

Review Article

# Emblica Officinalis: A Traditional Indian Herb

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## I N F O

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## A B S T R A C T

Emblica officinalis, a famous Indian herb commonly known as amala, became more popular during the COVID era. It is one of the most useful medicinal plants in classical Indian science, i.e., ayurveda. Its common popular synonym is Dhatri or Anurse, which means it cares for the person as a mother care for her child. Emblica officinalis has both nutritional and medicinal values. It is one of the herbs with the richest source of vitamin C.

Even though its fruit comes in the category of minor fruit, it is very popular not only among farmers and nurserymen but also among ayurvedic physicians and even among scientists because of its increasing demand, especially during COVID, also due to its commercial significance, which is highly remunerative, because it does not require much care. The Emblica officinalis syn. Phyllanthus emblica, or Indian gooseberry, comes in the category of minor arid zone fruit, which is a crop of commercial significance.

**Keywords:** Emblica Officinalis, Ayurvedic Material Medica, Dhatri, Arid Zone and Indian Goose Berry

## Introduction

Emblica officinalis is a native plant of Indian origin that grows well in tropical and subtropical regions such as Pakistan, South East Asia, China, Malaysia.

Uzbekistan and Sri Lanka Its fruit is a well-known medicine in Indian material medicine, Its plant is worshipped in Indian tradition on Akshya Navami.

## Aims and Objective

To review the medicinal aspects of Emblica Officinalis wsr to its botany.

## Conceptual Study

### Botanical Discription

Emblica Officinalis is a plant that comes from the Euphorbiaceous family and is a small to medium-sized

tree that grows in forests up to 1450 m altitude. It is a large tree with thick branches that arch each other, having a height of approx. 1 to 8 m. It is a deciduous tree with grey-brown bark.<sup>1</sup>

Leaves are simple, alternate, subsessile and these are closely set along branchlets, which appears like pinnate leaves. Leaves are light green in colour.

Flowers of this plant are unisexual, about 3 mm in size, white in colour and grow in clusters at terminal shoots.

Male flowers have 6 tepals, oblanceolate 1.5 mm, obtuse stamens, 3 anthers, oblong, connate by their connectives, 6-disc glads.

The female flower has 6 tepals, oblanceolate and obtuse, a superior ovary, 2 ovules in each cell, 3 styles that are broadly fimbriate and staminiferous.<sup>2</sup>

The fruit of the plant is sub globose, light greenish yellow in colour, becomes light brown after ripening. These are roughly spherical, about 20–30 mm across in size, smooth in touch, hard in appearance, have six vertical stripes on their surface. Fruits are grown in the winter season and seen in the market from October to mid-March. Each fruit contains a single reddish seed of about 3.9 to 4.5 mm in size. The Botanical Description of this plant can be better understood by Figure 1,2,3,4. Emblica officinalis can be propagated by seed.<sup>3,4</sup>



Figure 1. Amla Fruits



Figure 2. Amla Seeds



Figure 3. Amla Leaf

- Kingdom: Plantae
- Division: Angiospermae
- Class: Dicotyledonae
- Order: Geraniales
- Family: Euphorbiaceae
- Genus: Emblica
- Species: officinalis Geartn.

Figure 1,2,3,4. showing flower, seed, leaf and tree of Emblica officinalis.



Figure 4. Amla Tree

### Distribution

It is found throughout the tropical and subtropical parts of India. It is a potential crop that also grows in marginal soils and in various types of degraded lands, such as salt-affected soils, salines, and dry and semi-dry areas of countries like Pakistan, South East Asia, China, Myanmar, Malaysia, Uzbekistan and Sri Lanka.<sup>5</sup>

### Parts Used

The whole plant of *Emblica officinalis* can be used for various purposes, and because of this, its economic value increases, which presents the herbalist with excellent value for money. The dried fruit, the nut or seed, leaves, roots, bark, and flowers are frequently and commonly employed for medicinal purposes. The ripe fruits are most commonly used in the preparation of very fanatic medicines such as Chyvan prash and in the kitchen as well. In the same way, dried fruit also has medicinal value in the preparation of medical churna, vati, kwath, etc. Its green fruit is considered the richest source of vitamin C. It is sour, astringent, and a little bit sweet in taste. Its flowers are cooling and refreshing in nature. The bark is astringent in taste. Its two famous forms found in India are the wild one, which has smaller fruits, and the cultivated form, sometimes called “Banarsi”, which has larger fruits used as medicine in Indian science.

### Recommended Dosage

Churna: 3-10g bid/tid

Kwatha: 1:4,60-120ml bid/tid

## Chemical Composition of Amla

Various Chemicals such as tannins, alkaloids, and phenols are present in Amla. Fruits have approximately 28% of the total tannins present in the whole plant. There are two hydrolysable tannins, Emblicanin A and B, present in fruit that have antioxidant properties. Out of them, one hydrolyzes gallic acid, ellagic acid, and glucose, while the other, Emblicanin B, gives ellagic acid and glucose, respectively. Phyllembin is also present in its fruit. Activity-directed fractionation revealed the presence of several phytochemicals like gallic acid, corilagin, furosin, and geraniin. Various flavonoids, such as quercetin, and alkaloids like phyllantine and phyllantidine, are also found. Along with the above chemicals, it primarily contains amino acids, carbohydrates, and other compounds given in Table 1.

**Table 1. Chemical Composition of Emblica Officinalis fruit**

Hydrolysable Tannins	Emblicanin A and B, Punigluconin, Pedunculagin, Chebulinic acid (Ellagitannin), Chebulagic acid (Benzopyran tannin), Corilagin (Ellagitannin), Geraniin (Dehydroellagitannin), Ellagotannin
Alkaloids	Phyllantine, Phyllembin, Phyllantidine
Phenolic compounds	Gallic acid, Methyl gallate, Ellagic acid, Trigallayl glucose
Amino acids	Glutamic acid, Proline, Aspartic acid, Alanine, Cystine, Lysine
Carbohydrates	Pectin
Vitamins	Ascorbic acid
Flavonoids	Quercetin, Kaempferol
Organic acids	Citric acid

## The Ayurvedic Description of Amla

The fruit has these properties, according to the Ayurvedic classifications

**Rasa (taste):** Primarily amla, tikta, and Kashaya, but also madhura was noticed, Particularly while drinking water after one has consumed the Fruit. Katu is a minor, secondary taste, while lavana is Absent (sour and astringent are the most dominant, but the fruit has five tastes, including sweet, bitter, bitter and pungent).

**Veerya(nature):** cooling

**Vipaka(taste developed through digestion):** sweet

**Guna(qualities):** light, dry

**Doshas (effect on humors):** quietens all three doshas: vata, kapha, and pitta, and is especially effective for pitta. Because of its cooling nature, amla is a common ingredient in treatments for a burning sensation anywhere in the body and for many types of inflammation and fever; these are manifestations of pitta (fire) agitation.

Amla has been considered the best of the Ayurvedic rejuvenative herbs because it is tridosaghna. Uniquely, it has a natural balance of tastes (sweet, sour, pungent, bitter, and astringent) all in one fruit. It stimulates the brain to rebalance the three main components of all physiological functions, the water, fire, and air elements within the body.

**Karma:** dipana, pachana, anuloma, jwaragna, raktaprasadna, kasahara, svasahara, hrdaya, chakshushya, romasanjana, jivaniya, medhya, rasayana, and tridoshaghna.

**Prabhava (effects):** Amalki is sattvik, bringing good fortune, love, and long life to those that consume it.

Charaka samhita mentioned that amalaki is viewed as one of the most potent and nutritious herbs, and it also says "Amalaki is the best rejuvenative herb", It is specifically observed that amla is a great rasayana that helps to protect from disease and reduce the possibilities of premature ageing. Amla has low molecular weight hydrolysable tannins (Emblicanin A and Emblicanin B, punigluconin), thereby making it one of the more powerful antioxidant herbs in Ayurveda.<sup>6,7</sup>

## Emblica officinalis: The Natural Refreshner

Vitamin C, present in E. officinalis, is one of the main factors that can help to retrieve or refill the energy lost by the body. So, the replenishment of new energy caused by Emblica officinalis is considered a natural refresher.

## As an energy refiller

It's One teaspoon powder with honey after taking milk in the morning helps to improve freshness and strength to the body.

In anaemia therapy Amla being rich in vitamin C is a good absorption agent of iron. Ascorbic acid is highly present in E. officinalis, which further helps to reduce iron deficiency.

## Relieves leucorrhoea

This can be cured by taking of 3 gms of powdered E. officinalis with 6 gms of honey every day for one month can cure this problem.

## Effects on urinary stone

Its powder with radish used in removal of renal calculi from

bladder to exterior through urine. The best time to have them is morning or evening.

### **Emblica therapy for diarrhea**

Its Paste of leaves with honey is an effective cure for diarrhoea.

### **Emblica as a febrifuge**

Its leaf extracts are widely used for the treatment of fever in Malays homeo medicines. In Ayurvedic Emblic seeds are boiled with chitrak root and chebulic myrobalan and the boiled contents are used for curing fever.

### **Relieves headache**

It can help in reducing temperature when its mixtures with buttermilk apply externally and also give chillness to head and further relieve headache.

### **Improves body weight**

It helps in increasing your weight because it assists in balancing nitrogen levels and increasing protein levels very well. It helps in maintaining proper functioning of the metabolic activities of the body because of various minerals including chromium, zinc, and copper present in it.

### **Skin Sores and Wounds**

Its leave's juice application provide relief in sores. Paste of its bark of Emblica officinalis can be used in treatment of cut or wound as external application.

### **Scurvy**

Because of the Anti-ascorbic virtues of Emblica myrobalans, it is used in the treatment of scurvy.

### **Vaginal Complaints**

Its fruit juice mixes with sugar are used for the relief of burning sensation in the vagina.<sup>8,9,10</sup>

### **Discussion**

We can use the entire plant, which presents the herbalist with excellent value for money. The dried fruit, the fresh fruit, the nut or seed, leaves, roots, bark, and flowers are frequently employed. Ripe fruits are generally used fresh in the preparation of various medicines, such as Chyvanprash, but dried fruits are also used in the preparation of medicines, such as Trifala.

It is used in in treatment of acidity and peptic ulcers because of Madhur vipaak and sheet virya. being the richest source of vitamin C, Calcium, Iron, essential amino acids, and many other vitamins, minerals, and antioxidants. Various Research reports on Amla reveal its analgesic, anti-tussive, antiatherogenic, adaptogenic; cardio, gastro, nephroprotective, chemopreventive, radio- and chemomodulatory, and

anticancer properties. It is also reported to possess potent free radical scavenging, antioxidant, anti-inflammatory, anti-mutagenic, and immunomodulatory activities that are efficacious in the prevention and treatment of various diseases like cancer, atherosclerosis, diabetes, liver disease, and heart disease. Overall, as per Ayurvedic science, it is not only used in the treatment of various diseases but also as a rejuvenator in the promotion of better health.

### **Conclusion**

Emblica Officinalis is commonly used in Indian medicine in the treatment of various illnesses such as Diabetes, eye disorders, etc. due to its various phytochemical constituents and classical use as explained from historical times. While being exceptional for its ethnic, ethnobotanical, and ethno-pharmaceutical uses, it is an important common ingredient of many Ayurvedic medicines, rejuvenator medicines, and tonics. It is considered one of the richest natural sources of Vitamin C, and it also plays a vital role in the prevention and treatment of innumerable health disorders. It is considered to be a safe herbal medicine without any adverse effects, so it is named as dhatri. It can be concluded that the Indian gooseberry is a traditionally and clinically proven herb for both its application and efficacy.

### **References**

1. Zhang LZ, Zhao WH, Guo YJ, Tu GZ, Lin S, Xin LG, Studies on chemical constituents in fruits of Tibetan medicine *Phyllanthus emblica*, *Zhongguo Zhong Yao ZaZhi*.2003; 28(10): 940-3.
2. Udupa KN, Ayurveda for Promotion of Health, *Journal of Ayurveda*, 3, 1985.
3. Sharma SK, James B, Perianayagam, Aney Joseph AJM, Christina, Evaluation of anti-pyretic and analgesic activity of *Emblica officinalis* Gaertn, *Journal of Ethnopharmacology*. 2004; 95,83-5.
4. Nosal ova G, Mokry J, Hasan KM, Antitussive activity of the fruit extract of *Emblica officinalis* Gaertn, (Euphorbiaceae), *Phytomedicine*. 2003;10,583-9.
5. Santoshkumar J, Manjunath S, Pranavkumar MS, A study of antihyperlipidemia, hypolipidemic and antiatherogenic activity of fruit of *Emblica officinalis* (Amla) in high fat fed Albino Rats, *International Journal of Medical Research and Health Sciences*. 2013;2(1): 70-77.
6. Agnivesha, *Charaka samhita*, elaborated by Charak and Dradhbala with *Ayurveddeepika* commentary by Shri Chakrapanidutta, Edited by: Vaidya Yadavji trikamji acharya, Prolouged by: Prof. R.H.Shingh Published by: Chaukhamba Subharati Prakashan Reprinted 2011
7. Vridhha Sushruta, Acharya Sushruta, Nagarjuna, Chandrat, *Sushruta Samhita*, With

commentary Nibandhsangraha of Dalhanacharya, edited by Acharya yadavaji trikamji, Reprint, Chaukhambha surbharti Prakashan, Varanasi, 2008.

8. Kim HJ, Yokozawa T, Kim HY, Tohda C, Rao TP, Juneja LR. Influence of Amla (*Emblica officinalis* Gaertn.) on Hypercholesteremia and Lipid Peroxidation in Biological Membranes. *J. Ethnopharmacol.* 2005; 64(2): 135-139.
9. Calixto JB, Santos AR, Cechinel-Filho V & Yunes RA. A review of the plants of the genus *Phyllanthus*: their chemistry, pharmacology and therapeutic potential. *Medicinal Research Reviews.* 1998; 18(4): 225–258.
10. Dey KL, *The Indigenous Drugs of India - Short Descriptive Notices of the Principal Medicinal Plants Met with in British India*, 2nd edition. Thacker, Spink & Co., Calcutta, 1896.

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