

# UNIT -I

## Ayurvedic System

An Introduction Ayurvedic medicine (also called Ayurveda) is one of the world's oldest medical systems. It originated in India and has evolved there over thousands of years. In the United States, Ayurvedic medicine is considered complementary and alternative medicine (CAM)—more specifically, a CAM whole medical system. Many therapies used in Ayurvedic medicine are also used on their own as CAM—for example, herbs, massage, and specialized diets. This fact sheet provides a general overview of Ayurvedic medicine and suggests sources for additional information. Key Points

- The aim of Ayurvedic medicine is to integrate and balance the body, mind, and spirit. This is believed to help prevent illness and promote wellness.
- Ayurvedic medicine uses a variety of products and techniques to cleanse the body and restore balance. Some of these products may be harmful if used improperly or without the direction of a trained practitioner. For example, some herbs can cause side effects or interact with conventional medicines.
- Before using Ayurvedic treatment, ask about the practitioner's training and experience.
- Tell your health care providers about any complementary and alternative practices you use. Give them a full picture of what you do to manage your health. This will help ensure coordinated and safe care.

Ayurvedic medicine, as practiced in India, is one of the oldest systems of medicine in the world. Many Ayurvedic practices predate written records and were handed down by word of mouth. Two ancient books, written in Sanskrit more than 2,000 years ago, are considered the main texts on Ayurvedic medicine—Caraka Samhita and Sushruta Samhita. The texts describe eight branches of Ayurvedic medicine:

- Internal medicine
- Surgery
- Treatment of head and neck disease
- Gynecology, obstetrics, and pediatrics
- Toxicology
- Psychiatry
- Care of the elderly and rejuvenation
- Sexual vitality.

Ayurvedic medicine continues to be practiced in India, where nearly 80 percent of the population uses it exclusively or combined with conventional (Western) medicine. It is also practiced in Bangladesh, Sri Lanka, Nepal, and Pakistan. Most major cities in India have an Ayurvedic college and hospital. The Indian government began systematic research on Ayurvedic practices in 1969, and that work continues.

Constitution (prakriti). Ayurvedic medicine also has specific beliefs about the body's constitution. Constitution refers to a person's general health, the likelihood of becoming out of balance, and the ability to resist and recover from disease or other health problems. The constitution is called the prakriti. The prakriti is a person's unique combination of physical and psychological characteristics and the way the body functions to maintain health. It is influenced by such factors as digestion and how the body deals with waste products. The prakriti is believed to be unchanged over a person's lifetime. Life forces (doshas). Important characteristics of the prakriti are the three life forces or energies called doshas, which control the activities of the body. A person's chances of developing certain types of diseases are thought to be related to the way doshas are balanced, the state of the physical body, and mental or lifestyle factors. Ayurvedic medicine holds the following beliefs about the three doshas:

- Each dosha is made up of two of five basic elements: ether (the upper regions of space), air, fire, water, and earth.
- Each dosha has a particular relationship to bodily functions and can be upset for different reasons.
- Each person has a unique combination of the three doshas, although one dosha is usually prominent. Doshas are constantly being formed and reformed by food, activity, and bodily processes.
- Each dosha has its own physical and psychological characteristics.
- An imbalance of a dosha will produce symptoms that are unique to that dosha. Imbalances may be caused by a person's age, unhealthy lifestyle, or diet; too much or too little mental and physical exertion; the seasons; or inadequate protection from the weather, chemicals, or germs. The doshas are known by their original Sanskrit names: vata, pitta, and kapha.

The **vata dosha** combines the elements ether and air. It is considered the most powerful dosha because it controls very basic body processes such as cell division, the heart, breathing, discharge of waste, and the mind. Vata can be aggravated by, for example, fear, grief, staying up late at night, eating dry fruit, or eating before the previous meal is digested. People with vata as their main dosha are thought to be especially susceptible to skin and neurological conditions, rheumatoid arthritis, heart disease, anxiety, and insomnia.

The **pitta dosha** represents the elements fire and water. Pitta controls hormones and the digestive system. A person with a pitta imbalance may experience negative emotions such as anger and may have physical symptoms such as heartburn within 2 or 3 hours of eating. Pitta is upset by, for example, eating spicy or sour food, fatigue, or spending too much time in the sun.

People with a predominantly pitta constitution are thought to be susceptible to hypertension, heart disease, infectious diseases, and digestive conditions such as Crohn's disease.

**The kapha dosha** combines the elements water and earth. Kapha helps to maintain strength and immunity and to control growth. An imbalance of the kapha dosha may cause nausea immediately after eating. Kapha is aggravated by, for example, greed, sleeping during the daytime, eating too many sweet foods, eating after one is full, and eating and drinking foods and beverages with too much salt and water (especially in the springtime). Those with a predominant kapha dosha are thought to be vulnerable to diabetes, cancer, obesity, and respiratory illnesses such as asthma.

Treatment Ayurvedic treatment is tailored to each person's constitution. Practitioners expect patients to be active participants because many Ayurvedic treatments require changes in diet, lifestyle, and habits. The patient's dosha balance. Ayurvedic practitioners first determine the patient's primary dosha and the balance among the three doshas by

: • Asking about diet, behavior, lifestyle practices, recent illnesses (including reasons and symptoms), and resilience (ability to recover quickly from illness or setbacks)

- Observing such physical characteristics as teeth and tongue, skin, eyes, weight, and overall appearance

- Checking the patient's urine, stool, speech and voice, and pulse (each dosha is thought to make a particular kind of pulse). Treatment practices. Ayurvedic treatment goals include eliminating impurities, reducing symptoms, increasing resistance to disease, and reducing worry and increasing harmony in the patient's life. The practitioner uses a variety of methods to achieve these goals:

- Eliminating impurities. A process called panchakarma is intended to cleanse the body by eliminating ama. Ama is described as an undigested food that sticks to tissues, interferes with normal functioning of the body, and leads to disease. Panchakarma focuses on eliminating ama through the digestive tract and the respiratory system. Enemas, massage, medical oils administered in a nasal spray, and other methods may be used.

- Reducing symptoms. The practitioner may suggest various options, including physical exercises, stretching, breathing exercises, meditation, massage, lying in the sun, and changing the diet. The patient may take certain herbs—often with honey, to make them easier to digest. Sometimes diets are restricted to certain foods. Very small amounts of metal and mineral preparations, such as gold or iron, also may be given. 4

- Increasing resistance to disease. The practitioner may combine several herbs, proteins, minerals, and vitamins in tonics to improve digestion and increase appetite and immunity. These tonics are based on formulas from ancient texts.

- Reducing worry and increasing harmony.

Ayurvedic medicine emphasizes mental nurturing and spiritual healing. Practitioners may recommend avoiding situations that cause worry and using techniques that promote release of negative emotions. Use of plants.

Ayurvedic treatments rely heavily on herbs and other plants—including oils and common spices. Currently, more than 600 herbal formulas and 250 single plant drugs are included in the “pharmacy” of Ayurvedic treatments. Historically, Ayurvedic medicine has grouped plant compounds into categories according to their effects (for example, healing, promoting vitality, or relieving pain). The compounds are described in texts issued by national medical agencies in India. Sometimes, botanicals are mixed with metals or other naturally occurring substances to make formulas prepared according to specific Ayurvedic text procedures; such preparations involve several herbs and herbal extracts and precise heat treatment.

## **UNANI SYSTEM**

### **Introduction**

The Unani system of medicine; sometimes referred to as Greco-Arab medicine or Unani Tibb; is based on Greek philosophy. As per this traditional system, the human body is composed of four basic elements: earth, air, water and fire having cold, hot, wet and dry temperaments respectively. The body fluids are composed of four humors: blood, phlegm, yellow bile and black bile. These humors have their own temperament:

Blood:	hot	&	wet
Phlegm:	cold	&	hot
Yellow bile:	hot	&	dry
Black bile:	cold & dry		

The quality and quantity of four humors affect the state of health and disease in the body.

### **Origin and development of Unani system of medicine**

The Unani system of medicine originated in Greece (Unan or Yunan in Arabic language). Aesculapius is credited as originator of this system. Buqrat (better known as Hippocrates, 460-377 BC) is said to be a descendent of Aesculapius and recognised as ‘father of Unani medicine’. Unani medicine developed in the four time periods each in a different geographical belt:

1. Greek period
2. Arab-Persian period
3. Spanish period
4. Indian period

### **Concept of Health**

According to Unani medicine, health is considered as a state of body with humors in equilibrium and body functions normal. Health is based on six essential elements:

1. Air
2. Drinks and food
3. Sleep and wakefulness
4. Excretion and retention
5. Physical activity and retention
6. Mental activity and rest

This theory is indirectly having partial similarity with the accepted definition of health as a state of physical, mental and social wellness.

### **Diagnosis**

Classical diagnosis in Unani system is based on examination of pulse, stool and urine in addition to routine physical checkup.

### **Modes of treatment**

There are three modes of treatment in Unani system:

1. Regimental therapy (Ilajbil tadbeer) – Use of exercise, climate change, massage, venesection, leaching, cupping, diet therapy etc.
2. Pharmacotherapy (Ilajbil dava) – use of drugs of plant, animal and mineral origin, either alone or in combination.
3. Surgery (Ilajbil Yad) – Surgical intervention in treatment as last resort.

### **Unani Medicine: The Indian Scenario**

This section is intended to provide a brief over-view of the education & training, professional practice and research in Unani medicine including the recent advances.

## **SIDDHA SYSTEM**

Like Ayurveda, Siddha is also a traditional medical system of India. It is of Dravidian origin and has its entire literature in Tamil language. The basic concepts of the Siddha medicine are the same as those of Ayurveda. The difference is mostly in detail, Siddha being influenced by the local tradition with roots in the ancient Dravidian culture.

Its origin is also traced to mythological sources belonging to the Shaiva tradition. According to the tradition, Lord Shiva conveyed the knowledge of medicine to his wife Parvati. The knowledge was passed from her to Nandi and finally it was given to the Siddhas. The word Siddha denotes one who has achieved some extraordinary powers (*siddhi*). This achievement was related to the discipline of mind and its superiority over body, and was accomplished through both yoga and medicine. Thus *siddhars* (practitioners of Siddha) became the symbols of psychosomatic perfection and so the Siddha medicine became a combination of medicine and yoga.

The tantrik *siddhi* was thought of in different forms such as *janmaja* (due to birth), *osadhija* (due to some medical elixirs), *mantraja* (due to magical incantations), *tapoja* (due to penance) and *samadhija* (due to meditation). The tantriks endeavoured to attain the *siddhis* by several means, one of them was through the use of certain compositions of compounds of mercury, sulphur, mica and several other metallic substances.

According to tradition, there were 18 Siddhars (the person who has achieved some extra-ordinary powers): Nandi, Agasthiyar, Thirumular, Punnakkeesar, Pulasthiyar, Poonaikannar, Idaikkadar, Bogar, Pulikai isar, Karuvurar, Konkanavar, Kalangi, Sattainathar, Azhuganni, Agappai, Pumbatti, Theraiyar and Kudhambai, but the Agasthiyar (Agastya) was the topmost. He is regarded as the originator of the Siddha medicine and also of the Tamil language. He occupies the same position as Hippocrates in modern western medicine. In the period of Ramayana he

seems to have settled in the South. Thus origin of every tradition in the South, including language and culture, is traced back to Agastya.

In the Siddha medicine system use of metals, minerals and chemical products is predominant. The use of metals started from the period of Vagbhata (6th Century AD). Alchemy actually has its origin in the Siddha system which was connected with the Tantrik culture, aimed at perfection of man not only at the spiritual level but also at the physical level. The use of human urine in medicine also started with the Tantrik culture and became popular in the medieval period.

The dates of most of alchemy texts are generally uncertain, but they belong possibly to a period between the 9th and the 18th Centuries AD, the period between the 10th and the 14th Centuries being perhaps the most flourishing one. Generally these texts come under the category of the *rasasastra*, signifying systematic treatments of the new knowledge and practices relating to the use of mercurial compounds and a host of other substance as medicine. The following are among the important *rasasastra* texts in Sanskrit: *Rasahrdaya* by Govinda Bhagavat, *Rasaratnakara* by Siddha Nagarjuna, *Rasarnava* (author unknown), *Rasaratnasamuccya* by Vagbhata, *Rasaratnakara* by Nityanatha Siddha, etc.

There are also some tantrik texts, which deal with alchemical ideas as part of their psycho-experimental-symbolic treatment for the tantrik goals and related practice. These texts are not only in Sanskrit language but also in other languages like Tamil, Telugu, Kannada, etc. About two hundred works in Tamil on the Siddha medicine having alchemical ideas. Of special importance

are *Amudakalaijnanam*, *Muppu*, *Muppuvaippu*, *Muppu-cunnam*, *Carakku*, *Guruseynir*, *Paccaivett usutram* and *Pannir-kandam* by Agastya; *Kadaikandam*, *Valalai-sutram* and *Nadukandam* by Konganavar; *Karagappa*, *Purva*, *Muppu-sutram* and *Dravakam* by Nandisvar; *Karpam* and *Valai-sutram* by Bogar etc.

The name of Agastya and Bogar have been mentioned as the authors of alchemy works in Tamil language. The writings of Bogar contain a number of references to his contacts with China. Whether he was a Chinese who imparted alchemical knowledge to the Tamilians is a moot point.

The alchemical literature in Sanskrit is presented as a dialogue between Siva and Parvati in their different forms, of which perhaps the most significant are the forms of Bhairava and Bhairavi. Siva is also worshipped in the form of known as *linga*. In Tamil language *lingam* also means cinnabar (mercuric sulphide) also, and that cinnabar forms one of the constituents of a composition (*astabandha*) used during the installation of divine idols. Traditionally cinnabar is the source of divine energy and possesses the creative principles.

One of the Siddhars of Tamilnadu, Ramadevar, says in his work on alchemy (*Cunnakandam*) that he went to Mecca, assumed the name of Yakub and taught the Arabs the alchemical arts. It is significant that some of the purification processes and substances of alchemical significance are common to both Islamic and Indian alchemy.

## ***Basics of Siddha Medicine***

Generally the basic concepts of the Siddha medicine are almost similar to Ayurveda. The only difference appears to be that the Siddha medicine recognizes predominance of *vatham*, *pitham* and *kapam* in childhood, adulthood and old age respectively, whereas in Ayurveda it is totally reversed: *kapam* is dominant in childhood, *vatham* in old age and *pitham* in adults.

According to the Siddha medicine various psychological and physiological functions of the body are attributed to the combination of seven elements: first is *saram* (plasma) responsible for growth, development and nourishment; second is *cheneer* (blood) responsible for nourishing muscles, imparting colour and improving intellect; the third is *ooun* (muscle) responsible for shape of the body; fourth is *kollzuppu* (fatty tissue) responsible for oil balance and lubricating joints; fifth is *enbu* (bone) responsible for body structure and posture and movement; sixth is *moolai* (nerve) responsible for strength; and the last is *sukila* (semen) responsible for reproduction. Like in Ayurveda, in Siddha medicine also the physiological components of the human beings are classified as *Vatha* (air), *Pitha* (fire) and *Kapha* (earth and water).

### ***Concept of Disease and Cause***

When the normal equilibrium of three humors (*vatha*, *pitha* and *kapha*) is disturbed, disease is caused. The factors, which affect this equilibrium are environment, climatic conditions, diet, physical activities, and stress. Under normal conditions, the ratio between these three humors (*vatha*, *pitha* and *kapha*) is 4:2:1 respectively.

According to the Siddha medicine system diet and life style play a major role not only in health but also in curing diseases. This concept of the Siddha medicine is termed as *pathya* and *apathya*, which is essentially a list of do's and don't's.

### ***Diagnosis***

In diagnosis, examination of eight items is required which is commonly known as *astasthanapariksa*. These are:

1. *na* (tongue): black in *vatha*, yellow or red in *pitha*, white in *kapha*, ulcerated in anaemia.
2. *varna* (colour): dark in *vatha*, yellow or red in *pitha*, pale in *kapha*;
3. *svara* (voice): normal in *vatha*, high pitched in *pitha*, low pitched in *kapha*, slurred in alcoholism.
4. *kan* (eyes): muddy conjunctiva, yellowish or red in *pitha*, pale in *kapha*.
5. *sparisam* (touch): dry in *vatha*, warm in *pitha*, chill in *kapha*, sweating in different parts of the body.
6. *mala* (stool): black stools indicate *vatha*, yellow *pitha*, pale in *kapha*, dark red in ulcer and shiny in terminal illness.
7. *neer* (urine): early morning urine is examined; straw colour indicates indigestion, reddish

yellow excessive heat, rose in blood pressure, saffron colour in jaundice and looks like meat washed water in renal disease.

8. *nadi* (pulse): the confirmatory method recorded on the radial artery.

### ***Concept of Treatment***

The treatment in Siddha medicine is aimed at keeping the three humors in equilibrium and maintenance of seven elements. So proper diet, medicine and a disciplined regimen of life are advised for a healthy living and to restore equilibrium of humors in diseased condition. Saint Thiruvalluvar explains four requisites of successful treatment. These are the patient, the attendant, physician and medicine. When the physician is well qualified and the other agents possess the necessary qualities, even severe diseases can be cured easily. The treatment should be commenced as early as possible after assessing the course and cause of the disease. Treatment is classified into three categories: *devamaruthuvum* (Divine method); *manuda maruthuvum* (rational method); and *asura maruthuvum* (surgical method). In Divine method medicines like *parpam*, *chendooram*, *guru*, *kuligai* made of mercury, sulphur and *pashanamsare* are used. In the rational method, medicines made of herbs like *churanam*, *kudineer*, *vadagam* are used. In surgical method, incision, excision, heat application, blood letting, leech application are used.

According to therapies the treatments of Siddha medicines could be further categorized into following categories such as Purgative therapy, Emetic therapy, Fasting therapy, Steam therapy, Oleation therapy, Physical therapy, Solar therapy and Blood letting therapy, Yoga therapy, etc.

## **HOMEOPATHIC SYSTEM**

“Homeopathy is a safe, effective system of natural medicine, used by millions of people worldwide for more than 200 years. Homeopathic medicines are prepared from natural sources, used in small amounts, recognized by the U.S. Food & Drug Administration, non-toxic and when properly administered, safely used with infants, children, adults, pregnant women and with animals

- Physical body or plane of existence
- Emotional plane-feelings
- Mental plane-thoughts
- Individual personality-Ego
- Connection to Higher Knowing
- Relationship to Family, Humanity
- Relationship to Kingdoms in Nature and the Planet Homeopathy is a medical specialty that Treats the Whole Person



- Rather than only focusing on an isolated or diseased part or sickness, homeopathy seeks to recognize the imbalance in a sick person that is reflected in the totality of their body, emotions, mind and spirit.
- Treatment will affect the whole person, stimulate their innate vital force or energy system (chi, cellular intelligence etc.) to heal themselves.

## **DEFINITION OF HEALTH**

“Health is freedom from pain in the physical body, having attained a state of well-being; freedom from passion on the emotional level (excessive emotional extremes), having as a result, a dynamic state of serenity & calmness, and freedom from selfishness in the mental sphere, having as a result, total unification with truth”.

## **The Word : HOMEOPATHY**

- HOMEO= similar or like
- PATHY= suffering or disease
- Homeopathy is the science and art of healing according to the Law of Similars or “Similia Similibus Curentur”
- Homeopathy identifies the symptom pattern and works with the body toward cure, rather than to suppress a problem.
- Traditional or Allo-pathic treatment uses “other” or Anti-treatments: eg., antiinflammatories, anti-depressants. Dr. Samuel Hahnemann
- Dr. Samuel Hahnemann was a German physician that systematized the ancient healing principle of the law of similars into the empirical science and clinical practice of homeopathy 200 years ago.
- Hippocrates

## **Law of Similars**

- In Latin this is similia similibus curentur.
  - The key principle in homeopathy. Meaning: like should cure likes.
  - Any substance that can produce a totality or spectrum of symptoms in a healthy person can cure that totality of symptoms in a sick person.
  - This is based on the concept of resonance in the field of vibrational or energy medicine.
  - The symptom picture of the remedy must be like the symptom picture of the sick person
- Symptoms
- Symptoms are the best attempt of the body & mind to heal itself.

- There is a purpose in developing a fever or thirst or diarrhea-or even a fear to avoid touching a hot flame again.
- Treatment should work with the body as a whole to stimulate the defense mechanism in completing the cure in a gentle and safe manner.

### **Homeopathic Philosophy**

- We do not become sick in part-the whole person is in a state of imbalance.
- While the mind or body may eventually show signs of illness, they are not the origin of the illness.
- The origin is at the level of that person's vital forceelectromagnetic field- chi-morphogenetic field.
- Homeopathic remedies are potentized substances carrying information/ energy force that acts on the vital force. Once that vital force is balanced, the person heals himself. Homeopathic Pharmacy
- Homeopathic remedies/medicines are bioenergetic catalysts that carry a similar resonance or vibration, matched to the person's individual state of imbalance. Tuning-fork effect.
- Prepared by FDA- regulated homeopathic pharmacists.
- All kingdoms in nature are used- this is not herbology. Homeopathic remedies are diluted beyond Avogadro's number so there are no chemical side -effects or interactions.

### **What is Being Treated?**

- The inherent "vital force", energetic blueprint or electromagnetic field of a person is given information to initiate the re-balancing or healing process according to their own cellular intelligence.
- We observe progress or changes at the physical, emotional, mental levels-even dreams, food cravings, energy level and over time, shifts in consciousness. Two Categories of Treatment
- ACUTE: self-limited conditions, brief-may be mild or intense, such as cold-flu, acute food poisoning, otitis media, etc. Rx: Usually lower potency 6c,12 c or 30c TID
- CHRONIC: "Constitutional" treatment for persisting patterns or long standing symptoms. The duration of tx will depend on the person's vitality, onset, familial & genetic factors, degree of stress, other drugs or suppressive tx's.
- Rx: Wide range: One dose of: 30c, 200c, 1M, 10M and observe. Liquid LM's. Chronic Conditions Treated
- Examples of what may be helped with homeopathic treatment: Allergies,asthma- bronchitis-pneumonia, headaches, pms, menstrual problems, thyroid problems, gastro-intestinal, musculo-

skeletal, skin, urinary, chronic fatigue etc. Anxiety, depression, ADD-learning issues, phobias, insomnia, mood-swings, fears- OCD, addictive states, PTSD, co-dependency Homeopathic Therapeutics: In Classical Homeopathy

- Similar Remedy
- Provings
- Totality of Symptoms
- Minimum Dose •

### **Asava And Arishta –**

Asava and Arishta are very important dosage forms of Ayurveda. They contain naturally generated alcohol. This alcohol acts as the medium for active ingredients of the herbs to dissolve in it. In general, all Asava and Arishta have 5 – 10 % of alcohol. Though these Ayurvedic medicines contain alcohol, they are quite safe to prescribe and to consume.

### **General method of preparation of Arishta –**

Usually in Arishta manufacturing, (like Ashwagandharishtam), First Kashaya is prepared by boiling herbs in water and filtered. To this Kashayam, specified amounts of jaggery(guda) / sugar candy / honey is added. Mixed well and then filtered again. To this, fermenting agent – Dhataki flower (Woodfordia fruticosa) or Madhuka flower (Madhuca indica) is added. To this, Prakshepa Dravya – certain spices like pepper, long pepper, clove, cinnamon etc are added.

This is taken in a vessel, kept closed under heap of husk / hay/ any place where temperature is around 35 degree celsius.

It is kept for fermentation for 15 – 45 days, as per the specific formula.

During this time, the sucrose in jaggery / sugar candy gets converted into alcohol with the help of fermenting agents.

While the natural alcohol production takes place, the water soluble active principles in the Kashaya and the spices get dissolved in the alcohol medium.

After the said period, it is taken out of the vessel and stored in bottles for dispensing.

In many cases, remnant portion of previous arishta is used as the seed to induce fermentation. (called as Sura beeja – mother yeast).

### **Examples of Arishta –**

**Dasamoolarishtam** – used in treating cold, cough, anemia, after delivery care of mother, female infertility, etc.

**Draksharishtam** – used in cold, cough, asthma, throat infection, intestinal disorders.

**Saraswatarishtam** – used to improve memory, concentration, immunity. Also acts as cardiac tonic.

**Amritarista** – used in treating fever

**Arjunarishta** – used in cardiac disorders, cold, cough etc.

**Ashokarishta** – used in heavy periods, fever, bleeding disorders, bleeding hemorrhoids etc.

### **Manufacturing of Asava –**

Usually, herbs are mixed with required amount of water. This is taken in place of Kashayam (here, kashayam is not prepared, but there are a few exceptions). Rest of the procedure is same as above.

### **Examples of Asava –**

**Lohasavam** – used in anemia, malabsorption syndrome, IBS, anorexia etc.

**Ushirasav** – used in bleeding disorders, anemia, Urinary tract disorders, intestinal worms etc

### **Are these medicines, containing alcohol safe?**

These medicines contain self generated alcohol, which dissolves active principles of herbs and spices in it. Hence it is quite safe to use in therapeutics.

Without any hesitation, since 5000 years, these medicines are used in Ayurvedic treatments.

### **Dose of Asava and Arishta –**

Whenever safety of a medicine is discussed, it is always in relation with the dose. Hence administration in proper dosage is very essential. Classical dose of Asava and Arishta are – 48 – 96 ml. Approximately 50 – 100 ml, in divided dose, per day.

In very weak patients, it can be diluted with equal amount of water, before administration.

### **Advantages of Asava and Arishta medicines –**

**A. Shelf life** – Shelf life of Asava and Arishta is upto 10 years. (related – expiry dates of Ayurvedic medicines) While other Ayurvedic medicine forms like Kashayam, tablets etc cannot be stored for very long, Asava and Arishta have considerably very high shelf life.

**B. Best taste** – Asava and Arishta are the best tasting Ayurvedic medicines. Avalehas (herbal jams like cheyawanaprash) are also equally good to taste. But dose fixation is quite difficult in case of Avalehas, compared with Asava and Arishta.

**C. Transportation** – If they are prepared properly, they do not get spoilt / contaminated during transportation. Such as spoilage may happen in case of Kashayam (water decoction), Churna (herbal powders) etc.

**D. Appreciation** – Because of color, consistency, aroma and taste, they are highly appreciated by the patients.

### **Disadvantages of Asava and Arishta –**

In children, we cannot use it in higher dose and much precautions are required.

Some women patients might not like these medicines because of alcohol content. Especially, in menopausal age, with use of Asava and Arishta, some women may feel increase in hot flashes, perspiration,

Some elder patients may also feel increased warmth in the body, gastric irritation, hair fall, constipation etc.

### **Manufacturing precautions to be taken –**

Some use yeast to induce fermentation and some use steel or plastic containers as fermentation vessel. This is not as per Ayurvedic principle. Ayurveda has explained Madhuka / Dhataki flowers as fermenting agent. Ayurveda recommends usage of chemically inert containers such as earthen pots, wooden vessels, porcelain jars, etc for the purpose of fermentation.

## **Tailas:**

### **Methods of Preparation and Characteristics**

Tailas are the liquid or semisolid dosage form of medicament which is meant for internal and external use. Tailas are preparations in which tail (oil) is boiled with prescribed Kasaya (decoction) and kalkas of the drug according to the formula. This process ensures absorption of the active therapeutic principles of the ingredients.

#### ***Methods of Preparation:***

#### **It involves three essential components for the preparation of Tailas:**

1. Liquid (water)
2. Fine paste of the drug
3. Taila (sneha dravya)

The fine paste of the drug and the liquid are mixed together and ghee is then added, boiled and stirred well continuously so that the paste is not allowed to adhere to vessel walls. When all the liquid contents have evaporated, the moisture content in the fine paste of the drug will also begin to evaporate.

At this stage it has to be stirred more often and carefully to ensure that the fine paste of the drug does not stick to the bottom of the vessel. The fine paste is taken out with the help of ladle and tested from time to time to know the condition and stage of the pakam. When the pakam is harder when put in fire burns without any crackling noise indicates the optimal stage for oral intake. In the beginning the boiling should be on mild fire and in the end also it should be mild fire.

#### ***Characteristics:***

They will have colour, odour and taste of the drugs used and have the consistency of the oil. When considerable quantity of milk is used in the preparation, the oil become thick due to ghrita and in cold season may condense further.

#### ***Preservation:***

They are preserving in glass, polythene or aluminium container.

***Marketed Preparation:***

1. Pinda taila.
2. Bhringaraja Taila.
3. Narayana Taila.

**Churna:**

**Types, Method of Preparation and Precaution**

**These are solid dosage form of medicament meant for internal use.**

**These are two types:**

**1. Simple churan:**

It contains only one medicament.

**2. Compound churan:**

It contains two or more than two medicaments.

***Method of preparation:***

The drugs are cleaned and dried properly. They are finely powdered and sieved. If more than one drug are present then each one is separately powdered, sieved, accurately weighed and then all mixed together. The powder is fine to the extent of at least 80 mesh sieves. It should not adhere together or become moist. The finer powder has better therapeutic value.

***Preservation:***

It should be stored in the air tight containers.

***Precaution:***

1. Thoroughly cleaned and dried drugs should be used for the preparation of churans.
2. They should be finely sifted.
3. Each substance should be powdered separately and then mixed.
4. Pestle and mortar used for reducing the particle size and mixing the substances should be clean and dry.
5. They must be stored in a dry container.
6. They should not be prepared in rainy season.
7. They should dissolve in the stomach contents.

The dose is 2-3 gm, which may be increased or decreased according to age and severity of disease. It is administered with water, milk, fruit juices or any other suitable liquid depending on

the nature of disease. It may be given by mixing with gur or honey in equal quantity, with sugar twice the quantity and with milk four times the quantities as that of drug.

***Marketed preparation:***

1. Triphala churna.
2. Sudarshan churna.
3. Drakshadi Churna.

## **BHASMA**

Ayurveda has its existence from prevedic period. To trace the history of use of various drugs in Ayurvedic system of medicine we have to depend upon Vedas, because they are the oldest source of Indian culture. A review of available literature indicates that this system of medicine might have been in vogue even prior to Vedas as we find references to various diseases<sup>1</sup> and uses of herbs<sup>2</sup> for medicinal purposes even before the period.

The authors of *Samhitas* added some new dimensions to the scope and definition of Ayurveda. According to *Charaka Samhita* “It is the knowledge of all about human beings, which relates to good and bad, weals and woe, the measurement of life and the things beneficial and harmful to life”.<sup>3</sup> In fact there is nothing in the world which may not become the cause of human pleasure or worries, comfort or trouble and consequently does not come in perview of Ayurveda.

All the branches of medical knowledge such as Anatomy, Physiology, Pathology are included in Trisutra<sup>4</sup> of Ayurveda, which is defined as causes, signs and treatment.

According to Yajurveda God Rudra is the original perceptor of divine type of medicine. The divine type of medicine may again be divided in to two main divisions, the first consists of *Mantra* (Vedic hymns), *Japa* (Silent prayers) and *Yagya* (Religious offering), etc., while the second one consists of “*Rasa*”—special type of medicine.

### ***Rasa-Shastra***

The branch of Ayurveda which deals with the pharmaceutical preparation of *Rasaushdhis* is known as *Rasa-Shastra*. The main concept of *Rasa-Shastra* is to transform lower metals (lead, tin, copper, zinc) in to higher metals (gold, silver) and to strengthen the body tissues and maintain them in a fresh and healthy state so as to remove poverty, senility, disease and death from the world<sup>5</sup>. Besides these, disease curing aspect is also included.

### **Importance of *Rasa-Chikitsa***

*Rasa-Chikitsa* was considered to be the most effective and time saving therapy<sup>6</sup>.The preparations used under *Rasa-Chikitsa* being palatable, were preferred over other formulations for oral administration. Further these preparations have the advantage of being effective in smaller dose than the herbal preparations<sup>7</sup>. In *Rasa-Shastra* the metals and minerals are also

termed as *Dhatus* and *Updhatus* because of their specific role in biological system i.e. these can sustain body tissue by supplementing some of the essential elements to the tissues, whose deficiency causes many diseases in the body. Thus it can be said that on account of the above mentioned qualities and properties, the use of drugs of metal and mineral origin has become more frequent than the use of drugs of herbal origin.

### **Use of metals and minerals as therapy**

In modern system of medicine the metals are generally not recommended for use as therapeutic agents as they are found to damage the tissues of various organs.

*Rasa-Chikitsa* of Ayurvedic system of medicine recommends the use of metals and minerals in the form of *Bhasma* and *Kupipakwa Rasayanas*, which are reported to be free from toxic effects on body tissues when used in proper doses<sup>8</sup>. The treatment advocated in Ayurveda was also enunciated on the basis of re-establishing the normal proportions by ingestion of different objects including metals, minerals, vegetables and even animal tissues<sup>9</sup>. In Ayurvedic *Rasa-Chikitsa* copper (*Tamra*) is an important metal used in the form of *Bhasma* in various preparations which are indicated for treating diseases like *Pandu* (Anaemia), *Kustha* (Skin diseases), *Arsha*(Piles) etc.<sup>10</sup>.

### **Use of *Tamra* as therapy**

*Tamra* (copper) is a prehistoric material which came in to offing after the stone age. The period during which copper had its widest application in society is known as copper age or *Tamra Yuga*. In Vedic literature copper is mentioned by the name of *Loha*<sup>11</sup>. Though in *Charaka* and *Sushruta Samhita*<sup>12</sup> there are references to *Tamra churna*, the method of preparation of *Bhasma* remained in dark. The study of tantric literature reveals that the use of metal was known in that period yet it was kept under strict secrecy like *Mantras* and it remained so till Nagarjuna (7<sup>th</sup>-8<sup>th</sup> century A.D.) lifted the curtain. He suggested the use of metals in various *Rasa* texts and thus the secrecy of their use was brought to an end.

With the development of *Rasa-Shastra* to obtain usable form of metals and minerals, different processing/techniques like *Shodhana*, *Marana*, *Amritikarana*, *Lohitikarana* (obtaining desired colour in *Bhasma*), etc. came in to existence.

### **Shodhana**

Historically the *shodhana* concept was in existence at the time of *Charaka Samhita* as *Saucha*<sup>13</sup>; it is described as one of the fundamentals considered necessary for the *Gudantaradhana* (alteration or addition of properties in the drugs). This concept was further developed after the development of *Rasa* (Metals and Minerals) therapy in the field of Ayurvedic medicine, i.e. from 8th century A.D. and onward. During the period ancient scholars who encouraged the use of metal and minerals as therapy also recognized their toxicity. During this period a number of *shodhana* measures were developed to remove or reduce their toxicity and to make them useful for the system. These include grinding of these drugs with vegetable extractives and with other acidic, or alkaline liquids, heating of metals and minerals and its



quenching in various liquids or their boiling, sublimation, etc. These measures in turn are able to remove washable, soluble, volatile impurities of drugs of metal and mineral origin. Sometimes some organic or inorganic material either in traces or in large amount is added to these substances which helps either in their detoxification or potentiation in therapeutic efficacies.

The *shodhana* treatment also helps in impregnation of some organic material in the inorganic drugs for making the drugs as organo-metallic compounds<sup>14</sup> and to make it more acceptable to body. Pharmaceutically, *shodhana* also helps conversion of material in a state suitable for the further pharmaceutical processings like, *Marana*, *Amritikarana*, etc.<sup>14</sup> The type of the process of *shodhana* may be selective depending on the nature of raw material. Some special techniques are described below.

### **Techniques of *shodhana***

(1) ***Prakshalana***—In this technique proper washing of raw material with water is done to remove the dust and to make it free from insects and microorganisms.

(2) ***Mardana***—In this technique trituration of raw material with some vegetable juices, decoctions, cow's milk, etc. is done for detoxification and disintegration of raw material to make it suitable for the processing like *marana* of metals and minerals.

(3) ***Swedana***—Here boiling of raw material in certain juices, cow's milk, cow's urine etc. is done for increasing the brittleness of minerals and metals and for reducing the toxic character of some poisonous metals and minerals and also for infusion of therapeutically efficacious properties in metals and minerals.

(4) ***Galana***—Filtering of raw material through a sieve separates the adulterants if mixed in the raw material and also separates the heterogenous particles.

(5) ***Bhawana***—In this technique trituration of raw material with some juices, decoctions is done till complete dryness. This technique minimises the poisonous character and increases the therapeutic potency of drug because qualities of liquids (vegetable juices and decoctions) also get infused with the raw material. This technique also disintegrates the raw material in to fine particles.

(6) ***Bharjana***—Here roasting of raw material is done. It is presumed that during *bharjana*, with evaporation of water content, some of the poisonous volatile and thermolabile content of raw material also gets destroyed.

(7) ***Nirvapa***—In this technique, heating and quenching of raw material in some vegetable juices or lime water is done. This technique of *shodhana* remarkably increases the brittleness of minerals and metals and neutralisation of the toxic character of raw material takes place due to variable pH of liquids in which raw material is to be quenched.

(8) ***Dhalana***—In this technique, melting of raw material and pouring in some vegetable juice/lime water is done. After this process the raw material partially gets converted in to some compound form and brittleness of raw material increases.

(9) **Patana**—It involves distillation of raw material. It is a very useful technique for easy separation of adulterants mixed in the metals and mercury because temperature required for the distillation of mercury and other metals is different and due to this these can be easily separated from an amalgam by the process of distillation.

### ***Shodhana of Tamra***

Thin flakes of *Tamra* (copper) are recommended for pharmaceutical processing. For *shodhana* of *Tamra*, many methods are prescribed in the classical texts; some of them are as follows.

There is a general method for *shodhana* of all the metals. Here *Tamra patra* is heated red hot and quenched for seven times each in *Til tail* (sesamum oil), *Gomutra* (cow's urine), *Kanji* (fermentation preparation- Sour gruel), *Takra* (curd diluted with water in ¼ ratio), and *Kulathi Kwath* (decoction of *Dolichos biflorus*), respectively. In this method the liquids used for quenching. *Tamra* should be changed after each quenching and a fresh liquid should be taken for new quenching<sup>8</sup>.

In other method for *Tamra Shodhana*, coating of *Saindhava Lavana* (rock salt) with *Nimbu Swarasa* (Lemon juice) on *Tamra patra* is done followed by heating and quenching in *Nirgundi Swarasa* (Juice of leaves of *Vitex negundo*) or *Kanji* for seven times. In yet another method, boiling of *Tamra patras* in cow's urine continuously for nine hours is also advocated. These methods are also called *Vishesh shodhana* of *Tamra*.

### **Effect of *shodhana* on *Tamra*:**

During *shodhana*, *Tamra* metal changes and disintegrates in to fine particles<sup>15</sup> (due to heating and quenching of metal in liquids of various variable pH). It facilitates further *marana* (incineration). The liquid treatment being acidic, alkaline, oily or sometimes mixed in nature also helps in dissolving many impurities of raw material, while the heat treatment removes the volatile and thermolabile impurities. Impregnation of organic substances in the raw material is also achieved by *shodhana* by which it becomes more suitable for human use.

### ***Marana***

It is the next step in conversion of metal/mineral in to fine ash (*Bhasma*) form, suitable for systemic absorption in human body. To achieve this, the drug of metal and mineral origin is first added with some *marana* drugs (drugs helpful in conversion of metal and mineral in to ash) and then it is subjected to *bhawana* (trituration with some juices, decoctions and acidic liquids) and then to heating through a fixed heating pattern known as *Putapaka*<sup>16</sup>. This total procedure is repeated several times till the metal/minerals attains the quality of *Bhasma*.

Metals were used in fine powder form during the time of *Samhita* (Charaka<sup>17</sup> and Sushruta). They were heated to red hot and quenched in to some vegetable extractives or in some other liquids for their complete conversion in to fine powder form. But this is not considered as a proper state for making metals suitable for internal use. With the development of *Rasa-*

*Shastra* much better pharmaceutical processes were developed and different *Yantras* (special apparatuses) and *putas* (heat devices) were employed to achieve the process of *marana*. The *bhawana* (trituration of mineral and metals with different herbal, juices, decoctions) is done to obtain the organometallic compound and to make it in to the pillete form. After *bhawana*, the drugs are dried and after closing them in an earthen pot (*Sarava Samputa*) or in a crucible (*Musha*) they are subjected to heat treatment (*Putapaka*).

Different types of *putas* are developed for the heat treatment of different metal and mineral drugs. The *putas* are selected on the basis of heat tolerance capacity of particular metal or mineral. Selection of suitable *puta* for conversion of metal and mineral in to ash form is desirable for better results. These *puta* having variable dimension are able to provide different grades of temperature to the material which is under the process of *putapaka*. For most of the *putas* cow dung is used as fuel. Temperature pattern of different *Putas* is shown in Table 1.

### ***Marana of Tamra***

In different methods described for *marana* of *Tamra* various supporting materials like *Parad* (Mercury), *Gandhaka* (Sulphur), *Hingula* (HgS-cinnebar), *Hartal* (As<sub>2</sub>S<sub>3</sub>-orpiment), *Manahshila* (As<sub>2</sub>S<sub>2</sub>-realgar) with the *bhawana* of *Nimbu Swarasa* (lemon juice) are indicated to be used. Heat treatment for *Tamra* is *Varaha Puta* which is sufficient for the *marana* of *Tamra* to make the proper *Bhasma*<sup>18</sup>.

### ***Bhasma Pariksha***

Following parameters have been setup in classical texts to ensure that the processing of *Bhasma* is complete for internal use with no untoward effects.

All the following tests are not applicable for checking every *Bhasma*. But according to nature of the raw material used for incineration appropriate test should be selected to test the final product.

1. ***Varitara*** : *Bhasma* should be so light in weight that when sprinkled on stagnant water in a pot, it should freely float on the surface of water.

2. ***Rekhpurna*** : *Bhasma* should be so fine that when rubbed in between the two fingers, it should be able to impregnate the finger lines.

3. ***Nirdhuma*** : *Bhasma* placed on mild heat should not produce fumes.

4. ***Nihswada*** : *Bhasma* should be free from any taste.

5. ***Nischandra*** : *Bhasma* should be lustreless.

6. ***Avami*** : Ingestion of *Bhasma* should not induce nausea or vomiting.

7. ***Apunarbhava*** : If *Bhasma* mixed with *Mitrapanchaka* (1. *Gunja*- seeds of *Abrus precatorius*, 2. *Guggulu*- latex of *Commiphora mukul*, 3. *Madhu*- honey, 4. *Ghritand* 5. *Tankan-Borax*) is heated, its compounds should not be reduced in to free metal form.

8. ***Niruttha*** : If *Bhasma* is heated with a piece of silver, weight of silver should not increase.

### ***Bhasma Parikshas of Tamra Bhasma***

The following *Bhasma parikshas* are useful in determining the quality of *Tamra Bhasma*.

*Varitara, Rekhapurna, Nirdhuma, Nihswada, Avami, Niruttha*. Along with these *Amla pariksha* and *Dadhi pariksha* are also useful in the case of *Tamra Bhasma* ; they are as follows:

(a) ***Amla Pariksha*** : *Tamra Bhasma* after mixing with lemon juice should not produce bluish colour in the solution even after twelve hours.

(b) ***Dadhi Pariksha*** : *Tamra Bhasma* when sprinkled on curd should not produce blue colour on curd surface even after hours.

### ***Amritikarana of Tamra Bhasma***

In the schedule of pharmaceutical processing this specific process is described to rule out any undesirable effect which might be present in the *Bhasma* even after the process of *shodhana* and *marana*.<sup>19</sup>

As implied in the definition of the process, every *Bhasma* after the processing of *Amritikarana* becomes *Amrit* (Nectar) i.e. free from any sort of possible undesirable effect and becomes highly efficacious therapeutically.

For the *Amritikarana* process again *putapaka* of *Tamra* is done with/without *Gandhaka* (Sulphur) after triturating it with different liquids like *Nimbu Swarasa, Kumari Swarasa* (*Aloe vera* juice), *Panchamrit* (cow's milk, curd, *ghrit*, honey and sugar) either keeping in simple crucible or in midst of *Suran* (*Amorphophallus campanulatus*)

Thus it is observed that even in ancient period ( i.e. *Samhita* period, 2nd century B.C. to 2nd century A.D.) many preparations and their method of preparation have been mentioned but after 8th century A.D. this development found further elaboration which is in practice even today. If these methods are altered by any means the drug may lose its therapeutic value and may have some injurious effect on the patients.

## **AVALEHA**

General Description: Avaleha or Lehya is a semi-solid preparation of drugs, prepared with addition of jaggery, sugar or sugar-candy and boiled with prescribed juices or decoction.

These preparations generally have

- (1) Ka<sup>3</sup>/<sub>4</sub>āya or other liquids,
- (2) Jaggery, sugar or sugar-candy,
- (3) Powders or pulps of certain drugs,
- (4) Ghee or oil and
- (5) Honey.

Jaggery, sugar or sugar-candy is dissolved in the liquid and strained to remove the foreign particles. This solution is boiled over a moderate fire. When pressed between two fingers if pāka becomes thready (Tantuvat), or when it sinks in water without getting easily dissolved, it should be removed from the fire. Fine powders of drugs are then added in small quantities and stirred continuously to form a homogenous mixture. Ghee or oil, if mentioned, is added while the preparation is still hot and mixed well. Honey, if mentioned is added when the preparation becomes cool and mixed well.

The Lehya should neither be hard nor a thick fluid. When pulp of the drugs is added and ghee or oil is present in the preparation, this can be rolled between the fingers. When metals are mentioned, the bhasmas of the metals are used. In case of drugs like Bhallātaka, purification process is to be followed.

The Lehya should be kept in glass or porcelain jars. It can also be kept in a metal container which does not react with it. Normally, Lehyas should be used within one year.

Definition: ā-gāvaleha is a semisolid preparation made with the ingredients in the Formulation composition given below.

**Method of preparation:**

Wash, dry and powder the ingredients 1 to 8 separately and pass through sieve number 85.

Wash and peel Ārdraka, grind it, squeeze the juice and filter it through a muslin cloth to collect svarasa.

Mix the powdered ingredients 1 to 8 thoroughly, levigate with Ārdraka svarasa and later dry the mixture.

Add honey and stir thoroughly to form an avaleha.

Pack it in tightly closed containers to protect from light and moisture.

**Description:**

A blackish brown coloured semisolid sticky paste, odour pleasant, taste bitter, astringent and spicy.