

ANTI-AGEING EFFECT OF AMALAKI: A REVIEW

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ABSTRACT

Ayurveda is one of the ancient systems of medicine, which, is not only a health care system but a form of lifestyle adopted to maintain perfect balance and harmony within human existence. Therapeutics (*Bheshja*) in Ayurveda is said to be of two types *Urjaskara* (energizers/strengthening agents) and *Roga shamak* (curing agent). *Rasayana* comes under the first category and has dual action, that is, it maintains the healthy state of the body and also alleviates the disease. *Rasayana* is one among the major classification of Ayurvedic therapeutics which can be advised to both diseased and healthy individual in order to strengthen one's body as well as mind. Ayurveda offers vast amount of information on principles of anti-ageing activity and anti-ageing herbs, one such *Rasayana* herb is "INDIAN GOOSEBERRY" commonly known as "AMALAKI" or "AMLA" that enhances and restores the process of conservation, transformation and resurgence of the life force. It mainly has vitamin-c content, which fight against free radicals and reduces the signs of ageing. This action is likely to be responsible for its rejuvenating property. It also has aphrodisiac, immunomodulatory and anti-oxidant properties. This article presents a review on Anti-ageing (*Vayasthapana*) effect of Amalaki.

Keywords: *Amalaki, Rasayana, Rejuvenation, Anti-ageing, Anti-oxidant.*

INTRODUCTION

Ageing is a natural process in the words of Seneca, "Old age is an incurable disease" but more recently Sir James Sterling Ross Commented: You do not heal old age, you protect it; you promote it; you extend it¹. Ageing is an inevitable, always progressive,

biological process associated with decline in physical and mental functions. Ageing occurs at different levels such as social, behavioral, physiological, morphological, cellular and molecular level. There is a sharp increase in variation in function with ageing. An organ

function appears to undergo a moderate decline with age².

Ayurveda is basically the science of life and longevity. *Jara-tantra* is the highly evolved branch in Ayurveda which deals with concept of Ageing and Age related problems³. *Ayurveda Rasayana tantra* describes technique providing multidimensional solutions to Ageing, premature ageing and their complications. Scientific studies in Ayurveda have proven the preventive efficacy for Ageing just because of Rasayana therapy. In Ayurveda, concept of Anti-ageing is embodied in *Rasayana*.

The word *Rasayana* (*Rasa+ayana*) refers to nutrition and its transportation in the body. “*Rasa*” means nutrition and “*Ayana*” means channels and here *Rasayana* essentially means nutrition at all levels from macro to micro-cellular level. *Rasayana* brings about normalcy of *Rasa Dhatu* and thereby maintain other *Dhatu* in equilibrium. Such state of improved nutrition prevents ageing which can be understood as “*Vayasthapana*.”

AGEING IN AYURVEDA

Ayurveda considers ageing as the *Swabhava*, i.e. the very nature of life process. The life is time-bound and is bound to undergo senescence and death leaving behind its eternal conscious element the *Atman* which is immortal. Still a long healthy life is the most cherished wish of mankind. The process of senescence is hallmarked by involutionary changes in the *Panchbhautic* and *Tridoshika* pattern. *Kapha*, *Pitta*, *Vata* dominates in young age, middle age and old age

respectively. *The Vata Dosha* overwhelms the old age.

RASAYANA THERAPY

Rasayana is the science of nutrition aiming to procure the best qualities of body tissues (*Dhatu*s) leading in turn to longevity, immunity, resistance, against disease and improved mental faculties. *Rasayana* is one of the Eight branches of Ayurveda and it encompasses rejuvenate life style, healthy dietetics and rejuvenate herbomineral nutraceuticals.

CLASSIFICATION OF RASAYANA⁴

1. According to Mode of Administration of Rasayana

- A. *Kutipravesika* (In door regimen)
- B. *Vatatapika* (Outdoor Regimen)
- C. *Droni praveshika* (Special Regimen)

2. According to purpose of Administration

- A. *Kamyas Rasayana* (promotor of normal health)
 - 1. *Prana Kamyas* (promotor of life-vitality and longevity)
 - 2. *Medha Kamyas* (promotor of intellect)
 - 3. *Sri Kamyas* (Promoter of complexion and Lusture)
- B. *Naimittika Rasayana* (Promoters of specific vitality in specific disease)
- C. *Ajasrika Rasayana* (Dietry Rasayana)

3. As per contents

- A. *Ahara Rasayana* (Dietary Modalities)
- B. *Acara Rasayana* (Behavioural Modalities)
- C. *Dravya Rasayana* (Drug based measures)

1. CLASSIFICATION OF RASAYANA ACCORDING TO AGE⁵

Age Group	Desired Effects	Rasayana Drugs
0-10	<i>Balya</i>	<i>Vaca</i>
11-20	<i>Vridhhi</i>	<i>Amalaki</i>
21-30	<i>Chabbi</i>	<i>Haridra</i>
31-40	<i>Medha</i>	<i>Shankhapushpi</i>
41-50	<i>Twak</i>	<i>Kumari</i>
51-60	<i>Dristi</i>	<i>Triphala</i>
61-70	<i>Shukra</i>	<i>Kapikachhu</i>
71-80	<i>Vikrama</i>	<i>Chyavanaprash</i>
81-90	<i>Buddhi</i>	<i>Brahmi</i>
91-100	<i>Karmendriya</i>	<i>Abhyanga</i>

2. VARIOUS CONTEMPORARY THEORIES OF AGEING

1.The wear and tear theory	10.Mitochondrial theory
2.The neuroendocrine theory	11.Errors and repair theory
3.The genetic control theory	12.Redundant theory
4.The free radical theory	13.Cross-linkage theory
5.Waste accumulation theory	14.Autoimmune theory
6.Limited number of cell division	15.Caloric restriction theory
7.Hayflick limit theory	16.Gene mutation theory
8.Death hormone theory	17.The rate of living theory
9.Thymic-stimulating theory	18.The telomerase theory

“Amalaki” is foremost amongst the Anti-ageing drugs. It is the best Rejuvenating herb. It is a potent Anti-oxidant, rich in Vitamin-c, Tannin and Gallic acid. It has properties like:-

- *Rasayana* (Adaptogenic)
- *Ajara* (Anti-ageing)

- *Ayushprada* (prolonged cell life)
- *Sandhaniya* (Improves cell migration and cell binding)⁶
It promotes, protects and extends youthful state and thus, curtailing Ageing process.

3. VERNACULAR NAMES OF EMBLICA OFFICINALIS:

Sanskrit	<i>Amalaki, Dhatriphala, Amalika, vayastha, sriphalam</i>
Hindi	<i>Amla</i>
English	<i>Indian Gooseberry, Embelic Myrobalan</i>
Kashmir	<i>Aonla</i>
Tamil	<i>Nelli</i>
Gujrati	<i>Ambala</i>
Malayalam	<i>Nelli Kayi</i>

4. BOTANICAL CLASSIFICATION:-

Kingdom	Plantae
Division	Angiospermae
Class	Dicotyledonae
Order	Geraniales
Family	Euphorbiaceae

Genus	Emblica
Species	Officinalis Geartn

MORPHOLOGY:-*Amla* is a deciduous tree, which is medium in size, and it grows up to 8 to 18 meters.

HABITAT: - *Amla* is native to India it grows in tropical regions; therefore a warm, hot and humid climate is required.

ATTRIBUTES:-

RASA⁷: *Amla*, *Madhura*, *Katu*, *Tikta*, *Kashaya*

ANURASA: *Madhura*

GUNA⁷: *Guru*, *Ruksha*, *Sheeta*

VIRYA:*Sheeta*

VIPAKA: *Madhura*

THERAPEUTIC EFFECT: Rejuvenation

EFFECT ON HUMORS: Quietens all three *doshas: vata, pitta, and kapha* and is especially effective for *pitta* and *kapha Dosh*.⁸ i.e *Vata* by its *Amlatwa*; *Pitta* by *Madhuryata* and *sheetata*; *Kapha* by *Kashayatwa androokshatwa*⁹. It is one of the best *Rasayana*¹⁰ and best among the *Vayasthapana* (Anti-ageing).¹¹

5. CHEMICAL CONSTITUENTS:

Hydrolysable Tanins	Emblicanin A and B ,Punigluconin,Pedunculagin,chebulinic acid(Ellagitanin), Chebulagic acid (Benzopyran tannin) ,Corilagin,Ellagotanin
Alkaloids	Phyllantine,Phyllembain,Phyllantidine
Phenolic compounds	Gallic acid, Methyl gallate , ellagic acid, trigallayl glucose
Amino acids	Glutamic acid , Proline, Aspartic acid ,Alanine,Cysteine,Lysine
Carbohydrates	Pectin
Vitamins	Ascorbic acid
Flavonoids	Quercetin,kaempferol
Organic acids	Citric acid

MEDICINAL ACTIVITIES OF EMBLICA OFFICINALIS

- Anti-oxidant
- Immunomodulatory
- Anti-tumor activity
- Anti-ulcer activity
- Hypolipidemic activity
- Hepatoprotective activity
- Anti-inflammatory activity
- Antimicrobial activity
- Hypoglycemic activity
- Neuroprotective activity

DISCUSSION

Amla fruit has a special place in Ayurveda, a nurturing herb that is credited with a number of health benefits. In Ayurvedic tradition, the fruit forms an integral part of medicinal preparations that are used to support wellness and healthy Ageing.¹²

Charka samhita mentioned *Amalaki* is viewed one of the most potent and nutritious drug and also it says (*Amalaki vayasthapnanam sreshtham*)¹³“*Amalaki* is the best rejuvenating herb” and specifically observed that *Amalaki* is a great *Rasayana* that helps to protect from disease and reduce the possibilities of

premature Ageing. *Amla* has low molecular weight hydrolysable Tanins (Emblicanin A and B) thereby it is considered as one of the more strong antioxidant herb in Ayurveda.¹Free radicals are natural by-products of our own metabolism. Apart from supplementing nutrition *Amalaki* gets rid of these free radicals which enhance cell ageing due to high amount of vitamin-c and flavonoids in it.

Moreover a study in *Drosophila* noted that daily consumption of feed with an *Amla* content was able to increase the days survived from 41.9 days to 76.8 days (83% increase), although a large variance was detected (76.8 days being the mean value, with +/- 40.6 days for maximal and minimal values). This increase in longevity was met with an increase in fecundity.¹⁵

CONCLUSION

The ageing process is a challenging human experience common to everyone and the desire to look young prevails in the majority of us. The biggest challenge with geriatric problem is that in most of cases the condition cannot be attributed to a single cause. In such condition the conventional medical therapy fails to come out with effective management plan and hence is severely compromised.

Ayurveda have proven the preventive efficacy for Ageing (*vridh awastha*) and its conditions just because of *Rasayana* herbs. Modern research trends mainly revolve around principles of Anti-ageing activity described in Ayurveda; *Vayasthapana* (Age defying), *Shoth hara* (Anti-inflammatory) and many

Rasayana herbs such as *Amalaki*, *Mandukparni* are used. *Amalaki* is the foremost herb amongst them. Ayurveda is a perfect holistic system where various *Rasayanas* and rejuvenation herbs can produce a profound effect on human body and thus help a person cope with the day to day stresses of life, minus the anxiety.

Hence, *Amalaki* prevents Ageing and provides longevity, immunity against disease, improves mental and intellectual competence.

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