BEAUTY

Can Sunscreen Actually Treat Dark Spots?

Sunscreen cannot erase every kind of pigmentation, but it can stop ultraviolet exposure adding fresh damage while you decide what needs treating.

The frustrating return of a dark spot

You spend weeks watching a mark left by acne slowly fade. Then comes a bright afternoon, an unplanned walk or a seat beside a sunny window. The patch seems more noticeable again, and sunscreen starts to sound less like protection than a missing part of the treatment.

There is a sound reason for that idea, but it needs careful wording. Sunscreen is not an eraser. The available treatment reviews do not show that sunscreen alone reliably clears existing post-inflammatory hyperpigmentation-the marks that remain after skin inflammation. Its clearer role is to limit ultraviolet (UV) exposure, which can damage skin cells and encourage the skin to make more pigment.

Ultraviolet A (UVA) rays can reach deeper into the skin than ultraviolet B (UVB) rays. When skin is exposed to UVA, it responds by making more melanin, the pigment that darkens skin. A tan is therefore evidence of damage, not a healthy glow. Long-term UV exposure is also associated with dark spots, premature skin ageing and skin cancer.

That makes sunscreen important, but not magical. Think of it as protecting the ground you have gained. It may reduce an ongoing source of pigment-provoking damage; it does not tell you what caused a mark, whether that mark will fade or whether another treatment is appropriate. Those are separate questions.

Pigmentation is not one problem

"Dark spots" is a useful description in the mirror, but a poor treatment category. Post-inflammatory hyperpigmentation (PIH) follows inflammatory skin conditions and is more common in darker skin tones. In a 2024 review focused on skin of colour, 89% of the cases studied followed inflammatory conditions and 83% affected the face.

Under-eye darkness is more complicated still. A 2021 review found that it can have pigmentary, structural, vascular or mixed causes. Pigment-directed creams or peels cannot restore lost volume, just as sunscreen cannot correct loose skin or a vascular cause. The same-looking concern may therefore require a very different response.

This is where the claim that sunscreen "treats pigmentation" can mislead. It treats the exposure side of the problem by filtering UV rays. It does not follow that every brown, grey or shadowed area is primarily driven by sunlight-or that protecting it from sunlight will make it disappear.

There is also a medical boundary that matters more than the cosmetic one. Check your skin for changes in the size, shape, colour or feel of moles, birthmarks and spots. If a spot is new or changing, take it to a health professional rather than treating it as ordinary pigmentation. Sunscreen should never become a reason to postpone that conversation.

Sunscreen belongs in this picture as protection from further UV damage, not as a promise that an existing mark will vanish.

What the treatment evidence really shows

The evidence for clearing PIH is less satisfying than advertising often suggests. A 2024 systematic review of 41 studies covering 877 patients found complete responses in 5.4% of people receiving topical treatments and 18.1% of those receiving laser or energy-based procedures. Most people who responded had partial rather than complete improvement.

Combination approaches produced partial responses in 84.9% of participants, compared with 72.4% for topical treatments and 61.2% for laser or energy-based devices. But these figures do not establish sunscreen as the ingredient responsible. The review grouped broad treatment categories, and most included pigmentation was associated with acne, limiting how confidently its findings apply to marks with other origins.

Another 2024 review included 48 studies and 1,356 people with skin of colour. Topical retinoids and laser therapy were the most frequently reported interventions, yet the reviewers concluded that robust effectiveness was lacking across treatment types. Laser sometimes produced complete clearance, but it also worsened PIH in some cases.

That uncertainty is important. Pigmentation treatment is not a neat contest in which a stronger product inevitably wins. Even procedures and topical treatments studied specifically for PIH often produce incomplete results. Sunscreen belongs in this picture as protection from further UV damage, not as a promise that an existing mark will vanish.

Protection takes more than a bottle

A broad-spectrum sunscreen filters both UVA and UVB rays. Sun protection factor (SPF) describes how well a sunscreen filters UV rays, with a higher number indicating more

protection. General public-health guidance supports broad-spectrum SPF 15 or higher; workplace guidance for people exposed outdoors recommends at least SPF 30.

The number on the container is only part of the job. Sunscreen wears off and needs to be put on again after swimming, heavy sweating or towelling. It works best alongside other forms of protection rather than as permission to stay indefinitely in strong sun.

Shade, tightly woven clothing and a wide-brimmed hat all reduce exposure. UV rays still reach you on cool or cloudy days and can reflect from water, cement, sand and snow. In the continental United States, they are generally strongest around the middle of the day, although exposure is not confined to those hours.

Avoiding tanning matters too. A tan forms after UV exposure has already damaged skin, and a so-called base tan does not prevent sunburn. Tanning beds also expose skin to UVA and UVB rays. If pigmentation is the concern, deliberately adding the signal that tells skin to make more melanin works against the protective aim.

Build one useful barrier this week

For the next week, make sun protection the stable part of your approach rather than repeatedly changing pigment products. You need a broad-spectrum sunscreen of at least SPF 15, plus a wide-brimmed hat or tightly woven clothing for exposed skin. Put the sunscreen on before going outside and replace the layer after swimming, sweating or towelling.

Use enough to cover exposed areas rather than treating one visible mark as the only skin worth protecting. If you will be outside for a long stretch, plan for shade as well. The bottle is one layer; the hat, clothing and shelter are others.

Do not use that week as a home experiment to decide whether a suspicious spot is harmless. Note any change in size, shape, colour or feel and arrange a professional assessment. If the concern is under-eye darkness or pigmentation that followed inflammation, ask what type of problem it appears to be before adding another treatment.

Sunscreen cannot guarantee that a dark mark will fade. What it can do is stop you treating pigmentation with one hand while continuing to expose your skin to a known source of pigment and cellular damage with the other. That practical step takes a broad-spectrum sunscreen and something that physically puts shade between your skin and the sun.

Where this comes from

- Sun Exposure

  MedlinePlus, U.S. National Library of Medicine · https://medlineplus.gov/sunexposure.html
- Tanning

  MedlinePlus, U.S. National Library of Medicine · https://medlineplus.gov/tanning.html
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