

Parabens



Parabens are the most widely used preservatives in cosmetic products. They may be used with other types of preservatives to stop growth of microorganisms to protect the consumer and to lengthen the shelf-life of the product. They may also be used in other common products such as drugs and foods.

How People Are Exposed to Parabens

People are most commonly exposed to parabens when they put cosmetics or other personal products that contain them on their skin. Cosmetics that may contain parabens include makeup (foundation), moisturizers (skin lotion), hair care products, and shaving products, among others. The most common types are methylparaben, propylparaben, butylparaben, or benzylparaben. Cosmetics sold in retail stores are required by law to declare ingredients on the label, so you can look for these when buying products.

How Parabens Affect People's Health

The human health effects from skin exposure to low levels of parabens are unknown. They have weak hormonal (estrogenic) activity in test systems, like the other chemicals we are measuring. They are typically used in cosmetic products at much lower levels than currently allowable standards.

Levels of Parabens in the U.S. Population

In a report released after the *Fourth National Report on Human Exposure to Environmental Chemicals* (Fourth Report), CDC scientists measured parabens in the urine of over 2500 individuals age 6 or older who took part in CDC's National Health And Nutrition Examination Survey (NHANES) during 2005-2006. By measuring parabens in urine, scientists can estimate the amount of parabens that entered peoples' bodies.

CDC scientists found detectable levels of parabens in at least half of the general public (Calafat, et al., 2010). Some types of parabens were detected more frequently; methylparabens were detected in 93% of the general population and propylparaben was detected in 99% of the general population. Levels were higher in Blacks compared to Whites and in females compared to males, but lower in children under age 12 compared to 12 and older. Researchers explained that the differences in exposure levels may be due to differences in use of beauty and personal care products that contain parabens.

Finding a measurable amount of parabens in urine does not mean that the levels of parabens cause an adverse health effect. Biomonitoring studies on levels of parabens provide physicians and public health officials with reference values so they can determine whether people have been exposed to higher levels of parabens than are found in the general population. Biomonitoring data can also help scientists plan and conduct research on exposure and health effects.

For More Information

- Skin Deep Cosmetic Safety Database: <http://www.cosmeticsdatabase.com/>
- Calafat AM, Ye X, Wong L-Y, Bishop AM, and Needham LL. Urinary Concentrations of Four Parabens in the U.S. Population: 2005-2006. *Environ Health Perspect* doi:10.1289/ehp.0901560

Updated April 2010

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