

Deodorants - a risk factor for breast cancer?

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Underarm deodorants or antiperspirants are an essential part of the modern day hygiene routine, but most underarm hygiene products contain chemicals that work to disguise odour and reduce wetness. They also contain preservatives which ensure the product continues to work for a long period.

For years, the rumours surfaced that using underarm deodorant or antiperspirant can cause breast cancer.

Despite the fact that there is no scientific basis to support this rumour, women still become concerned that the chemicals contained in deodorants and antiperspirants enter the body through the skin and reach the breasts.

Scientists are now researching some of the chemicals in underarm hygiene products for a basis for these concerns and parabens are one particular group of chemicals being studied.

Parabens are widely used as preservatives in the cosmetic and pharmaceutical industries.

They can be found in shampoos, shaving gels, cleansing gels, deodorants, topical pharmaceuticals etc.

Common parabens include benzylparaben, butylparaben, propylparaben, methylparaben, and ethylparaben.

In previous studies performed in test tubes and on animals, scientists found that parabens behave as weak forms of the hormone estrogen.

Parabens prompted the growth of breast cancer cells and the growth of uterine cells in mice in test tubes.

One large study found no connection between antiperspirant use and breast cancer, but a new report raises the issue that the aluminum salts contained in many underarm deodorants could possibly increase a woman's risk of breast cancer.

Dr. Philippa D. Darby of the [University of Reading](#) in the UK, used laboratory techniques called chromatography and spectrometry to see if 20 samples of breast cancer tissue contained parabens.

The researchers say they found six different kinds of parabens in the breast cancer tissue samples and all of the samples contained some parabens.

They say the average concentration of all types of parabens in the samples was about equal to the amount that had prompted breast cancer cells to grow in test tubes in earlier studies.

Their report does not say whether the samples were from women who used deodorants or antiperspirants containing parabens, and does not specify whether the breast cancer samples had hormone receptors or not.

Neither does the study say whether the women whose samples were examined had other risk factors that could have contributed to the development of breast cancer or whether the levels of parabens were the same in other tissues within the same women, or whether these same women were using other paraben-containing products.

Darby says a wide range of substances can mimic estrogen, including certain pesticides, cosmetics and detergents, and it is possible that aluminum salts and other inorganic estrogen-related compounds called "metalloestrogens" can further disrupt normal hormonal signaling within the breast.

Darby also says the human breast is now subjected to a wide range of environmental estrogenic insults.

According to Darby aluminum is of particular concern because it is applied to an area close to the breast, and left on the skin.

Deodorants also are frequently used after shaving, making it easier for aluminum salts to enter the blood stream.

Studies have also demonstrated that aluminum salts can penetrate human underarm skin even if it is unbroken.

Until recently, Darby says it was previously thought that only organic chemicals were able to exert estrogen-like effects in the body, or otherwise disrupt the hormone's normal functioning.

The researchers suggest that there may be a possibility that such chemicals might enter breast tissue from outside sources and, once there, might accumulate in levels high enough to trigger the growth of breast cancer cells.

Darby says however that much more research is needed before they can begin to ascertain the collective effects of all these chemicals.

In conclusion the study has found that certain chemicals - called parabens - used in foods, cosmetics, and medicines were present in samples of breast cancer tissue.

However the study has many limitations apart from being very small, and raises more questions than it answers.

It does raise an important question about the possibility that parabens might affect women's breast cancer risk but larger and more comprehensive studies are needed to explore this possibility.

The study is published in the Journal of Applied Toxicology.