BEAUTY

Your Under-Eye Circles May Not Be About Sleep

Dark circles fall into four broad types, and knowing which one you see matters more than buying another promising cream.

The mirror gives you one problem

You catch your reflection under unforgiving light and see the same dark half-moons. The beauty aisle offers a simpler story: one concern, one cream, one hopeful purchase. But "dark circles" is a description of what you see, not an explanation of why you see it.

A 2021 systematic review of 39 studies divided under-eye circles-known clinically as periorbital hyperpigmentation-into four broad causes: pigmentary, structural, vascular and mixed. Those categories matter because an ingredient intended to change pigment cannot replace lost volume, while a procedure aimed at volume loss is not automatically the answer to visible pigment.

This is also why photographs of other people's results can tell you so little about your own face. Two under-eye areas may look similarly dark while the physical explanation differs. Even the review's long list of interventions came with a substantial caveat: high-quality evidence was scarce, so its findings should be interpreted selectively.

The useful first question, then, is not which product has the boldest promise. It is which of the four explanations could plausibly sit behind the shadow or colour you are trying to change.

Pigment is colour in the skin

Pigmentary circles are the most literal version of the problem: the darkness is based in pigment. The 2021 review found that topical creams, serums and chemical peels can be useful for pigment-based circles. Lasers were described as only mildly to moderately beneficial for pigment and vascular types.

That wording deserves attention. "Useful" does not mean every cream works, and it does not tell you that one fashionable ingredient will clear every pigmented under-eye area. The review covered several approaches but still judged the overall evidence to be short on high-quality studies. Its conclusions are possibilities, not promises.

A 2025 systematic review of 14 studies also examined injectable platelet-rich plasma (PRP) and platelet-rich fibrin (PRF) around the eyes. PRP had stronger evidence for

hyperpigmentation, while PRF was associated more with changes in texture, wrinkles and crepiness. The researchers could not conclude that either was superior overall and called for larger randomized trials with standardized measures.

That distinction is easy to lose when "rejuvenation" is used as a catch-all. Pigment, fine lines and skin texture are separate targets in the evidence. A treatment associated with improvement in one should not be assumed to solve the others.

The category comes before the promise.

Structure makes its own shadow

Structural circles come from the shape or support of the under-eye area rather than pigment alone. The clearest example in the review was volume loss: soft-tissue fillers and a person's own fat grafting were judged most effective when lost volume was responsible for the darkness.

Skin also changes with age. It becomes thinner and loses fat, leaving it less plump and smooth. Sunlight is a major contributor to skin ageing, while cigarette smoking contributes to wrinkles; the amount of wrinkling rises with the number of cigarettes smoked and the number of years of smoking.

Excess skin looseness is another structural issue. The 2021 review found eyelid surgery to be the best option when that looseness was the underlying cause. That is a very different proposition from applying a serum, and it shows why treating every circle as surface discolouration can lead you in the wrong direction.

Procedures are not interchangeable shortcuts. The 2025 review noted that conventional approaches such as hyaluronic acid fillers carry a risk of complications. For PRP and PRF, the included studies reported only mild, temporary adverse effects, but durability remained uncertain; improvements associated with PRF often diminished by six months. These are medical procedures to discuss with an appropriately qualified clinician, not additions to a home routine.

Blood vessels can show through

The third category is vascular. Here, the relevant feature is blood vessels rather than pigment or lost volume. The treatment review found lasers mildly to moderately beneficial for vascular circles, but again warned that strong evidence was scarce.

The fourth category-mixed-is perhaps the most important. It means more than one cause is

present. Pigment can coexist with a structural shadow; vascular features can sit alongside changing texture. A single under-eye product may therefore be aimed at only one part of what you see.

There is another reason not to collapse every change around the eye into a cosmetic concern. Allergic conjunctivitis can include itching, mucus-like discharge, swelling of the conjunctiva and eyelid swelling. Guidelines for non-infectious conjunctivitis consistently recommend measures including artificial tears, a cold compress and avoiding or removing allergens; allergy types may also require medicines such as topical antihistamines.

Severe eye pain, decreased vision or a painful reaction of the pupil are warning signs of a potentially more serious condition inside the eye. Atypical findings or a problem that becomes chronic also need a proper medical and eye history and physical examination. At that point, the question is no longer which kind of dark circle you have.

Before you buy, read the container

Once you see four possible causes instead of one universal flaw, cosmetic promises become easier to judge. Cosmetics can change how an area looks, but a product that claims to treat or prevent disease is also a drug. If a cosmetic is also a drug, its first listed ingredient will be identified as an active ingredient-the chemical intended to make it effective.

The full ingredient list is on the container because manufacturers are required to provide it. Claims such as "natural" and "hypoallergenic" have no official meaning, so those words cannot tell you whether a product addresses pigment, structure or anything else. Fragrances and preservatives are the most common causes of cosmetic-related skin problems, and red, irritated skin is often the first sign of an allergic reaction.

That leaves you with a modest but useful step for Monday. Take the under-eye cosmetic you already use-or the one you are considering-and read its container. Look for the complete ingredient list and, if it makes a treatment claim, whether an active ingredient appears first. Do not let broad language substitute for that information.

This takes the product container and a well-lit place to read it. If the label cannot show what is supposed to do the work, it cannot resolve the bigger uncertainty: whether your circle is pigmentary, structural, vascular or mixed. The category comes before the promise.

Where this comes from

- Skin Aging

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

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