

Perspective

Routine skincare - What I advise to defy aging?

Nidhi Singh¹

¹Department of Dermatology, Gleneagles Global Health City, Chennai, Tamil Nadu, India.



***Corresponding author:**

Nidhi Singh,
Senior Consultant, Department
of Dermatology, Gleneagles
Global Health City, Chennai,
Tamil Nadu, India.

nidhi.derm@gmail.com

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ABSTRACT

Aging is a natural process and a fact of life, but increasing life expectancy and the desire to look young have led to seeking out answers concerning skincare to defy aging. Various reasons for aging have been implicated such as the effect of gravity on soft tissue results in their sagging over the facial skeleton, sun damage, hormonal changes, decreased skin blood flow, weight gain, fascial and ligament laxity, shrinkage of glandular tissue, and skeletal resorption. Although intrinsic aging is genetically driven, extrinsic aging is affected by sun exposure, environmental insults, stress, sleep patterns, smoking, and various lifestyle factors. Extrinsic aging can be delayed or reduced by various lifestyle modifications such as moving naturally throughout the day, mindful eating, good sleep, prioritizing stress relief, strong social network with family and friends, and a good skincare routine. Good skin health reflects overall well-being. A good skincare routine of gentle cleansing, moisturizing, and sun-screening along with a healthy lifestyle can help reduce aging changes.

Keywords: Skincare, Anti-aging, Healthy lifestyle

INTRODUCTION

Aging is a natural, progressive, and undesirable biological process that unfortunately cannot be stopped as per current knowledge.^[1] Aging skin changes can be attributed to a variety of reasons such as the effect of gravity on soft tissue leading to sagging over the facial skeleton, photodamage, hormonal changes, decreased skin blood flow, weight gain (due to slow metabolism and hence fat deposition), fascial and ligament laxity, glandular tissue shrinkage, and skeletal resorption.^[2]

INTRINSIC AND EXTRINSIC SKIN AGING

Skin aging changes can be attributed to intrinsic or extrinsic. Intrinsic aging is genetically driven, chronological, spontaneous, and biological aging while extrinsic aging is environmental aging and photoaging affected by sun exposure, environmental insults, stress, sleep patterns, smoking, and various other factors.^[1-3]

Common signs of intrinsic skin aging include fine wrinkles, thin and transparent skin, and loss of underlying fat leading to hollowed cheeks and eye sockets; loss of firmness on hands and neck; bones shrinking away from the skin (bone loss leading to sagging skin; dry skin with pruritus; inability to sweat sufficiently to cool the skin); and graying hair eventually turning white.^[2] Intrinsically aged skin is smooth and unblemished, normal geometrical patterns, and some exaggerated expression lines while extrinsically aged skin is characterized by dyspigmentation, telangiectasia, and roughness. Histologically, extrinsically aged skin has increased epidermal melanin, sebaceous hyperplasia, fragmented and disorganized collagen,

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accumulation of amorphous elastic fibers in the dermis, and epidermal thickness increases initially and decreases later on.^[1,2]

Ethnicity, anatomic variations, and hormonal influences affect intrinsic aging.^[4] Sunlight exposure is the most common extrinsic aging determinant. Repeated ultraviolet A and B exposure is the most important factor promoting photoaging. However, visible light and blue light are also implicated photoaging, pigment darkening, melasma and post-inflammatory hyperpigmentation in Fitzpatrick IV–V skin types.^[1] Smoking and alcohol have been found to have a significant impact on facial aging in women, although the impact was found to be higher with smoking.^[5] Smoking is an independent risk factor for premature skin aging. Smokers experience significant deterioration in skin color and shine. “Smoker’s face” is characterized by wrinkles, skin atrophy, and a gray complexion.^[6] Air pollution also accelerates skin aging such as wrinkling and skin pigmentation changes by inducing oxidative stress.^[7] Chronic stress has been associated with decreased immunity, impaired wound healing, and increased inflammation probably through accumulation of reactive oxygen species and deoxyribonucleic acid damage. Chronic, low-grade inflammation leading to aging is termed as “inflammageing.”^[8]

A sugar-rich diet accelerates skin aging as sugar binds to proteins and lipids and glycation occurs. Food low in sugar cooked with water decreases intake of preformed exogenous advanced glycation end products and decreases endogenous production of physiologically glycated proteins. High fat and carbohydrate intake is associated with a higher likelihood of a wrinkled appearance. Mediterranean diet regimens rich in vegetables and fruits and reducing red meat consumption have been found to have positive effects on health and aging.^[9] Physical activity and exercises help in the formation of new cells by increasing blood flow.^[10] Exercise definitely has health benefits, and the role of facial exercises in delaying skin aging changes is also being explored. Recently, in a study, improvement in mid and lower face fullness was noted after the participants aged 40–65 years practiced at-home facial exercises initially daily for eight weeks followed by alternate days from the 9th to 20th week. Facial exercises may help probably due to exercise accentuated cheek and facial muscle hypertrophy.^[11]

ANTIAGING SKINCARE ROUTINE

Anti-aging treatments based on the phenotypic changes of aging may be divided into:

- Primary or basic preventive antiaging approaches before the phenotypic changes are noticed.
- Secondary antiaging approaches to tackle once the phenotypic changes are noticed.

The scope of this article is limited to the primary preventive antiaging approaches. An ideal skincare routine should include gentle cleansing, moisturizing, and suncreening. A preventive antiaging agent may be added. Many environmental impurities and cosmetic products are not water soluble. Hence, simple water washing would not be sufficient to remove the oil, dirt, and harmful particles. Lipid-free cleansing agents containing humectants and emollients are preferred. Vigorous cleansing or scrubbing should be avoided. Scrub should not be used more than once a week, and it is not recommended for patients with sensitive skin. Moisturizing should be done immediately after cleansing and at least twice a day. Ideal face moisturizer should be non-comedogenic. It protects the skin’s natural moisture barrier without causing irritation. Moisturizers work to rehydrate skin by reducing transepidermal water loss and through formulations created by mimicking natural moisturizing factor.

Sunscreen use is the most important preventive antiaging strategy. Sunscreen with SPF 30 and above and at least PA+++ should be used 15–30 mins before going out in the sun and reapply every 3 h. It is preferable to use sunscreen even at home and workplaces due to intense exposure to blue light digital devices, and sometimes one may have to suddenly go outdoors during the day at short notice. Sunscreen should also be used on cloudy days. An adequate amount of sunscreen use is very important, and the “teaspoon rule” is helpful. According to the “teaspoon rule,” 3 mL (slightly more than half a teaspoon) should be applied for the face and neck/each arm and 6 mL (slightly more than a teaspoon) for each leg/chest/back.^[12] When outdoors, additional sun protection measures such as sunglasses, hats, and clothing should be used.

Retinoids are the first choice to treat aging skin and prevent skin aging. It improves skin tone, texture, pigmentation, and pore size and reduces fine wrinkles and hyperpigmentation.^[1,3] Retinoids may cause redness, irritation, scaling, and stinging in the first few weeks and hence should be started as twice a weeknight or alternate night and gradually increased to daily night usage. Other antiaging topical agents are alpha hydroxy acids, Vitamin E and C, Niacinamide, etc. Alpha hydroxy acids have been found to improve skin firmness and elasticity and reduce wrinkles and hyperpigmentation. Topical Vitamin E not only works as a moisturizer and reduces transepidermal water loss but also protects against UV-induced inflammation and hyperpigmentation. Vitamin C is very popular as serums but has poor skin penetration due to hydrophobic stratum corneum. Lowering the pH of L-ascorbic acid (the most biologically active and unstable form) to below 3.5 improves its stability and permeability. The stable lipophilic and esterified forms of Vitamin C such as ascorbyl-6-palmitate, magnesium ascorbyl phosphate,

tetraispalmitoyl ascorbic acid, etc., must be converted to the active form, L-ascorbic acid, to be effective. Vitamin C is also a replenisher of the oxidative form of Vitamin E and works synergistically with Vitamin E to protect against oxidative damage. In a double-blind placebo-controlled study, a 5% nicotinamide gel formulation was evaluated for 12 weeks in 50 women aged 40–60 years and was found to have significant improvement in fine wrinkles, skin texture, and hyperpigmentation.^[13] Many oral antiaging supplements containing Vitamin A, C, beta-carotene, selenium, coenzyme Q10, silymarin, pycnogenol, procyanidins, and antioxidants are available.^[1-3,14]

Certain topical agents such as palmitoyl pentapeptide (promotes type 1 collagen production) are being tried to help in skin regeneration and hence help in preventive skin antiaging strategy.^[14,15] Acetyl hexapeptide (Argireline) more popularly known as “Botox in a jar” reduces the appearance of fine lines (crow’s feet, glabellar lines, or nasolabial lines) through modulation of SNAP-25 and hence relaxes the muscles and reduces wrinkles with botulinum toxin-like effect.^[14] Topical growth factors derived from secretions of the snail (snail mucin) contains various growth factors, copper peptides, allantoin, and glycolic acid, which are found to boost collagen production and are being tried for skin rejuvenation.^[1,16]

LIFESTYLE

Avoiding sun exposure, good nutrition (well-balanced diet-local, seasonal, close to traditional, stop eating once 80% full), staying hydrated, exercising, getting good sleep, avoiding smoking, and early diagnoses and management of systemic diseases (e.g. diabetes-good control) helps in delaying aging skin changes. Places with a higher than usual number of people living much longer than average are termed “Blue Zone.” Longevity lessons from blue zones include moving naturally throughout the day, cultivating a strong sense of purpose, prioritizing stress relief, stopping eating once 80% full, plant-based diet rich in beans, whole grains, veggies, and fruit; being a part of community or organization and staying surrounded by loved ones – friends and families.^[17]

CONCLUSION

Good skincare routine of gentle cleansing, moisturizing, and sunscreens/photoprotection measures along with antiaging strategies such as topical retinoids, alpha hydroxy acids, Vitamin C and E, niacinamide, an antioxidant-rich diet, and a healthy lifestyle can help delay skin aging changes. But, can we really defy or prevent skin aging? Acceptance and awareness along with a good skincare routine and healthy lifestyle can help in gracefully delaying skin aging.

Ethical approval

The Institutional Review Board approval is not required.

Declaration of patient consent

Patient’s consent not required as there are no patients in this study.

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Conflicts of interest

There are no conflicts of interest.

Use of artificial intelligence (AI)-assisted technology for manuscript preparation

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