



# Introduction

## PHARMACOGNOSY

Pharmacognosy is a systematic study of the crude drugs obtained from natural origins like plants, animals, and minerals. Pharmacognosy can be defined as the branch of science which involves the detailed study of drugs obtained from natural origin including name, habitat, collection, cultivation, macroscopy, microscopy, physical properties, chemical constituents, therapeutic actions, uses, and adulterants. The word “Pharmacognosy” is derived from two words, pharmakon means medicine (drug) and gnosis means to acquire knowledge of something.

### Role of Pharmacognosy in Allopathy

Allopathy is derived from the words Allos means opposite and Pathos means suffering. Allopathy is a system of medicine, that combats disease by using remedies that are different from the effects produced by the disease to be treated, e.g. antibacterials, antivirals, and antacids used for acidity.

Allopathic medicine is another term for conventional, or modern Western medicine. It is an evidence-based system where doctors and other healthcare professionals treat symptoms using conventional medications. Therefore, this system is also called Western medicine or Modern medicine. In the early 19th century, German physician Christian Friedrich Samuel Hahnemann coined the term allopathy. Unlike complementary medicine, allopathic medicine relies on trusted source clinical examinations and screening to confirm a diagnosis, focusing on a person's symptoms and signs before

treatment. Conventional (allopathic) medicine treatment modalities include trusted source pharmacological drugs, surgery, and radiation therapies. An allopathic doctor can prescribe medications that require a prescription. Pharmacognosy plays an important role in the treatment of many diseases in allopathy. It plays a crucial role in the discovery, characterization, and production of drugs. In this system, drugs or various dosage forms, e.g. tablets, capsules, injections, tonics, etc. are manufactured using synthetic chemicals or chemicals derived from natural products like plants, animals, minerals, etc. This system also used modern types of equipment for diagnosis, analysis, surgery, etc.

### Advantages of allopathy:

- Easily available
- Immediate response
- Assured treatment
- The modern method of treatment
- Patient protection
- Research and development
- Various kinds of dosage forms are available
- Efficient management in emergency conditions

### Disadvantages of allopathy:

- Partial treatment
- Side effects are major disadvantages
- Long-term medicine causes severe side effects
- Modern medicines suppress the symptoms
- Incorrect diagnosis may be fatal
- Drug–drug interactions
- Suppressed immunity
- High cost

### Traditional and Alternative Systems of Medicines in India

The traditional system of medicine also known as indigenous medicine or folk medicine or alternative medicine comprises medical aspects of knowledge, skill, and practices based on different cultures and are used to treat diseases. Traditional medicine refers to health practices, approaches, knowledge, and beliefs incorporating plant, animal, and mineral-based medicines, spiritual therapies, manual techniques, and exercises, applied singularly or in combination to treat, diagnose and prevent illnesses or maintain well-being. Alternative medicine is a term that describes medical treatments that are used instead of traditional (mainstream) therapies. Some people also refer to it as “integrative” or “complementary” medicine. More than half of adults in the United States say they use some form of alternative medicine.

### Different types of Alternative Systems of Medicines in India

1. **Ayurveda:** The Ayurvedic System of Medicine evolved nearly 5000 years ago (3000 BC). Ayurveda is the combination of two Sanskrit words *Ayur* means life and *Veda* means knowledge or Science of Life. Thus, Ayurveda means ‘Science of Life’ which employs treatment modalities, such as purification, palliation, prescription of various diets, exercises, and the avoidance of disease-causing factors. In most cases, ayurvedic therapy is more successful than allopathic treatment in chronic illness.
2. **Unani medicine:** This system of medicine originated in Greece with the Greek philosopher Hippocrates (460–377 BC). The Unani system was later developed by Arabs and became popular as an Arab system of medicine. Unani medicine got its important in Egypt, Syria, Iraq, Persia, India, China, and other countries. In India, Arabs introduce the Unani system to the Mughals. Unani medicine treats a patient with diet, pharmacotherapy, exercise, massages, and surgery. It was introduced in India around the 10th century AD.
3. **Homeopathy:** The word ‘Homeopathy’ is derived from the Greek words, ‘Homois’ meaning ‘similar/like’ and ‘pathos’ means ‘suffering/treatment’. It originated in Germany and was introduced in India around 1810–1839. Homeopathy is based on the law of healing “*Similia Similibus Curantur*” which means ‘likes are cured by likes. It means the substances capable of causing diseases in healthy subjects are used as medicines in diluted form to treat a similar pattern of disorder. It uses highly individualized remedies selected to address specific symptoms or symptom profiles.
4. **Siddha:** It is an ancient South Indian medicinal system, that started before 2000 BC. The Siddha system originated in India and is amongst the oldest systems of medicine in the country. Agastya was believed to be the father of Siddha medicine and he wrote a book known as *Agattiya Charakku*. It considers the patient, his/her surroundings, age, sex, race, habitat, diet, appetite, physical condition, etc. to arrive at the diagnosis. Siddha system uses minerals, metals, alloys, drugs, and inorganic compounds to treat patients. This system is largely therapeutic in nature.
5. **Chinese system of medicine:** Traditional Chinese medicine is thousands of years old and has changed little over the centuries. Its basic concept is that a vital force of life, called Qi, surges through the body. Any imbalance in Qi can cause disease and illness. It is based on the principle of the Yin and Yang theory. Yang represents the force of light and Yin represents the forces of darkness. According to the yellow emperor, Yin and Yang is the foundation of the entire universe. It underlies everything in creation.
6. **Aromatherapy:** Aromatherapy is concerned with the use of essential oils for their healing properties. Aromatherapy provides treatment through the stimulation of the sense of smell using pungent materials. Aromatherapy is used to treat

skin problems, rheumatism, acne, poor circulation of blood, and nervous disorder” like stress, insomnia, headache, etc. It is also used to heal wounds. The different types of essential oils used are Lavender, Sandalwood, Fennel, Rosemary, Ginger, Jasmine, Clove, Citronella calamus oils, etc.

## 1. AYURVEDA SYSTEM OF MEDICINE

Ayurveda is a natural system of medicine, that originated in India more than 3,000 years ago. The term Ayurveda is derived from the Sanskrit words ayur (life) and Veda (science or knowledge). The four Vedas written by Aryans are Rigveda, Shamveda, Yajurveda, and Atharvaveda into that Ayurveda is the Upaveda (part) of Atharveda. Thus, Ayurveda translates to knowledge of life. *Charaka* and *Sushruta* made significant contributions to Ayurveda. The book *Charak Samhita* was written by Charaka and he was known as the father of Ayurveda. Based on the idea that disease is due to an imbalance or stress in a person’s consciousness, Ayurveda encourages certain lifestyle interventions and natural therapies to regain a balance between the body, mind, spirit, and the environment. Ayurveda treatment starts with an internal purification process, followed by a special diet, herbal remedies, massage therapy, yoga, and meditation. Ayurveda is believed to be the oldest form of medicine and has been referred to as “*The Mother of All Healing*”. While many healing modalities look at fighting disease, Ayurveda looks at promoting health and wellness, but can still have treatments directed at fighting various health concerns.

The basic foundation is the fundamental doctrine according to which whatever is present in the universe (macrocosm) should be present in the body (the microcosm). It has been conceptualized that the universe is composed of five basic elements named *Prithvi* (Earth), *Jala* (Water), *Teja* (Fire), *Vayu* (Air), and *Akash* (Space/Ether). The human body is derived from them in which these basic elements join together to form what is known as ‘Tridoshas’ as *Vata* (Space and Air), *Pitta* (Fire and Liquid), and *Kapha* (Liquid and Solid). These humors govern and control the basic psychobiological functions in the body. In addition to these three humors, there exist seven basic tissues (*saptha dhatus*): *Rasa*, *Rakta*, *Mamsa*, *Meda*, *Asthi*, *Majja*, and *Shukra*, and three waste products of the body (*mala*) such as feces (stool), urine (*mutra*) and sweat. The healthy condition of the body represents the state of optimum equilibrium among the three doshas. Whenever this equilibrium is disturbed due to any reason—disease condition results. The growth and development of the body components depend on the nutrition provided in the form of food. The food is conceptualized to be composed of the basic five elements mentioned above. Hence, it is considered to be the basic source material to replenish or nourish the different components of the body after the action of bio-fire (*Agni*).

### Principles of Ayurveda (Table 1.1)

**Vata** (Air): It regulates the nervous system. It is responsible for the movement and

Ayurveda		
Panchamahabhuta	Tridosha	Saptadhatu
1. <i>Prithvi</i> (Earth)	1. <i>Vata</i> (Space and Air)	1. <i>Rasa</i> (Lymph/Plasma)
2. <i>Jala</i> (Water)	2. <i>Pitta</i> (Fire and Liquid)	2. <i>Rakta</i> (Blood)
3. <i>Vayu</i> (Air)	3. <i>Kapha</i> (Liquid and Solid)	3. <i>Meda</i> (Fat tissue)
4. <i>Agni/Teja</i> (Fire)		4. <i>Mamsa</i> (Muscle tissue)
5. <i>Akasha</i> (Space)		5. <i>Majja</i> (Bone marrow)
		6. <i>Shukra</i> (Semen/ Reproductive tissue)
		7. <i>Asthi</i> (Bone)

sensation of the cell/whole body. It transmits sense impressions to the mind and responds to various places of the body, maintaining the integrity of the body and the proper functioning of its various constituent elements. The sensory organs of touch and sound depend upon *vata*. It stimulates agni and produces joy.

**Pita** (Bile): It regulates energy production, digestion, metabolism, and tissue building in the body. It is responsible for all digestive and metabolic activities.

**Kafa** (Phlegm): It regulates heat, formation of fluid, and mucous, and strengthening of the stomach and joints. It provides the static energy (strength) for holding body tissues together. It also provides lubricants at various points of friction.

When these doshas are in a normal state of functioning, it is healthy, and when they lose their equilibrium and get vitiated by various internal and external factors they produce various types of diseases (*Vyaadhi*) in the human body. Hence Ayurvedic treatment is aimed at restoring the equilibrium of the doshas. Ayurveda is mainly classified into eight branches which specialize in different fields of medicine, viz. *Kaya Chikitsa* (Internal medicine), *Shalya Tantra* (Surgery), *Shalakya Tantra*, *Kaumarbhrtiya* (Paediatrics), *Rasayana* (Rejuvenating therapy), *Vajikarana* (Aphrodisiac therapy), *Agada Tantra* (Toxicology) and *Bhutvidya* (Psychiatry). Of these *Rasayana* and *Vajikarana* deals with the preservation and promotion of health and vigor. (The remaining branches deals with disease.)

### Diagnosis

The diseases are diagnosed by observation of doshas (*vata*, *pitta*, and *Kapha*). Under the skin, eyes, nails, and tongue are observed, and recorded the pulse rating. Investigation of mala (urine, stool, and sweat) is also observed. Diagnosis is always done by considering

the patient as a whole object to be examined. The physician takes careful note of the patient's internal physiological characteristics and mental disposition. He also studies other factors like-the affected bodily tissues, humor, the site at which the disease is located, the patient's resistance and vitality, his daily routine, dietary habits, the gravity of clinical conditions, condition of digestion, and details of the personal, social, economic and environmental situation of the patient. The general examination is known as a tenfold examination, through which a physician examines the following parameters in the patient:

1. Psychosomatic constitution
2. Disease susceptibility
3. Quality of tissues
4. Body build
5. Anthropometry
6. Adaptability
7. Mental health
8. Digestive power
9. Exercise endurance and
10. Age

In addition to this, examination of pulse, urine, stool, tongue, voice and speech, skin, eyes, and overall appearance is also carried out.

### Treatment Aspects

The treatment lies in restoring the balance of disturbed humor (*doshas*) through regulating diet, correcting life routine and behavior, administration of drugs, and resorting to preventive non-drug therapies known as '*Panchakarma*' (Five processes) and '*Rasayana*' (rejuvenation) therapy. Before initiating treatment many factors like the status of tissue and end products, environment, vitality, time, digestion and metabolic power, body constitution, age, psyche, body compatibility, and types of food consumed are taken into consideration.

### Diets in Ayurveda

Ayurveda lays great emphasis on diet regulation. According to Ayurvedic concepts,



food has great influence over the physical, temperamental, and mental development of an individual. Food is the basic material for the production of the body and life-supporting vital matter known as *rasa*. The *rasa* is converted to body components and supports all types of life activities.

## 2. UNANI SYSTEM OF MEDICINE

The Unani system of medicine (unanipathy), is also known as Islamic medicine, Loniah medicine, Oriental medicine, and Arab medicine. This system originated in Greece and has been influenced by African, Persian, and Egyptian medicine. It was introduced in India by the Arabs around the 10th century AD, with the spread of Islamic civilization. Now unanipathy has become a part of the Indian system of medicine and India is one of the leading countries so far as its practice is concerned. It is very much similar to Ayurveda. Hippocrates and Aristotle made valuable contributions to this system. Unani system of medicine is based on two theories namely the Hippocratic theory of four humors and the Pythagorean theory of four proximate qualities. The four humors or fluids which exist within the body are:

1. *Dam* (blood),
2. *Balghan* (phlegm),
3. *Safra* (yellow bile or choler) and
4. *Sauda* (black bile or melancholy)

Each humor has its temperament blood is hot and moist, phlegm is cold and moist, yellow bile is hot and dry, and black bile is cold and dry. The ideal person bears all four in equal proportion. However, in most people, one or more humor predominates giving rise to a particular character. For instance, excess choler produces a choleric type of person who is likely to be short-tempered, sallow, ambitious, and vengeful. The four proximate qualities are the states of the living human body hot, cold, dry, and moist. They are represented as earth, water, air, and fire.

Health is a state of the body in which there is equilibrium in the humor and functions of the body are normal under its temperament and the environment. When the equilibrium of the humor is disturbed and functions of the body are abnormal, in accordance with its temperament and environment, that state is called disease. Unani medicine believes in the promotion of health, prevention of diseases, and cures. The health of humans is based on the six essentials which are atmospheric air, drinks, and food, sleep, and wakefulness, excretion and retention, physical activity and rest, and mental activity and rest.

### Diagnosis

Diseases are mainly diagnosed with the help of pulse (*nabz*), and physical examination of the urine and stool. Also, patients are examined systematically to make the diagnosis easy as spot diagnosis with the help of simple, modern gadgets.

### Treatment

The Unani system of medicine treats the cause of the disease rather than its symptoms. The thorough history of the patient is noted and he is subjected to pulse, stool, and urine examination. This system observes the influence of surroundings and ecological conditions such as air, food, drinks, body movement and repose, psychic movement and reposes sleep and wake fullness and excretion and retention on the state of health. This influence causes the dominance of one of the four humors in every human body. Unani believes that it is the dominance that gives a man his habit and complexion, i.e. his temperament. In a system, the diseases are treated as follows:

**Hajbil Tadbeer (Regimental therapy):** Some drugless regimens are advised for the treatment of certain ailments, i.e. exercise, massage, venesection, diaphoresis, diuresis, hamam (Turkish bath), purging, emesis, Douches (cold and hot) and the regimen for geriatrics.

**Hajbil Ghiza (Dietotherapy):** It deals to treat certain ailments by administration of specific diets or by regulating the quantity and quality of food.

**Hajbil Dava (Pharmacotherapy):** It deals with the use of naturally occurring drugs mostly herbal drugs. Some drugs of animal and mineral origin are also used. Single drugs or their combination in raw form are preferred over compound formulations.

**Hajbil Yad (Surgery):** The drugs used are mostly of plant origin. Some drugs of animal and mineral origin are also used. Patients are treated either by single drugs (crude drugs) or by compound drugs (formulations of single drugs).

There are two types of compound drugs used in the treatment of diseases, i.e. classical compound drugs which are in use for hundreds and thousands of years, and patent/proprietary compound drugs which have been formulated by individuals or institutions as per their research and experiences. The Unani system of medicine is one of the oldest systems of medicine in the world; it is still popular and practiced in the Indian subcontinent and other parts of the world.

The traditional healer who practices the Unani system is called Hakim. Hakims not only cure a bodily disease but also acts as an ethical instructor unanipathy has shown remarkable results in curing diseases like arthritis, leucoderma, jaundice, bronchial asthma, filariasis, and several other acute and chronic diseases where other systems do not give desired level of positive response. The Unani system is secular in character and popular among the masses.

### 3. HOMEOPATHY SYSTEM OF MEDICINE

Homeopathy is an age-old system of healing, which was discovered by a German physician and chemist, Dr. Samuel Hahnemann (1755–1843). He proposed that the cause of disease may also be its remedy and above all it does not produce any harmful effects. The word

Homoeopathy is derived from the Greek words *homoios* meaning like and *pathos* meaning treatment. Hahnemann forwarded the laws of similar, i.e. like can be cured by like (*similar similibus curentur*). This is the fundamental principle of homoeopathy and with this concept, he began to experiment on himself and he started with cinchona. He observed, infect, that cinchona produced a fever similar to that of malaria although it was well-known that the drug was used to combat the disease. With the help of colleagues and friends, he succeeded in getting relevant results from a wide range of plant, animal, and mineral extracts and he published all these results in the text of homeopathy called “the organon of medicine”.

In homeopathy, the drug treatment depends upon the symptoms as described by the patient. This is based on the concept of proving and prover the healthy person is called a prover who takes different doses of drug extract and the symptoms produced are noted which is called proving. The prover maintains a precise and accurate record of physical, mental, and emotional changes produced due to drug extract. In this way the same drug extract is induced in the patient and symptoms are recorded. Consequently, the symptoms of prover and the patient are compared.

The drugs used in homeopathy are extracted in the form of mother tincture which is further diluted in terms of centesimal or decimal potencies. If one drop of mother tincture is added to 99 drops of an inert solvent such as alcohol and water, then it is denoted by the symbol of 1c. If one drop from the 1c is added to further 99 drops of solvent then it is denoted as 2c. Similarly, typically potencies of 6c, 12c, 30c, 200c and 1000c can be prepared. Alternatively, decimal potencies in the dilution series of 1 in 10 are prepared by adding 1 part of the mother tincture to 9 parts of the diluent. These are denoted by the symbols D2, D30, etc. However in the homeopathic system of medicine each dilution is claimed to increase the healing power of the drug.

### Homeopathy in India

The World Health Organization (WHO) data suggested that homeopathy is currently the second largest system of medicine in the world. Homeopathy in India Homeopathy came to India in 1810 when Dr John Martin Honigberger, a French traveller who learned homeopathy from Dr Hahnemann, visited India and treated patients. He treated Maharaja Ranjit Singh, the then-ruler of Punjab, with a homeopathic remedy Dulcamara while he suffered from paralysis of the vocal cords. Babu Rajendra Lal Dutt (1818-1889) may be called the Father of Indian Homeopathy.

### Fundamental Principles of Homeopathy

The basic fundamental principles are discussed by Hahnemann in different sections:

1. **Law of Similia:** Homeopathy is based on the law “Similia Similibus Curentur” which means “likes are cured by likes” or “Let similar be treated with similar”. Simply we can say that the medicine administered to a diseased individual is such that if given to a healthy person, it produces the same disease.
2. **Law of Simplex:** Simple and single drugs should be prescribed at a time.
3. **Law of minimum:** Drugs are administered in minimum quantity to prevent unwanted side effects. The dose and repetition of medicine have to be minimum to ensure that the treatment is safe and free from side effects.
4. **Drug Proving:** To apply drugs for therapeutic purposes their curative power should be known.
5. **Individualization:** Medicines can never be prescribed based on the name of the disease without individualization of each case of disease. No two patients get the same remedy even though they may be having the same disease.
6. **Order of healing:** After any treatment, your health should never progress from milder illness to more severe illness. There

is a defined order in which the cure should happen, as per the nature of the law.

### Benefits of Homeopathy

- The principles that homeopathy works on include such nature-based, pragmatic facts, like treating a person holistically, through a single, simple medicine.
- Problems like piles, tonsillitis, sinusitis, menstrual disorders, lifestyle diseases, and common mental and emotional disorders. prepared dynamically, and prescribed in a dosage that is just enough to stir up the self-healing mechanism of your own body.
- One of the potential aspects of homeopathy is that it addresses these conditions in a patient successfully, that too with a single, or at the most with two medicines.
- Homeopathy treats the multi-morbid person as a whole, which works on bringing back the biological functions in order, thereby addressing them all, and thus helping the patient holistically and simultaneously improving his/her general well-being.
- Homeopathy has been covered under AYUSH Mission. Homeopathy medicine system due to its low cost is a better alternative medication system. Homeopathy has proven strength in the treatment of allergic disorders, skin diseases, children's problems, several so-called surgical conditions such as piles, fistula, tonsillitis, and also in the management of chronic and lifestyle-related ailments.

### 4. SIDDHA SYSTEM OF MEDICINE

The *Siddha* system of medicine is one of the oldest systems of medicine in India. The term '*Siddha*' is derived from the root word '*Siddhi*' which means 'an object to be attained' or 'perfection'. According to tradition, the origin of the *Siddha* system of medicine is attributed to the great *Siddha* Agasthya who is known as the father of *Siddha* Medicine. The *Siddha* system of medicine owes its origin to medicinal ideas and practices of a class of Tamil sages called

the *Siddhars* 'perfected' or 'holy immortals'. *Siddhars* were spiritual masters who possessed the *ashta/siddhis* or unique powers.

They undertook a systematic study of nature and its elements and from what they were able to grasp, they developed a highly systematized medicine which is now known as the *Siddha* system is well founded on basic principles of nature and its elements offer a careful and thorough study of the human system. The term *Siddha* means achievements and *Siddhars* (Tamil word) is derived from its root 'chit' means perfection in life or heavenly bliss. It generally refers to eight kinds of supernatural powers attainable to man. The person who had achieved such miraculous powers in life was known as *Siddhars*. In the annals of the ancient *Siddha* system of medicine, the first medicinal plant mentioned as well as found a place in ancient Tamil literature is *Margosa* or *Neem*. This has been used by Tamils from time immemorial as a deterrent for smallpox and other infectious disease.

The principles and doctrine of this system have a close similarity to *Ayurveda*. Like *Ayurveda*, this system believes that all objects in the universe including the human body are composed of five basic elements namely earth, water, fire, air, and ether (sky). The food which the human body takes and the drugs it uses are all made of these five elements. As in *Ayurveda*, this system also considers the human body as a conglomeration of three humors seven basic tissues, and the waste products of the body, such as feces, urine, and sweat. The three humors are *Vatham*, *Pitham*, and *Karpam*.

***Vatham*:** The characteristics are lightness, dryness, coldness, and motility. It is formed by sky and air and controls the nervous action that constitutes movement, activity, sensation, etc. It predominates in the first one-third of life.

***Pitham*:** It is formed by fire and controls the metabolic activity of the body, digestion warmth, luster, intellect, etc. It predominates in the second one-third of life.

***Karpam*:** The characteristics are firmness, smoothness, heaviness, and viscosity. It is formed by earth and water and controls the stability of the body such as strength, potency, and smooth working of joints. It predominates in the last one-third of life.

The seven basic tissues (called *dhatus*) are *Rasa* (lymph), *Kurudhi* (blood), *Tasai* (muscle), *Kazhuppu* (adipose tissue), *Elumbu* (bone), *Majjai* (marrow) and *Sakkilam* and *Artavare* (male and female hormones). Food is considered to be the basic building material of the human body which gets processed into humours, body tissues, and waste products. The equilibrium of humours is considered a health and disturbance or imbalance lead to disease.

### I. Three Humours

1. To regulate the living body easily the five primordial elements were concise into three humors namely *vazhi* (*vadham* or air), *azhal* (*pitta* or heat), and *Iyyam* (*Kapha* or cold), when humors are in natural equilibrium and harmony, a person enjoys the best of health.
2. The first one-third of one's life is considered as a *vazhi* period where a person grows physically, psychologically, emotionally, spiritually, etc.
3. The second one-third of one's life is considered as *azhal* period where life is considered to be in the maintenance phase in physiological condition.
4. Finally, the last one-third of one's life is physiologically attributed to the *Iyyam* period or the destructive/senile phase of one life.

### II. Five Sheaths (Kosham)

- The nature of being human encompasses physical and psychological aspects that functions as one holistic system.
- The *kosham* system refers to different aspects as layers of subjective experience. They are *paruvaudambu*–*annamayakaosham*



(food: apparent-physical sheath), valiud-mambu-pranamayakosham (air-apparent-sheath), manaudambu-manomayakosham (mind-apparent sheath), arivudambu-vijnanamayakosham (wisdom-apparent-Intellectual sheath) and inbaudambu-anandamayakosham (bliss-aparent sheath).

### III. Ten Pranic Air (Vayus)

- These ancillary vayus are not just responsible for physiological function but also contribute to the psychological and spiritual component.
- *Siddha* therapy: The foremost substance given for an imbalance of three humors or illness is of herbal origin.

The *Siddha* system has developed a rich and unique treasure of drug knowledge in which the use of metals and minerals is very much advocated. The drug classification in briefly are:

- There are 25 varieties of water-soluble inorganic compounds called UPPU. These are different types of alkalies and salts.
- There are 64 varieties of mineral drugs that do not dissolve in water but emit vapors when put on fire. Thirty-two of these are natural and the remaining is artificial.
- Seven drugs do not dissolve in water but emit vapor on heating.
- The system has classified separate classes of metals and alloys which melt when heated and solidify on cooling. These include items like gold, silver, copper, tin, lead, and iron. These are incinerated by special processes and used in medicine.
- There is a group of drugs that exhibit sublimation on heating and includes mercury and its different forms like mercury metal, red sulfide of mercury, mercury chloride, mercury subchloride, and red oxide of mercury.
- Sulfur, which is insoluble in water finds a crucial place in *Siddha* materia medica along with mercury for use in therapeutics and maintenance of health.

In addition to these, there are drugs obtained from animal sources. The diagnosis of a disease involves identifying its causes. Identification of causative factors is through the examination of a pulse (*nadi*), urine (*mutram*), eyes, a study of voice, the color of the body (*deiham*), tongue, and the status of the digestive system the system has worked out detail procedure of urine examination which includes a study of its color, smell, density, quantity and oil drop spreading pattern. It is holistic in approach and the diagnosis involves the study of a person as a whole as well as a disease.

### Treatment

Treatment is based on all diagnostic characteristics of a patient. *Siddha* system extensively uses drugs of vegetable source as well as mineral origin. The use of metals like gold, silver, sulphur, zinc, copper, mica, etc. is only seen in the *Siddha* system of medicine. The *Siddha* system is capable of treating all types of diseases other than emergency cases. Practitioners have claimed that *Siddha* medicines are effective and reduce the highly debilitating problems that manifest themselves among patients with AIDS. More research into the efficacy of these medicines is presently in progress.

## 5. CHINESE SYSTEM OF MEDICINE

It is also ancient dating back to the Yellow Emperor's classic of Internal Medicine (Huang Di Nei Jing) between 200 BC and 100 AD. It is based on the idea "all life is subject to natural laws" The hypothesis includes two "yin and yang" theory say that everything in the universe consists of a dark (yin) and light side (yang). This text is based on detailed observations of nature and a deep understanding of the way that all life is subjected to natural laws. In traditional Chinese medicine living in harmony with these principles is the key to good health and longevity.

Traditional Chinese medicine has two quite different systems—the Yin and Yang

theory and the five elements similar to Indian tradition. They developed quite separately in China and the five elements system was only accepted and fully incorporated into Chinese medicine during the Song dynasty (AD 960–1279). According to the traditional Chinese system of medicine everything in the universe is composed of yin and Yang—words that were first used to denote the dark and light side of the valley. Everything has Yin and Yang aspects or complementary opposites such as day and night, up and down, wet and dry. Every Yin or Yang category can itself also be subdivided—so that while the front of the body is Yin relative to the back which is Yang, the abdomen is Yin relative to the chest which is Yang. The five elements theory associates constituents of the natural world: wood, fire, earth, metal, and water. Each element gives rise to the next in a perpetual fashion. The five elements have a central role in Chinese herbal medicine in the grouping of the taste of herbs and parts of the body.

The traditional Chinese medicine system consists of 3 parts. They are:

I. Theory	II. Treatment	III. Prevention
a. Yin and Yang theory	a. Herbalism	a. Qigong
b. Five elements theory	b. Acupuncture	b. Tai chi
	c. Moxibustion	c. Meditation
	d. Cupping	
	e. Massage therapy	

## I. Theory

### a. Yin and Yang theory:

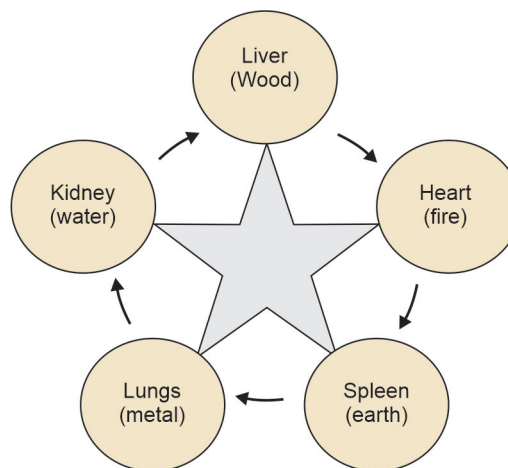
- It is a concept of dualism. Yang predominates during the day and turns into Yin after dark.
- In the human body when the Yin and Yang elements are well balanced, the person is in good health. A person falls sick when the balance is disturbed.

### • Yin and Yang in the body:

Yin	Yang
Lower body	Upper body
Chest and abdomen	Shoulders and back
Interior	Exterior
Internal organs	Bowels
Fluid	Gas
Nourish	Cleanse

### b. 5 elements theory:

- The 5 vital organs (heart, liver, kidney, spleen, and lung) are corresponding to one of the 5 elements of the universe, i.e. earth, wood, metal, fire, and water.
- The 5 organs function in an interlocked and interconnected relationship.
- In the human body, if any change occurs in a vital organ will affect the other organ and cause disease.



## II. Treatment

### a. Herbalism

- Herbs consist mainly of natural medicinal materials such as plants, animal parts, and minerals of medicinal value.
- Different parts of plants, such as the leaves, roots, stems, flowers, and seeds, are used.
- Each ingredient has unique characteristics and is used to treat diseases.

### b. Acupuncture

- Acupuncture involves the stimulation of anatomical points on the body with thin needles. Acupuncture patients usually feel little to no pain because the needles are like hair.

### c. Moxibustion

- Moxibustion is a traditional Chinese medicine technique that involves the burning of spongy herbs to facilitate healing.

### d. Cupping

- In this therapy, cups are placed on the skin to create suction. The suction of the cups mobilizes blood flow to promote the healing of disease.
- The cups can be made of a variety of materials including glass, bamboo, and earthenware.

### e. Massage therapy

- Also known as Chinese massage (Tui Na).
- Uses wave-like motions to loosen joints and nourish muscles.
- Stimulates the flow of Qi (means energy), blood, and body fluids.
- Can be used to treat pain, stress, or digestion problems.

## III. Prevention

### a. Qigong

- Qigong is a Chinese form of exercise.
- It regulates the mind, and body through coordinated movements, breathing techniques, and meditation to promote overall health, balance and inner peace.

### b. Tai chi

- It involves gentle, dance-like body movements with mental focus, breathing, and relaxation.

In traditional Chinese medicine causes of illness depends upon the patterns of disharmony which are an expression of an imbalance between Yin and Yang. The health result depends upon a deficiency or excess of either Yin or Yang. For example, cold is not just the result of a virus but a sign that the body is not adapting to external factors such

as wind-heart, wind-cold or heat similarly a high temperature indicates too much Yang, and shivering is the result of an excess of Yin. Therefore, according to this theory, harmony is to be restored between Yin and Yang both within the patient's body and between the patient and the world at large.

Traditional Chinese medicine focuses on maintaining the Yin-Yang balance to maintain health and prevent illness. Traditional Chinese medicine doctors look at the balance of body, mind, and spirit to determine how to restore Qi, the Yin-Yang balance, and good health. Even today traditional Chinese medicine is a valid medical system in China and available to the Chinese on an equal footing with conventional western medicine.

## Diagnosis

A good practitioner should attempt to apply all four aspects of the methods of diagnosis: observation (inspection), auscultation and olfaction, palpation, and inquiry. The five elements (i.e. water, metal, earth, fire, and wood). They differ in diagnosis and treatment. **The elements:** 5 phases indicate a process of continuous movement of life. These play a dynamic role in the Chinese system of medicine like in making groups of herbal tastes and parts of the body.

*Example:* Shivering occurs due to an excess of Yin while the excess of Yang causes a fever. The treatment is done with herbs and poly-herbal, e.g. *Ephedra sinica*, *Rheum palmatum*, *Carthamus tinctorius*, *Clerodendron trichotomum*, *Panax ginseng*, etc. Spread to Japan and Korea and is called Kampoh.

## 6. AROMATHERAPY

Aromatherapy, or the use of essential oils to promote health and well-being, has also been used since ancient times. Essential oils can be used topically and/or aromatically to support body systems and treat a variety of health and wellness concerns, the main use of essential oils in Ayurveda is through inhalation. Aromatherapy is regarded as a specialized

branch of phytotherapy and concerns the use of essential oils for their healing properties. It is an ancient healing art that was used by our ancestors. Egyptian used essential oils for embalming and from the evidence of paintings it is clear that they were also seen as all vital offerings to the gods. In Vedic literature; in Rigveda in India dating before 2000 BC list of about 700 substances is mentioned such as camphor, sandalwood, cinnamon, myrrh, etc. Similar literature is available in African and Asian countries. The term aromatherapy was coined in 1928 by Rene-Maurice Gattefosse, a French chemist working in his family's perfumery business. He became fascinated with the therapeutic possibilities of the oils after discovering by accident that lavender oil was able to heal and prevent scarring from his severe burn. Valnet developed the ideas of Gattefosse and he used these techniques in the treatment he published his work in the book entitled "Aromatherapie". However, the extension of these techniques to a wider concept of well-being is credited to Maury, through her book "*The Secret of Life and Youth*". Aromatherapy provides treatment through the stimulation of the sense of smell using pungent materials. The various types of essential oils are extracted from plant sources and topically applied both in local and whole-body massage. This stimulates the healing process of the body by increasing blood flow in the skin and at the same time, the pungent aromas stimulate the 'limbic' system or emotional center of the brain. In addition to massage aromatherapy can also be affected by using essential oils

in aromatic baths and through inhalation. Aromatherapy is used to treat skin problems, rheumatism, acne, poor circulation of blood, and nervine disorder like stress, insomnia, headache, etc. It is also used to heal wounds. The different types of essential oils used are Lavender, Sandal wood, Fennel, Rosemary, Ginger, Jasmine, Clove, Citronella Calamus oils, etc. Aromatherapy works through the sense of smell and skin absorption using products such as these:

- Diffusers
- Aromatic spritzers
- Inhalers
- Bathing salts
- Body oils, creams, or lotions for massage or topical application
- Facial steamers
- Hot and cold compresses
- Clay masks

We can use these alone or in any combination. There are nearly one hundred types of essential oils available. Generally, people use the most popular oils. It has been shown to reduce:

- Nausea
- Pain and body aches
- Anxiety, agitation, stress, and depression
- Fatigue and insomnia
- Muscular aches
- Headaches
- Circulatory problems
- Menstrual problems
- Menopausal problems
- Alopecia, or hair loss