

Ingredient in Popular Acne Products Linked to Cancer

Benzoyl peroxide, found in over-the-counter acne and rosacea treatments, can easily degrade into benzene, a known human carcinogen.

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Some over-the-counter benzoyl peroxide (BPO) acne and rosacea treatments contain high levels of benzene, a known human [carcinogen](#), according to a new analysis [published in the Journal of Investigative Dermatology](#).

Used in [topical medications](#), BPO is a diacyl peroxide that kills bacteria and reduces inflammation on the skin. Although it is considered unstable and can break down into benzene, BPO can be used in prescription or over-the-counter products at up to a 10% concentration, according to the Food and Drug Administration (FDA).

The analysis found that BPO drug products degrade into benzene when exposed to room temperature, elevated temperatures and outdoor UV light.

For the study, researchers from the independent quality assurance laboratory Valisure tested more than 100 over-the-counter BPO acne products. The products tested were available at major retailers across six states and included wash-away cleansers and topical ointments intended to be left on the skin for long periods of time.

They found that about 34% of products tested off the shelf contained levels of benzene above the conditionally restricted FDA limit of 2 parts per million. Specifically, Proactiv contained 18 times the amount of the carcinogen and a CVS-brand face wash had 13 times the amount considered safe by the FDA, [according to a Time](#) article on the findings.

“The results presented here suggest that a substantial portion of the BPO acne treatment market currently contains unacceptably high levels of benzene in products sitting on the shelf,” study’s researchers wrote in their analysis.

This [supports evidence from a separate Valisure-led study](#) that found high levels of benzene in certain acne products. In March, the company [launched a citizen petition](#) urging the FDA to investigate the products and remove affected items from shelves, including Proactiv, CeraVe, La Roche-Posay, CVS Health's brand and more.

According to the [Centers for Disease Control and Prevention](#), long-term exposure to high levels of benzene can cause harmful effects on bone marrow and lead to a decrease in red blood cells, which can lead to anemia. What's more, the Department of Health and Human Services determined that benzene causes cancer, including [leukemia](#), in humans.

In a [news release](#), the study's lead investigator David Light, a cofounder and president of Valisure, and an affiliate professor at Arnold & Marie Schwartz College of Pharmacy and Health Sciences at Long Island University, said this discovery presents "a potentially serious public health risk."

Study co-investigator Christopher G. Bunick, MD, PhD, of the Department of Dermatology and Program in Translational Biomedicine at Yale University School of said, "These findings suggest a need to recommend refrigeration of BPO products throughout the supply chain—from manufacturing to patient use—to limit benzene exposure."