

Phthalates Explained

What are Phthalates?

Phthalates (pronounced “thal-ates”) are just one of the many of the problematic undisclosed ingredient types in most fragrance oils that have been linked to many degenerative diseases. They are endocrine disrupters. According to the environmental lobby group phthalates affect hormone levels, semen quality and genital development in male fetus. Phthalates are used as plasticizers, which are substances that modify the physical properties of materials. Phthalates are created by a reaction of alcohols with phthalic anhydride and the elimination of water. They are present in larger-molecule variety in everyday household items like carpet, footwear, toys upholstery, electrical cables and vinyl flooring. For this application hard and inflexible PVC (polyvinyl chloride) is made soft and flexible with the use of phthalates. The smaller-molecule type serves as a fixative, binder, and solvent in perfumes and fragrances to slow evaporation and cause the scent to linger. This is why the aroma of fragrance oils lingers on your body or in the air longer than the scent of an essential oil. Phthalates allow the fragrance oil to linger on your skin longer because of its fixative properties. Fragrance chemicals in scented laundry products, lotions, hairsprays, scented candles and air fresheners are breathed into the lungs 24 hours per day. Nail polishes also use phthalates to gain a more supple texture and by using phthalates’ fixative properties. A report by The Environmental and Health Working Group done in 2002 found that phthalates were found in 72% of beauty products.

Common Phthalates in Cosmetics

The most commonly used phthalate is diethyl phthalate. A few of the commonly used phthalates including dibutyl phthalate and diethylhexyl phthalate are banned in Europe but still allowed in the USA. Dibutyl phthalate and diethylhexyl phthalate are suddenly being removed from products produced by the cosmetic companies that sell in the USA and EU. But it is only a handful of American companies that are complying with the EU’s regulations, why bother if they only sell in the USA? Why protect Americans from these hidden ingredients that are protected under trade secret laws? The U.S. Centers for Disease Control and Prevention found metabolized forms of dibutyl phthalates in *every person* tested in their National “body burden” study. Dimethyl phthalate, diethyl phthalate, diisobutyl phthalate, dicyclohexyl phthalate and bis (2-ethylhexyl) phthalate have been found in common fragrance brands and are still allowed in the EU and USA. Most ingredient conscious consumers would not purchase a product if they saw any of the following listed: dibutyl phthalate, diethylhexyl phthalate, dimethyl phthalate or diethyl phthalate. But they are never listed on an ingredient list. The consumer simply reads “fragrance”. If a company uses fragrance oils in their products they should not claim to be phthalate free, paraben free, preservative free, non-toxic, hyper allergenic or cruelty free. But it happens everyday because manufactures do not know what is truly in the fragrance oils they purchase. Any host of ingredients

including “processing agents”, preservatives and a long list of chemical cocktails could be in any fragrance oil.

Phthalate Studies

Studies have shown that phthalates can damage the lungs, liver and kidneys, and to harm the developing testes of offspring. These results came from animal tests which, according to government scientists, are pertinent to predict the health impacts of a substance in humans. There are also studies of phthalates on rats that showed that phthalates caused deformity and impaired function of the penis and testes. I was surprised to find that there were human studies that found humans with similar deformity as the rat studies. Of course, these were not cruel studies being done on pregnant women. These were pregnant women who had unknowingly exposed their developing sons to phthalates through deodorant, perfume, cosmetics, air fresheners, household cleaners and everyday personal care products. According the Independent News and Media Limited, 1 out of every 150 to 200 boys born in the UK has a birth abnormality of the penis known as hypospadias. It happens during the first trimester as a result of incomplete masculinisation in the womb. According to Professor Richard Sharpe of the Medical Research Council’s Human Reproductive Sciences Unit, there is a link between incidents of hypospadias, undescended testes, low sperm-count and testicular cancers that have to do with environmental and lifestyle factors.

He Said, She Said, Who is Right?

The Environmental Working Group argues that most consumers use multiple fragranced products which can lead to a potentially dangerous cumulative level of phthalates in the consumer’s bloodstream. Good scientific explanation of the hormone disruption caused by phthalates can be found on these sites: <http://www.ehponline.org/docs/2005/113-8/ss.html> and <http://www.ourstolenfuture.org/NEWSCIENCE/oncompounds/phthalates/2005/2005-0527swanetal.htm> The Fragrance Material Association declares that the Natural Resource Defense Council, Environmental Working Group and various studies done around the world have made inaccurate conclusions and the phthalates are completely safe. No matter which side is right, I would still like to know what ingredients are in a product before I use it. If you must stay with fragrance oils for your cosmetic lines there are phthalate free alternatives that are available to manufacturers. Some are making the changes so ask your supplier if your supplies are phthalate free.