

Amla Berry (Indian Gooseberry)

Latin Name: Emblica officinalis

ANTIOXIDANT; RESTORATIVE; High in VITAMIN C

USE All parts of the tree, especially the fruit

Prevalent in India and some parts of Asia

HISTORY

- 1) Circa 400-200 BCE on Charaka Samhita- ancient Indian Ayurvedic Medicinal Text:
"Amalaki is the best among rejuvenative herbs."
- DIGESTIVE; CARDIO TONIC; LIVER protective; VISION care
- One of three Ingredients of popular Ayurvedic formulation, TRIPHALA: Used for the above and also in treatment of Cancer

QUALITIES

- 1) NUTRIENTS: Excellent source of Vitamin C; has Chromium; Zinc; Copper
- Amino Acids; High in antioxidants
- 2) ENERGY Tonic
- General Debility; Gray Hair; Hair Loss
- Study: OXIDATIVE Stress & Arteriosclerosis in DIABETICS
- Studies: lowering BLOOD GLUCOSE levels in diabetics
- 3) DIGESTIVE
- Indigestion; Colitis; Constipation; Diarrhea; Gastritis; Stomach and Colon Inflammation; ULCERS; Cleanses Intestines; Worms
- 4) LIVER - Hepatitis; Jaundice
- 5) CARDIOVASCULAR- Study: Cardiovascular Health despite Acute Stress
- PALPITATIONS; HEART TONIC; Reduces Blood CHOLESTEROL; Arteriosclerosis
- ANEMIA; Bleeding Gums; Rebuilds BLOOD, BONES, CELLS, TISSUES; SPLEEN
- 6) OTHER
EYESIGHT; Eye Inflammations and Infections; Degeneration
ANTIOXIDANT; Radiation; Sunscreen and in Skin Care products
Obstinate URINARY conditions, inflammation
CANCER; Inhibits tumor growth

Amla References

Herb History and General Information

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Memorial Sloan Kettering Cancer Center. See www.aboutherbs.com accessed July 17, 2014

Studies

Biswas 2001 at www.pubmed.gov accessed July 17, 2014. An open prospective multicentre clinical trial conducted in patients suffering from various ophthalmic disorders with a herbal eye drop Ophthacare which contained *Emblica officinalis* showed that it is useful in a variety of infective, inflammatory and degenerative ophthalmic disorders.

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Chaudhuri 2002 at www.pubmed.gov accessed July 17, 2014. A standardized extract of *Phyllanthus emblica* (trade named *Emblica*) was found to have a long-lasting and broad-spectrum antioxidant activity and it is suitable for use in anti-aging, sunscreen and general purpose skin care products.

Henson, Shari, Amla Extract Improves Endothelial Function in Patients with Type 2 Diabetes, *HerbClip*. February 28, 2014 (No. 091335-491). Austin, TX: American Botanical Council. Review of Effects of Phyllanthus emblica extract on endothelial dysfunction and biomarkers of oxidative stress in patients with type 2 diabetes mellitus: A randomized, double-blind, controlled study by Usharani P, Fatima N, Muralidhar N., *Diabetes Metab Syndr Obes*. 2013;6:275-284. doi: 10.2147/DMSO.S46341

Henson, Shari, Combination of Epigallocatechin-3-gallate and Amla Extract Reduces Risks for Diabetic-uremic Patients. *HerbClip*. November 15, 2011 (No. 071132-436). Austin, TX: American Botanical Council Review of Efficacy of epigallocatechin-3-gallate and amla (*Emblica officinalis*) extract for the treatment of diabetic-uremic patients by Chen T-S, Liou S-Y, Wu H-C, et al., *J Med Food*. 2011 Jul-Aug;14(7-8):718-723

Jacob 1988 at www.pubmed.gov accessed July 17, 2014. Study of the effect on total serum cholesterol and its lipoprotein fractions of supplementation of the diet with amla (*Emblica officinalis*) in normal and hypercholesterolaemic men aged 35-55 years showed a decrease in cholesterol levels.

Manjunatha 2001 at www.pubmed.gov accessed July 17, 2014. Chyawanprash, an ancient Indian dietary supplement containing vitamin C (34 mg/100 g) derived from amla (*Emblica officinalis*) reduces postprandial glycemia in oral glucose tolerance test & reduces blood cholesterol level to a greater extent than vitamin C in 10 normal healthy adult male volunteers.

Oliff, Heather S., PhD, Amla Decreases Cardiovascular Changes Induced by Acute Stress. *HerbClip*. April 30, 2014 (No. 041451-495). Austin, TX: American Botanical Council. Review of Evaluation of Phyllanthus emblica extract on cold pressor induced cardiovascular changes in healthy human subjects by Fatima N, Pingali U, Pilli R., *Pharmacognosy Res*. 2014;6(1):29-35

Xia 1997 at www.pubmed.gov accessed July 17, 2014. The medicinal plant, Phyllanthus emblica is good for anti-hepatitis, anti-cancer, anti-tumor and regulation of stomachal function. It is also regarded as a traditional immunomodulator and a natural adaptogen. [Article in Chinese]

[Additional info on Studies:](#)

Type 2 DIABETES

Usharani P, Fatima N, Muralidhar N. Amla Extract Improves Endothelial Function in Patients with Type 2 Diabetes. *HerbalGram* 2013, Issue: 102 Page: 44-45, </herbalgram/issue102/HG102-resrvw-aml.html> 2014-06-01 [19.47 KB]

...In a pilot clinical study, it had significant antihyperglycemic and antihyperlipidemic effects in patients with diabetes....

...Eighty patients completed the study. They were randomly assigned (20 in each group) to receive either 1 capsule of 250 mg amla twice daily, 1 capsule of 500 mg amla twice daily, atorvastatin 10 mg at bedtime and matching placebo in the morning daily, or placebo twice daily for 12 weeks....

...After 12 weeks, the reflection index (RI) was significantly reduced in the 250 mg amla, 500 mg amla, and atorvastatin groups compared with baseline values ($P < 0.001$ for all). Compared with the placebo group, the mean absolute change for all 3 active treatments was statistically significant ($P < 0.001$). Furthermore, 500 mg amla and atorvastatin significantly improved endothelial function compared with the 250 mg dose of amla.

...The 250 mg amla, 500 mg amla, and atorvastatin groups experienced significantly reduced nitric oxide and malondialdehyde levels, and increased glutathione levels compared with baseline ($P < 0.001$), suggesting improved antioxidant status. Also in the 3 active treatment groups, CRP levels decreased significantly compared with baseline and placebo ($P < 0.001$), indicating reduced inflammation. Lipid profiles improved in all 3 active treatment groups; serum levels of total cholesterol, low-density lipoprotein cholesterol, and triglyceride were significantly reduced and high-density lipoprotein cholesterol levels were increased. Average plasma glucose levels also decreased after 12 weeks in all 3 active groups as measured by HbA1c.

...Further analysis showed that 500 mg amla and atorvastatin each had a better effect than 250 mg amla on all biomarkers....

...In conclusion, both the proprietary amla extracts and atorvastatin significantly improved endothelial function and decreased markers of oxidative stress and inflammation in patients with diabetes. The authors suggest that amla as an adjunct to current hyperlipidemia agents may provide improved protection against arteriosclerosis and CVD. Amla "extract may be a good therapeutic alternative to statins in diabetic patients with endothelial dysfunction because it has the beneficial effects of the statins but without the well known adverse effects of these agents." Further studies are needed in larger numbers of patients to reinforce these findings.

—Shari Henson

HYPERGLYCEMIA

Deng R. A review of the hypoglycemic effects of five commonly used herbal food supplements. Recent Pat Food Nutr Agric. April 1, 2012;4(1):50-60; See Herbalgram.com: 12-14-2012, HC# 081214-462; /herbclip/462/081214-462.html 2012-12-14 [24.909 KB]

...Amla is an edible fruit from trees in the Phyllanthaceae and Euphorbiaceae families. The fruit is used to treat a variety of disease conditions, including hyperlipidemia and diabetes. Two recent patents made claims that amla could be used for managing hyperglycemia. These claims were made based on the results of 4 clinical trials conducted with patients who had diabetes.

In the first trial, fasting blood sugar (FBS) levels and glycated hemoglobin (HbA1c) were significantly decreased in patients receiving the composite supplement, whereas the control group remained unchanged. The second trial indicated a significant

reduction in both FBS and HbA1c levels in all 3 age groups of the diabetics. The third trial showed no significant reduction in FBS or HbA1c; however, patients with high FBS levels had a significant reduction in FBS, and a non-significant reduction in HbA1c levels. In a fourth clinical study, results indicated a significant reduction of FBS compared to patient baseline levels, but no significant effect for HbA1c levels was observed.

Based on the Jadad scale, the quality of the amla trials ranged from 0 to 4. Thus, there is strong scientific evidence (Level B1) to support that the composite supplements with amla are effective for lowering blood glucose levels in diabetics, although there is not enough evidence to support that amla was effective by itself...

...In summary, this review evaluated the efficacy of 5 herbal supplements that have been reported to be effective for controlling hyperglycemia. Most trials that evaluated the effects of amla were composite supplements that contained other herbs which made it difficult to evaluate an effective dose for amla as an individual supplement.

HEART STRESS

Fatima N, Pingali U, Pilli R. Amla Decreases Cardiovascular Changes Induced by Acute Stress. Pharmacognosy Res. 2014;6(1):29-35./herbclip/427/031113-427.html 2011-06-30 [14.723 KB]

Herbclip Date: 04-30-2014 HC# 041451-495

Re: Amla Decreases Cardiovascular Changes Induced by Acute Stress

Fatima N, Pingali U, Pilli R. Evaluation of Phyllanthus emblica extract on cold pressor induced cardiovascular changes in healthy human subjects. Pharmacognosy Res. 2014;6(1):29-35.

Stress causes increases in blood pressure, and therefore, acute and chronic stress are risk factors for the development and progression of cardiovascular disease. Stress releases free radicals, which can create pathophysiological changes by damaging cardiovascular cells. Amla (Indian gooseberry; Phyllanthus emblica syn. Emblica officinalis) fruit extract contains a large concentration of vitamin C and provides free radical scavenging during oxidative stress. The purpose of this prospective, randomized, double-blind, placebo-controlled, crossover study was to evaluate the effect of amla fruit extract on stress-induced cardiovascular parameters in healthy subjects.

Healthy men (n = 12, aged 20-30 years) participated in this study conducted at Nizam's Institute of Medical Sciences; Punjagutta, Hyderabad, India.

...At day 14, in response to the CPT, the following changes were observed in the amla group:

- Significantly decreased mean systolic and diastolic BP compared with baseline and placebo (P < 0.05 through P < 0.001 depending on the location of measurement).
- Significant 7% decrease in the augmentation index (a measure of central aortic pressure, and demonstration of arterial stiffness) compared with baseline (P < 0.01) and placebo (P < 0.001).
- Significant 14% increase in the SEVR compared with baseline (P < 0.01) and placebo (P < 0.001).

... The authors conclude that this formulation of amla fruit extract may have beneficial effects in reducing stress-induced cardiovascular changes. They state that the antioxidant and cardioprotective actions of amla, which have been demonstrated in vitro and in vivo, help to explain the possible mechanism of action in reducing cardiovascular changes produced by the CPT.

While the results of this pilot study are encouraging, they cannot be extrapolated to people already at risk for developing cardiovascular disease. Even for healthy individuals, several caveats apply when interpreting the findings: the study was not designed to assess cardiovascular risk reduction; only the effects of amla on acute stress were measured; the trial duration was too short to assess whether additional benefits might accrue with longer-term use; and the sample size was too small to provide statistically significant evidence of effectiveness. If the intent is for people to take amla fruit extract to decrease the risk of cardiovascular events, then additional research is needed to evaluate long-term efficacy and safety under acute and chronic stress conditions. In future trials, a broader range of stress tests and direct measures of antioxidant effects would further strengthen the evidence base.

—Heather S. Oliff, PhD

Amla Monograph

<http://www.101herbs.com/emblica-officinalis.html>

Introduction

Amla is one of the most celebrated herbs in the Indian traditional medicine system, Ayurveda, Amla's traditional uses include as a laxative, eye wash, appetite stimulant, restorative tonic, and to treat anorexia, indigestion, diarrhea, anemia, and jaundice. Amla is becoming increasingly well known for its unusually high levels of Vitamin C, which is resistant to storage and heat damage due to cooking.

Origin

It is found natively in India. Indian gooseberry has been used as valuable ingredient of various medicines in India and abroad.

Chemical composition/ key active constituents

Amla is highly nutritious and is an important dietary source of Vitamin C, minerals and amino acids. The edible fruit tissue contains protein concentration 3-fold and ascorbic acid concentration 160-fold compared to that of the apple. The fruit also contains considerably higher concentration of most minerals and amino acids than apples. Glutamic acid, proline, aspartic acid, alanine and lysine are 29.6%, 14.6%, 8.1%, 5.4% and 5.3% respectively of the total amino acids. The pulpy portion of fruit, dried and freed from the nuts contains: gallic acid; tannin; sugar; gum albumin; crude cellulose; mineral matter; and moisture. Amla fruit ash contains chromium; zinc; and copper.

Remedies for

Indian Gooseberry or Amla is used for all Pitta diseases, all obstinate urinary conditions, anemia, biliousness, bleeding, colitis, constipation, convalescence from fever, cough, diabetes, gastritis, gout, hepatitis, hemorrhoids, liver weakness, to relieve stress, osteoporosis, palpitation, spleen weakness, tissue deficiency, vertigo rebuilds blood, bones, cells, and tissues. It increases red blood cell count and regulates blood sugar; heart tonic, cleanses mouth, stops gum bleeding, stops stomach and colon

inflammation; cleanses intestines, strengthens teeth, aids eyesight, worms, acidity, eye and lung inflammations, ulcerations, G.I. disorders, painful urination and internal bleeding.

About Herbs App

AMLA

Clinical Summary

Emblica officinalis is a deciduous tree prevalent in some parts of Asia. All parts of the tree, especially the fruit, are commonly used in traditional medicine for various ailments including diarrhea, jaundice, headaches, inflammation, and as a tonic (1). It is also one of the constituents of a popular Ayurvedic formulation, Triphala.

The activity of *E. officinalis* is often attributed to its antioxidant constituents, such as ascorbic acid, polyphenols, flavonoids, and tannins (2) (3). In vitro and in vivo studies indicate antioxidant (1) (4) (5), antibacterial (6), hepatoprotective (7), cardioprotective (3) radioprotective (8), antiulcerogenic (9), antitumor (10), analgesic (11), antidiabetic (12), and antihyperlipidemic (13) properties.

Clinical data are limited to a few studies that show benefit in patients with uremia (accumulation of constituents in the blood that are normally eliminated in the urine) by reducing oxidative stress (5); improving HDL and lower LDL-cholesterol levels in diabetic patients (16); and lowering lipid levels and blood pressure in patients with hyperlipidemia(17).

Because *E. officinalis* exhibits strong antioxidant effects, it may interfere with chemotherapy and radiation therapy.

Constituents

- Vitamins: Ascorbic acid, Thiamin, Riboflavin, Niacin
- Tannins: Emblican A, Emblican B
- Gallic Acid
- Diterpenes
- Triterpene lupeol
- Flavonoids
- Polyphenols (18)

Mechanism of Action

The antioxidant activity of *E. officinalis* is attributed to the high content of ascorbic acid (4) but it was discovered that such effects may be due to the tannins, Emblicanin A and Emblicanin B (1). The antidiabetic property of *E. officinalis* is thought to be due to its ability to reduce release of inflammatory cytokines that cause insulin resistance (12). *E. officinalis* may also play a role in preventing age-related hyperlipidemia by reducing nitric oxide synthase and cyclooxygenase-2 (COX-2) protein levels via inhibiting NF-kappa B activation (13). In another study, *E. officinalis* extracts were shown to induce apoptosis in mature osteoclasts, an effect that may limit bone resorption in pathologies associated with bone loss (15).

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TRIPHALA - Cancer

Baliga MS. Triphala, Ayurvedic formulation for treating and preventing cancer: a review. *J Altern Complement Med.* 2010;16(12):1301-1308. doi:10.1089/acm.2009.0633. See Herbalgram.com 02-15-2011 HC#011141-418; /herbclip/418/011141-418.html 2011-02-15 [34.187 KB]

Date: 02-15-2011 HC# 011141-418

Re: Triphala in the Prevention and Treatment of Cancer - Review of the Evidence
Baliga MS. Triphala, Ayurvedic formulation for treating and preventing cancer: a review. *J Altern Complement Med.* 2010;16(12):1301-1308. doi:10.1089/acm.2009.0633.

Made from three fruits (amla [*Phyllanthus emblica*], chebulic myrobalan [*Terminalia chebula*], and belleric myrobalan [*Terminalia bellerica*]), Triphala is one of the most common Ayurvedic preparations. It is formulated in two variations: one uses equal portions of all three fruits; the other, one part chebulic myrobalan, two parts belleric myrobalan, and four parts amla. In Ayurveda, Triphala is a tridoshic rasayan, balancing and strengthening the three elements of human life: vata, pitta, and kapha. (See an explanation of these concepts from the Ayurvedic Foundation at: <http://www.ayur.com/dosha/tridosha.html>.) In practice, Triphala is used for gastric and digestive issues, cardiovascular problems, vision disorders, liver problems, and inflammation. It has been reported effective for anemia, jaundice, asthma, fever, chronic ulcers, leucorrhea, and pyorrhea. Triphala exhibits antibacterial, antimalarial, antifungal, antiallergic, and antiviral effects. Triphala is a cardi tonic and reduces myocardial necrosis and serum cholesterol. It is hepatoprotective, and has also been reported to have antiaging effects and to improve mental function. It further potentiates adrenergic function, important in stress recovery.

Studies performed since 2000 suggest that Triphala may be antioxidant, antimutagenic, antineoplastic, chemoprotective, radioprotective, and chemopreventive, with a possible role in cancer prevention and treatment. This article summarizes the recent findings.

... Several mechanisms may contribute to Triphala's anticancer effects, including free radical scavenging, increased antioxidant enzyme production, reduced cellular damage, inhibition of lipid peroxidation, and anti-inflammatory, antimutagenic, anticlastogenic, and immunomodulatory effects... —Mariann Garner-Wizard

REDUCES RISKS for DIABETIC-UREMIC PATIENTS

Chen T-S, Liou S-Y, Wu H-C, et al. Combination of Epigallocatechin-3-gallate and Amla Extract Reduces Risks for Diabetic-uremic Patients. See Herbalgram.com 11-15-2011 HC# 071132-436. /herbclip/436/071132-436.html 2011-11-15 [16.018 KB]

Hemodialysis, used for patients with end-stage renal failure to remove low-molecular-weight metabolic waste materials, can activate neutrophils, which release reactive oxygen species into the blood. This so-called neutrophil burst results in increased oxidative stress in those patients. Other factors, including infection, overdose of iron supplements, and complications, can also increase the level of oxidative stress in uremic patients. In diabetic patients, particularly, regular hemodialysis along with diabetic complications can lead to high levels of oxidative stress. Supplementing

antioxidants might be a convenient and economic way to reduce oxidative stress in those patients, say the authors....

...Included in the study were 13 uremic patients with diabetes and 15 healthy subjects. The healthy subjects were significantly younger than the diabetic subjects.

...The authors report that the EGCG/AE mixture significantly improved antioxidant defense as well as diabetic and atherogenic indices in the diabetic-uremic patients. ...

—Shari Henson

HerbClip News 06-30-2011

Amla – The Nurse Herb

Amla(*Phyllanthus emblica* syn. *Embolica officinalis*) is known by several names including amalaki, dhatri, Indian gooseberry, and the nurse as the herb acts like a nurse in its healing properties. The fruit is considered sour, cooling and sweet, benefits all tissues, and increases vital energy or Ojas. Amla has been used as a nutritive tonic, rejuvenative, aphrodisiac, laxative, astringent, hemostatic, and refrigerant.

Ayurvedic practitioners have prescribed amla for bleeding disorders, anemia, diabetes, gastritis, hepatitis, osteoporosis, constipation, liver and spleen weaknesses, early graying of hair and hair loss, general debility and tissue deficiency, and vertigo.

The Charaka Samhita, one of the oldest Ayurvedic medicinal texts (circa 400-200 BCE), states that, "Amalaki is the best among rejuvenative herbs." It is used to increase red blood cell count, to rebuild and maintain tissues, and to strengthen bones (it is also good for strengthening hair and nails and is used to help them grow). Amla is said to improve eyesight, heal gums prone to bleeding, and relieve inflammation of the stomach and colon.

Amla fruit comes from a moderate-sized deciduous tree that grows in the subcontinent of India. The tree is long-living, and the herb is believed to promote longevity as well as love and good fortune.

Considered sattvic in Ayurveda and with its many healing abilities, it is little wonder that amla is being examined for its potential in cancer prevention and treatment (See HC 031113-427). With its capabilities to strengthen the various systems of the body, amla, which can be consumed in chutneys and relishes as well as medicinal preparations, may provide the body's immune system the strength to protect it from a number of modern ailments and diseases.

Lori Glenn, Managing Editor