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REPORT

Topical Use of Tea Benefits Skin Health

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Tea has been prized throughout human history for its health-promoting effects. In ongoing research, scientists are discovering that the topical use of tea may confer numerous benefits to the skin. Rich in antioxidants, topically applied tea extracts help promote healthy, youthful skin.

Skin is often thought of as the great envelope of the human body. It has numerous and varied functions including external protection, temperature regulation, sensory detection, and toxin removal, as well as the specialty functions involving the hair and nails. One amazing property of skin is that it is continuously being made by our bodies. Skin reproduces itself approximately every 28 days, the time it takes for a newborn skin cell, or epidermal cell, to migrate and mature to the skin's dry surface, known as the stratum corneum.

The skin's appearance is determined by its exposure to potentially harmful environmental influences such as sunlight and air pollution, in combination with diet and topical care. Promoting optimal skin appearance and function entails protecting and nourishing the skin as much as possible. It is important that these efforts target skin cells during their earliest stages of development, so that the older cells look and function as best they can. These efforts also play a large part in preventing many dermatological diagnoses, as well as skin cancer, the most common of all cancers.

Red, green, white, and black teas from around the world have been used for centuries in various medicinal remedies. Modern research continues to elucidate the anti-aging and health-promoting effects of tea.¹ Recent findings have shown that tea has antioxidant, anti-aging, anti-inflammatory, and anti-cancer benefits.²⁻¹⁰ When combined with other topical agents in skin care products, tea helps to enhance their effects, a synergy that helps improve the skin's appearance, texture, and function. Frequent exfoliation allows active tea constituents to better penetrate the skin. Alpha-hydroxy acids are among the most beneficial exfoliating agents available today.

Tea contains several of the most potent and protective antioxidant vitamins and phytochemicals for skin health. The most important of these are vitamins C and E, carotenoids, and flavonoids.¹¹⁻¹⁵

Vitamin C contributes to human health in many important ways, including promoting the health and beauty of the skin. Vitamin C decreases production of the pigment melanin, allowing for lighter and brighter skin.¹⁶ It is required for collagen synthesis, which may contribute to fewer wrinkles,¹⁷⁻¹⁹ and also helps facilitate skin repair after an injury.²⁰ Vitamin E is a strong antioxidant that is able to suppress free radicals in the skin.²¹ Its ability to be regenerated in the skin is enhanced by vitamin C.²²

Carotenoids found in tea are potent fat-soluble antioxidants that help quench free radicals generated by ultraviolet rays.²³ In addition to vitamin antioxidants and carotenoids, tea also contains 25-30% flavonoids, which include water-soluble plant pigments known as polyphenols. The major polyphenol in tea is epigallocatechin-3 gallate, or EGCG. Oral and topical use of tea and EGCG helps to inhibit inflammation and oxidative stress, and may help to prevent photoaging and cancers of the skin.²⁴ The combination of these natural antioxidants improves skin health, giving it a smoother, brighter, and healthier appearance.

Research indicates that tea is a potent inducer of superoxide dismutase (SOD), an enzyme that quenches excess superoxide radicals and other reactive oxygen species.²⁵⁻²⁷ As adults reach the age of 60 and beyond, the amount of SOD in normal skin diminishes and is incapable of adequately neutralizing large amounts of reactive oxygen species.²⁸⁻³¹ With environmental and other influences such as sunlight, smoking, and diet contributing to the generation of reactive oxygen species, it is critical to optimize SOD levels through the use of tea and other flavonoids.

In addition to the beauty benefits of topical tea, natural fruit acids called alpha-hydroxy acids rejuvenate the skin by encouraging the shedding of old, sun-damaged cells on the skin's



surface.³²⁻³⁵ Alpha-hydroxy acids loosen the glue-like surface cells to each other, allowing the dead skin to peel off and the skin underneath to emerge. This underlying skin has a fresher, healthier look, with a more even color and texture. Exfoliation with alpha-hydroxy acids also allows topical antioxidant agents such as tea to affect the newly exposed cells to greatest benefit.

For optimal effects, frequent use of topical products containing tea in combination with exfoliating agents is recommended. Furthermore, oral supplementation with vitamins C and E, carotenoids, and omega-3 fatty acids can help to beautify the skin and boost its antioxidant status. Finally, eating a diet rich in flavonoids such as those found in brightly colored fruits and vegetables will help promote and preserve your skin's health and beauty

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