

Foods That Support the Skin's Natural UV Defense

1. Tomatoes (Lycopene)

Evidence: Excellent

Lycopene is probably the most studied dietary carotenoid for photoprotection.

Studies have found that after 10–12 weeks of regular tomato consumption, participants experienced:

- Reduced UV-induced redness (erythema)
- Less oxidative damage
- Reduced collagen degradation
- Increased skin density

Best sources

- Cooked tomatoes (highest absorption)
- Tomato paste
- Tomato sauce
- Sun-dried tomatoes

Cooking and consuming with olive oil dramatically increases lycopene absorption.

Goal: approximately 15–30 mg lycopene/day (about ½ cup tomato paste or several servings of cooked tomatoes).

2. Carotenoid-Rich Vegetables

Evidence: Excellent

Carotenoids accumulate in the skin over weeks to months and help neutralize free radicals generated by UV exposure.

Important carotenoids include:

- Beta-carotene
- Alpha-carotene
- Lutein
- Zeaxanthin
- Astaxanthin (primarily from seafood)

Foods

- Carrots
- Sweet potatoes
- Pumpkin
- Butternut squash
- Red peppers
- Spinach
- Kale
- Swiss chard
- Collards

Higher skin carotenoid levels are associated with:

- Better UV resistance
- Improved skin tone
- Reduced wrinkles
- Improved elasticity



3. Dark Leafy Greens

Evidence: Strong

Rich in:

- Lutein
- Zeaxanthin
- Vitamin C
- Folate
- Polyphenols

Lutein accumulates in the skin and has been shown to:

- Improve hydration
- Reduce UV damage
- Improve elasticity

Excellent choices:

- Spinach
- Kale
- Arugula
- Watercress

4. Orange and Yellow Fruits

Rich in:

- Beta-carotene
- Vitamin C
- Polyphenols

Examples:

- Mango
- Papaya
- Apricots
- Cantaloupe
- Peaches

These provide antioxidant support and help maintain collagen.

5. Berries

Evidence: Strong

Berries contain anthocyanins and other flavonoids that help:

- Reduce oxidative stress
- Decrease inflammation
- Support collagen preservation

Best choices:

- Blueberries
- Blackberries
- Raspberries
- Strawberries

6. Polyphenol-Rich Foods

Polyphenols influence several pathways involved in UV damage.

Green tea

Contains EGCG, which has been shown to:

- Reduce UV-induced inflammation
- Reduce DNA damage
- Reduce erythema

Cocoa (dark chocolate)

High-flavanol cocoa has been shown to:

- Increase the minimal erythema dose (MED)
- Improve skin hydration
- Increase dermal blood flow

Aim for dark chocolate with a high cocoa content (70%+), but watch added sugars.



7. Extra Virgin Olive Oil

Provides:

- Vitamin E
- Polyphenols
- Oleic acid

The Mediterranean diet, rich in olive oil, is associated with reduced photoaging.



8. Fatty Fish (Omega-3s)

Evidence: Excellent

EPA is particularly important.

Omega-3s help:

- Reduce inflammatory prostaglandins
- Lower UV-induced inflammation
- Reduce sunburn response
- Preserve collagen

Excellent sources:

- Salmon
- Sardines
- Mackerel
- Herring

- Anchovies

Aim for 2–3 servings weekly.

9. Nuts and Seeds

Provide:

- Vitamin E
- Selenium
- Healthy fats
- Polyphenols

Especially:

- Walnuts
- Almonds
- Sunflower seeds
- Pumpkin seeds

10. Vitamin C-Rich Foods

Vitamin C is essential for collagen synthesis and works synergistically with vitamin E.

Excellent sources:

- Kiwi
- Bell peppers
- Citrus fruits
- Strawberries
- Broccoli

11. Watermelon

A surprisingly rich source of lycopene—gram for gram, some varieties contain more lycopene than fresh tomatoes.

Also provides:

- Citrulline
- Vitamin C
- Hydration

12. Red Peppers

Among the richest dietary sources of:

- Vitamin C
- Beta-carotene
- Capsanthin (a carotenoid with antioxidant activity)

Dietary Patterns That Protect Skin

Research suggests that dietary patterns may matter more than any single food.

Mediterranean Diet

Consistently associated with:

- Less photoaging
- Reduced skin cancer risk
- Better skin elasticity
- Lower inflammation

Key features:

- Olive oil
- Fish
- Vegetables
- Fruit
- Nuts
- Legumes
- Herbs

Rainbow Diet

Encourage patients to "eat the rainbow" daily:

-  Red (lycopene)
-  Orange (beta-carotene)
-  Green (lutein)
-  Blue/Purple (anthocyanins)
-  Yellow (flavonoids)

Different pigments provide complementary photoprotective compounds.

Foods That May Increase UV Damage

While evidence varies, these dietary patterns have been associated with greater oxidative stress and inflammation:

- Ultra-processed foods
- Sugar-sweetened beverages
- Diets high in refined carbohydrates
- Excess alcohol
- Deep-fried foods rich in repeatedly heated seed oils
- Diets low in fruits and vegetables

Putting It All Together

For patients interested in supporting healthy skin from within, a daily plate might include:

- **Healthy fat:** Extra virgin olive oil or avocado
- **Colorful vegetables:** Spinach, kale, carrots, peppers, tomatoes
- **Protein:** Salmon, sardines, or other omega-3-rich fish
- **Fruit:** Berries and citrus or kiwi
- **Extras:** Green tea, a handful of walnuts or almonds, and a small portion of dark chocolate

Combined with sensible sun habits, these foods help reduce UV-induced oxidative stress, support collagen integrity, and promote long-term skin health. They should be viewed as part of a comprehensive skin protection strategy rather than a replacement for broad-spectrum sunscreen, protective clothing, and shade.