



## USE OF AYURVEDIC MEDICINES TO TREAT VARIOUS CHRONIC DISEASES

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### ABSTRACT

Ayurveda or Ayurvedic medicine is a system of traditional medicine native to India, which uses a range of treatments, including panchakarma ('5 actions'), yoga, massage, acupuncture and herbal medicine, to encourage health and wellbeing. It is originated in India more than 3,000 years ago. Ayurveda is a holistic approach to health designed to help people live long, healthy, balanced lives. Ayurveda can have positive effects when used as a complementary therapy in combination with standard, conventional medical care. 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. Interestingly, Ayurveda has ability to treat many chronic diseases such as cancer, diabetes, arthritis,

and asthma, which are untreatable in modern medicine. Other studies have found that Ayurveda lowers blood pressure and cholesterol, slows the aging process, and speeds recovery from illness. Many herbs used in Ayurvedic medicine have antioxidant effects, meaning they may help to protect against long-term illnesses, such as heart disease and arthritis. Ayurveda can successfully cure these diseases permanently. Slow but permanent cure is the power of Ayurveda since it completely focuses on the root cause of the ailment.

**KEYWORDS:** Ayurveda, Chronic diseases, cancer, diabetes, arthritis, asthma.

## INTRODUCTION

India is known for its traditional medicinal systems— Ayurveda, Siddha, and Unani. Medical systems are found mentioned even in the ancient Vedas and other scriptures. The literal meaning of Ayurveda is “science of life,” because ancient Indian system of health care focused on views of man and his illness. It has been pointed out that the positive health means metabolically well balanced human beings. Ayurveda offers treatment methods to cure many common diseases such as food allergies, which have few modern treatments. However, one should be aware that Ayurvedic nutrition is not a “magic bullet” system but requires the full participation of the patient to succeed.<sup>[1]</sup> The branches of modern Ayurveda include:

- Principles of preventive healthcare for the entire family.
- Treatment of addictions.
- Purification and rejuvenation treatments.
- The ayurvedic approach to diet and weight loss.
- Musculoskeletal system treatments.
- Promotion of self-healing and resistance to disease.
- Male and female infertility.
- Beauty and cosmetic treatments for men and women

Ayurvedic literature has remedies for age-related diseases like memory loss, osteoporosis, diabetic wounds, etc. for which no efficient medicine is available in modern therapy.<sup>[2]</sup>

### Ayurveda for cancer therapy

Cancer, one of the most deadly challenges spreading drastically in 21st century, has now officially become the most dangerous killer in the world according to the World Health Organization. Cancer is related to adversary of modernization and advanced pattern of irregular and stressed life dominated by Western medicine. Ayurveda can be helpful in the management of cancer in many ways such as prophylactic, palliative, curative and supportive. Ayurvedic medicines help to improve the quality of life of the patients through various pharmacokinetic mechanisms. Some Ayurvedic preparations can fight against tumors. They can be helpful in targeting the specific tissues as shown in some allopathic studies on nano-particles of gold. Ayurvedic preparations can act as an adjuvant or a co-therapy along with chemotherapy or radiotherapy. It is also helpful in post-surgery care.

Ayurvedic medicines help to minimise the side effects of these therapies. Ayurvedic preparations help to slow the progress of cancer in cases where chemotherapy, radiotherapy or surgery is contra-indicated, due to some reasons and patients have no other choice.<sup>[3]</sup>

### Anticancer mechanisms of common ayurvedic herbs

**Table 1: Common Ayurvedic drugs for cancer.**

Herb	References and mechanisms addressed
Curcumin/turmeric	<ol style="list-style-type: none"> <li>1. Reviews details of modulation of pathways of cell proliferation, cell survival, caspase activation, tumor suppressor, death receptor, protein kinase, and mitochondrial pathways.</li> <li>2. Role in prevention of cancer progression.<sup>[4]</sup></li> </ol>
Vitis vinifera	The mixture of Terminalia chebula, grape juice and sugar cane juice has been used. <sup>[3]</sup> Resveratrol, a natural product derivative from grape juice has been proved to possess cancer chemopreventive activity. <sup>[5]</sup>
Moringa oleifera	The paste of Moringa oleifera seeds, Solanum xanthocarpum, Sinapis dichotoma, Holarrhena antidysenterica and Nerium odorum roots prepared with buttermilk is used for arbuda tumours. <sup>[5]</sup>
Bhallataka (Semecarpus anacardium Linn. F.)	protective effect against the abnormal anti-oxidant levels and peroxidative damage in mitochondrial fraction of mammary carcinoma. <sup>[6]</sup>
Bhanga (Cannabis sativa Linn.)	The stimulation of cannabinoid receptors using cannabinoids is reported to be anti-tumorigenic. It was reported to inhibit tumor invasion/metastasis, tumor cell proliferation, block angiogenesis and induce apoptosis. <sup>[6]</sup>
Giloy/Guduchi	It helps to cure cancer. Giloy is sometimes used as an adjunct therapy to support conventional cancer treatment. <sup>[7]</sup>



**Figure 1: Curcumin/turmeric.**



**Figure 2: Moringa oleifera.**



**Figure 3: Giloy/Guduchi**



**Figure 4: Bhanga**

### **Ayurveda for Diabetes mellitus**

Diabetes mellitus has gained gigantic disgrace in recent times as it is fast becoming the world's largest silent killer. India has been projected by WHO as the country with the fastest growing population of Diabetic patients. It is estimated that between 1995 to 2025 diabetic patients in India will increase by 195%. The problem with diabetes mellitus is that it is very difficult to diagnose in the early stages. However, a person stick to an Ayurvedic preventive strategy right from the beginning can easily prevent this disease or control it if already suffering. It is a medical condition in which there is an accumulation of glucose in the urine and blood of the person. This condition is known as hyperglycemia.

Diabetes mellitus is a metabolic disorder, i.e. it is caused due to the malfunctioning of the pancreas, which is responsible for the production of the hormone insulin.<sup>[8]</sup> In Ayurveda, diabetes is connected with and referred to as a urinary abnormality. All-in-all, there are twenty types of diabetes concerns. Out of those twenty, the most common type of diabetes is Diabetes mellitus.

Going by the ancient texts, the diabetes treatments in Ayurveda include herbal medications, Panchakarma treatment, its various processes (Vamana, Virechana, Vasti, etc.) and many more. However, the procedure opted for the treatment largely depends on the severity of the condition that the individual is facing.<sup>[9]</sup>

Commonly used ayurvedic drugs for diabetes mellitus:



Figure 5: Areca catechu.



Figure 6: Aloe barbadensis.

Table 2: Common Ayurvedic drugs for Diabetes mellitus.

<i>Plant Name</i>	<b>Ayurvedic/common name/herbal formulation</b>	<b>Antidiabetic and other beneficial effects in traditional medicine</b>
<i>Annona squamosa</i>	Sugar apple	Hypoglycemic and antihyperglycemic activities of ethanolic leaf-extract, Increased plasma insulin level. <sup>[10]</sup>
<i>Areca catechu</i>	Supari	Hypoglycemic. <sup>[10]</sup>
<i>Boerhavia diffusa</i>	punarnava	Decrease in hexokinase activity, decrease in glucose-6-phosphatase and fructose bis-phosphatase activity, increase plasma insulin level, antioxidant. <sup>[10]</sup>
<i>Aloe barbadensis</i>	Aloe	used for a variety of medicinal purposes, including in the treatment of allergic reactions, wounds, burns, rheumatoid arthritis, rheumatic fever, diabetes, inflammation, etc. The plant has phytoactive compounds, such as flavonoids, terpenoids and polysaccharides, including pectins, hemicelluloses, glucomannan, sterols $\beta$ -sitosterol, lupeol, tannins, etc., with analgesic, antioxidant, anti-cancer and anti-inflammatory properties. <sup>[11]</sup>
<i>Anacardium occidentale</i>	cashew nut	The bark of this plant has been reported to have hypoglycemic and antihypertensive properties. The plant's stem, leaves and bark are rich in phenolics, saponin, flavonoids, vitamins and selenium. The <i>A. occidentale</i> plant contains alkaloids, anthocyanidins, tannins, essential oils, glycosides, myricetin, pentoside, lactone, quercetin hexoside, xanthones, palmitate, sitosterol, stigmasterol, 3-O- $\beta$ D-galactopyranoside, etc., which are responsible for its antibacterial, antimutagenic and antifungal activities. <sup>[11]</sup>

### **Ayurveda for Heart disease**

Cardiovascular problems have been dealt in detail in Ayurveda, which describes heart as a body organ governing emotions and circulating blood to keep person alive and healthy. Heart disease is a global phenomenon. It is now becoming a major health problem even in developing countries.<sup>[12]</sup> The predisposing factors are heredity, high blood pressure, diabetes, high serum cholesterol and smoking. Improper diet and stressful lifestyle leads to thickening of arteries resulting in angio- obstruction and angina. Ayurveda has given different plants and formulations which are useful in managing heart disease.<sup>[13]</sup>

**Angina:** It is characterised by pain in chest, also occurs in jaws and abdomen. In some cases it may cause no symptoms. If blood clot suddenly cuts off most or all blood supply to the heart, heart attack results. It is a chest pain that occurs due to inadequate oxygen supply to the Heart Muscle. Angina saw in people with age more than 50 years. Angina can be a precursor for Heart Attacks. Today Angina is one of the leading causes of the deaths of people.<sup>[14]</sup>

### **Natural Home Remedies for Angina**

- 1) fenugreek-Fenugreek seeds can be soaked in water overnight and taken on an empty stomach to reduce cholesterol levels.
- 2) water-Drinking enough of water every day helps to cleanse our bodies.
- 3) lemon-Lemon is a readily available home treatment. To avoid the formation of fat and cholesterol in your body, try to include one lemon in your daily dietary supplements.
- 4) Parsley-Parsley is also an important home treatment for angina pectoris. It can be consumed in the form of fresh or dry leaves.<sup>[15]</sup>
- 5) Tulsi -The best technique to treat angina is to chew Tulsi leaves in the morning.
- 6) garlic-On an empty stomach, eating two or three raw garlic cloves lowers blood pressure and it is helpful in angina.
- 7) onion-Taking onion juice in the morning immediately lowers your cholesterol level.
- 8) grapes-They assist to lower your chance of having a heart attack and enhance the quality of your breathing.
- 9) Amla- It helps to stimulate flow of blood by increasing heart rate.
- 10) Daily short walks also aid in the treatment of angina.<sup>[16]</sup>

### **Hypertension (High blood pressure)**

Hypertension is a chronic and often asymptomatic medical condition in which systemic arterial blood pressure is elevated beyond normal. As such, the heart is forced to work harder

to overcome the increased systemic pressure in order to deliver blood to tissues, which puts strain on the heart and arteries. Over the period of time, the additional strain leads to cardiovascular dysfunction and is a primary contributing cause of congestive heart failure, myocardial infarction, pulmonary embolism, cerebral aneurysm and kidney failure.<sup>[17]</sup>

### Natural Home Remedies for Hypertension

- 1) Tea- Research on black tea shows no effect on BP in people.
- 2) Garlic- Garlic has long been used for a variety of cardiovascular conditions, especially hyperlipidemia. It has also been reported to have hypotensive action. It is thought to increase nitric oxide production, resulting in smooth muscle relaxation and vasodilatation<sup>[18]</sup>
- 3) Green Oat - A diet containing soluble fiber-rich whole oats can significantly reduce the need for antihypertensive medication and improve BP control. Considering the lipid and glucose improvements as well, increased consumption of whole oats may significantly reduce cardiovascular disease risk.<sup>[19]</sup>
- 4) Blueberry juice- In addition to being an excellent source of antioxidants, which fight diseases like cancer and prevent aging, blueberries also help decrease blood pressure, especially when consumed daily.
- 5) Hibiscus tea- Hibiscus is a plant that is very popular amongst those who want to lose weight, however this plant can also help reduce blood pressure.<sup>[20]</sup>
- 6) Celery- According to a Chinese theory, celery has antihypertensive properties because it acts upon the liver: one type of hypertension is associated with liver dysfunction. Researchers have suggested that celery seed extract may help lower blood pressure as it acts as a natural calcium channel blocker. Celery seeds are also rich in fibre which helps to lower blood pressure.
- 7) Ajwain- Ajwain also called as thyme-is an Indian spice, found everywhere in India. It contains a flavoured compound called Rosmarinic acid that is known to have many benefits, such as reduced inflammation and blood sugar levels, increased blood flow and also helps to lower blood pressure. A study suggests that an intravenous administration of a crude extract of *ajwain* decreases BP, accompanied by a decrease in heart rate.
- 8) Cinnamon - Cinnamon is a flavoured spice obtained from the bark of a cinnamon tree. Since ancient times, cinnamon has been used to treat various heart-related symptoms, and it also reduces high blood pressure. It appears to relax and dilate the blood vessels.<sup>[21]</sup>
- 9) Coriander - Coriander (*dhania*) is not only used as a culinary ingredient but also as a traditional medicine for the treatment of cardiovascular and gastrointestinal diseases.

Coriander is an excellent remedy to manage high blood pressure. It is packed with heart-friendly fibres.

10) Ginger - People have used it for centuries to improve many aspects of heart health, including circulation, cholesterol levels, and blood pressure. Both human and animal studies have shown that taking ginger reduces blood pressure in several ways. It acts as a natural calcium channel blocker and natural ACE inhibitor. Ginger appears to lower blood pressure by acting as a natural calcium channel blocker and dilating the blood vessels.<sup>[22]</sup>



**Figure 7: Home remedies for hypertension.**

### **Heart Attack (Myocardial Infarction)**

Heart attacks, otherwise known as myocardial infarctions, are caused when the blood supply to a section of the heart is suddenly disrupted. Without the oxygen supplied by blood, the portion of the heart muscle fed by the blocked artery can become damaged. If blood flow is not restored, the cells within the heart muscle will start to die. Heart attacks are often caused by coronary heart disease (CHD), or the narrowing or hardening of the arteries due to a build-up of plaque. This process occurs over many years. Plaque can become damaged and the formation of a blood clot can develop. This blood clot may eventually block an artery causing a heart attack.<sup>[23]</sup>

### Symptoms of a Heart Attack Include

- Pain or discomfort in the center of the chest.
- Pain or discomfort in the arms, the left shoulder, elbows, jaw, or back
- The patient may experience difficulty in breathing or shortness of breath.
- Nausea.
- Light-headedness or fainting.
- Sweating.
- Women are more likely to experience shortness of breath, nausea, vomiting, and back or jaw pain.

### List of Ayurvedic drugs to prevent heart attack

#### 1. Arjuna

Scientific name: Terminalia arjuna

Family: Combretaceae

Kingdom: Plantae

Order: Myrtales

Use- Arjuna has been used as a cardiogenic in coronary heart failure, ischemia, cardiomyopathy, atherosclerosis, and myocardium necrosis and has been used for the remedy of various human illnesses like blood illnesses, anemia, venereal and viral sickness; and to preserve splendid healthiness. Scientific proof presents the usefulness of numerous Ayurvedic tablets in cardiovascular illnesses. Clinical research has proven the efficacy of the bark of T. arjuna in congestive cardiac failure, persistent solid angina, and hypertension. T. arjuna and its constituent, Arjunolic acid have proven cardioprotective results because of their antioxidant property.<sup>[24]</sup>

#### 2. Lasuna (Garlic)

Scientific name: Allium sativum

Family: Amaryllidaceae

Order: Asparagales

Kingdom: Plantae

Uses- Lasuna lowers blood lipid ranges by modulating key enzymes withinside the liver answerable for LDL cholesterol biosynthesis. It additionally saves the hardening of blood vessels by lowering lipid accumulation withinside the arteries. Lasuna is a powerful

antioxidant that gets rid of unfastened radicals that cause an imbalance withinside the regular cap potential of blood vessels to constrict and dilate.<sup>[25]</sup>

### 3. Jatamansi (Spikenard)

Scientific name: *Nardostachys jatamansi*

Family: Caprifoliaceae

Order: Dipsacales

Kingdom: Plantae

Uses- The extract of jatamansi notably averted and restored the lipid peroxides and antioxidant enzyme to nearly regular ranges in a rat model. The root has been medically used to deal with insomnia and blood, circulatory, and intellectual disorders. Some arrangements of the plant had been used as a cardiogenic, analgesic, and diuretic withinside the Unani machine of remedy.<sup>[26]</sup>

### 4. Pushkaramool

Scientific name: *Inula racemosa*

Family: Asteraceae

Higher classification: *Inula*

Kingdom: Plantae

Uses- *Inula racemosa* protects the coronary heart from isoproterenol-caused myocardial harm by lowering oxidative pressure and modulating the hemodynamic and ventricular capabilities of the coronary heart. The present look at findings displays the cardioprotective impact of *I. racemosa* and assists the pharmacological relevance of its use and cardioprotection mechanism in ischemic coronary heart sickness.<sup>[27]</sup>



Figure 8: Arjuna



Figure 9: Jatamansi

## CONCLUSION

Ayurveda is one of the oldest medical systems, which comprises thousands of medical concepts and hypothesis. Interestingly, Ayurveda has ability to treat many chronic diseases such as cancer, diabetes, arthritis & asthma, which are untreatable in modern medicine. Today, the cost of health care is constantly rising, and affecting people's ability to afford health coverage. Drug-based medicines are being unaffordable for economically poor countries like India and problematic in the Western countries due to numerous side effects. The drug should be the last rather than first mean of treatment, beginning with the natural healing method like Ayurveda. Ayurveda is still lagging behind because of the lack of scientific evidence in many cases and poor research methodology. Ayurveda requires more researches in the areas of fundamental principles and diagnostic tools in place of drug research. In the present scenario, the research methodology of Ayurveda is not good enough, which needs further advancements in the development and promotion of Ayurveda.

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