CHAPTER NO.1
INTRODUCTION

1.1 HERBALS FOR HEALTH

Using herbs and plants for medicinal purposes has a long tradition. In India and China, these traditions date back thousands of years. Once thought of as “traditional medicine” used by native or ancient cultures, herbal medicine has enlarged as a popular alternative or supplement to modern medicine. According to the World Health Organization, 4 billion people, almost 70 percent of the world population, use herbal medicine for some aspect of primary health care. It is estimated that in the United States alone, botanical dietary supplements exceed $3 billion per year.

Herbal products can be found in grocery stores and on the web, as well as natural food markets, their traditional source. Forty percent of American’s take dietary supplement. About half of the people take vitamin and mineral supplement, a third take some type of herbal product and the rest take other ergogenic aids such as amino acid or protein powders. The herbal market is growing steadily at about 20 percent each year. People take herbs for many reasons and many conditions. One of the biggest seasons is that herbs are considered natural and therefore healthier and gentler than conventional drugs (Ironically, many prescription drugs are of herbal origin). They are used for everything from upset stomachs to headaches. Some people take them for overall health and well-
being, not for any specific condition. For others, herbal use is grounded in traditions passed down from generation to generation or recommended by folk healers. Medicinal herbs are significant source of synthetic market, medicinal herbs are used as raw drugs, extracts or tinctures. Isolated active constituents are used for applied research for the last few decades, phytochemistry (study of plants) has been making rapid progress and herbal products are becoming popular.

Ayurveda, the ancient healing system of India, flourished in the Vedic era in India. According to historical facts, the classical texts of Ayurveda, Charaka Samhita and Sushruta Samhita were written around 1000 BC. The Ayurvedic Materia Medica includes 600 medicinal plants along with therapeutics. Herbs like turmeric, fenugreek, ginger, garlic and holy basil are integral part of Ayurvedic formulations. The formulations incorporate single herb or more than two herbs (poly herbal formulations).

Medicinal herb is considered to be a chemical factory as it contains multitude of chemical compounds like alkaloid, glycosides, saponins, resins oleoresins, sesquiterpene lactones and oils (essential and fixed). Today there is growing interest in chemical composition of plant based medicines. Several bioactive constituents have been isolated and studied for pharmacological activity. Medicinal plants are of great value in the field of treatment and cure of diseases. Over the years, scientific research has explained our knowledge of the chemical effects and composition of the active constituents. It has now been universally accepted fact that the plant drugs and remedies are safer than that of synthetic medicines for curing the complex diseases. Natural product is a source for bioactive compounds and has been a growing interest in drugs of plant origin and such drugs formed an important class for disease control.2
1.2 HISTORY OF HERBAL MEDICINE

Plants have been used as a source of medicine by man from ancient times. Initially, these formed the bulk of folk or ethno medicines, practiced in India and some other parts of the world like China, Africa and South America. Later a considerable part of this indigenous knowledge was formulated, documented and eventually passed into the organized system of medicine such as Ayurveda, Unani, Siddha and some other outside India. Plants have played a significant role in maintaining human health and improving the quality of human life for thousands of years and have served human well as valuable components of medicines, seasonings, beverages cosmetics and dyes. Herbal medicine is based on the premise that plant contains natural substances that can promote health and alleviate illness. Herbs are prime medicinal agents in traditional and holistic therapies. Particularly in India and China an extensive science has been developed. Now a day the medicinal plants play a major roll and constitute the back bone of the traditional medicine. Mainly in Indian Materia Medica include about 2000 drugs of natural origin folklore practice. In India, plants have been traditionally used for human and veterinary health care. India has a special position in area of herbal medicine. Since it is one of the countries which are capable of cultivating most of the important plants used both in modern and tradition system of medicine

The traditional heritage of India includes many true tested medicinal plants/drugs for various diseases and to which there is no answer in modern medicine till today. Indian traditional medicine is based on various system including Ayurveda, Siddha, Unani and Homeopathy. The Indian traditional medicines can be classified into two groups. In first group are the medicinal preparations which are generally of plants, minerals, or animal origin or mixtures of two or three of them and have well laid down procedure for
their preparations. While the folk medicines belong to the second group, which are herbal household remedies and have no systematic approach for processing raw materials and are mostly used as family traditions. The evaluation of these drugs is primarily based on phytochemical, pharmacological and allied approaches such as chromatography, microscopy and other.

Ayurveda is the ancient system of treatment of a disease consists of salubrious use of drugs, diets, and certain practices. Ayurveda is based on hypothesis that everything in the universe is composed of five basic elements viz. space, air, energy, liquid and solid. The concept of ethno pharmacology has evolved from the requirement for studies in light of modern science on the drugs used in the traditional medicine. In 1981, Bruhn and Holmstedt defined ethno pharmacology as the interdisciplinary scientific exploration of biologically active agents traditionally observed by man. “In its entirety, pharmacology embraces the knowledge of the History, source, chemical and physical properties, compounding biochemical and physiological effects, mechanism of action, absorption, distribution, biotransformation, excretion and therapeutic and other uses of drugs”. A drug is broadly defined as any substance (chemical agent) that affects processes of living. Therefore, briefly, the main component of ethno pharmacology may be defined as pharmacology of drugs used in ethno medicine.

Herbalism is a traditional medicinal or folk medicine practice based on the use of plants and plant extracts. Herbalism is also known as botanical medicine, medicinal botany. Many plants synthesize substances that are useful to the maintenance of health in humans and other animals. These include aromatic substances, most of which are phenols of health in humans and other animals. These include aromatic substances, most of which are phenols or their oxygen substituted derivatives such as tannins. Many of the
herbs and spices used by humans to season food yield useful medicinal compounds. Many of the pharmaceutical currently available to physicians have a long history of use as herbal medicines, including opium, aspirin, digitalis, and quinine.

The World Health Organization (WHO) estimated that about 80% of the population living in the developing countries relies almost exclusively on tradition medicine, the medicine for their primary health care needs. In almost all the traditional medicine the medicinal plants play a major role in cure of disease. The plant kingdom still holds many species of plants containing substance of medicinal value which have yet to be discovered large no of plants are constantly being screened for their possible pharmacological value. All plants possess hundreds of characteristics of a morphological, histological, embryological, chemical and genetic nature. Currently photo chemistries have significant development. The technology involves the isolation, extraction, Purification and characterization of active constituents from natural origin. The isolated compounds are mainly used as therapeutic agent in chronic disease5.

According to the WHO, 74% of 119 modern plant- derived pharmaceutical medicines are used in ways that are similar to their traditional uses. Major pharmaceutical companies are currently conducting extensive research on plant materials gathered from the rainforests and other places for possible new pharmaceuticals. Nature can be considered as the ultimate chemist as natural products offer us with an abundant source of novel chemo-types, pharmacophores or lead structures, which could be directly used or derived into ready-made drugs.

“Herbal renaissance” is happening all over the globe as herbal products are the symbol of safety as compare to synthetic medicine, which could be regarded unsafe to human and environment. From many centuries herbs are used for a medicinal, flavoring and aromatic properties but
synthetic products of modern age has decreased their importance for a movement. But hopefully blind dependence on synthetic drug is over and now day’s peoples are adopting herbalism with hope of security and safety to health.

Traditional system of medicine is found to have utilities as many accounts. Due to population rise adequate supply of drug and high cost of treatment and side effect along with drug resistance has been encountered in synthetic drugs, which has lead to an elevated emphasis for the use of plants to treat human diseases. The affordability of herbs has also drawn the attraction towards their use.

India is one of the oldest civilizations which is known for rich repository of medicinal. The forest of India is Pandora’s Box being having rich collection of medicinal and aromatic plants which could be utilize to prepare drugs and perfumes. Ayurveda, the bible of Indian medicinal science has codified about 8000 herbal remedies used for various therapeutic purposes. The other ancient epical health books like, The Rig-Veda, Yajurveda, Atharvaveda, Charaka Samhita and Sushrut samhita has described the use of various medicinal plants which are still found in many of Ayurveda formulations. But unfortunately a lot of valuable ancient knowledge is being lost in alarming rate.

Green plants biosynthesize and preserve large number of biochemical products, many of which are extractable and used for various scientific investigations. Secondary metabolites of plants also found a number of roles in modern medicine. It is the potential of ancient herbal medicinal systems which provide base to synthesis the lead structures for the development of modified derivatives with increased efficiency and/or reduced toxicity.

Some miraculous useful chemical from plants include vincristine, vinblastine, taxolpodophyllotoxin, camptothecin, digitoxigenin, gitoxigenin,
digoxigenin, tubocurarine, morphine, codeine, aspirin, atropine, pilocarpine, capsaicin, allicin, curcumin, artemisinin and ephedrine. The crude extract from medicinal plants could be used as medicament. In the other side the isolation and identification of active principle along with elucidation of their mechanism of action of drug extreme importance.

In industrialized nations at the present time, some fifty percent of all prescribed drugs are derived or synthesized from natural products, the available sources for which are animals, marine, plants, and microorganisms. It is considered that because of the structural and biological diversity of their constituents, terrestrial plants offer a unique and renewable source.

1.3 STUDIES ON MEDICINAL PLANTS

Variety of reasons has been cited for the need for studying medicinal plants. Most of the traditional knowledge about medicinal plants was in the form of oral knowledge that had been lost with persistent invasions and cultural adaptations. There was no uniform or standard procedure for maintaining the inventory of these plants and the knowledge about their medicinal properties. There is a prevalence of using plants and plant based products in various contemporary and traditional systems of medicine, without any written documentation or regulation. Therefore, it is essential that such uses of natural products be documented and studied for systemic regulation and wide spread application. The leads for a significant number of modern synthetic drugs have originated from isolated plant ingredients, as the search for newer entities begins from either derivatising existing drugs or from traditional or contemporary medicinal systems. Therefore, it is essential that research on photochemistry of plants used extensively in traditional medicines is carried out.
1.4 INVENTORISATION OF MEDICINAL PLANTS AND TRADITIONAL KNOWLEDGE

In this era of special transport and multimedia communication, extensive movement of plants, organisms and people rapidly spreads epidemic diseases caused by micro organisms, against which indigenous populations have no defense extinction of certain tribes and with them, their knowledge. A review of the texts of the first Latin American histories has shown that since the discovery of the new world, hundreds of communities and tribes have disappeared. A similar situation exists in the rest of the developing world. The most urgent need is to rescue and record all traditional knowledge on plants, that possibly can be, as quickly as possible and to save the natural vegetation from further degradation. Therefore, inventories of the traditional uses have to be prepared taking into account in the tribal knowledge. An inventory of medicinal plants compiled by the WHO in 1978 covered only ninety number countries and contained 20000 species, of which only about 250 were of widespread use, and some of which had been analyzed to identify their main active chemical compound. In India, the Department of Biotechnology (DBT), Ministry of Science and Technology, Government of India has sponsored a project on "Inventorizing medicinal plants" medicinal plants, wherein literatures on Ethan botanical, Chemical, pharmacological and toxicological details of around 1700 plants are being collated⁷.

The tribal knowledge has to be validated, protected and marketed globally as well. Such an effort with benefit sharing will uplift the tribal community and gives the modern world new medicines. For example, The Pushpangadan Model of benefit sharing for Kani tribes of Kerala for the development of 'Jevaniya' drug from Trichopus Zeylanicus as
a tonic has provided significant share of the credit and monetary grains to the community.

1.5 UTILITY OF PLANTS IN CONTEMPORARY MEDICINE

A large number of very specific pharmaceutical products, many of them synthetic are available to treat almost every disease. Nevertheless, plants still have a pre-eminent place in today's therapy for the following reasons.

There is renewed interest in using plants in therapy as is the case with 'Artemisia annua', for the anti-malarial drug and species of Cinchona for quinine. With the therapeutic success of chloroquine and its synthetic derivatives in the treatment of malaria, the use of quinine passed into history of medicine. Through acquired resistance, an established biological phenomenon, pathogens and parasitic can develop heritable resistance to chemotherapeutic agents on continued exposure, by a process of selection that results in acquiring resistance to a particular chemical compound. Currently, the demand for these natural products is beyond the production capacity of the extraction laboratories. As a result, malaria has again become a great health risk in tropical areas. This demand has also been accentuated further by the acquired resistance of the insect vector, the Anopheles mosquito to insecticides that were indiscriminately used in the twentieth century in sanitation campaigns. Similar is the care with tuberculosis, where the therapy that was successful for a long time now suffers from the pathogens acquired resistance. There is an urgent need to find effective drugs from plant origin also against this disease. Modern medicine depends on a number of plants that are also used in traditional medicine, although they have not yet been improved upon. Neither all natural compounds can be totally synthesized nor can all the synthesized compounds be equal to the natural products Digitoxin from Digitalis
purpurea and Digitalis lanata could not be synthesized, and synthetic vincristine of Catharanthus roseus has been found to be far less efficient than the natural product. Even though immunotherapy has achieved great success, we still do not have vaccines for all viral disease. It is possible that plants would be useful to treat viral disease as several plant species of promise exist, as for example Neem. Most antibiotics still come from fungi, and there is a vast scope for this in higher plants. There are a lot of immune modulating drugs in Ayurveda known as ’Rasayan' drugs which need to be exploited. Before the hope in medicinal plants is realized, it is essential that controlled studies be conducted, for example, the double blind system can be used, to confirm their therapeutic effect. Nonetheless, in fold medicine these plants are employed with apparently favorable results, and above all without causing detectable unfavorable side effects\textsuperscript{8-10}.

Plants are useful in the treatment of mild afflictions that are common and frequent such as the common cold and mild stomach ache or diarrhea. These and other illness pass with little or no treatment; hygienic and dietary measures help. Infusions or decoctions of some plants, like garlic, pepper, ginger etc., are well known in fold medicine throughout the world to provide relief from these afflictions. These remedies can contribute to improving the general state of the patient.

1.6 DISCOVER OF NEW THERAPEUTIC ENTITIES

The capacity of chemicals to modify a molecular structure is almost unlimited, but the capacity to create new structures with therapeutic properties has been found to be limited plants (and animals) offer thousands of new molecules. An intensive and extensive study of the naturally occurring molecules identified as 'therapeutically active' is desired urgently to come out with new therapeutic entities. The very large number of alkaloids and several other doses of chemical compound discovered
during the 1970s and 1980s found to be pharmacologically active, serve as models for new synthetic compounds. A number of plant based drugs such as vincristine, taxol, digoxin, quinine, reserpine, ergotine, opioids, ephedrine, colchicine, rutin, coumarins, anthraquinones etc., are still a part of standard therapy. Most of these do not have any synthetic substitutes. Several other plant products are used in formulations that are sold over the counter (OTC) in several countries. The role of plants in standard therapy will certainly be enhanced several fold in future, provided we make the move in the right direction. Phytochemical are a major source of dyes, flavours, sweeteners, aromas, perfumes, insecticides, antiparasitic drugs and many other substances. Further research on plants will provide, apart from drugs, additional sources of these industrial raw materials. All this potential justifies the broadest and most exhaustive phytochemical research 8-10.

1.7 OBTAINING INTERMEDIATE CHEMICALS FROM PLANTS BY STRUCTURAL MODIFICATIONS

It became clear, after several unsuccessful attempts, that only a small number of natural products are amenable for artificial synthesis. Also evident is the fact that possibilities of designing and artificially synthesizing new structures for therapeutic use are limited and fast dwindling. This led to the realization that therapeutically active chemical structures should be found among the constituents of living organisms and these should form the basis for developing new structures or for improving them, through structural modification.

Some natural products suffer from certain disadvantages such as their occurrence in minute quantities in the source material, poor solubility, low stability, poor absorption, incorrect distribution, failure to reach the target etc. A structural modification improves the efficiency of these drugs, the modified form being called the
'pro-drug'. For example, aspirin is a pro-drug of salicylic acid. Vindesine an anticancer alkaloid is a pro-drug of vinca (catharanthus roseus) alkaloids. Vincristine, the antileukemia drug which is in great demand, suffers from the disadvantage of very low yields from the source material, and so is prohibitively expensive. Vinblastine, another anticancer drug from the same plant is present at levels of 1000 times higher than vincristine and the cost is a third of vincristine. Vinblastine is now being used as a parent drug to obtain, through structural modification, the pro-drug vincristine. Thus, there are several methods of improving the performance of native drugs in a relatively shorter time and at a lower expense. The use of computers in structural determinations has made the process even smoother\textsuperscript{11}.

1.8 CONVENTIONAL & ALTERNATIVE WESTERN APPROACHES OF MEDICINE

Complementary and alternative medicine (CAM) is a broad domain of healing resources that encompasses all health systems, modalities, practices and their accompanying theories and beliefs, other than those intrinsic to the politically dominant health system of a particular society or culture in a given historical period. CAM includes all such practices and all ideas self defined by their users as preventing or treating illness or promoting health and well-being. Boundaries within CAM and between the CAM domain and the domain of the dominant system are not always sharp or fixed. Concepts generally ascribed to CAM includes: wellness, self-healing, bioenergy, nutrition, natural products & plants, individuality.

1.8.1 Biomedicine (Allopathy)

Allopathic medicines are the most effective system dealing with many common and serious problems, amongst them: acute trauma, acute infections associated with bacteria, protozoa, some
fungi, and some parasites; acute medical emergencies; and acute surgical emergencies. Allopathic intervention in these conditions often saves lives and reduces the severity and duration of illness. Allopathy's lack of a theoretical base makes it nearly impossible to teach, to learn, or to practice. Instead of having a set of principles that can be learned and applied to all conditions, medicine's multi-causal and multi-modality approach requires that the clinician learn specific interventions for each disorder.

According to Andrew Weil, the following complaints about medicine are valid:

(a) It is too expensive (owing in large part to high-tech gadgetry for diagnosis and treatment)

(b) it is too dangerous (owing to the use of dangerous, refined drugs and the widespread use of worthless, unnecessary or excessive surgery (where resistant microorganisms can be easily spread) by practitioners who may not be aware of how health can be achieved and maintained and whose dependence on high-tech diagnosis may have atrophied their diagnostic skill).

(c) it is not effective at treating many diseases that really matter (owing to theoretical deficiencies - e.g., there is no basis for treating acute infection by virus; nutritional & metabolic disease; chronic degenerative disease; allergies; autoimmune disease; most cancers; psychosomatic diseases; mental illness).

1.8.2 Osteopathy

Osteopathic medicine is a system of health care founded in 1874 by Andrew Taylor Still (1828 - 1917) and based on the theory that the body is capable of making its own remedies against disease and other toxic conditions when it: (a) is in normal structural relationship; (b) has favorable environmental conditions; (c) has adequate nutrition.
Today, osteopathy utilizes generally accepted methods of medical diagnosis and physical, pharmacological and surgical methods of treatment, while placing strong emphasis on the importance of body mechanics and manipulative methods to detect and correct faulty structure and function. Still’s developed this approach to medicine because he was dissatisfied with the effectiveness of 19th Century medicine. He believed that many of the medications of his day were useless or even harmful. Still studied concepts of "good health" and applied them to treatment of disease. The philosophy of osteopathy focuses on the unity of all body parts. Still identified the musculoskeletal system as a key element of health, and recognized the body's ability to heal it. He stressed preventive medicine, eating properly, and keeping fit. Over half of all osteopathic physicians practice in primary care areas, such as pediatrics, general practice, obstetrics/gynecology and internal medicine, and DOs are found in higher proportions than MDs in rural areas.

1.8.3 Naturopathy

Naturopathic medicine is a distinct system of healing - a philosophy, science, art and practice that seek to promote health by stimulating and supporting the body's inherent power to regain harmony and balance. Although the term naturopathy was first used at the turn of the century, the philosophical basis and many of the methods of naturopathic medicine are ancient, some dating back at least to 400 B.C., when Hippocrates became famous for his treatment of disease in accordance with the following natural laws

1. Only nature heals, providing it is given the opportunity to do
2. Let food be your medicine and let medicine be your food
3. Disease is an expression of purification
4. All diseases are one.
1.8.4 Homeopathy

The founder of Homeopathy was Samuel Hahnemann (1755-1843); who were a MD, a chemist, and a mineralogist a botanist and a linguist. He became disillusioned with orthodox medical practice of the day (routine bleedings, heroic purging with cathartics, and administration of large doses of crude drugs), and he devised an approach based on entirely different premises. According to Hahnemann, symptoms are the outward sign of illness; they are the organism's attempt to heal itself. His approach was to assist the body in its attempt to heal.

1.8.5 Chiropractic

Chiropractic is a drug-free, non-surgical science and, as such, does not include pharmaceuticals or incisive surgery; it is a branch of the healing arts concerned with human health and disease processes. Doctors of chiropractic (DCs) consider humans as integrated beings and give special attention to physiological aspects including structural, spinal, musculoskeletal, neurological, vascular, nutritional, emotional and environmental relationships.

The practice and procedures employed by DCs are based on the academic and clinical training received in and through accredited chiropractic colleges and include, but are not limited to, the use of current diagnostic and therapeutic procedures. Such procedures specifically include the adjustment and manipulation of the articulations and adjacent tissues of the human body, particularly of the spinal column. Included is the treatment of intersegment aberrations for alleviation of related functional disorders.
1.9 The Importance and Value of the Ancient Indian System of Medicine

The ancient intuitive India that brought to being the brightest and the most inspired of eternal spiritual songs on the struggles and problems of active life in this terrestrial world in relation to the highest end of existence which self-realization is, and embodied them in the four Vedas, could not resist its native many-sided tendency not merely to subject the entire nature of man to a process of dynamic spiritualization, but literally to seek the health, strength, vim, vitality, longevity of the third of the triune aspect of man,—the physical body, which is recognized as the indispensable and perfectible vehicle for both the enjoyment of temporal happiness and supreme spiritual felicity. This tendency of an essentially intuitive mind, towards an integral development of life, towards a complete blossoming of the whole man even while living in a physical form in this material world, this impassioned affirmation of positive living, this acceptance of the body as the best instrument for the realization here on earth, of the best blessings of the profound spiritual realms, resulted in the obtainment of the yet unmatched, deepest insights, the subtle determining vital powers and secrets in the human system that govern its radiant health and longevity and in the creation of a yet another Veda, the Ayurveda. Ayurveda is a perfect science of life and consists of a body of most remarkable knowledge on the internal mechanism of human health and longevity, on medicinal herbs and therapeutic roots, on the efficacious treatment of human ills by eradicating from the human system the very sources of their causation. This great medical science and humanity’s most ancient and finest preventive school of practical medicine, which has been practiced in India, century after century for over four thousand years, by expert Vedas well-versed and highly trained in its lore, should now receive,
as a matter of immediate practical necessity, the increasing and the best interest of modern free India. To those who claim to have a knowledge of this ancient medicinal science enriched by the happy results of the researches and advancement made by eminent Vaidyas in succeeding ages, its superior merits over the Western systems of medicine, and its immense value, do not need any delineation. Such names of the great pioneers who added to the development of the science of Ayurveda, as Vagbhata, Madhava, Jivaka and Bhava Mishra of Banaras are well-known, and the almost miraculous results that the medicinal herbs prescribed by Ayurveda have brought into the systems of those who have used them, are more than sufficient proof of its unique value. The amazingly wide scope and the genuine scientific nature of Ayurveda received much enthusiastic appreciation by such Westerners as Sri William Hunter, too, and the recent researches show that the early Greeks owed much of their knowledge on the physiology of man and medicine, to Ayurveda. The interest of Government of India, in Ayurveda is indeed most encouraging, but the private bodies and the public too should come to an increasing recognition of its importance and value, and as a first step begin trying its drugs.

1.9.1 Importance of Ayurveda

Ayurveda is the science of life. It shows the way to remove diseases, to keep up sound health and attain longevity. This wonderful science cannot be rooted out of India. It is deeply rooted in the hearts of the children of India, the offspring’s of Charaka, Sushruta, Madhava, Vagbhat Sharangadhara and Dhanwantari. Even if all the books on Ayurveda are lost today, it will surely survive.

The efficacy of Ayurvedic medicines prepared strictly in accordance with the methods presented by the Ayurvedic text is very great and their curative powers cannot be in the least doubted or disputed. Ayurveda was in vogue in India since very early times. The Ayurvedic and
Siddha systems have played a very important and vital part in the sphere of public health. Their popularity is due to their availability, cheapness and efficacy, but their thorough knowledge was confined to a few specialists only. There was paucity of standardisation of the drugs and therefore the Ayurvedic system did not keep pace with the Allopathic system.

An Ayurvedic physician is very accurate and scientific in determining the causes, symptoms and treatment of diseases. He accurately diagnoses the diseases by feeling the pulse or looking at the eyes and face. He brings about harmony of the three Doshas—Vatha (wind), Pitta (bile) and Kapha (phlegm) by administering the suitable Rasas in correct proportions and combinations.

Ayurveda is based on ten fundamental considerations—

1. Dusyam (the seven Dhatus and Doshas)
2. Desam (surrounding)
3. Balam (strength)
4. Kalam (season)
5. Analam (fire of digestion, Agni)
6. Prakriti (body)
7. Vayaha (age)
8. Satvam (mental state)
9. Satmyam (compatibility)
10. Aharam (dietary habits)

Ayurveda can cure certain diseases for which the allopathic pharmacopoeia has no remedy. There are great many indigenous drugs of extreme utility but little known to the students of allopathy. The Allopaths are just emerging from the slough of empiricism. Many of the empirical methods of treatment adopted by many ayurvedic physicians are of the greatest value. Whatever the ancient ayurvedic physicians of yore knew are nowadays being brought to light as new discovery by the allopaths. If
people follow the treatment according to the methods of Charaka, there will be few chronic invalids in the world.

1.9.2 Comparison of Chinese medicine & Ayurveda

Based on ancient textes Ayurvedic and Chinese medicines focus on disease prevention. Instead of treating symptoms, both seek to balance a person’s energy—called "chi" in Chinese medicine and "prana" in Ayurveda—which helps the body heal itself. Both believe in five elements: air, fire, water, earth and ether in Ayurveda; fire, earth, metal, water and wood in Chinese medicine. The Ayurvedic approach balances the three "doshas," or constitutions: vata, pitta and kapha. Chinese medicine seeks balance between yin and yang. Both approaches rely on herbal remedies, although the specific plants used are different, as is their classification. Ayurveda classifies herbs into four categories: energy, taste, post-digestive effect and potency. Chinese medicine also classifies herbs by four categories: Four Natures, Five Flavors, Four Directions, and Organs and Meridians. Both approaches believe that people’s health is determined by their relationships to the cosmos and that one achieves health by living in harmony with universal and internal forces. Both systems involve lifestyle regimens; however, the Chinese model doesn’t have as fully developed detoxification and restoration processes as Ayurveda. Chinese medicine uses acupuncture to stimulate acupuncture and release chi blockages. Similarly, Ayurveda uses yoga and massage.