http://www.education.com/reference/article/potential-dangers-mainstream-deodorants/

A recent poll of over 500 parents revealed that approximately 50% of children ages 4 to 11 are using deodorant by age 11. Given that the 2007 US Census Bureau report indicated that there are 32 million children in this age group that figures to about 16 million children using deodorant before age 11. The vast majority of these children are using mainstream deodorant products, which has raised some concern from some groups because of the potential for damaging chemicals in these products. In the same study cited above, only 38% of parents were aware that there are potentially harmful chemicals contained in mainstream deodorants. Some of the chemicals under scrutiny include Parabens, Aluminum, and Propylene Glycol.

Parabens

Parabens are used in a variety of products (including food) and are generally included as a preservative, an antifungal, and for its bacterial effects. Some have speculated that there is an association between deodorants containing Parabens and breast cancer. The Parabens can mimic the hormone estrogen, which has been shown to play a role in breast cancer (1). The study that triggered concerns was titled, "Concentrations of Parabens in Human Breast Tumors" by Darbre in the *Journal of Applied Toxicology* (2). This study showed that a long term, low doses of Parabens (consistent with what humans are typically exposed to) can accumulate intact in the body. They tested 20 women with breast tumors and found a substantial amount of live intact Parabens in the tumors of all the women.

Unfortunately, however, the researchers did not take tissue samples from healthy women without breast cancer, so it cannot be confirmed that the women with breast cancer had higher amounts of Parabens in their tissue than healthy women. Thus, scientists cannot prove that Parabens contribute to cancerous cell development, but the study raises many concerns about the potential role of Parabens in cancer growth.

The FDA says, "At the present time, there is no reason for consumers to be concerned about the use of cosmetics containing Parabens. However, the agency will continue to evaluate new data in this area. If FDA determines that a health hazard exists, the agency will advise the industry and the public, and will consider its legal options under the authority of the FD&C Act in protecting the health and welfare of consumers."(3) The FDA's conclusion was based upon the Cosmetic Ingredient Review's (CIR) opinion on the subject. ***Interestingly, the CIR is an industry sponsored organization, a company funded by cosmetic companies that use Parabens in their products.***

Aluminum

Aluminum contained in antiperspirants has also been linked with some health problems. Researchers have found that some forms of aluminum found in the brain can cause neurological damage associated with Alzheimer's disease. Aluminum is also linked to Anemia, Osteomalacia, glucose intolerance, memory deficits, and Alzheimer's, Lou Gehrig's (amyotrophic lateral sclerosis), and Parkinson's diseases. The direct association between aluminum absorbed via antiperspirants and these health conditions has not been confirmed**, but a 2001 study showed that aluminum is absorbed after just one application of antiperspirant remained in blood system 15 days (4).**

Aluminum Zirconium is used only in antiperspirants and not deodorants. This is, in fact, the difference between antiperspirants and deodorants is the difference between the

two. Antiperspirant is an Over the Counter (OTC) drug because the aluminum is an active ingredient. The chemical compound Aluminum Zirconium actually stops the body from perspiring, the concern is that if your body's natural functions are somehow blocked, like perspiring for instance, could this be potentially damaging?

Propylene Glycol

Propylene Glycol (sometimes referred to as Propanediol) is another commonly used ingredient in antiperspirants (and some natural deodorants, too!). Propylene Glycol is commonly used as an ingredient in antifreeze. Propylene Glycol enters the skin so quickly that the Environmental Protection Agency has warned factory workers to avoid skin contact in order to prevent brain, liver, and kidney abnormalities. Because of these warnings, some experts have raised additional concerns about antiperspirant use.

Antiperspirant Alternatives

Given the health concerns described above, a number of experts recommend that antiperspirants not be used, especially with children. See below for a number of recommendations and alternatives to traditional antiperspirants:

1. Alternative Mixture: In a small spray bottle, mix together baking soda and water. If odor still exists, you can add a small amount of vinegar.
2. Wash Well: When washing underarms, make sure to wash well. It takes approximately 20 seconds of rubbing with soap and water to really clean the skin.
3. Simpler Soap: Anti-bacterial and antiseptic soaps destroy the natural balance of the skin and typically contain unwanted chemicals. Try to find a soap (sometimes an older brand) with fewer ingredients (fewer than seven would be ideal).
4. Deodorant for Kids Alternative: Junior Varsity Naturals™ is the only maker of an all-natural gender specific deodorant for kids. The short list of ingredients includes: Glycerin (Derived from vegetable oil), Aqua (water), Sodium Stearate (Derived form stearic acid from vegetable oil) Ethylhexelglycerin (Derived from vegetable glycerin from vegetable oil), Polysorbate 20 (Derived from Lauric Acid from coconut oil), and Fragrance (Derived from Essence oils). The company was founded in order to provide parents with an all natural deodorant solution for their children. For more information, please see www.jvnaturals.com