts pressure on Carotid Sinus and also tries to reduce the blood pressure. Joshi (1983) if internal Kumbhaka is observed without this Jalandhar Bandh, there is a fear of increasing the blood pressure. Performing this bandh eliminates the high Blood pressure risk. However, the bandh should be released before performing Rechaka.

Uddiyan Bandh

Uddiyana bandha is the abdominal lock, one of the three internal locks or bandhas described and employed in hatha yoga. It involves, after having exhaled all the air out, pulling the abdomen in and up under the rib cage by means of taking a false inhale while holding the breath (performing the same action of an inhale without actually pulling any air into the body) and then release the abdomen after a pause. Then, the whole cycle of false inhale, pause and release is repeated many times before letting the air into the lungs, resuming normal breath. Performing Uddiyan Bandh further increases this pressure. The Uddiyan Bandh also regulates the pressure in an appropriate direction. Both the bandhas must be released while performing Rechaka after Kumbhaka.

Mul Bandh

Since this Bandh is practiced at the root of the spine, it is known as Mool Bandh. Contracting the anus, draw upwards the Apaan.Vayu slowly by practice, is called Mool Bandh. Mool Bandh can be usefully practiced by sitting in any asan and every type of Pranayama. However, Mul Bandh is to be continuously performed during the practice of Pranayama. In the initial stages, Mul Bandh must be performed
during Kumbhaka at least, so that the generated air pressure is kept under proper control.

In short, it means that after Pooraka, the bandhas should be fixed in the order as Jalandhar Bandh, Mul Bandh and then Uddiyan Bandh and they should be released in the reverse order i.e., Uddiyan Bandh, Mul Bandh and Jalandhar Bandh before performing Rechaka.

**NADI SHUDDHI PRANAYAMA**

The breathing passage in the nasal cavity is divided into two owing to the mid partition between two nasal cavities, viz. the left and the right. In Yoga, the left nasal cavity is called ‘Chandra Nadi’ (The moon passage) or ‘Ida Nadi’ and the right nasal cavity is known as ‘Suryanadi’ (The sun passage) or ‘Pingala Nadi’.

Nadi Shuddhi is one of the fundamental types of Pranayama. It is necessary to have Nadi Shuddhi before performing Pranayama. Nadi Shuddhi is done with two methods. ‘Samanu’ is performed with Nadi Shuddhi Pranayama with Beej Mantra. Nirmanu is performed through the medium of Dhouti Kriyas.

It is necessary to sit in Padmasana for practice of Pranayama. The pose should be ‘Samkayshirogreevam’ that means, the spinal cord must be absolutely erect, neck straight, gaze should be firmly centered in front and then the eyes should be closed.

Without affecting the straight posture of the cord, loosen the body, by reducing the strain in the muscles. Pay attention to the breath. The mind should be concentrated on the air that gradually moves in and out of the nostrils. The tip of the nose will start feeling the touch of the air. The mind should be concentrated on that touch. Do not try to control the breathing, it should be completely natural. The breathing will become gradual on its own, and then try to control it gradually. Pooraka and Rechaka should be prolonged and gradual. Try to count the time measure for Pooraka and Rechaka and try to have them in the ratio of 1:2. In that pose, continue deep breathing in the same ratio (1:2). Then gradually try deep Puraka with only the left nostril. After the deep Pooraka, keeping both the nostrils closed; fix Jalandhar Bandh, Mul Bandh and Uddiyan Bandh. Kumbhaka should be of the same duration as that of Pooraka. Then release Uddiyan Bandh, Mul Bandh and Jalandhar Bandh in
that order and keeping the left nostril closed; perform Rechaka with the right nostril for exactly double period. *This completes half the duration of Nadi Shuddhi Pranayama.*

Immediately with the same right nostril, perform deep Pooraka. Keeping both the nostrils closed, perform Kumbhaka and fix all the three bandhas. When the Kumbhaka is of the same duration as that of Pooraka, releasing all the three bandhas, perform Rechaka gradually with the left nostril. *This completes the rest half of one cycle of Nadi Shuddhi Pranayama.*

Immediately, start Pooraka with the left nostril and begin the second cycle of Pranayama. In the initial stages, the ratio of 1:1:1:2 (i.e., Pooraka 1, Kumbhaka 1 and Rechaka 2) is useful. We have learnt deep breathing in the ratio 1:0:2, hence here only 1 measure of Kumbhaka (pranayama) is introduced. The measure is to be gradually increased to the ideal ratio of 1:4:2.

**Duration:**

If one second is regarded as a unit, then the Pooraka should be for 4 units, Kumbhaka for 16 and Rechaka for 8. This means total 28 seconds for half a cycle. One complete rotation will take 56 seconds i.e., approximately 1 minute. However, this does not mean that the duration of a minute is fixed for Nadi Shuddhi Pranayama. It should be possible to go through a number of rotations at the rate of one per minute. When the rotations continue, the time measure can go on changing. Sometimes, the control over the breathing is lost; sometimes it is continued on its own. At times, it may turn out to be suffocating and the practice may have to be discontinued for breathing in a natural manner.

**Precaution in Pranayama:**

Pranayama is the science of breath. It is the hub round which the wheel of life revolves.”As lions, elephants and tigers are tamed very slowly and cautiously, so should prana be brought under control very slowly in gradation measured according to ones capacity and physical limitations. Otherwise it will harm the practitioner, “warns the Hatha yoga pradipika.
The effect of the strain and pressure caused by the asanas reaches the internal organs only after considerable practice. However, pranayama affects the internal organs directly. To face the effects, the internal organs should have the required capability. This capability is generated through the right practice of asanas. Hence, it is advisable to practice pranayama only after a proper study of asanas for a considerable time period. The pranayam is not to be done after meals, it is better performed before food on empty stomach in sitting facing east or north. No sound should be produced during inhalation or exhalation.

Ujjayi

The distinctive feature of this Pranayama is that the glottis is half-closed, producing a low continuous sound throughout the breathing exercise.

Technique:-

Sit in Padmasana or Siddhasana. Close the mouth. Inhale slowly through both the nostrils in a smooth uniform manner till the breath as long as you can comfortably do it and then exhale slowly through the left nostril by closing the right nostril with your right thumb. Expand the chest when you inhale. During inhalation a peculiar sound is produced owing to the partial closure of glottis. The sound produced during inhalation should be mild and uniform pitch. It should be a continuous sound also. This Kumbhaka may be practiced even when walking or standing. Instead of exhaling through the left nostril, you can exhale slowly through both nostrils.

This removes the heat in the head. The practitioner becomes very beautiful. The gastric fire is increased. Asthma, consumption and all sorts of pulmonary diseases are cured. Perform Ujjayi to destroy decay and death.
NATUROPATHY

Naturopathy, or naturopathic medicine, is a system of medicine based on the healing power of nature. Naturopathy is a holistic system; strive to find the cause of disease by understanding the body, mind, and spirit of the person. There are two areas of focus in naturopathy: one is supporting the body's own healing abilities, and the other is empowering people to make lifestyle changes necessary for the best possible health.

Brief History

It is oldest of all the prevailing systems of medicine and thus it can be called the mother of other systems. Cody (1999). All important aspects of Nature Cure are given in Vedas, such as fasting and treatment by water.

After Vedic period came Pauranic period, in which also the system of Nature Cure prevailed. Raja Dileep had undergone Milk Kalp and had lived in forest. The infertile queens of King Dasharath had undergone Fruit Kalp and had eaten only one kind of fruit after which they gave birth to children. In the beginning, no system of medicine used to be in practice. Whenever people became unwell they fasted to regain health. The use of medicines started with the period of Ramayana when Ravan ordered his vaidyas to prepare medicines from the herbs which on being boiled in water produced a concoction which acted as medicine to cure his various diseases. Similarly Lord Rama ordered Hanuman to get sanjeevani herb for Lakshman to treat his unconsciousness. From this very period some religious traditions were established in our country, such as going on pilgrimage to holy places, observance of Kalp Vas, fasts, satvik food, taking of saltless food once a week, repetition of Ramnam and worship of Ether, Air, Sun, Water and Earth.

Traces of evidences are also available of natural treatment being practiced for treatment of various diseases in the various epical eras such as of pandavaas, Lord Buddha and king Ashoka.

Evolution of Naturopathy in India

In India Naturopathy was the oldest system of healing. It has been used thousands of years back as only system of healing. About 300 years back with the invent of Allopathy which is a fast and easy way of healing further get more
popularity. So slowly naturopathy was losing its luster. But soon after Second World War with the limitation and side effects of drugs puts many patients to return back to natural medicine. Kirchfeld and Boyle (1994). Naturopathy as a system of medicine gained popularity much later after pioneering works of Louis Kuhne, Adolf Just and Henry Lindlahr. Nature Care movement started in India when Louis Kuhne’s book “New Science of Healing” was translated in Hindi, Urdu and Telugu.

Inspired with the book RETURN TO NATURE Mahatma Gandhi, father of Nation, advocated naturopathy in India. He cured himself by Naturopathy and then with his initiative first proper naturopathy hospital has come up in India at Utrlikanchan. Inspired by Mahatma Gandhi, some Nature Cure practitioners and devotees of this system of treatment belonging to Vijayavada (Andhra Pradesh) did admirable work in propagating Nature Cure in South India. Dr. Krishnan Raju established a big hospital in Bhimavaram near Vijayavada. Many lovers of Nature Cure went to this hospital and got training in Nature Cure treatment. Later, they made it the aim of their lives to propagate it among the people. Dr. Sitaram Jindal, an industrialist and Naturopath, has established "Institute of Naturopathy and Yogic Sciences", which is the largest of its kind in Asia. Many Naturopaths in our country began to propagate this system of treatment and did admirable work. Prominent among them are: Late Dr. Lakshmi Narain Choudhary, Dr. Janki Saran Verma, Dr. Baleshwar Prasad, Dr. Khushi Ram Dilkash, Dr. Sharan Prasad, Dr. Mahavir Prasad Poddar, Dr. Ganga Prasad Gaur "Nahar", Mahatma Jagoishwaranand, Dr. Vitthal Das Modi, Dr. Hira Lai, Dr. S.J. Singh, Dr. S.N. Pandey, Dr. Y.N. Mishra, Dr. Din Shah Mehta of Poona, Dr. J.M. Jassawala of Bombay, Dr. Kulranjan Mukherjee of Calcutta, Dr. V. Venkat Rao of Hyderabad and his wife late Dr. Smt. Vijaylakshmi. It is because of the tireless efforts of these persons that many state governments of our country have given recognition to Naturopathy and have also established many institutions to promote it. The Central Government has given encouragement to this system by establishing "Central Yoga and Nature Cure Research Council" and National Institute of Naturopathy, Pune. Today many institutes which give training in Naturopathy are being run in collaboration with several universities, and it is hoped that in coming years this system would be developed very fast and would reach the villages of our country.
Philosophy of Naturopathy

Naturopaths believe that the human body is composed of five great elements (or panchamahabhutas) imbalances of which create diseases.

These are as under:-

1. Earth (Prithvi)
2. Water (Jal)
3. Air (Vayu)
4. Sun/Fire (Agni)
5. Ether (Akash)

It is a composite illustration of all forces of Nature. Treatment by these is what is called Nature Cure or the Naturopathy. The element Earth stands for the solid structure like bones. Water is a representative of the fluids like blood, lymph, etc. Air represents the breath of life, Fire symbolizes the vitality and Ether or Space personifies the reflection of the human spirit — Soul— the unseen aspect of the human entity.

Ten Basic Principles of Nature Cure

Most of the principles and practices of naturopathy like :-

- Morbid Matter theory
- Fasting
- Nutrition and Dietetics
- Cleansing acts
- Massages
- Exercises and the concepts of vitality, panchamahabhutas (five great elements) were familiar to our Vaidyas and Rishis and have been in use in our country over the past many years.
"Dr. Trail is also very clear in his view about nature cure. “He says that those doctors who rely less on medicines have more faith in natural living as a method of treatment. Such doctors pay attention to remove foreign matter from the bodies of patients and to use air, sunlight and water to build the health of the patient.”

Nature Cure recognizes ten basic principles, Micozzi (2001) which should be thoroughly understood. An understanding of these principles would enable anyone to maintain good health and live a long healthy life full of joy.

These ten basic principles are

1. All diseases are same, their causes are same and their treatment is same.
2. Germs do not cause disease.
3. Acute illness is not an enemy but a friend.
4. Nature itself is the doctor.
5. Treatment is not of a particular disease but of the entire body of the patient.
6. Diagnosis of disease is not necessary.
7. It takes time to cure a patient suffering from chronic ailments.
8. Suppressed diseases come to surface through Nature Cure.
9. Simultaneous treatment of body, mind and soul.
10. No medicines should be given to the patient during Nature Cure treatment.

NATUROPATHIC TREATMENT MODALITIES

The general treatment modalities and diagnostic methods employed in Nature Cure are used to restore the health of a patient which is as follows:

Water Therapy

Also called Hydrotherapy, it is the most ancient remedial method. Water is employed in different forms in the process of treatment as it produces several
types of physiological effects depending on temperature and duration. This method is the most widespread and is used in almost all treatments.

**Air Therapy**

Air is amongst the most important sources in life. Fresh air is essential for good health. Air Therapy is employed in different pressures and temperatures for different diseases.

**Space Therapy**

Naturopaths believe that congestion in the body causes disease. The best way to avoid congestion of mind and body is by fasting (or what is called Fasting Therapy).

**Mud Therapy**

Mud is employed in the treatment of various diseases like constipation and skin disease because it absorbs, dissolves and eliminates the toxic materials and rejuvenates the body.

**Fire Therapy**

In Nature Cure treatment, various temperatures are employed through different heating techniques to produce specific effects. It believes that existence of all the living beings depend upon “agni” (or fire). Colour therapy makes use of the fact that sunrays comprise seven colors of varying wavelengths, each affecting the body differently. These colors are employed through irradiation on body or by administering charged water or oil and pills.

**Massage Therapy**

Massage is generally employed for tonic, stimulant and sedative effects. It is an effective substitute for exercise.

**Diet Therapy**

Naturopaths believe that one’s eating habits are reflected in ones physical and mental health. Most of the diseases are treatable through Food Therapy.
The right kind of food is the single important factor that promotes and preserves Health whereas wrong food habits leads to diseases. Hippocrates has rightly advised us “Let your food be your medicine and let your medicine be your food.”

Though a wide range of naturopathic practices such as Water Therapy, Air Therapy, Space Therapy, Mud Therapy, Fire therapy, Massage Therapy, Diet therapy etc. are being practiced these days but the most effective naturopathic treatments for controlling hypertension is supposed to be diet therapy which includes dietary modification because imbalanced diet and increased dietary sodium intake has emerged as the major cause for hypertension these days.

Most of the modern allopathic physicians also now emphasize on role of dietary management and life style modifications in controlling hypertension. The dietary guidelines that most doctors prescribe for hypertension are summarized in the DASH diet, or Dietary Approaches to Stop Hypertension. This dietary program, which is endorsed by the National Institutes for Health, emphasizes an excellent healthy diet approach—low sodium, high fiber, fruits, veggies and little junk food.

Naturopathic Treatment by Food

Diet should be such that it fulfills the nutritional requirements of our body. Such diet can also be tasty. But we should know that those foods, which are tasty but have no nutritional value are injurious to our digestive system but body, has to work and spend energy to expel such useless stuff from the system. Most people have weakness for tasty foods. They do not care much for the nutritional value of the food they are eating. They injure their digestive system by eating too much refined food, by frying vegetables so much that they lose most of their nutritional value, by cooking them in such oils which are harmful and by adding too much spices and chillies. Just as wrong food harms our digestive system, “right food” can cure any ailment. First we should know what a person should eat under normal circumstances to keep healthy and strong, and then we should know what kind of food one should take in case he is suffering from any illness. Then food is taken as “medicine” and the patient gets treatment by food.

Balanced Diet:
Our diet should have enough proteins, carbohydrates, fats, roughage, water, minerals and vitamins. Balanced diet fulfills all the requirements of proteins, carbohydrates, fats, vitamins and minerals. Meat, fish and eggs should not be taken in naturopathy. Those who have been regularly taking these in their diet should gradually give them up. We should avoid all refined, de-vitaminised and de-mineralized food, spices, condiments, stimulants like tea, coffee and tobacco and all intoxicants. One should not take food while in tension or go to sleep at night just after meals or drink water with meals.

**Acidity and Alkalinity of Food:**

When our body is in good health, our blood is slightly alkaline and urine slightly acidic. The delicate acidity-alkalinity balance in our body largely depends upon the food we eat. The acid forming types of food are chiefly all the animal proteins, such as meat, eggs, fish and cheese, the starchy or sugary foods, such as cereals and sugar. The alkali forming foods are vegetables and fruits. Phosphorus, sulphur, chorine, iodine, carbon dioxide, lactic acid and uric acid present in the foods contribute to the acidic effect. Sodium and its salts, potassium, calcium, iron, copper, magnesium and manganese present in the foods contribute to the alkaline effect. It is the correct balance between acidity and alkalinity which leads to good health. Scientists have fixed the neutral point between acidity and alkalinity at 7. For good health, the balance should be around 7.4 that it is slightly alkaline. A change in the balance leads to various diseases. According to some scientists, extreme acidity causes diabetes and extreme alkalinity causes cancer. Gupta and Mazumder (1997). When unbalanced diet is taken, toxins are formed, and when these toxins are not completely eliminated by the body, they damage various organs of the body. One must eat right food in right proportion to keep the blood purified and to maintain the correct acidity-alkalinity balance.

**Health Giving Diet:**

Before we know what Health Giving Diet is, we should first know what the purpose of our taking food is. The purpose of eating food is not merely to satisfy our hunger or for taste. The purpose is also not to fatten our gross body. When we take food, our purpose should be to improve our mental and spiritual health besides nourishing our physical body. We are completely healthy when our body, mind and
Keeping this in mind, our food is divided in three categories

1. Satvik
2. Rajasik
3. Tamasik.

Satvik food is good for the health of body, mind and soul. Rajasik food strengthens the body, but is not good for spiritual growth. There are also foods like onion or garlic, which are good for the health of the physical body but have a bad effect on mind and spirit. Such foods are known as tamsik.

Swami Vivekananda in his book "Bhakti Rahasya "has said that there are many ways to realise God, the most important being eating only Satvik food as natural food. Our mind is not purified till we take pure or Satvik food. We see that by "Health Giving Diet" we mean Satvik food. The characteristics of Satvik food or "Health Giving Food" are:

- It strengthens the body.
- It checks weakening of body.
- It maintains the proper temperature of the body.
- It is strength giving.
- It is digested quickly.
- It is not exciting.
- It enhances memory, life span and beauty

**Diet for Hypertension:**

Diet followed by hypertension patients should be in such a way that it reduces body weight and excess fat, thereby reducing the blood pressure. Therefore the following diet is recommended
A vegetarian diet including the following is ideal for hypertension - Garlic, Lemon, parsley, bitter gourd, drumstick etc.

Fresh fruits are very useful in fighting high blood pressure. Indian Gooseberry, Grapes, banana, guava and watermelon are considered beneficial. Dry fruits are also considered to be harmless

The quantity of salt used should be minimized to the maximum possible extend. Excessive use of salt is considered to be the main culprit behind many heart diseases especially hypertension.

Non vegetarian food like red meat and eggs should be completely avoided due to its high salt content.

Coffee should be avoided because of its caffeine content.

Reduce the quantity of oil used and completely avoid the use of hydrogenated oils.

Reduce the intake of cereals and pulses.

Therapeutic significance of various food items prescribed in Naturopathy:

Garlic:

The relationship between garlic and high blood pressure has been investigated scientifically Gopalan et al. (1999), and found to be quite sound. Garlic is regarded as an effective means of lowering blood pressure. It is said to reduce spasms of the small arteries. It also slows down the pulse rate and modifies the heart rhythm, besides relieving the symptoms of dizziness, numbness, shortness of breath, and the formation of gas within the digestive tract. It may be taken in the form of raw cloves or two to three capsules a day.

Gooseberry:

Indian gooseberry is another effective remedy for high blood pressure. Panday and Kapoor (1988). A tablespoon each of fresh Indian gooseberry juice and honey mixed together should be taken every morning in this condition.
CHAPTER 1: Introduction

Lemon:

Lemon is also regarded as a valuable food to control high blood pressure. It is a rich source of vitamin C which is found both in the juice and peel of the fruit. This vitamin is essential for preventing capillary fragility.

Wheat Grass:

Wheat-grass has abundance of chlorophyll apart from all the minerals essential for body. It also contains Vitamin A, Vitamin C, Vitamin B, E, K and Laetrile-B17 etc. Besides these, it also contains carbohydrates, proteins, and fat.

Tomato:

The tomato is known as a powerhouse of nutrition. It contains a multitude of vitamins and minerals that act to support health. However, it was not until the discovery of the carotenoid lycopene that modern science began to truly recognize the healing power of the tomato.

Honey Water:

Drinking honey water helps reduce cholesterol, helps regulate blood pressure and maintains vasodilatation. Mix a teaspoon of honey with 5 to 10 drops of apple cider vinegar to a cup of hot water and drink this early in the morning.

Watermelon:

Watermelon is another valuable safeguard against high blood pressure. A substance extracted from watermelon seeds is said to have a definite action in dilating the blood vessels, which results in lowering the blood pressure. The seeds, dried and roasted, should be taken in liberal quantities.

Vegetable Juice:

Raw vegetable juices, especially carrot and spinach juices, taken separately or in combination, are also beneficial in the treatment of high blood pressure. If taken in combination, 300 ml of carrot juice and 200 ml of spinach juice should be mixed to make 500 ml or half a liter of the juice, and taken daily. If taken separately, one glass should be taken twice daily, morning and evening.
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RATIONALE OF THE STUDY:

Though a number of factors may be responsible for hypertension such as pre-existing cardiac diseases, renal diseases, age, endocrine disorders, but still majority of cases of hypertension these days have found to be mainly due to Sedentary Life style, Poor Dietary habits, Increased Psychological Stress and Obesity. Thus Yoga and Naturopathy will come out to be a comprehensive and more beneficiary treatment for the holistic management of Hypertension. Thus arises the need and demand of Yoga and Naturopathy to control the disorder, with natural measures.

STATEMENT OF THE PROBLEM:

The purpose of the study was the “Effects of selected Yogic and Naturopathy Practices on Systemic Hypertension.”

OBJECTIVES OF THE PROBLEM:

1. To find out the effect of Yogic practices on systolic blood pressure.
2. To find out the effect of Yogic practices on diastolic blood pressure.
3. To find out the effect of Yogic practices on BMI.
4. To find out the effect of Yogic practices on heart rate.
5. To find out the effect of naturopathic practices on systolic blood pressure.
6. To find out the effect of naturopathic practices on diastolic blood pressure.
7. To find out the effect of naturopathic practices on BMI.
8. To find out the effect of naturopathic practices on heart rate.

DELIMITATIONS:

1. The study has the following delimitations:-
2. The study has been delimited to the middle aged patients only.
3. The study has been delimited to the female patients.
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4. The study have been confined to the subjects from “Sarvodhya Bhawan, Gandhi Adhyana Kendra” Jalandhar.

5. The study has been confined only to the selected practices of Yoga i.e., Asanas, Pranayama, and Dhyana.

6. The study has been confined only to one selected practices of Naturopathy i.e., Dietary Modification.

7. The underlying causes have not been considered and the same yogic and naturopathic practices to all subjects.

8. The study has been delimited to the duration of Eight weeks.

LIMITATIONS

1. The subjects of this study belong to different nature, habits, age group, socio-economic strata and family background and other natural factors which are not under the control of investigator and were considered as limitations of the study.

2. The underlying etiology of hypertension may be different in different subjects but irrespective of this, same treatments has been imparted to the subjects.

HYPOTHESIS OF THE PROBLEM:

1. It is hypothesized that there would be significant reduction in systolic blood pressure through Yogic practices.

2. It is hypothesized that there would be significant reduction in diastolic blood pressure through Yogic practices.

3. It is hypothesized that there would be significant reduction in BMI through Yogic practices.

4. It is hypothesized that there would be significant reduction in heart rate through Yogic practices.

5. It is hypothesized that there would be significant reduction in systolic blood pressure through naturopathic practices.
6. It is hypothesized that there would be significant reduction in diastolic blood pressure through naturopathic practices.

7. It is hypothesized that there would be significant reduction in BMI through naturopathic practices.

8. It is hypothesized that there would be significant reduction in heart rate through naturopathic practices.

CONCEPTUAL DEFINATIONS

The following are the Conceptual Definitions in this research:

1. BLOOD PRESSURE:

   Blood pressure is defined as the lateral pressure exerted by the contained column of blood on the wall of arteries. (John B. Kostis, 2005)

2. SYSTOLIC BLOOD PRESSURE:

   Systolic Blood Pressure is the maximum pressure exerted in the arteries during the systole of heart. (John B. Kostis, 2005)

3. DIASYTOLIC BLOOD PRESSURE:

   Diastolic Blood Pressure is the minimum pressure in the arteries during the diastole of the heart. (John B. Kostis, 2005)

4. PULSE RATE:

   This is the number of times the heart beats in a minute. It is also known as heart rate. (John B. Kostis, 2005)

5. BODY MASS INDEX:

   It is the relative measure of height and weight of an individual. It is calculated as weight in kilograms divided by square of height in meters. (John B. Kostis, 2005)

6. HYPERTENSION:
Hypertension is defined as a sustained increase in systolic blood pressure (SP) of 140 mmHg or greater and/or diastolic (DP) of 90 mmHg or Greater. (John B. Kostis, 2005)

7. **YOGA**:

Yoga is the suppression of the modifications of mind. (Acc. to Maharishi Patanjali)

8. **NATUROPATHY**:

Naturopathy is not only a scientific system of healing but also an art of healthy living. The basic principles of Naturopathy very much suits to the Indian philosophy of Panchmahabhootas i.e. Human body is composed of five great elements viz. Earth, Water, Air, Sun and Ether. In Naturopathy the main treatment modalities used are mud, water, sun-rays, air, massage, natural diet, fasting and exercise etc. These elements reflect in each cell of our body and treatment with the help of these elements is called Naturopathy. (Acc. to the Central Council for Research in Yoga and Naturopathy, Deptt. of AYUSH, New Delhi)

**SIGNIFICANCE OF THE STUDY:**

The study will help to identify the effects of yoga therapy and naturopathy for hypertension, and also the preventive measures which should be taken to avoid this disorder. The study will help to have a wider vision on the disease as a syndrome, and to control all the clinical manifestations, using natural curative and preventive measures. It will give an insight view of the yoga therapy and naturopathy.