



# WELLSPRING Physical Therapy

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## Toxins in Body Care and Beauty Products

**What is a toxin?** A toxin is any substance that irritates cells and interferes with normal functioning of an organ. The skin is by far the body's largest organ, and it is permeable.

**Toxin levels.** Since 1976 the Environmental Protection Agency has been conducting tests measuring toxin levels using samples of fat tissue from people living in all regions of the U.S. Of the 54 chemical toxins measured, five were found in 100% of all samples. Another nine were found in 91-98% of all samples. The EPA's ongoing testing shows that our bodies carry chemical toxins – it's not a matter of if, but how much and how they are affecting our health.

### Toxins in beauty, body care, cosmetic and household products

#### 1. alcohol (isopropyl)

- **what it is:** a solvent and denaturant (a poisonous substance that changes another substance's natural qualities); is petroleum-derived (also used in antifreeze, as a solvent in shellac and diluted essential oils)
- **what it does:** according to *A Consumer's Dictionary of Cosmetic Ingredients*, ingestion or inhalation of the vapor may cause headaches, flushing, dizziness, mental depression, nausea, vomiting, narcosis, anesthesia and coma; the fatal ingested dose is one ounce.
- **where it is found:** in hair color rinses, body rubs, hand lotions, after-shave lotions fragrances

#### 2. sodium laurel sulfate (SLS) and sodium laureth sulfate SLES)

- **what they are:** detergents and chemicals that produce foam (industrially, they are used as a degreaser)
- **what they do:** strip the hair, scalp and skin of natural oils which regulate moisture and are linked to immunity and skin health; leave hair, scalp and skin dry, can corrode hair follicles and impair the ability of hair to grow
- **where they are found:** 90% of shampoos, toothpastes and body care products that produce foam contain SLS and/or SLES.

#### 3. propylene glycol

- **what it is:** a petroleum plastic that acts as a wetting agent and solvent, provides smoothness to a product and prevents the product from drying out the active ingredient in antifreeze
- **what it does:** can break down protein and cellular structure; can penetrate skin quickly and become systemic, cause dermatitis and kidney, liver and brain problems; leaves a greasy film on the skin, giving the sensation of moisture, but actually blocks the skin from breathing and exchanging moisture and energy from the environment, thus preventing toxins from being smoothly discharged through the skin; has been found to inhibit cell growth so cells do not reproduce normally.
- **where it is found:** beauty and body care products

#### 4. fragrance

- **what it is:** the FDA estimates that 4,000 different chemicals are used in the fragrance industry; a single fragrance can contain hundreds of chemicals, most of which are synthetic, derived from petroleum; many are toxic or carcinogenic; manufacturers are not required to list chemicals in a specific fragrance.
- **what it does:** can cause symptoms from headache to allergic rashes and can affect the central nervous system; can cause depression or hyperactivity
- **where it's found:** personal care products

## 5. DEA (diethanolamine), MEA (monoethanolamine), TEA (triethanolamine)

- **what they are:** hormone-disrupting chemicals known for form nitrates and nitrosamines; found in forms like Cocamide DEA, Cocamide MEA and Lauramide DEA
- **what they do:** create foam in products; are restricted in Europe because of known carcinogenic effects; repeated use of DEA-based detergents has been shown to increase liver and kidney cancers; risks are significantly increased in children.
- **where they are found:** products that foam – bubble baths, body washes, shampoos, soaps, facial cleansers, detergents.

## 6. triclosan

- **what it is:** antibacterial chemical, registered with the EPA as a pesticide; a chlorinated aromatic similar in molecular structure and chemical formulation to some of the most toxic chemicals – dioxins, PCBs and Agent Orange.
- **what it does:** interferes with the way hormones perform, such as changing genetic material or fostering birth defects; internally it can lead to cold sweats, circulatory collapse, convulsions, coma, even death; stored in body fat, it can accumulate to toxic levels, damaging liver, kidneys and lungs, can cause paralysis, sterility, suppression of immune function, brain hemorrhages and heart problems; microbiologists say triclosan is capable of forcing the emergence of “superbugs” that it can’t kill and that daily use in products from children’s soaps to toothpaste may be unwise.
- **where it’s found:** detergents, dish washing liquids, soaps, deodorants, cosmetics, lotions, creams, toothpaste; *Good Housekeeping* reported in its March 1999 issue that Americans snatched up \$540 million of these products, without proof that they even do what they claim.

7. **chlorine:** chlorine isn’t found in personal care products, but it is found in tap water, showers, pools, laundry products, cleaning agents, food processing and sewage systems; can cause asthma, hay fever, anemia, bronchitis, circulatory collapse, confusion, delirium, diabetes, dizziness, irritation of the eyes, mouth, nose throat, lungs skin and stomach and contribute to heart disease, high blood pressure and nausea.

8. **others:** alpha hydroxy acids (glycolic, lactic, AHA, etc.), aluminum benzophenone, benzalkonium chloride, butylenes glycol, diazolidinyl urea, ethylparaben, lanolin, methylparaben, petrolatum, polyquaterniums, propylparaben, polysorbates, polyvinylpyrrolidone.

***Be sure to read the ingredients on any products before you buy. Even products found in health food stores may contain some of these toxins.***

## Natural Alternatives

- Safe, non-toxic alternative to anti-bacterial products containing triclosan is Organic Essentials Hand Wash with Grapefruit Seed Extract. Lavender has natural anti-bacterial properties.
- A body cleanser that protects against chlorine’s damaging effects is Organic Essentials Nourishing Body Cleanser. Diluted Dr. Bronner’s liquid soaps make good body soap.
- Natural essential oils offer an alternative to synthetic fragrances and can impart aromatherapeutic benefits; researchers say that natural essential oils do not stay or build up residue in the body and are excreted by normal elimination channels.
- Aaida, Alba Botanica, Aubrey, Avalon Organics, Burt’s Bees, Weleda, Miracell products are non-toxic.

A website helpful in assessing the safety of body care and beauty products is the Environmental Working Group, Skin Deep Cosmetics Database [www.ewg.org/skindeep/](http://www.ewg.org/skindeep/) These sites allow you to type in the name of a product and it will produce a report, indicating if the product is of low, medium or high concern. The site also gives comparisons of similar products and their ratings.

**Laundry detergent:** Powdered laundry detergent contains salts that can’t be processed out in the water treatment plants. It is environmentally destructive. Liquid laundry detergents are easier on the environment. I use Dr. Bronner’s Lavender Soap diluted 10 parts water to one part soap. It cleans well using only ¼- ½ cup.