



# Role of Herbs in cosmetics





# Aloe Vera

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- ✓ Aloe vera belongs to the family Liliaceae, and is commonly called Quargandal, Ghratkumari, Gheekvar, katraazhai or kumari.
- ✓ It is widely used in medicines. It has been used to treat constipation, burns, genital herpes, dandruff, osteoarthritis, inflammatory bowel disease, asthma and epilepsy.
- ✓ With the improvement in cosmetology, it has been proved that Aloe vera is a very important component of cosmetics.
- ✓ Aloevera is a herbal plant species belonging to liliaceae family that is found only in cultivation, having no naturally occurring populations, although closely related aloes do have presence in northern Africa.
- ✓ It is an ingredient in many cosmetics because it heals, moisturizes, and softens skin. Simply cut one of the aloe vera leaves to extract the soothing gel. Aloe vera contains amino acids like leucine, isoleucine, saponin glycosides that provide cleansing action, vitamins A,C,E,B, choline, B12 and folic acid and provide antioxidant activity.



# Active Principal Components

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The active components of plant are anthraquinones, chromones. The other active principles of Aloe include hydroxyanthrone, aloe-emodin-anthrone 10-C-glucoside.

The pungent yellowish gel containing anthraquinones and glycosides has been reported from the middle part of leaf. The anthraquinones and chromones has anticancer activity, antiinflammatory and evacuating.



# Cosmetics Uses

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- ✓ The Aloe gel (Muco-polysaccharides) gives chilling effect and also acts as a moisturizing agent. It also has role in rejuvenation of aging skin.
- ✓ Aloe vera gel gloves improved the skin integrity, decrease appearance of acne wrinkle and decrease erythema.
- ✓ The hardened skin cells become softer by the applied form of amino acids present in gel. Zinc proceeds as an astringent to tighten pores.



# Medicinal Uses

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- ✓ Aloe vera is anthelmintic, aperients, carminative, diuretic, stomachic and Juice is used in skin care medicine, dyspepsia, amenorrhea, burns, colic, hyperadenosis, hepatopathy, constipation and dropsy carbuncles.
- ✓ The gel of this plant, is used for helminthiasis in children and is a purgative and anthelmintic.
- ✓ A variety of glycoprotein present in Aloe vera juice has been reported to have anti-tumor and antiulcer effects and to increase proliferation of normal human dermal cells.
- ✓ Traditionally, Aloe vera gel is used both, external (treatment of wounds, minor burns, and skin irritations) and internally to treat constipation, coughs, ulcers, diabetes, headaches, arthritis, immune-system deficiencies



THE ART CONNECT





# Turmeric

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- ✓ Turmeric has been used in India as a medicinal plant, and held sacred from time immemorial. Turmeric is used in India as a spice, dye, cosmetic, medicines and home remedies.
- ✓ The fresh juice of turmeric is believed to have antiparasitic property in many skin afflictions. Turmeric mixed with gingelly oil is applied over the body to prevent skin eruptions.
- ✓ A coating of turmeric powder or a thin paste is applied on small pox and chicken pox patients to facilitate the process of scabbing.
- ✓ Turmeric has a very wide variety of phytochemicals including curcumin. The long list of uses include antiseptic, analgesic, anti-inflammatory, antioxidant, Collagen formation, antimalarial, insectrepellant, and other activities associated to turmeric.



# Properties

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According to Ayurveda, turmeric is Vranahara (ulcer healing), Varnya (improve complexion), Tvakdosahara (cure skin diseases), and Kandoohara (cure itching).

Till recently, before the onslaught of synthetic and herbal skin care products in the market, womenfolk were dependent more on turmeric, and they used to smear their bodies with a mixture of turmeric–sandal paste for gaining a golden glow to their skin.

Indian women apply it to the skin to reduce hair growth. Several Sanskrit synonyms of turmeric indicate its color-improving property (such as: varna-datri — one who gives color, indicates its use as enhancer of body complexion; hemaragi and hemaragini — both indicate golden color, meaning that it is used by women folk to get a golden complexion; yoshti priya, meaning favorite of young women, indicating its use for enhancing beauty; hridayavilasini, meaning giving delight to heart, charming; etc.).





# Properties

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It is considered as an effective wound-healing medicine and is strongly related to the social customs of India. If a wound occurs as a part of a ritual, only turmeric powder is used for healing.

The wounds are usually caused by old, rusty, unclean iron sword or hooks while performing certain rituals; even in such cases the wounds get healed without any pus formation or infection.





# Neem

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## **NEEM**

**Name of medicinal plant: Azadirachta indica**

**Family: Meliaceae**

**Common name: Indian: Holy tree, Indian lilac tree**

**Hindi: Neem, Nim**

**Sanskrit: Nimba**



# CONSTITUENTS

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The chemical constituents consist of various biologically active compounds that can be derived from the neem tree, including steroids, triterpenoids, alkaloids, carotenoids, ketones, flavonoids, and phenolic compounds. Biologically more active compound is azadirachtin, which is actually a mixture of seven isomeric compounds named as azadirachtin A-G and azadirachtin E is the most effective one.

Other compounds that have a biological activity are salannin, volatile oils, meliantriol and nimbin.



## Anti-dental caries

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A.indica also known as neem is used as a perfect tool for maintaining periodontium in India and South Asia since 1000 of years.

Neem has antiseptic, insecticidal, antiulcer, astringent, and for medicinal properties. Neem leaves are used for curing of gingivitis and periodontitis.

The anti-inflammatory action of neem is exhibited by inhibiting prostaglandin E and 5 HT and reducing the inflammation. "Azadiachtin" explains antibacterial action by destroying the bacterial cell wall and inhibiting the growth of bacteria via the breakdown of f cell wall disturbing the osmotic pressure which leads to cell death.



# Anti-dental caries

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Neem, the multipurpose medicinal plant is the unique source of different compounds. Ethno-botanical and traditional uses of natural compounds, especially of plant origin received much attention as they are well tested for their efficacy and generally believed to be safe for human use.

It is best classical approach in the search of new molecules for the management of various diseases. Immense research should be undertaken for a better economic and therapeutic utilization of the neem and its products



# Anti-Dental Caries

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A neem-extract dental gel significantly reduced plaque and bacteria (*S. mutans* and *Lactobacilli* inhibited *S. mutans* (bacterium species were tested) over the control group that used commercially available mouthwash containing the germicide chlorhexidine gluconate (0.2% w/v).

In preliminary findings, neem causing tooth decay) and reversed incipient carious lesions (that is, primary dental caries).



# Neem Properties

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## **Anti-ulcer**

Neem bark extract reduced human gastric acid hypersecretion, and gastroesophageal and gastroduodenal ulcers. After 10 weeks, the duodenal ulcers were nearly fully healed; after 6 weeks, one case of esophageal ulcer and gastric ulcer were fully healed.

## **Anti-inflammatory, anti-pyretic and analgesic activities**

Carrageenan-induced paw edema in rat and mouse ear inflammation is effectively suppressed by chloroform extract of stem bark. Bark extract is effective against inflammatory stomatitis in children. Neem oil has effective anti-pyretic activity. Analgesic activity mediated through opioid receptors in laboratory animals is also reported in the plant. Anti-pyretic and anti-inflammatory activities in various extracts have been reviewed.



# Anti-bacterial activity

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Gram-positive and Gram-negative microorganisms that include streptomycin and Mycobacterium tuberculosis resistant strains which are inhibited by the antibacterial activity of seeds oil, bark oil, and leaves oil. In vitro study, oil from the leaves, seeds and bark inhibits Klebsiella pneumoniae, Mycobacterium pyogenes, M. tuberculosis, and Vibrio cholerae.

Streptococcus mutans and Streptococcus faecalis are effectively inhibited by the antimicrobial property of neem extracts. From neem oil a new vaginal contraceptive (NIM-76) exhibits inhibitory effect on the growth of diverse pathogens including fungi, virus, and bacteria.

Nowadays, in vitro study against 14 strains of pathogenic bacteria was evaluated by the antibacterial activity of neem seed oil.





# Clove

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## **BOTANICAL DESCRIPTION OF CLOVE:**

**Kingdom** –Plantae

**Phylum** –Angiosperms

**Order**- Myrtales

**Family** –Myrtaceae

**Genus** –Syzygium

**Species** –aromaticum

**Binomial name**-*Syzygium aromaticum*



# Clove Properties

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clove oil is the eugenol which acts as an anesthetic, analgesic, anti-inflammatory activity. The essential oils of clove oil have biocidal activity against *A. albopictus* (tiger mosquitos) , thereby helping in the control of malaria.

Stress which is very common in every individual can also be relieved with the help of hydro-alcoholic extracts of clove oil. Because of its anti-oxidant activity it serves in the prevention of cancer

Oral problems like dental plaque and caries , periodontal diseases , etc are growing widely these days because of the change in lifestyle and food habits but the advantages is that it can be cured easily so people are going in search of natural products to treat these diseases as there is no toxic effects



# Constituents

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Clove contains 14-20% of volatile oil that includes eugenol, acetyeugenol, sesquiterpenes ( $\alpha$ - and  $\beta$ -caryophyllenes) and small quantities of esters, ketones and alcohol.

Clove also contains tannins, sitosterol and stigmasterol. Oils of clove can be rubbed against the sore tooth or gums to relieve toothache, and whole clove can be chewed to control bad breath.



# Clove Properties

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The oil extracted from a clove is known as eugenol. Depending on where the oil is extracted from either the bud, leaf, or stem . The concentration of eugenol generally ranges from 60 to 90%. Clove oil is generally used in dentistry to treat pain from a dry socket, as well as used in a number of temporary restorative materials.

Because the aroma of the oil is very strong, clove oil often leaves a lingering, aromatic presence in the dental office. Clove oil can be found in most natural health stores and in some grocery stores



# TYPES OF CLOVE OIL

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There are three types of clove oil

**1. Bud oil** is derived from the flower-buds of *S. aromaticum*. It consists of 60–90% eugenol, eugenyl acetate, caryophyllene and other minor constituents.

**2. Leaf oil** is derived from the leaves of *S. aromaticum*. It consists of 82–88% eugenol with little or no eugenyl acetate, and minor constituents.

**3. Stem oil** is derived from the twigs of *S. aromaticum*. It consists of 90–95% eugenol, with other minor constituents.



# ANTIMICROBIAL ACTIVITY AGAINST ORAL PATHOGENS

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Clove oil has an inhibitory action against various organisms like *S. aureus*, *L. monocytogenes*, and *Aspergillus*.

Synergistic effects of clove oil along with other oils of cilantro, dill, coriander, and eucalyptus showed a higher level of inhibition on gram-negative bacteria, thus proving that the synergism aggravates the antimicrobial activity of clove oil(28). *Streptococcus mutans* are the main causative organism for dental caries.

*Streptococcus mutans* is the normal flora present in every individual's oral cavity. They are coccus shaped non motile bacteria. *S. mutans* are the predominant one found in dental plaque, which uses the sugar contents present in our food particles and grow and secrete a sticky polysaccharides which then leads to the plaque formation in our teeth. It produces enzymes which metabolise sugars and release lactic acids as their by-products, the acids will slowly corrode the enamel thereby leading to dental caries. If these dental caries are left untreated they enter the pulp chamber and destroy it completely so the tooth becomes non-vital.

# Anti-microbial activity

Cloves represent one of the Mother Nature's premier antiseptic.

Clove oil was found to be more effective than sodium propionate (standard food preservative) against some food borne microbes.

Clove oil was found to be very effective against Staphylococcus species. Amongst the fungi, Aspergillus niger was found to be highly sensitive to the clove oil. Essential oil of clove, dispersed

(0.4% v/v) in a concentrated sugar solution, had a germicidal effect against various bacteria (*S. Aureus*, *Klebsiella Pneumoniae*, *Pseudomonas aeruginosa*, *Clostridium perfringens*, *E.coli*) and *Candida albicans*





### Whole Cloves

Gently hold a few whole cloves close to the affected tooth. As the cloves soften, carefully chew to release pain-relieving eugenol.

### Powdered Cloves

Apply ground cloves to the area between the affected tooth and your cheek.

### Clove Oil Compress

Soak a cotton ball or swab with 3-4 drops of clove oil diluted in 1/2 teaspoon olive or coconut oil and gently apply to affected tooth.



# How to Use Clove Oil for Tooth Pain

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1. Place two to three drops of the oil in a clean, small container. Add 1/4 to 1/2 teaspoon of olive oil. This mixture will prevent any soft tissue irritation that is common when using clove oil on its own.
  2. Soak a small piece of cotton in the oil mixture until it is saturated. Blot the cotton on a piece of tissue to remove the excess oil before placing the cotton in your mouth.
  3. Using a clean pair of tweezers, hold the cotton on the painful area for 10 seconds, making sure you do not swallow any of the oil.
  4. Once complete, rinse your mouth with saline solution. This step may be repeated two to three times daily.
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# HERBAL HAIR CARE

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Introduction In olden times herbal products were used for medicinal purposes, both internally as well as externally. Herbal drugs were used as juice, latex or in dried powder form. Now a day's personal care products containing ingredient from the plant origin are getting an increasing trend in the pharmacy world.

Cosmetic product containing plant material as active ingredient is comes under the category of cosmeceuticals.

Appearance of hair makes an important impact on total body feature. Color, length and appearance of hair make a significant difference from person to person. Cosmetics that are used for hair care purpose applied orally and should not be used for therapeutic purpose.

Basic feature of hair care cosmetics are as

1. Should be easy to use
2. Should have local effect.
3. Should be harmful to hair skin and mucous membrane.
4. Should not be allergic to body.
5. Should be applied topically.

Hair care cosmeceutical formulations mainly include shampoo, gel, lotion solution and oil.



# Henna

**Botanical Name:** *Lawsonia Inermis*

*Lawsonia inermis* Linn. is commonly known as henna, which is recognized in traditional system of medicine.

It is a much-branched glabrous shrub or small tree (2-6 m in height), cultivated for its leaves although stem bark, roots, flowers and seeds have also been used in traditional medicine.

Henna, or Mehndi, is an evergreen plant. A member of the *Loosestrife* family, henna originally comes from Egypt, a country that is still one of the main suppliers of the plant. The henna plant typically grows in the drier climates of India, Northern Africa, and the Middle East.

# USES

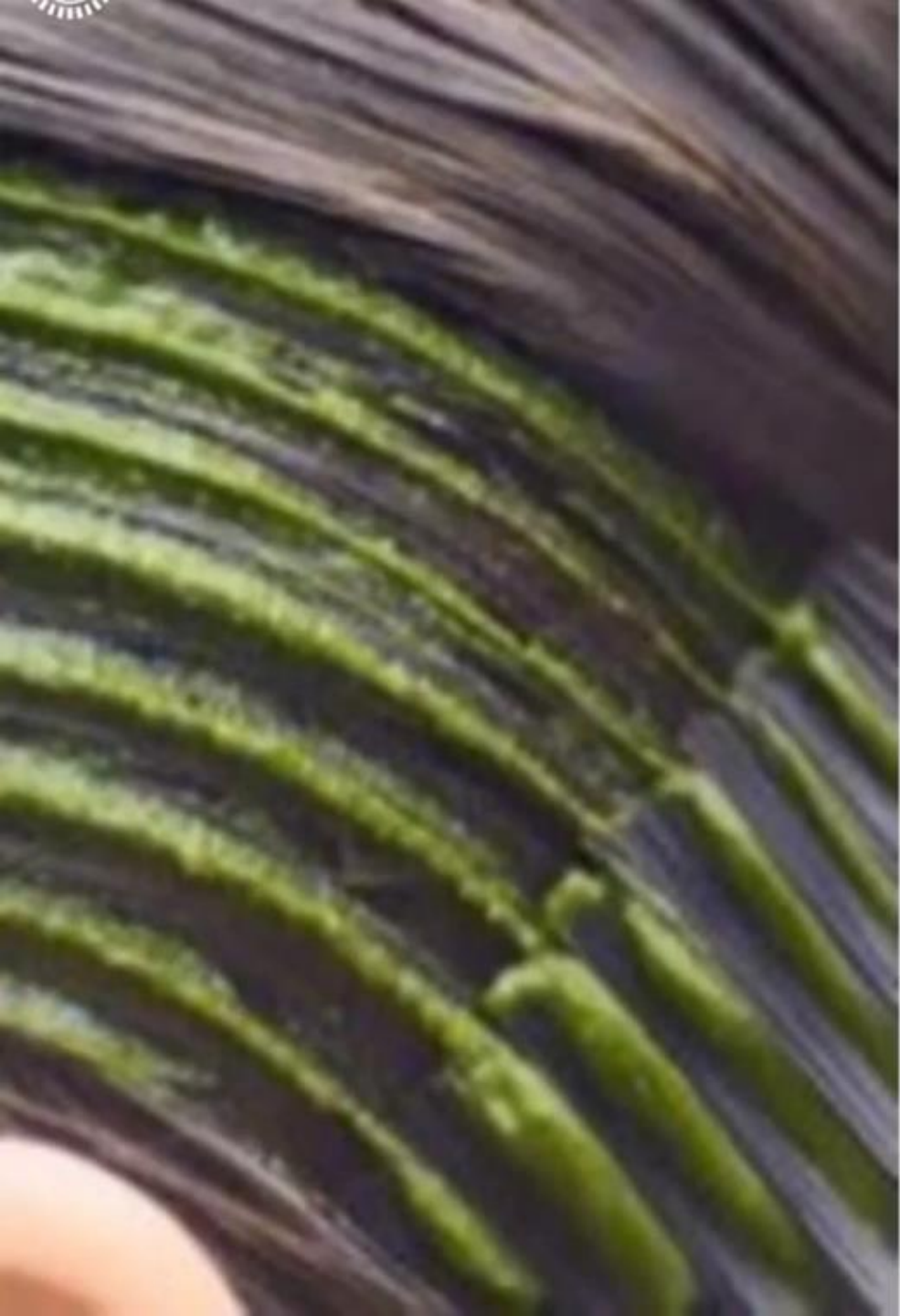
It has been traditionally reported in use of headache, hemicranias, lumbago, bronchitis, boils, ophthalmia, syphilitis, sores, amenorrhea, scabies, diseases of the spleen, dysuria, bleeding disorder, skin diseases, diuretic, antibacterial, antifungal, anti-amoebiasis, astringent, anti-hemorrhagic, hypotensive and sedative effect.

Several studies are being carried towards it activates like cytotoxic, hypoglycaemic, nootropics, antimicrobial, antibacterial, trypsin inhibitory, wound Healing, antioxidant, anti-corrosin, anti-inflammatory, analgesic and antipyretic, anti-parasitic, tuberculostatic, protein glycation inhibitory, hepatoprotective, anti-tumoral activity. With all these potential benefits, this plant is not widely utilized.

**Export** Quality 100% Natural

Product of Allin Exporters From The Lap of Nature





# USES

Ethnobotanical uses Henna has been used cosmetically and medicinally for over 9,000 years. Traditionally in India, mehndi is applied to hands and feet. Henna symbolizes fertility. Its use became popular in India because of its cooling effect in the hot Indian summers.

**Henna leaves, flowers, seeds, stem bark and roots are used in traditional medicine to treat a variety of ailments as rheumatoid arthritis, headache, ulcers, diarrhea, leprosy, fever, leucorrhoea, diabetes, cardiac disease, hepatoprotective and coloring agent.**

Henna leaf has an orange-red dye and leaf paste or powder is widely used for decorating hands, nails and feet with patterns. It is also used as a hair dye. It is used for alleviating jaundice, skin diseases, venereal diseases, smallpox and spermatorrhoea.

Flowers are very fragrant and used to extract a perfume, which is used as base for local scents. An infusion of the flowers is a valuable application to bruises. Decoction of the flowers is describes as an emmenagogue. Seeds are deodorant. Powered seeds with real ghee (clarified butter) are effective against dysentery.



# Chemical Constituents

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Leaves 2-Hydroxy-1, 4-naphthoquinone (HNQ; Lawsone) is the principle natural dye contained at 1.0-1.4 % in the leaves of Henna

Other related compounds present in the leaves are:

1, 4 dihydroxynaphthalene, 1,4-naphthoquinone, 1,2-dihydroxy-glucoyloxynaphthalene and 2-hydroxy-1,4-diglucoyloxynaphthalene.

Flavonoids (luteolins, apigenin, and their glycosides).  
Coumarins (esculetin, fraxetin, scopletin). Steroids ( $\beta$ -sitosterol).

# AMLA

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**AMLA**

**Biological Sources**

**Common Name: Indian Gooseberry**

**Hindi Name: Amla**

**Sanskrit Name: Amalaki, Dhatri**

**Latin Name: Emblica officinalis Gaertn.**

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## Part Used:

Fresh fruit, Dried fruit, Seeds, Leaves, Root, Bark and Flowers. Fruits are generally used fresh, dry fruits are also used



# Chemical Constituents

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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 1.32%, tannin, gum 13.75%; albumin 13.08%; crude cellulose 17.08%; mineral matter 4.12% and moisture 3.83%. Amla fruit ash contains chromium, 2.5 ppm; zinc 4 ppm; and copper, 3 ppm.

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# Hair Growth

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A fixed oil is obtained from the berries that are used to strengthen and promote the growth of hair. The dried fruits have a good effect on hair hygiene and have long been respected as an ingredient of shampoo.

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# Hair Tonic

Day 1



Day 15



Indian gooseberry is an accepted hair tonic in traditional recipes for enriching hair growth and pigmentation. The fruit, cut into pieces is dried preferably in the shade.

These pieces are boiled in coconut oil till the solid matter becomes charred. This darkish oil is excellent in preventing graying. The water in which dried Amla pieces are soaked overnight is also nourishing to hair and can be used for the last rinse while washing the hair. Indian gooseberry is used in various ways.

The best way to take it with the least loss of vitamin C, is to eat it raw with a little salt.

It is often used in the form of pickles and it is dried and powdered. The berry may also be used as a vegetable. It is boiled in a small amount of water till soft and taken with a little salt.

# Hair Tonic

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Amla is one of the richest natural sources of vitamin C, its fresh juice containing nearly twenty times as much vitamin C as orange juice.

A single tiny Amla is equivalent in vitamin C content to two oranges. Clinical tests on patients suffering from pulmonary tuberculosis have shown that this high concentrate is more quickly assimilated than the synthetic vitamin.

It is an ingredient of many Ayurvedic medicines and tonics, as it removes excessive salivation, nausea, vomiting, giddiness, spermatorrhoea, internal body heat and menstrual disorders. Because it is also cooling, it increases sattwa, and is an excellent liver tonic. Research has been done with amla evaluating its role as an antioxidant, in ulcer prevention, for people with diabetes, for mental and memory effects, and its anti-inflammatory benefits. Amla extract supplements be helpful in those undergoing radiation therapy or would it also protect the cancer cells that the radiation is trying to destroy. Amla Tonic has a haematinic and lipolytic function useful in Scurvy and Jaundice, prevents indigestion and controls acidity as well as it is a natural source of anti-ageing.



