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Women's Health E-mail Update

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Women's Health Resources

Emerson Ecologics is proud to provide our integrative healthcare professionals with a resource specifically designed to focus on Women's Health. Under the title Women's Health Resources, we will bring a variety of resources related to women's health issues to you; available through e-mail, on our web site, and through printed media. Just another way Emerson Ecologics is committed to providing you Solutions for Optimal Patient Health.

Breast cancer and beauty products: the paraben concern

Breast cancer is considered to be a multi-factorial process. Genetic, lifestyle, immune and environmental factors play a role. Part of the process leading to cancer is acquiring damage to genes that regulate normal cell growth. This damage or mutation can be caused in part by exposure to chemicals in the environment and in part by other factors. There are known risk factors for breast cancer that are generally agreed upon throughout the medical and scientific community. They include early menarche, late menopause, having a first child later in life or not having children at all, a history of a first degree relative with breast cancer, a carrier of the breast cancer gene, past exposure to ionizing radiation, obesity, excess alcohol and use of a combination of estrogen and progestin for four years or more in postmenopausal women. [1] But these factors only account for 10%-40% of breast cancers.

What accounts for the rest?

We may never know the full range of factors that lead to breast cancer but environmental factors must be considered. Chemicals in the environment can act like estrogen in the body. Breast tissue is extremely sensitive to estrogen stimulation which causes breast cell division. [2] Hormones such as estrogen, progesterone, prolactin and growth hormone affect growth and functioning of breast cells.[2] More than half of breast tumors depend on estrogen.[2] Environmental chemicals can act like hormones and other growth factors.[2] Environmental chemicals can affect the balance that controls breast cell division and growth. [3] One such chemical is parabens.

Parabens are a group of synthetic chemicals that we are exposed to everyday. They are in many cosmetics, shampoos, lotions, soaps and many other grooming products. They are what keep bacteria from growing in the product. Common parabens used in cosmetic and grooming products are methylparaben, ethylparaben, butylparaben, and propylparaben. Typically more than one paraben is used in a product and they are often used in combination with other chemical preservatives. Parabens were first approved for use in cosmetic products in 1984 when the Cosmetic Ingredient Review (CIR) determined they were safe. The CIR again looked at the safety of parbens in cosmetics in 2003 and 2005 and again determined that parabens are safe as used in cosmetics.

So what's all the fuss about parabens?

A 2004 study looked at 20 women with breast cancer and measured the tumor tissue for 6 different parabens. 100% of samples had at least one paraben with methylparaben being the highest. [4] The study discussed the information in the context of the weak estrogen-like properties of parabens and the influence of estrogen on breast cancer. The study clearly had some flaws. First, it was a small sample of women all of which had breast cancer, and it did not compare this group to women without breast cancer. Also, it is important to note that the study did not show that parbens caused breast cancer but merely showed a correlation.

The question of parabens' estrogenicity has also been raised. One study in 2002 showed that parabens can act like estrogen in the body at the strength to cause breast cancer cells to grow and proliferate. [5] While a 1998 study found that the most potent paraben, butylparaben, had an estrogenic activity 10,000 to 100,000 fold less activity than endogenous estradiol. [7] Typically parabens used in cosmetics are at levels ranging from 0.01% to 0.03%. A 2005 review of the

estrogenic activity of parabens found, based on maximum daily exposure estimates on the levels in cosmetics that parabens could not increase the risk associated with exposure to estrogenic chemicals. [7]

The Darbre study did bring up an interesting point of concern. The study showed that 5 of the 6 parabens widely used in cosmetics can be detected intact in human tissue. Often studies look at urine or blood levels of chemicals which show changed or metabolized effects of the chemical. This study showed unchanged, intact parabens stored in human tissue. A report published in the Journal of the American College of Toxicology in 1984 estimated that parabens are used in more than 13,000 consumer products. [8] Parabens are easily absorbed through the skin where most cosmetics are applied. [9] We know from body burden studies that the average American has at least one form of parabens stored in their body. In 2008 Dateline NBC ran a story about the body burden of chemicals. They measured 76 chemicals in 2 families. Each family consisted of a mother, father and two kids. All members of both families had low to moderate levels of parabens. This covers men, women, adults and children. [10] This finding is not surprising considering parabens are in 13,000 grooming and hygiene products. [11]

What should women do?

Is there a concern for women applying a weak estrogen to the skin every day through cosmetics, lotions, shampoos, sunscreens lotions, and soaps? Caution may be warranted based on the studies showing the weak estrogenic activity of parabens and their ability to penetrate the skin and be found intact in human breast cancer tissue. However, further research needs to be done comparing a large group of women with breast cancer to a large group of healthy women without breast cancer as well as more estrogenicity studies in the lab. In the meantime, look for products that are using phenoxyethanol, capryly glycol, potassium sorbate, ascorbic acid and grapefruit seed extract as alternative preservatives. However, each of these too come with controversy in regards to issues including whether or not they have sufficient anti-microbial effects, labeling as natural, and the nature of the chemical make-up.

Happi and *GCI* trade publications publish annual preservative issues that serve as a resource to manufacturers. Whole Foods Market has developed their "Premium Body *Care"* list of products that meet the standards they have set based on the most current safety and efficacy data, research and resources available. Premium Body Care booklets are available in Whole Foods stores.

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