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How Worried Should I Be About Hydroquinone?

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THE CUT

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"How Worried Should I Be About?" helps you weigh scary-seeming findings about beauty products so you can decide what to actually put on your body.

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Hyperpigmentation happens when melanocytes — the cells that give the skin its tone — increase because of numerous factors, like sun exposure, acne, trauma, or wounds to the skin, says Corey L. Hartman, M.D., founder of Skin Wellness Dermatology in Birmingham, Alabama.

Until recently, the gold standard for treating these darker patches was a topical skin-lightening ingredient called hydroquinone, which works by reducing the melanocytes in your skin. But in the past few years, it has come under scrutiny. In 2020, the FDA pulled all over-

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been banned since 2001.) So the question remains: Since the OTC versions were pulled, is prescription hydroquinone actually okay to use?

The 2020 FDA move was part of a sudden, sweeping decision surprisingly tucked into the Coronavirus Aid, Relief, and Economic Security Act. The CARES law decreed, in part, that nonprescription drugs deemed “not generally regarded as safe” would no longer be available over the counter. But the FDA has been trying to remove hydroquinone from shelves for years thanks to a perceived concern over its dangerous ability to lighten skin and its potential for carcinogenesis, explains Dhaval Bhanusali, M.D., the founder of Hudson Dermatology & Laser Surgery in New York. “That said, he adds, “there has been no evidence that the medication is harmful in humans.” Rachel Westbay, M.D., a dermatologist at New York’s Marmur Medical, says hydroquinone’s initial link to cancer came from a study of rats and mice that had been force-fed the drug, resulting in some evidence of carcinogenic activity for male and female rats and female mice. “But it is important to note that these findings stemmed from large *oral* doses over extended time periods,” says Westbay. “There is no reported cancer data in humans with the use of topical hydroquinone.”

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The ingredient does have potential side effects, such as redness, burning, stinging, and irritation, particularly among those who have more sensitive skin, says cosmetic chemist and founder of BeautyStat Ron Robinson. Before the FDA banned OTC hydroquinone, it received “numerous reports of users encountering adverse effects including skin rashes, swelling, and skin discoloration,” Hartman explains. “In darker skin, hydroquinone may make hyperpigmentation worse since it may trigger an inflammatory response.” The greater concern, however, came with OTC hydroquinone being overused and misused. “Some consumers on a quest for lighter complexions have sought out illegal hydroquinone products that have caused serious side effects including permanent skin discolorations,” says Robinson. The gravest (but rare) instances of this include exogenous ochronosis, an often permanent blue-black discoloration of the skin or a total depigmentation around the treated area. But, Westbay repeats, this is extremely rare: “A literature review of exogenous ochronosis and clinical studies employing hydroquinone, involving over 10,000 exposures under careful clinical supervision, revealed an incidence of exogenous ochronosis in the United States of 22 cases in more than 50 years.”

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common prescription treatment for hyperpigmentation across the country,” says Bhanusali, adding that many dermatologists have voiced their disagreement over its being banned in OTC products. “Most derms, especially dermatologists of color, were against this ban because, though hydroquinone has its issues, it has largely been used safely for decades, and the concentrations that were available over the counter — less than 4 percent — were a great option for melanated people who didn’t have access to dermatologists or prescription products,” says Hartman, noting that inflammatory skin conditions like acne and eczema are common in these communities and if not treated can lead to hyperpigmentation that is severe, long-lasting, and emotionally devastating.

There are some rules of engagement to consider. Hydroquinone is a short-term skin-care solution usually not applied for more than two months. For certain patients, Hartman recommends it for a month or two maximum, while Bhanusali tends to use it for four to six weeks when appropriate, then reassesses. You can expect some skin peeling, “but it’s needed to get the results,” he adds.

Fastidious sunscreen application is particularly important when using hydroquinone. Westbay says that, according to a study presented at the [Society for Investigative Dermatology’s](#) annual meeting last year, hydroquinone use was found to increase the risk of both melanoma and nonmelanoma skin cancers by more than threefold. “This is not likely to be a direct consequence of hydroquinone toxicity,” Westbay explains. Instead, it’s based on the fact that hydroquinone works by decreasing the production of melanin pigment, thus increasing the skin’s exposure to UVA and UVB rays, ergo increasing the risk of skin cancer, she says. Which is why sunscreen is critical. Steering clear of the simultaneous application of other potentially irritating actives, like benzoyl peroxide (which is found in many acne products) or AHAs (increasingly common in exfoliating skin care) is important too. And if you’re pregnant or breastfeeding, hydroquinone is a no-go because it may be considered a carcinogen and is classified in category C, meaning risks can’t be ruled out in humans.

For those who would rather seek an alternative, Robinson suggests kojic acid, azelaic acid, glutathione, and vitamin C, all of which are available over the counter. “All of these help to control the overproduction of melanin,” says Robinson. Some people may find prescription retinoids helpful, but Hartman thinks they’re not up to the task of managing severe hyperpigmentation. “If the discoloration is mild, retinoids are helpful, but they take longer than other ingredients that target hyperpigmentation directly,” he says. Bhanusali highlights the lightening potential of tranexamic acid (which is available OTC), pointing to a recent study showing that its efficacy at 5 percent is comparable to 3 percent hydroquinone. And Hartman

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is safe for long-term use; and is available without a prescription,” says Hartman. “It’s unique in that it’s formulated and clinically tested on darker skin tones, which have been the hardest to treat successfully until now.”

But as with a host of other skin concerns, there comes a time when topical treatments alone, even hydroquinone, may not do the job for hyperpigmentation. That’s where, says Hartman, in-office procedures like a TCA peel (a type of chemical peel using trichloroacetic acid to deeply exfoliate) or lasers (the picosecond is a short-wave laser also used for tattoo removal) come into play. And those, much like hydroquinone, need to be handled with the utmost care and in the hands of an experienced doctor.

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