## Dermatologists Reveal the Truth About pH-Balanced Skincare. Most Products Don't Do What You Think.



A Guide To Skin pH Guillermo Spelucin - Getty Images

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If you're old enough to remember the Secret deodorant tagline, *Strong enough for a man, made for woman*, then a.) It's time to invest in an <a href="eye cream">eye cream</a>, and b.) You're already somewhat familiar with the concept of pH-balance. Secret first introduced that memorable line in 1972 and continued to use it in <a href="ads throughout the 80s">ads throughout the 80s</a>. It was based on the simple idea that female perspiration has a different pH than male sweat, so antiperspirants and deodorants needed to be formulated differently for women versus men. Secret and its slogans have evolved since then, but

we still see the term "pH-balanced" slapped on many personal care and skincare labels today.

In fact, pH is the very basis for some recent launches and skincare brands. Take, for example, <u>pH-In</u>, an acne line from Indeed Laboratories. Its formulators claim that the pH-In Healthy Skin System can help bring skin's pH and microbiome back into balance to reduce breakouts. <u>Sel:pH</u> is another example—it's a line that focuses on what you need to keep skin at its optimal pH.

These products tackle all the usual skin issues—<u>acne</u>, <u>dryness</u>, fine lines, enlarged pores, and <u>dark spots</u>—but in a different way. The basic concept: These skin problems crop up because your pH is out of whack, and restoring it to baseline is the solve.

## What is pH Exactly?

If your only reference to pH is from your high school chem class, here's a crash course: pH stands for the *potential of hydrogen* and relates to hydrogen ions in a water-based solution. The pH scale, invented way back in 1909, is a measure of how acidic or basic something is. On a scale of 0–14, acidic refers to anything that registers under 7, while alkaline or basic substances measure 8 and above. A pH of 7 is considered neutral (water and blood have a neutral pH.)

Your skin functions best at slightly acidic pH levels of 4.5 to 5.5, but that number can vary slightly based upon the area of the body you're talking about. "We refer to the outside layer of skin as the acid mantle," says <a href="Karan Lal">Karan Lal</a>, DO, a dermatologist in Scottsdale, Arizona. "When the acid mantle or your skin barrier is disrupted, there's a change in pH and skin can grow certain types of bacteria which can precipitate flares of skin conditions such as <a href="eczema">eczema</a> or acne breakouts," he says. But even minor skin annoyances, like dryness, irritation, and sensitivity can also be attributed to out-of-whack skin pH.

What changes skin's pH? Many things—and it's always changing, explains <u>Kavita Mariwalla</u>, MD, a dermatologist in West Islip, New York.

"The pH of your skin is in constant flux and changes when you're exposed to the cold outside, when you go back inside, and after you use certain topical treatments such as acids, retinoids, vitamin C, toners, harsh alkaline soaps, and cleansers," she says. Your diet, skin sebum, sweat, and hygiene habits can also affect skin pH.

## So, Is Changing Skin's pH Within Your Control?

Here's where it gets tricky: "The reality is, yes, you can alter your skin's pH, but a healthy skin microbiome will always bring your pH back to where it should be," says Dr. Mariwalla. "Your skin already has all these mechanisms to keep in homeostasis or a balanced state," she says. Some products are specifically designed to be a lower pH, such as alpha hydroxy acids, so they can do their function. In this case, the acidic nature helps loosen up all the intracellular glue that holds dead skin cells in place so they can slough off faster. Vitamin C is another example. It functions better as an antioxidant and is most stable at a lower pH. "Vitamin C has a pH of less than 4, but is applying it to your skin going to keep your skin at a pH of 4? No," says Dr. Lal. Healthy skin will self-correct.

Ok, but, say, you're doing something to throw off your skin's pH *every single day*, such as over-washing with alkaline (read: oil-stripping) soaps? "Over-washing can disrupt your pH, but that's not the only thing happening," says Dr. Mariwalla. At the root of a chronic pH disruption is a skin barrier dysfunction or an unhealthy microbiome (that's the community of bacteria and organisms living on the skin's surface)—and *that's* what you need to address in order to help the skin's pH recover.

## **Can Using pH-balanced Skincare Help?**

Well, that depends. "Contrary to popular belief, not all skincare products are pH balanced," says Alabama-based cosmetic chemist Rhonda M. Davis. "Most products typically have a pH range of 6 to 6.5," she says. "Those formulated at 4.5 to 5.75 are closest to our skin's pH." It's important to note that pH only applies to products containing water, not oils, butters, and balms, says Davis, who does see a need for pH-balanced skincare lines like the ones mentioned earlier. "Over the years, we

scientists have been informing and educating consumers about their skin acid mantle, microbiome, and the importance of maintaining it, so I am an advocate of using products that are pH balanced and also formulated with ingredients that mimic the natural components found in our skin."

Dermatologists say pH-balanced products do have merit, but maybe not for the reason you think. "I'm not against pH skincare, but it's really just another way of marketing products geared toward sensitive skin," says Dr. Mariwalla. Because that's what pH-balanced products are—gentle formulations that are safe for all skin types without a lot of actives in them. So if you're having an issue—dryness, sensitivity, breakouts—these products can help restore your skin barrier, as will limiting or avoiding certain active ingredients (think acids and topical retinoids) that will exacerbate the condition. But it's worth noting that any gentle cleanser and basic moisturizer with a mix of lipids, emollients, and humectants (ones labeled as appropriate for sensitive skin or barrier repair) will do the same thing.

Dr. Lal agrees that pH-balanced and barrier repair products are synonymous. "I think they're both using great scientific concepts to do the same thing," he says. "If you don't have a skin issue, you probably don't need pH-balanced skincare," he says. "But if you're having an issue and can't find skincare products suitable for your skin, pH-balanced products may be worth trying," he says.