



Rayat Shikshan Sanstha's

D. P. Bhosale College, Koregaon

Department of Botany

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Wallpaper on



Indian Herbal Medicines

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Indian Herbal Medicine

Herbal Medicine:

Herbal medicine is the study of pharmacognosy and the use of medicinal plants, which are a basis of traditional medicine. It is also called **herbalism, phytomedicine** or **phytotherapy**. Pharmacognosy may be defined as "the study of the physical, chemical, biochemical, and biological properties of drugs, drug substances, or potential drugs or drug substances of natural origin as well as the search for new drugs from natural sources". With worldwide research into pharmacology, some herbal medicines have been translated into modern remedies, such as the anti-malarial group of drugs called artemisinin isolated from *Artemisia annua*, a herb that was known in Chinese medicine to treat fever. There is limited scientific evidence for the safety and efficacy of many plants used in 21st century herbalism, which generally does not provide standards for purity or dosage. The scope of herbal medicine sometimes include fungal and bee products, as well as minerals, shells and certain animal parts.

The use of medicinal plants dates back to the Paleolithic age, approximately 60,000 years ago. Written evidence of herbal remedies dates back over 5,000 years to the Sumerians, who compiled lists of plants. Some ancient cultures wrote about plants and their medical uses in books called *herbals*. Herbs were also commonly used in the traditional medicine of ancient India, where the principal treatment for diseases was diet.

India has a rich traditional knowledge and heritage of herbal medicine in the form of Ayurveda. India is the largest producer of medicinal herbs and

is called as botanical garden of the world. But due to easy availability and fast action conventional allopathic medicine are used in large scale. In recent times due to side effects and growing cost of allopathic medicine, people are now looking for alternative medicines, herbal medicines being one of them. In India, among common herbal medicines, medicinal value of only four herbs; turmeric, tulsi, ginger and neem are known by more than 50% of the population whereas more than 70% population do not know the medicinal use of some of the lesser known herbal medicines. Even more than 90% of the population is not aware of most of uncommon plants of medicinal value. The World Health Organization (WHO) has recently defined traditional medicine (including herbal drugs) as comprising therapeutic practices that have been in existence, often for hundreds of years, before the development and spread of modern medicine and are still in use today.

Plants have always been used for medicinal purposes in India in traditional health care system. India has long tradition of use of herbal medicines for health care either in the form of medicine or herbal supplements. Indian traditional medical knowledge and practices uses plants as cure or as food supplements. From ancient period of India, various parts of the plants were used as medicine for the treatment of disease of human beings under traditional medicines like Ayurveda, Unani and Siddha. Considering the adverse effects of synthetic drugs, the people are looking for natural remedies which are safe and effective. In recent years growing interest in traditional herbal medicines in the has provided an option for use of medicinal plant resources as complementary and alternative medicines (CAM) due to their diversity, flexibility, easy accessibility and low or no side effects.

India officially recognizes over 3000 plants for their medicinal value. It is generally estimated that over 6000 plants in India are in use in traditional, folk and herbal medicine, representing about 75% of the medicinal needs of the Third World countries. India has one of the richest plants medical traditions in the world in the form of Ayurveda. The World Health Organization (WHO) has listed 21,000 plants, which are used for medicinal purposes around the world. Among these 2500 species are found in India, out of which 150 species are used commercially as herbal medicines or health food (neutraceuticals) on a fairly large scale. Whole plant or plant parts like root, bark, fruit or flower are not only used as cure but also as health food or nutritional supplements. Indian ancient literature had described properties and uses of many medicinal plants and these are still used in the classical formulations, in the Ayurvedic system of medicine.

Charak, Sushruta and Vagbhata described 700 herbal drugs with their properties and clinical effects. About 8,000 herbal remedies have been codified in Ayurveda. In India around 20,000 medicinal plant species have been recorded recently 10. But lack of awareness about herbal medicine limits the option of use of these as complementary and alternative medicines in India. The practices of using herbal medicines continue today because of its biomedical benefits as well as place in cultural beliefs in many parts of world and have made a great contribution towards maintaining human health. But results of the study shows that though herbs of medicinal value are being used in many herbal preparations of major pharmaceutical companies and these plants are the source of revenue in India, common people are less aware of the medicinal usage of the plants being used in medical formulations.

Indian traditional ayurvedic system of medicine- AYURVEDA:

"Ayurveda is a traditional Hindu method of medicine focused on the concept of bodily system equilibrium and uses diet, herbal therapy, and yogic breathing. The word 'Ayurveda' is derived from the Sanskrit terms 'ayus', which means 'life,' and 'veda,' which means 'science,' so Ayurveda literally means 'science of life.'

Over the course of two centuries, Ayurvedic treatments have changed and developed medicines, special diets, meditation, yoga, relaxation, laxatives, enemas, and medical oils. Complex herbal ingredients, minerals, and metal substances are widely used in the preparation of ayurvedic medicines. Surgical procedures such as rhinoplasty, kidney stone extractions, sutures, and foreign object extraction were also taught in ancient Ayurvedic texts.

Who Invented Ayurveda?

Dhanvantari was the founder of Ayurveda. Dhanvantari, the Hindu god of medicine and former king of Varanasi, is a manifestation of Lord Vishnu. In the Puranas, he is referred to as the Ayurvedic god. He emerged from the Ocean of Milk with the nectar of life during the Samudra Manthan. According to these legends, India was the Ayurveda country of origin.

History of Ayurveda:

- The history of Ayurveda can be traced back to about 6,000 BCE, when it started as an oral practice, according to modern Ayurvedic sources.
- Some elements of Ayurveda have been around since the Indus Valley Civilization.

- The Vedas gave rise to the first known forms of ancient Ayurveda as medical texts. In Vedic tradition, Ayurveda is an upaveda or auxiliary knowledge discipline.
- The origins of Ayurveda can also be found in the **Atharvaveda**.
- According to the Sushruta Samhita, Dhanvantari the founder of Ayurveda taught medicine to a community of physicians, including Sushruta.
- During the Vedic period, Ayurveda developed dramatically, and later non-Vedic systems such as Buddhism and Jainism developed medical principles and practises that appear in the classical Ayurveda texts.
- Ayurveda, which has its origins in ancient India and has survived and evolved through the vicissitudes of time, now has a bright future in India, the United States, and around the world.

Principles and Terminology associated with Ayurvedic System of Medicine:

- Medicine is divided into eight components in the earliest classical Sanskrit works on Ayurveda.
- **Kayachikitsa** is used as general medicine, body medicine
- Prenatal and postnatal treatment of the baby and mother, methods of childbirth, choosing the child's gender, intelligence, and constitution, childhood diseases, and midwifery are all discussed in **Kaumara-bhtya** (Pediatrics).
- Surgical procedures and the removal of foreign objects are taught in **Salyatantra**.
- **Shalakyatantra** is used to treat illnesses of the ears, eyes, nose, and mouth, among other items (ENT)

- **Bhutavidya** is used to pacify possessed spirits as well as people whose minds have been influenced by such possession.
- **The Agadatantra/Vishagara-vairodh Tantra** (Toxicology) covers epidemics, animal poisons, vegetables, and minerals. It also includes keys for identifying anomalies and their antidotes.
- **Rasayantantra** is used as rejuvenation and tonic to help people live longer, have more wisdom, and have more power.
- **Vajikaraatantra** is a combination of aphrodisiacs and therapies for enhancing the volume and viability of sperm as well as sexual pleasure. It also tackles infertility concerns and spiritual growth.
- The human body is made up of tissues (dhatus), waste (malas), and biomaterials (doshas), according to Ayurveda.
- Plasma (rasa), blood (rakta), muscles (mamsa), fat (meda), bone (asthi), marrow (majja), and semen (shukra) are the seven dhatus.
- Ayurveda has traditionally divided bodily substances into five classical elements, called **Panchamahabhuta** in Sanskrit: earth, water, fire, air, and ether, similar to classical antiquity's medicine.
- There are also twenty gunas (qualities or characteristics) that all matter is said to possess. Heavy/light, cold/hot, unctuous/dry, dull/sharp, stable/mobile, soft/hard, non-slimy/slimy, smooth/coarse, minute/gross, and viscous/liquid are the ten groups of gunas.
- According to Ayurveda, there are three essential forms of energy or functional concepts that exist in everyone and everything. We use the original Sanskrit words Vata, Pitta, and Kapha because there are no single words in English that express these concepts. These concepts can be attributed to the body's fundamental biology.

- Body, mind, and consciousness all work together in Ayurveda to maintain equilibrium. They are seen as various parts of one's personality. Understanding how Vata, Pitta, and Kapha interact is important for learning how to regulate the body, mind, and consciousness.
- The entire universe, according to Ayurvedic philosophy, is an interplay of the five great elements energies - Space, Air, Fire, Water, and Earth. Vata, Pitta, and Kapha are variations and permutations of these five elements that appear as patterns in the universe. Vata is the subtle energy of movement in the human body, Pitta is the energy of digestion and metabolism, and Kapha is the energy that shapes the body's structure.
- Vata is the subtle energy of movement that is made up of Space and Air. It regulates breathing, blinking, muscle and tissue contraction, heart pulsation, and all cytoplasmic and cell membrane movements. Vata, when balanced, encourages innovation and versatility. Vata, when out of control, causes fear and anxiety.
- Pitta is the body's metabolic system, which is made up of Fire and Water. Digestion, absorption, assimilation, nutrition, metabolism, and body temperature are all regulated by it. Pitta, when healthy, encourages knowledge and comprehension. Pitta, when out of control, triggers anger, hate, and envy.
- Kapha is the Earth and Water-based energy that shapes the body's structure, including bones, muscles, and tendons, and also the "glue" that binds the cells together. Both bodily parts and systems get their water from Kapha. It moisturises the skin, lubricates joints, and boosts immunity. When Kapha is balanced, it manifests as compassion,

calmness, and forgiveness. When it's out of control at times, it can lead to attachment, greed, and envy.

- Ama is a Sanskrit word that means "uncooked" or "undigested," and it refers to everything that is still in the process of being transformed. It is believed to be a harmful byproduct of insufficient or incomplete digestion in terms of oral hygiene.
- Ayurveda is graded as a subsidiary Veda in mediaeval taxonomies of Sanskrit information systems (upaveda). In later Ayurvedic literature, some medicinal plant names from the Atharvaveda and other Vedas can be found. The earliest known theoretical claims regarding Ayurveda's canonical disease models can be found in the Buddhist Canon.

Substances used in Ayurvedic System of Medicine:

- Ayurvedic treatments may come from the roots, leaves, fruits, bark, or seeds of plants like cardamom and cinnamon.
- Milk, bones, and gallstones are examples of animal products used in Ayurveda. Furthermore, fats are recommended for both internal and external use.
- Mineral use, such as sulphur, arsenic, lead, copper sulphate, and gold, is also recommended.
- Rasa shastra is the addition of minerals to herbal medicine.
- Madya, an alcoholic beverage used in Ayurveda, is said to balance the doshas by increasing Pitta and decreasing Vatta and Kapha.
- Madya wines are divided into five groups based on the raw material and fermentation process: sugar-based, fruit-based, cereal-based, cereal-based with herbs, fermented with vinegar, and tonic wines.

- Purgation, enhanced digestion or taste, dryness, and joint loosening are some of the potential outcomes. Madya is defined as non-viscid and fast-acting in Ayurvedic texts, and it is said to reach and clean minute pores in the body.
- In Ayurveda, opium's sedative and pain-relieving properties are considered. Purified opium is used in eight Ayurvedic preparations and is said to balance the Vata, Kapha doshas while increasing the Pitta dosha. It is used to treat diarrhoea and dysentery, as well as increase sexual and muscular capacity and affect the brain.
- According to Ayurveda, traumatic bleeding can be prevented using four different methods: ligation of the blood vessel, cauterisation by heat, use of preparations to promote clotting, and use of preparations to constrict the blood vessels.
- Normal ingestion, anointing, smearing, head massage, application to affected areas, and oil pulling are all examples of how oils are used. Shirodhara is a procedure in which liquids are poured on the patient's forehead.

Interesting Facts about Ayurveda:

- Yoga and Ayurveda are intertwined in Vedic understanding and function as stress relievers.
- Ayurveda will help you lose weight without compromising your physical or emotional well-being.
- Ayurveda helps to regulate hormones, resulting in a healthy menstrual cycle and problems linked to pregnancy.
- Ayurveda is a system of herbal medicine that is used to treat severe inflammation. Turmeric, ashwagandha, Boswellia, and ginger are

some of the herbs that are used in combination to minimise inflammation.

- Ayurveda purifies the mind, body, and spirit. Toxins that interfere with the body's normal functioning are eliminated using an Ayurvedic procedure called "Panchakarma."
- Ayurveda is an ancient form of medicine that focuses on the person rather than the disease. All that matters in Ayurvedic therapies are finding the cause of the disease and taking preventative steps to avoid it from harming the body. Furthermore, it is beneficial to the body both internally and externally.

Advantages of Ayurveda:

- Ayurveda puts a heavy focus on prevention and helps people to improve their wellbeing by paying careful attention to life balance, correct thought, diet, lifestyle, and herb use.
- Ayurveda knowledge helps one to understand how to achieve and sustain this harmony of body, mind, and consciousness based on one's own unique constitution and how to make lifestyle adjustments to achieve and maintain it.
- Ayurvedic diets and relaxation methods, according to researchers, may help minimise plaque accumulation. Plaque is the product of cholesterol and fats occurring in the inner lining of arteries. This is known as atherosclerosis, and it is the root cause of heart attacks and strokes.
- Herbs, vitamins, minerals, and proteins are all present in Ayurvedic medicine. To prevent and treat immunity-related disorders, these are combined at an adequate dose and given at the right time.

- Ayurvedic herbs and essential oils aid in blood flow, circulation, and the removal of toxins from the body through the skin.
- Ayurvedic therapies are also well-known for preventing cancer. A mixture of turmeric and black pepper is the best example of a herbal Ayurvedic formulation.

Some common medicinal plants having nutraceutical potential and their primary use in traditional medicine.

Sr. No.	Name of the Plant Used	Botanical Name	Family	Uses
1.	Shatavari	<i>Asparagus racemosus</i> Willd	Asparagaceae	A potent Ayurvedic rejuvenative. It supplies many female hormones and mostly recommended for those women who have hysterectomies. It also helps to maintain urinary tract and strengthens the immune system and also purifies the blood.
2.	Yashtimadhu, Licorice	<i>Glycyrrhiza glabra</i> L.	Fabaceae	It is a versatile medicine in India and China, for gastrointestinal health. It is a mild laxative, soothes and tones the mucous membranes, and relieves muscle spasms. It is an antioxidant, cancer protecting, botanical boosting, and certain immune functions such as interferon production. Its mode of action is as an antimutagen, preventing damage to genetic material that can eventually result in cancer.
3.	Nimba, Neem	<i>Melia azadirachta</i> L.	Meliaceae	It has strong health alleviating activity, used as a tonic and astringent that promotes healing. The extract has antispasmodic action. Its usage in Ayurvedic medicine for thousands of years has proved its detoxifying properties. It has shown most beneficial effects for the circulatory, digestive, respiratory, and urinary systems.
4.	Karela, Bitter melon	<i>Momordica charantia</i> L.	Cucurbitaceae	Karela has been widely used in Ayurvedic medicine. It contains Gurmarin, a polypeptide considered to be similar to bovine insulin, and has a strong sugar regulating effect by suppressing the neural responses to sweet taste stimuli.

5.	Shigru, Horseradish tree	<i>Moringa pterygosperma</i> Gaertn	Moringaceae	Shigru contains physiologically active principles that is effective in a broad range of health needs. It contains "Pterygospermin," an antibiotic-like substance.
6.	Pippali, Indian Long Pepper	<i>Piper longum</i> L.	Piperaceae	Pippali is a powerful stimulant for both the digestive and the respiratory systems and has a rejuvenating effect on lungs. It plays an important role in release of metabolic heat energy. This effect is the result of increased thyroid hormone level in the body. Pippali a typical Ayurvedic complementary component whose benefit is to increase the bioavailability and enhance absorption of the other active ingredients.
7.	Pippali, Indian Long Pepper.	<i>Piper nigrum</i> L.	Piperaceae	The black pepper is one of the most important spices which is widely used to amplify the body's ability to absorb nutrients contained in the food and aid the digestive process.
8.	Haritaki	<i>Terminalia chebula</i> Retz.	Combretaceae	Haritaki is a safe and effective purgative, expectorant, and tonic. It is an important ingredient of the classical Ayurvedic formulation "Triphala" which has a combination of three fruits. Tiphalpha is an important Ayurvedic medicine, which promotes health through successive steps of purification and detoxification. It is known to have strong antimutagenic activity, because of its very rich content vitamin C.
9.	Guduchi	<i>Tinospora cordifolia</i> Miers	Menispermaceae	Guduchi is a rich source of natural vitamin C and effective in inhibiting the growth of bacteria and in building up the immune resistance and has immune-boosting ability. Use of this plant increases white blood cells the killing ability of macrophages, the immune cells responsible for fighting invaders.
10.	Ashwagandha	<i>Withania somnifera</i> (L.) Dunal	Solanaceae	In Ayurvedic medicines Ashwagandha holds a place similar to Ginseng in traditional Chinese medicinal therapies. It is also called the "Indian Ginseng." It has been used for thousands of years as a popular remedy in Ayurvedic systems for many conditions. It is one of the best health tonics and restorative agents that have been used to treat general debility.
11.	Sunthi, Ginger	<i>Zingiber officinale</i> Rosc	Zingiberaceae	Ginger is considered an adjuvant in many Ayurvedic formulas in which it enhances absorption and prevents

				gastrointestinal side effects. It is a very common spice which is used in Ayurvedic medicine to improve digestion and to prevent nausea. These properties help bowel movements and relax the muscles which control the digestive system.
12.	Turmeric	<i>Curcuma longa</i>	Zingiberaceae	Increases anti-oxidant capacity Boosts brain-derived neurotrophic factor Lowers risk of heart disease Prevents Cancer Treats Alzheimer's disease Delay aging process Useful in Arthritis

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