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Onion for Hair: Unveiling Nature's Secret for Healthy, Strong Hair

Mr. Keshav Khadke*[1], Ms. Gauri Narke[2], Mr. Harsh Chaudhari[3], Ms. Saniya Shaikh[4], Mrs. Shraddha Dingare[5], Dr. Meera Deshmukh[6]

Lokmanya Tilak Institute of Pharmaceutical Sciences, Pune 411037 India.

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ABSTRACT

Onion [Allium cepa] is one of the most popularly used vegetable in human diet. It is grown widely all over the world. Onion bulb and its characteristics essence. The notion of cosmetics is prehistoric as humans and their civilization. Several types of products obtained from nature [Herbs] are used for enhancing the looks. The concept of cosmetics is as old as attractiveness and maintain a youthful appearance. Herbal onion cosmetics (such as onion oil, onion juice, onion shampoo, and onion essence) are now widely used and accepted by the general public due to their perceived lower side effects and better safety profile for promoting hair growth. The purpose of this work is to understand the benefits of onions for hair growth and health. Having healthy, shiny hair is a common aspiration, and rightly so, as it's on your head. Cleansing and nourishing the hair and scalp are fundamental to preventing hair damage and thinning, despite various measures. Your hair is often exposed to environmental factors and pollution, which can lead to dandruff, premature greying, hair thinning, and even baldness as you age and adopt certain lifestyle habits. This review gives an exposure to benefits of onion in various aspects of medication and hair care. The review also characterises the photochemistry, pharmacognosy, chemical constituents and biologically active constituents of Allium cepa. L [Onion]. It gives brief introduction about various hair problems and their solutions made with the help of onion. Review outlines the several brands and companies which consist onion extract in their hair care and other cosmetics products.

Keywords: Onion, Hair care, Photochemistry, Hair Growth, Herbal Cosmetics

INTRODUCTION: -

Onions, scientifically known as Allium cepa L., are the product of the most cultivated species in the Allium family. The genus Allium contains about 700 species of perennials composed of underground storage organs like rhizomes or bulbs. These species are widely distributed across North Africa, Europe, Asia, and North America. Onions are short-term horticultural crops that grow well in low latitudes. Popularly known as the "Queen of the Kitchen" due to their distinctive flavour, aroma, and medicinal properties, onions have been used as both a food and medicinal plant since ancient times.

Onions are a main ingredient in various dishes and are used throughout the year in forms such as curry, spices, salads, and condiments. They can be cooked with other vegetables, boiled, or baked. Additionally, onions are processed into products like pickles, powders, sauces, and flakes, and are known for their medicinal properties. They are referred to by different common names in various regions of the world.

The culinary and medicinal plant which people call by different names in different languages exists as Onion in English and Oignon in French and Zwlebel in German and Cipolla in Italian and Basal in Arabic and Palandu or Pyaj in Hindi and Piyas in Urdu and Choong in Chinese. People also know this plant as the Bulb Onion or Garden Onion. The scientific classification of onion places it in the species cepa of the genus Allium. The onion is a member of the division Tracheophyta (vascular plants) and the sub-division Spermatophyta. The super-division Embryophyta includes the onion which belongs to class Magnoliopsida and family Liliaceae. The onion belongs to the super-order Liliane which is part of the sub-kingdom Viridiplantae and infra-kingdom Streptophyta and finally the kingdom Plantae. The extensive classification system for onion demonstrates its plant kingdom importance which drives research in pharmacognosy and other biological fields.

Phytochemistry

The diverse genus Allium contains approximately 918 species, among which Allium cepa L. (commonly known as onion) belongs botanically to the Amaryllidaceae family. The word "onion" is derived from the Latin "unio," meaning "single" or "one," because the onion plant produces only a single bulb. Onions are often known by many other traditional or alternative names, such as Egyptian onions, common onions, and shallots, among others. Onions are important condiments and economical vegetables. The edible part of the plant, also called the corm, consists of a fleshy interior and dry, membranous, scaly exterior leaves, which is the main organ of interest. The shape of the bulb can be spherical, flattened, flat-topped, spindle-shaped, or subcylindrical. Usually available in white, yellow, purple, red, green, and other colours, onions can also be classified according to their pungency. When the bulb begins to form, photosynthetic products produced by the leaves are transported to the base of the leaves. This causes the core to swell, forming a bulb. As the bulb matures, the outer scales develop into a dry, impermeable skin that helps prevent dehydration. Eventually, the bulb matures, and no more leaves form on the inner bulb, resulting in a hollow pseudo stem. When the leaf sheath weakens, the pseudo stem separates from the leaf, and the leaf falls.

Chemical Constituents: -

Onions are rich in dietary fibres and sugar, with about 90% of their content being water. They are lower in sodium but higher in vitamins and minerals such as folic acid, vitamin B6, magnesium, calcium, potassium, and phosphorus. The lipid content of onions is low, with only glutamic acid and arginine being relatively high. Many phytochemical analyses have been performed on onions, identifying several compounds responsible for their unique flavour and medicinal properties. Phenolic compounds have attracted significant interest among various phytochemicals because they help improve the biological properties of medicinal plants.

Bioactive Compounds: -

Bioactive Compounds in Onions are rich in a variety of phytochemicals with beneficial functions, including organosulfur compounds, phenolic compounds, polysaccharides, and saponins. The main bioactive compounds of onions are sulphur-containing compounds, such as onionin A and cysteine sulfoxide, and phenolic compounds, such as rutin, quercetin, and quercetin glucoside. Different onion varieties have different contents of bioactive substances. The content of anthocyanins and flavonoids is highest in red onions, followed by yellow onions, and white onions are the lowest. Additionally, different layers of onions contain different primary compounds. Quercetin is the main compound in red onion skins, while quercetin-4-glucoside is the main compound in its bulbs.

Benefits of Onion in Hair Care

Onion juice can be helpful in some cases of hair loss. It may also prove beneficial in restoring the original soft glow and gleam of hair. Additionally, it may help prevent early greying and alleviate dandruff. There are various hair-related problems such as inflamed scalp, hair loss, dandruff, itchy scalp, dry scalp, thinning of hair, early greying of hair, and scalp infections. Research has found that the anti-inflammatory and antimicrobial properties of onions can be beneficial for hair growth.

Mainly hair-related problems include hyperpigmentation, dandruff problem, and baldness problems. There are various hair disorders that can lead to hair loss. The term androgenic alopecia is often used to outline the patterned loss of scalp hair in men and women who are genetically predisposed to this condition. In these cases, hair loss is symptomized by thinning of hair instead of hair follicle loss, at least in the early stages. In androgenetic alopecia, the anagen phase is reduced and sensitive hair follicles continue to miniaturize, resulting in the changes of fine terminal hairs into fine vellus hairs. Onions majorly contain protein (albumin), allyl propyl disulfide, diallyl sulphide Ether, alliin and allicin also contains few minerals such as potassium, zinc, calcium and magnesium. Onions are reported to be effective for patchy alopecia. Rub the affected area with onion juice in the morning and evening until it turns red, which should be followed by applying honey. Zinc helps produce much-needed oil in the scalp and avoids dandruff, which can result in hair loss. Iron is involved in the body's oxygenation.

Therapeutic Advantages of Onion

Scientists have discovered onions with many health benefits, majorly they are observed from the antioxidants in onions. It was observed that a specific antioxidant called quercetin can protect health in many ways like fighting inflammation and boosting the immune system. Onions are also a rich source of vitamins, minerals and Fiber.

They are also used in

- Reduce the risk of cancer

- Reduce the risk of Alzheimer's disease
- Diabetes control
- Reduce the risk of heart disease and stroke
- Bone marrow
- Digestive health
- Antibacterial effect.

List of Companies and brands which use Onion Extract for Hair Care Product

1. Atulya Onion and Bhringraj Hair Oil
2. Mama earth Onion Hair Oil, Shampoo and Conditioner.
3. Lotus Botanicals Red Onion Hair Oil, Shampoo and Conditioner
4. Naturally Red Onion and Bhringraj Hair Fall Arrest Shampoo
5. Vcare Onion Shampoo for hair growth
6. Arogya Onion Herbal Shampoo
7. Cosmic VEDA Onion Shampoo and Conditioner
8. Velvet Vista Onion Shampoo and Conditioner
9. Kapo Onion Shampoo
10. Plum Onion and Bhringraj Hair Growth Oil

Conclusion

Onions are the crucial part of our edibles and are also effective for hair and other body isuues. Onions are affluent in sulphur, which supportsnin enhancing blood circulation to the scalp. This elevated blood flow nurtures hair part (folicles), contributes hair growth and decreases thining of hair. Sulphur also has the potency to srenthen tha hair shaft making it less sensitive to brakage this promotes reduction in hair loss and enhances hair growth onion contains high amount of vitanin c, which promotes regulation of Immune health, collagen and iron absorbtion it also potent and oxidant that can prevent cell from being unstable avoiding the danage of molecules known as free radicle. Onion can also good source of B vitamins, icluding folic acid and vitamin B6.

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