

Nutrition and Skin Health



Skin is the largest organ of the body. It is complex and consists of many layers that work together. Skin blocks harmful substances, makes skin pigment, and houses blood vessels, nerves, and glands. Under the surface, it cushions internal organs and helps maintain body heat.

A balanced diet supports the health and function of all these layers. Nutritious foods can help your skin stay strong, vibrant, and hydrated. This publication provides general information about how to support skin health through nutrition.

How does nutrition influence skin health?

Not getting enough of some nutrients can contribute to several skin issues, like acne, eczema, psoriasis, dry skin, and even skin infections. Eating a variety of nutrients can support skin strength and health, protect it from environmental stress, and lower the risk of different skin conditions.

Proper nutrition also supports wound healing. People with diabetes, autoimmune health conditions, or those who take blood thinners may have a harder time with wound healing. A balanced diet that includes protein, involves foods high in vitamins and minerals, and gives proper hydration can be helpful. For those with diabetes, blood sugar management supports the health of all organs, including skin.

Diets high in processed foods, added sugar, and too much saturated fat can cause inflammation in the body and are linked to health issues like heart disease, diabetes, and some cancers. Examples of processed foods include fast food, packaged snacks and treats, and frozen convenience foods. These types of foods can cause increased skin inflammation and irritation. A diet rich in vitamins, minerals, and protein can help prevent and manage these conditions and make the skin stronger and healthier.

Changes in skin, hair, and nails are some of the first signs of certain nutrient deficiencies. For example, darkening or other changes in the color of skin is a sign of very low vitamin B₁₂. Another case is pellagra, also known as a niacin (vitamin B₃) deficiency, in which inflammation of the skin is common. If you have lasting issues with skin, nails, or hair, talk to your health-care provider about concerns linked to specific nutrient deficiencies.

What nutrients support skin health?

While all vitamins and minerals play a part in maintaining healthy skin, evidence has shown significant direct benefits from vitamins A, C, D, and E; unsaturated fatty acids; and antioxidants.

- **Vitamin A** supports cell growth and healing. It helps make new skin cells and can help the skin heal.
- **Vitamin C** supports the development of cells that make up the outer layer of skin, which retains moisture and strengthens the skin. Vitamin C also promotes collagen formation, which builds the skin's shape, structure, and elasticity.
- **Vitamin D** supports the growth and repair of skin cells. It protects against inflammation and supports the immune system found in the layers of the skin. Vitamin D may help skin issues like psoriasis, eczema, acne, and vitiligo, and even help the skin fight infections. Healthy skin can also make vitamin D when exposed to sunlight. The amount depends on where you live and how often your skin is in the sun.
- **Vitamin E** protects the skin from stress caused by the environment, like sunburns. It also lessens harm to DNA, likely cutting the risk of skin cancer. Additionally, it can improve dark areas on the face and slow skin aging.

- **Unsaturated fatty acids** include omega-3s and omega-6s. These are vital for keeping up the skin's protective barrier, maintaining elasticity, lowering inflammation, and supporting the healing of damaged skin.
- **Carotenoids** are natural pigments found in foods from plants. Carotenoids are the chemicals that give carrots their bright orange color. They help boost collagen and elastin growth, reduce inflammation, and protect against UV damage from the sun.
- **Polyphenols** are chemicals found in plants that soothe the skin. They protect against UV damage and promote collagen production.

Vitamin C, vitamin E, carotenoids, and polyphenols all have antioxidant functions in the body. Antioxidants can lower free radicals, a type of harmful molecule in the body. These harmful molecules are created when your body is exposed to things like pollution, UV rays from the sun, or even mental stress.

Table 1 provides examples of good food sources for these important nutrients.

Table 1. Food sources for nutrients that support skin health.

Nutrient	Food Sources	
Vitamin A	• Eggs • Fish • Beef liver • Dark-green vegetables like spinach, kale, and broccoli	• Cheese • Orange/yellow fruits and vegetables like squash, cantaloupe, sweet potatoes, carrots, and peppers
Vitamin C	• Citrus fruits like oranges, lemons, limes, and grapefruits • Bell peppers • Broccoli	• Brussels sprouts • Pineapple • Tomatoes and tomato juice
Vitamin D	• Eggs • Fish • Mushrooms • Beef liver	• Cereal with added vitamin D • Milk with added vitamin D • Cheese
Vitamin E	• Nuts • Spinach • Avocado	• Seed oils like canola oil • Broccoli
Omega-3 fatty acids	• Oily fish like salmon, tuna, sardines, and anchovies • Flaxseed • Chia seeds	• Walnuts • Edamame • Soybeans
Omega-6 fatty acids	• Nuts • Seeds like sunflower and pumpkin • Vegetable oils	• Peanut butter • Tofu • Chicken • Beef
Carotenoids	• Dark-green leafy vegetables like spinach, kale, collard greens, and romaine lettuce • Red fruits like watermelon and tomatoes	• Orange/yellow fruits and vegetables like squash, cantaloupe, sweet potatoes, carrots, and peppers
Polyphenols	• Pomegranates • Spices like cloves, cumin, and oregano	• Berries like blueberries, blackberries, and black currants • Green tea

Do dietary supplements and topical products benefit skin health?

Many nutrients that support skin health come in both supplemental and topical forms, each acting on the skin in unique ways. Nutrient supplements are often a pill, capsule, tablet, or powder. Topical forms are put straight on the skin, like creams, lotions, and oils.

You can buy some of these products over the counter, while others need a prescription from a health-care provider. Common examples are multivitamins or minerals marketed for skin health or skin aging; oral and topical vitamin C; vitamin E oils and capsules; and prescription-strength retinoids, a form of vitamin A. Applying nutrients to the skin does not work the same way as eating food or taking supplements. Topical forms of nutrients do not give the same benefits as a nutritious diet.

The science behind nutrient supplements and topical products for skin health is growing. Many studies are small, don't have enough funding to look at larger groups in the general public, and don't always consider other things that change the skin, like diet, time in the sun, age, or overall health. Keep in mind that what may work for one person may not work for someone else. This is most likely because of the large number of things that change skin health besides eating habits.

Finally, more is not always better. Overuse of certain nutrients, like vitamin A, can lead to toxic levels in the body, even when put on the skin. Talking with a health-care provider, pharmacist, or dermatologist is essential to find out which supplements or topical products are right and safe for your own needs.

Is hydration important for skin health?

Hydration is another big part of skin health. Hydration can come from drinks such as water, 100% fruit juice, and dairy products, and also from foods such as fresh fruits and vegetables, soups, and stews. Eating these foods can help keep the body hydrated. Adequate water intake maintains the skin's barrier function and allows for elasticity. Aim for 8 to 10 glasses of water and five or more servings of fruits and vegetables to meet hydration needs daily.

Other considerations for skin health

In addition to food and drinks, there are other lifestyle choices that support the overall health and quality of skin.

- **Limit alcohol as much as possible to support overall health and well-being.** Drinking alcohol can lead to a range of skin issues, including yellowing of the skin, constant itching, dark spots, hives, and a heightened risk of skin infections and cancer. It may also cause visible red veins, redness of the palms, and the development or worsening of conditions like psoriasis and rosacea.
- **Aim for seven to nine hours of good-quality sleep each night.** Poor sleep can harm our skin in many ways. Hormones that control stress and the immune system can be disrupted without enough good sleep. This can make skin less able to protect itself, leading to irritation or inflammation. Eczema, psoriasis, and hair loss can worsen without enough sleep. Skin can look tired, with dark circles, puffiness, and dullness.
- **Make sun-safe choices to protect skin.** Sunscreen, hats, sunglasses, and clothing are all great options to protect the skin from the sun's UV rays. When spending time outdoors, cover skin and look for shaded areas to avoid direct exposure. Avoid tanning beds to further protect skin.

Healthy skin is supported by all the ways you care for your body. Nutritious foods, hydration, sleep, and sun protection all work together to support your skin's strength and resilience. Small, consistent choices can make a big impact from the inside out.

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