

Care for Your Skin as You Age



We have about 20 square feet of skin, making it the largest organ in our body.¹ It's also our most vulnerable organ, as it is exposed to the oxidizing effects of UV radiation from the sun and the oxidizing effects of oxygen in the air.²

Years of oxidant stress can take a toll. Over time, our skin becomes thinner and more easily damaged, loses volume and elasticity, and can wrinkle and sag.

Wrinkles are a natural part of aging, but what can we do to slow their formation or reduce their visibility?



Sun Protection

Exposure to sunlight may account for up to 90 percent of visible skin aging.³ Factors like sun exposure and smoking can make us look up to 11 years older.⁴

Ways to protect your skin include:

- ▶ applying sunscreen
- ▶ wearing sun-protective clothing, hats, and sunglasses
- ▶ avoiding direct sunlight during the peak hours of 10 AM to 4 PM

For the prevention of skin cancer, the American Academy of Dermatology recommends regularly using sunscreen with an SPF of 30 or higher.⁵ An SPF as low as 15 can help prevent skin aging.⁶

Watch **“The Best Type of Sunscreen to Use”** on [NutritionFacts.org](https://www.nutritionfacts.org)

Protecting Our Skin with Diet and Lifestyle

Rather than creams, surgeries, and procedures, why not use diet and lifestyle to protect our skin? In addition to avoiding the harmful effects of sun exposure, many antioxidant, anti-inflammatory, glycotxin-free foods have been found to be effective in helping to preserve and improve skin appearance and health, and how we live our lives can have a powerful impact, too.

Foods to Eat:

- ▶ cocoa powder²⁶
- ▶ almonds²⁷
- ▶ flaxseeds²⁸
- ▶ soy foods²⁹
- ▶ cruciferous vegetables³⁰



What to Avoid:

- ▶ saturated fat³¹
- ▶ tobacco³²
- ▶ alcohol³³
- ▶ added sugars³⁴
- ▶ refined carbohydrates³⁵
- ▶ fried, grilled, and broiled meats³⁶



Lifestyle Hacks:

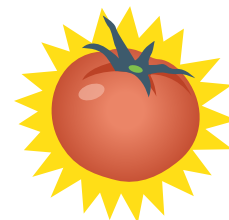
- ▶ **Minimize stress:** Antioxidant levels in the skin are dynamic, changing from hour to hour. When we're sick, stressed, or tired, it's particularly important to eat antioxidant-rich foods.³⁷
- ▶ **Sleep well:** Don't forget your beauty sleep. Over time, the oxidative stress associated with sleep deprivation could potentially translate into long-term differences in skin aging parameters, such as the presence of swollen or redder eyes, hanging eyelids, paler skin, more fine lines and wrinkles, and droopier corners of the mouth.³⁸
- ▶ **Reduce psychological stress:** Higher stress hormone levels are associated with increased perceived age.³⁹

What About Collagen?

Collagen supplements cannot be routinely recommended, given the unconvincing evidence base.⁴⁰

Instead, you can boost your body's collagen synthesis with diet by consuming:

- ▶ foods high in beta-carotene, such as tomatoes, tomato paste, sweet potatoes, and dark leafy greens⁴¹
- ▶ soy foods⁴²
- ▶ vitamin C-rich foods⁴³
- ▶ vitamin B12-fortified foods or supplements⁴⁴





Creams

Moisturizers can hydrate the skin and may reduce the appearance of fine lines by 15 to 20 percent.⁷ However, they may not do anything to treat the underlying cause.

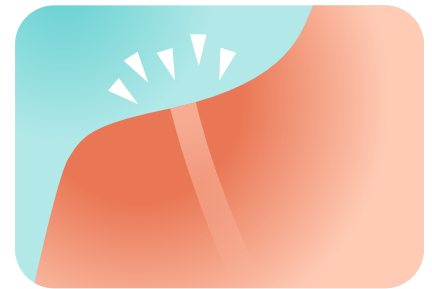
Topical Retinoids

Topical retinoids are the most important drug class to reverse the signs of aging.⁸ Their benefits include:

- ▶ visibly improving mild to moderate photodamage, including fine and coarse wrinkles, freckles, and other pigmentation
- ▶ improving overall skin texture
- ▶ restoring collagen formation

Topical retinoids also have many side effects. In fact, they are so common and plague such a high proportion of patients that they have their own name—“retinoid reaction.”⁹ Their side effects include:

- ▶ redness
- ▶ stinging
- ▶ burning
- ▶ itching
- ▶ peeling



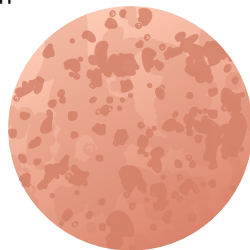
Most importantly, the use of topical tretinoin (retinoic acid) may increase risk of dying prematurely.¹⁰

What are the alternatives?

Topical Niacinamide

Topical niacinamide is a form of vitamin B3 that is non-irritating and has been found to be effective in reducing:¹¹

- ▶ yellowing
- ▶ wrinkling
- ▶ blotchiness
- ▶ dark spots in aging facial skin
- ▶ crow’s feet wrinkles around the eyes



You can make your own topical niacinamide at a 5,000 percent discount compared to store bought. Simply combine 1.4 grams of niacinamide with 1 ounce of face cream, and apply a pea-sized amount to each side of your face once a day.

Topical Vitamin C

Benefits¹² of topical vitamin C include improving:

- ▶ wrinkles
- ▶ sallowness
- ▶ skin tone (firmness)



Vitamin C is unstable in creams, so the skin care industry tends to use more stable vitamin C esters or derivatives.¹³ However, there is no evidence that these compounds have comparable effects, likely because they are poorly absorbed and are only minimally converted to the active form.¹⁴ You can make a much less expensive DIY solution just by buying ascorbic acid in bulk, mixing 3 grams into 30 grams of water, and applying a few drops onto your face each day.



Procedures

Each year, millions of people in the United States undergo cosmetic surgery, including tens of thousands of face-lifts, known technically as rhytidectomies. The most common cosmetic procedures are Botox, fillers, and laser or chemical peel skin resurfacing.¹⁵

Facelifts

- ▶ There is no consensus on the best face-lift technique, and the different techniques are all considered to be relatively safe when performed by a board-certified plastic surgeon.¹⁶
- ▶ According to one of the largest and most up-to-date analyses, surgical complications may only happen in about 1 in 20 cases, most often minor infections or hematomas, where blood collects under the skin flaps.¹⁷
- ▶ Serious infections, like facial necrotizing fasciitis (flesh-eating bacteria), are rare, and other uncommon consequences include scarring, hair loss, and injury to the parotid (salivary) gland.^{18,19}

Botox

- ▶ What it is: the injection of minute amounts of the nerve-blocking toxin that causes botulism to paralyze a few facial muscles.²⁰
- ▶ Side effects may include: droopy eyelids, double vision, an asymmetrical smile, or curving of the outer portion of the brow.²¹

Chemical Peels and Laser Skin “Resurfacing”

- ▶ What it is: a “controlled injury to the face.”
- ▶ The rationale behind these procedures is that the regeneration, repair, and remodeling of the damage can result in a tighter appearance.²²
- ▶ Short-term effects may include: bruising, swelling, itching, crusting, redness, infection, acne, and milia²³ (small white bumps under the skin).
- ▶ Long-term effects may include: persistent redness, pigmentation changes, and scarring.²⁴

Fillers

- ▶ What it is: volumizing injections of soft tissue fillers.
- ▶ Side effects may include: bruising, discoloration, infection, unsightly lumps and bumps, and permanent blindness.²⁵



Conclusion

Eating more healthfully may reduce skin aging and have the happy side effect of reducing our risk of dying prematurely.⁴⁵

Learn more: To view all of our videos on this topic, visit our Anti-aging topic page. You can also check out the latest research on other aspects of healthy aging.

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