Does a shampoo additive (sodium lauryl sulfate) cause cancer? [1]

Hi Alice!

I was wondering about the chemical sodium laureth sulfate. I have received several forwarded e-mails about this causing cancer by a lawyer looking into the matter. This chemical was said to be in many shampoos to create a nice lather, but it's actually a garage cleaner and is a cheap substance for the manufacturer, and in the past, only 1 in 2000 would get cancer from this, and now it's about 1 in 10. I was just curious if it really causes cancer, or is it just a prank? And if it really does cause cancer, what kind of cancer is it? Thank you. I would appreciate an honest answer.

Answer

Dear Reader,

With so many e-mail scams and myths, it can often be difficult to wash the fiction from the facts. Sodium laureth sulfate (SLES) ? and another, similarly-named chemical, sodium lauryl sulfate (SLS) ? are surfactants/detergents that are often found in a number of personal care products, such as shampoos, conditioners, soaps, cosmetics, and toothpaste. As detergents, they are responsible for removing oil and dirt from skin and hair. They are also responsible for the lather that's created when soaping or shampooing. However, these two chemicals have the potential to cause skin and eye irritation. Although SLES has not been found to cause cancer, SLS, which is harsher than SLES, has been implicated in cancer due to its mutagenic properties.

Studies that have assessed the toxicity of SLS and SLES have consistently indicated that skin and eye irritation may result from contact exposure to these chemicals. The potential for irritation depends on the amounts of these substances that come in contact with the skin as well as the duration of the contact. The Cosmetic Ingredient Review [2], an independent organization of the personal care products industry that rates the safety and toxicity of chemicals used in personal care products, has pointed out that even though SLES and SLS may cause skin and eye irritation, they do not pose a safety risk to humans because they are used in low concentrations in personal care products and cosmetics.

Despite the CIR's conclusions, other studies have shown that SLES and SLS were found to have other broad toxic effects in the body in small and moderate doses. Furthermore, the Canadian Environmental Domestic Substances List classifies SLES and SLS as being toxic or
harmful to humans. As mentioned previously, although there does not seem to be a link between SLES and cancer, studies have suggested that SLS has mutagenic properties and may therefore lead to cancer. However, it's not entirely clear which cancers are formed due to SLS, or how much SLS a person would need to be in contact with, and for how long, to develop cancer.

Isn't this just a little confusing? You bet! Due to the nature of scientific inquiry and research, we may not always be able to have straightforward answers to our questions. As such, it may also help to discuss this matter with a dermatologist and/or other health care provider whom you trust.

If these findings have gotten you in a lather of worry, or if you develop irritation after using products containing SLS or SLES, you may want to switch to products that do not contain these chemicals. Keep in mind that a number of personal care products have other ingredients with surfactant and detergent properties that may be less irritating/harmful. A dermatologist and/or pharmacist may be able to point you in the direction of these products. Alternatively, you may want to check out the Environmental Working Group's Skin Deep Database [3], which rates the safety of the ingredients used in personal care products. You can also browse the database for products that do not contain SLS and SLES. 

Not all questions have straightforward answers, but hopefully this response provides some good, clean facts.

Alice!
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