



## A REVIEW ON AMALAKI (EMBLICA OFFICINALIS GAERTN)

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### ABSTRACT

Ayurveda is an ancient holistic Indian system of medicine. Ayurveda uses various herbal preparations for the management of diseases. Plants are a rich source of medicinal constituents. The need of herbal medicines is increasing day by day in the Universe. Amalaki (*Embllica officinalis Gaertn*) is a multipurpose medicine in the traditional health system of India. It is referred to as Amrit phala. It has a beneficial role in degenerative disease, cancer, diabetes, and liver disorders. It important herb for tissue regeneration. In recent years various research is being conducted on Amalaki (*Embllica officinalis Gaertn*). The purpose of the paper is to collect and compile the general description of drug and various therapeutic properties as per modern research and our Ayurvedic literature. The fruits of Amalaki are widely used is the Ayurvedic preparation and it Increases Immunity against disease.

**KEYWORDS:** Ayurveda, Amalaki Traditional, Immunity Therapeutic.

### INTRODUCTION

Ayurveda is the science of life which deals with advantages and disadvantages as well as the happy and unhappy status of life along with what is good and the life itself. The main concept of diagnosis and drug development in Ayurveda is based on Tridosha (vata, pitta and Kapha) theory. In Ayurveda all raw herbs and ahara dravya are classified according to their Rasa, Guna, Virya, Vipaka and Prabhava. Amalaki (*Embllica officinalis*) is an important herb in traditional medical system of India. Amalaki commonly known as Indian gooseberry. All parts of Amalaki are useful in the treatment of various diseases, among all, the most important part is fruit. Amalaki fruit is referred as Amrit phal and is prominently included in ancient Indian mythological literature such as the Vedas, Shivpuran, Skandhapuran, Ramayan etc.<sup>[1]</sup>

Amalaki is the best Antiaging and tissue rejuvenating herbit. It is a potent drug high in tannin, vitamin c, gallic acid and antioxidants. Amalaki has low molecular weight hydrolysable tannins (Embllicanin A and B) so it is considered as one of the stronger anti-oxidant herb in Ayurveda.<sup>[2]</sup> Charak Samhita mentioned Amalaki is one of the most potent and nutritious drugs and also a best rejuvenating herb (Amalaki vayasthapanam shreshtham).<sup>[3]</sup> Amalaki possess important properties like rasayan ayushprada and sandhaniya. There a many researches done by medical sciences still the therapeutic

uses of Amalaki according to ancient and new Ayurvedic classics define a vast area to develop on this herb.

### AIMS AND OBJECTIVES

To study the therapeutic application of the drug Amalaki as per our ancient and recent classical text. To study the biochemical constitutes and therapeutic Amalaki as per the value of modern researches.

### MATERIAL AND METHODS

The basic conceptual and therapeutic materials were collected from the Ayurvedic literature, modern literature, research papers, and journals.

**Mythological Importance of Amalaki:** The Amla tree is thought to be home to Lord Vishnu and Goddess Lakshmi. The names Amla, Dhatri, and Dhatrika denote a nurturing mother. Because it is connected to both Lord Vishnu and Lord Siva, the tree is immensely respected in India. The holiness of Amla is mentioned in the *Brihad-dharma Purana*. Goddesses Parvati and Lakshmi desired to adore Lord Vishnu and Shiva in their transformed forms. The earth once became covered in water while Lord Brahma was meditating, according to the Skanda Purana. When the Lord saw the earth sinking, he was touched and wept, and the tears fell on the ground. The Amla plant sprouted from the first tears he shed. Amla is referred to as Adiroha (pre-eminent tree) because it was the first plant to sprout on Earth.<sup>[4]</sup>

Names of Amalaki in Various Languages<sup>[5]</sup>

|     |                       |                                                                                                                               |
|-----|-----------------------|-------------------------------------------------------------------------------------------------------------------------------|
| 1.  | Sanskrit              | <i>Dhatrithala, Amalaki, Amaliki, Amalakan, Sripthalam, Vayastha</i>                                                          |
| 2.  | Oriya                 | <i>Anala</i>                                                                                                                  |
| 3.  | Assamese              | <i>Amlaku</i>                                                                                                                 |
| 4.  | Nepali                | <i>Amlain</i>                                                                                                                 |
| 5.  | Marathi               | <i>Anvaḷa</i>                                                                                                                 |
| 6.  | Punjabi               | <i>Aula</i>                                                                                                                   |
| 7.  | English               | <i>Indian Goose Berry</i>                                                                                                     |
| 8.  | Gujarati              | <i>Ambala, Bhosa</i>                                                                                                          |
| 9.  | Hindi, Urdu & Bengali | <i>Amla</i>                                                                                                                   |
| 10. | Telugu                | <i>Karkchettu</i>                                                                                                             |
| 11. | Kannada               | <i>Nellikayi</i>                                                                                                              |
| 12. | Tamil                 | <i>Nellikai</i>                                                                                                               |
| 13. | Ayurvedic             | <i>Amalaki, Aaamalaka, Dhaatri, Kaayasthaa, Amoghaa, Amritaphala, Aaamala, Dhaatriphala, Vayasyaa, Vrshya, Shiva, Hattha.</i> |
| 14. | Italian               | <i>Mirabolano emblico</i>                                                                                                     |
| 15. | German                | <i>Amalaki</i>                                                                                                                |
| 16. | French                | <i>Phyllanthus emblica</i>                                                                                                    |
| 17. | Nepalese              | <i>Amba</i>                                                                                                                   |
| 18. | Chinese               | <i>An Mole</i>                                                                                                                |
| 19. | Malaysian             | <i>Popok Melaka</i>                                                                                                           |
| 20. | Portuguese            | <i>Mirabolano emblico</i>                                                                                                     |
| 21. | Unani                 | <i>Aamala, Amalakij</i>                                                                                                       |
| 22. | Siddha/ Tamil         | <i>Nellikaa, Nelli</i>                                                                                                        |

## Ayurvedic Classification

| <i>Charaka</i>                                                                                                                       | <i>Sushruta</i>                                                  | <i>Vagbhata</i>       | <i>Bhavprakash Nighantu</i> |
|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|-----------------------|-----------------------------|
| <i>Kushthadi Varga</i><br><i>Kasahara Varga</i><br><i>Virechanopaga Varga</i><br><i>Vayasthapana Varga</i><br><i>Jwarahara Varga</i> | <i>Parushadi Gana</i><br><i>Triphala</i><br><i>Amlkyadi Gana</i> | <i>Parushadi Gana</i> | <i>Haritkyadi Varga</i>     |

Modern (Taxonomy) Classification<sup>[6]</sup>

|    |                          |                            |
|----|--------------------------|----------------------------|
| 1  | Kingdom                  | Plantae                    |
| 2  | Division                 | Angiospermae               |
| 3  | Class                    | Dicotyledonae              |
| 4  | Family                   | Euphorbeaceae              |
| 5  | Order                    | Geraniales                 |
| 6  | Genus                    | Emblica                    |
| 7  | Species                  | officinalis Geartn         |
| 8  | Botanical Name Authority | Emblica officinalis Geartn |
| 9  | Authority                | Geartn                     |
| 10 | Current Name             | Emblica officinalis        |

## Natural habitat

Tropical and subtropical areas of India, chiefly in dry deciduous forests, ascending to 1400 m on the Himalaya,

Chhota Nagpur, Bihar, Orissa, West Bengal, North Circars, Deccan, Karnataka and in Western Ghats.<sup>[7]</sup>

## Morphological Description

|            |                                                                                                                 |
|------------|-----------------------------------------------------------------------------------------------------------------|
| Size       | Medium size deciduous tree. Height 8-18m                                                                        |
| Bark       | Light greenish, red inside, wood red hard close-grained, Stem grith 70cm.                                       |
| Branchlets | 10-20cm.stipules minute                                                                                         |
| Leaves     | Small very closely set in pinnate form, 1-3 cm. linear, oblong, acute closet over and overlapping               |
| Flowers    | Monoecious, unisexual, greenish, yellow in axillary clusters, depressed to globose shape, 2.1-2.4cm in diameter |
| Fruits     | 1.5 to 2.5 cm. in diameter, fleshy roundish with six lobes or ridges                                            |
| Seeds      | Six angulars, and hard                                                                                          |

### Amalaki Fruits

**Appearance:** Smooth, flashy, greenish-yellow, spherical, and hard with six vertical stripes and two seeds. Amalaki fruits size, shape, and weight were found to vary among its different varieties.<sup>[8]</sup>

### Ayurvedic description of Amalaki<sup>[10]</sup>

हन्ति वातं तदम्लत्वात्पित्तं माधुर्यशैत्यतः |

कफं रुक्षकषायत्वात्फलं धातुर्वास्त्रिदोषजित् || भा.प्र.नि.. 6/40

**Rasa:** Amla pradhana pañcha rasa (Lavana varjita)

**Guna-**Laghu, Ruksha, Sheeta, Sara

**Virya-** Seeta

**Vipaka-**Madhura

**Doshakarma-Tridoṣahara**, especially Pitta-Shamaka, Amla Rasa-Vataghna, Madhurvipaka and Sheetavirya—Pittaghna, Ruksha and kashaya Rasa – Kaphaghna.

### Pharmacological action

Vayahsthāpana, Rasāyana, Chakṣuṣya, Vriṣhya, Kusthaghana, Dahahara, Medohara, Shophaghna, Keshya, Sandhanakara, Dahaprashamana, Pramehaghna, Jwarhara (fewer removers); Chardighna (treatment of vomiting); etc.<sup>[11,12]</sup>

### Formulations<sup>[13]</sup>

Chyavanaprāṣa, Brāhmarasāyana, Dhātṛīlauha, Amalaki Rasayāna, Dhātṛyavaleha, Dhātṛyariṣṭa, Āmalakāvaleha, Amalakighṛitam, Triphala churna, Phaltikadi kashaya Āmalakacūrṇa.

### Therapeutic uses

1. Prameha (Diabetes): When taken daily with Haridra (Curcuma longa), fresh Amalaki juice might help manage diabetes.  
हरिद्रां पिबेद्दर्शनामलकी फलानाम्<sup>[14]</sup> (च. चि. 6/26)
2. Jwara (Fever): Amalaki fruit juice cooked in ghee works wonders for Jwara.  
रसमामलकानां दृज्वारापहम्<sup>[15]</sup> (च. चि. 3/230)
3. Panduroga (Anaemia): Amalaki churna (Powder) works wonders for Panduroga, especially when combined with honey.  
धात्रीफलं वा मधुना वलिहयात्<sup>[16]</sup> (सु. उ. 44/27).
4. Kamala (jaundice): Amalaki juice combined with grape juice can be used to treat Kamala.  
कामला.आमलकी रसः<sup>[17]</sup> (च. चि. 16/114)
5. Raktapitta (Bleeding Disorder) - Madhu (honey) and Sharkara (sugar) combined with Amalaki churna is used to make Raktapitta, and Virechaka (Purgative) is very helpful in this case.  
आमलकानि वा। विशेषतः<sup>[18]</sup> (च. चि. 4/57-58)
6. Hikka (Hiccough) - Hikka is controlled by combining the juice of Kapitha and Amalaki with Pippali powder and honey.  
पिप्पलीमधुयुक्तो धात्रीकपिथयोः<sup>[19]</sup> (च. चि. 17/135)
7. Vatarakta (Gout-Arthritis): In Vatarakta, the decoction (Kasaya) of Harida and Amalaki is highly focused on the end outcome.

आमलक.....पयायेत्<sup>[20]</sup> (सु.चि. 5/10)

8. Kasa (Cough): A simple remedy for a cough is to consume ghee together with a milk-boiled Amalaki churna.

चूर्ण.....हिताशी<sup>[21]</sup> (अ.ह.चि. 3/78)

### Systemic Uses

**Nervous System:** Cerebral Palsy (Mastika Daurbalya), particularly visual weakness (Drishtimandhya).

**Digestive system:** Constipation, abdominal disorders, jaundice (Kamala), haemorrhoids (Arsha), dyspepsia, acidity (Amlapitta), and liver disorders.

**Circulatory system:** Heart failure and blood biliary illness (Raktapitta).

**Respiratory System:** Common respiratory disorders such as tuberculosis (Yakshma), hiccups, and coughs.

**Reproductive System:** Excessive uterine bleeding, Spermatorrhea (Shukramrha), Excessive vaginal discharge (Shwetapradar).

**Urinary system:** Amalaki juice works wonders for diuresis (Mutrakrichh), Urine incontinence (Mutraghata), Gonorrhoea (Prameha), etc.

**Skin illnesses:** It works well for several skin illnesses as well as leprosy (Kushtha) erysipelas, also known as Anthony's fire (Visharpa).

**Assimilation:** It treats fatigue (Kshaya), inflammation (Shotha), and infirmity (Daurbalya).

Besides the conditions mentioned above, it can also be utilised for burning, typhoid fever (Vishama Jawara), chronic fever (Jirna Jwara), and excessive thirst (Trishna).

**Chemical constituents of Fruit pulp<sup>[22]</sup>** Moisture 81.2%, protein 0.5%, fat 0.1%, carbohydrates 14.1%, mineral matter 0.7%, fibre 3.4%, Ca 0.05%, K 0.02%, Fe 1.2 mg/100g, vitamin B 0.2 mg/100g, vitamin C 600 mg/100g, Phyllembelin, phyllemblic acid, acid, emblicol, quercetin, hydroxymethyl furfural, ellagic acid, pectin, putranjivan A, two new hydrolysable tannins called emblicannin A and B, punigluconin, and pendunculagin.

### Research-based Pharmacological Activities of Amalaki

**Antipyretic, Analgesic, and Anti-inflammatory Activities:** Strong antipyretic, analgesic, and anti-inflammatory properties can be found in extracts made from the leaves and fruits of Amalaki (Embllica officinalis), with inflammatory characteristics.<sup>[23,24,25,26]</sup>

**Immunomodulatory Activities:** Amalaki, or Emblica officinalis, possesses the capacity to stimulate the immune system, a potent and safeguarding barrier against recently surfaced viral illnesses.<sup>[27]</sup>

**Antioxidant Activity:** Amalaki fruit is rich in low molecular weight hydrolysable tannins and vitamin C. These ingredients turn amalaki into a strong source of antioxidants.<sup>[28]</sup>

**Anticancer Activity:** The amazing berry *Embellica officinalis* is well-known for its ability to both treat and prevent cancer. It also lowers the side effects associated with chemotherapy and radiation, which are commonly used to treat cancer.<sup>[29,30,31]</sup>

**Antidiabetic Activity:** Blood sugar levels are lowered by the fruit's high vitamin C content. It activates the islets of Langerhans, a solitary population of cells that release the insulin hormone.<sup>[32]</sup>

**Hepatoprotective Activity:** Numerous hepatotoxic substances, including heavy metals, ethanol, paracetamol, carbon tetrachloride, ochratoxins, hexachlorocyclohexane, and antitubercular medications, are protected against by Amalaki. The phytochemicals found in Amalaki, including gallic acid, ellagic acid, quercetin, and corilagin, have hepatoprotective properties against various xenobiotic substances.<sup>[33]</sup>

**Anti-Ulcer and Wound Healing Activity:** Because of its offensive and defensive mucosal components, Amalaki (*Embellica officinalis*) has a considerable ulcer healing impact and protective properties.<sup>[34]</sup>

**Anti-ageing Activity:** In addition to improving nutrition, Amalaki's high flavonoid and vitamin C content inhibits dangerous free radicals that hasten cell aging.<sup>[35]</sup>

## DISCUSSION

In Ayurvedic medicine, Amalaki (*Embellica officinalis*) is highly valued. One of the most adaptable plants, it has a variety of therapeutic uses. One of the first known medicinal plants mentioned in Indian philosophy is Amalaki. This multipurpose medicinal plant is a unique source of chemicals with a wide range of chemical structures. Although the Ancient Text of Indian Medicine mentions a few medicinal purposes, not much research has been done on the admirable medical uses of these substances; therefore, more research is required to fully utilise their therapeutic potential in the fight against illness. The focus of this review has been on the utilisation of Amalaki due to its pharmacological and functional properties. According to its description, Amalaki is an Ayurvedic Rasayana drug that has a regenerating impact on bodily tissues. The main ingredient of the Rasayan medicine Chyavanprash, Amalaki, is one of the three fruits used to manufacture Triphala. Amalaki is the food that contains the most vitamins C. Amalaki promotes healthy excretion, metabolism, and digestion. It has anti-inflammatory properties and provides nourishment for the body's tissues and organs. For the cardiovascular and respiratory systems, Amalaki fruit is restorative and immune-boosting.

It balances the digestive fire, or jatharagni. Amalaki supports a robust immune response by boosting Ojas, or physical vigour, energy, strength, and capability. Amalaki (*Embellica officinalis*) soothes Vata, Pitta, and Kapha, but

it calms Pitta in particular. All of the body's tissues are rejuvenated by Amalaki (*Embellica officinalis*), which also encourages the growth of Ojas, the essence of youth and immunity.

## CONCLUSION

Amalaki plays a significant role in the Indian traditional medical system known as Ayurveda. All things considered, Amalaki is a potent plant with therapeutic benefits for many different systems of the body. It is well known to support vitality, reproductive health, and physical well-being. Amalaki, which has the largest concentration of vitamin C and other vital nutrients, also prevents a host of health issues because of its potent antioxidant and biological qualities. We have attempted to provide an overview of the traditional and scientifically validated use of amalaki in this article. It has different Sansthanik Karmas (activities of the organs according to their systems). Despite the fact that Amalaki has been used for centuries for a variety of medical purposes, it is imperative that its medicinal benefits be investigated scientifically and demonstrated at the molecular level using the most recent scientific equipment and procedures.

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