



A Chemical Coat of Armor? Choosing Safe Sunscreen and Bug Spray

Written by Jill Grunewald and published in mix magazine, April 2012



In most areas of the country, winter was extraordinarily mild. Here in Minnesota, March blasted us with some temperatures more commonly experienced in June. So much for the “We-get-more-snow-in-March-than-February” mantra. This year, anyway.

The mosquitoes were buzzing before the equinox. And I’ve recently seen many a pink face from too much sun exposure. I think we’re going to have a long summer.

What is our best defense against two of the warmer months’ biggest casualties – sunburn and bug bites? Unsafe chemicals in our skincare products, including sunscreen, insect repellent, and cosmetics have been getting much recent attention, for good reason. What products are safe and which ones carry a toxic load?

It’s important to be mindful of what we’re slathering on our skin. This protective sheath is the largest organ of our body and, similar to the intestinal wall, readily absorbs what it’s exposed to. Sure, we all want protection against warm weather critters and don’t want to bake ourselves to a crisp, but when you consider the long-term implications of exposure to the chemical cocktails often found in sun and bug repellents, you may want to explore your options. These chemicals are a toxic burden to the liver and some have been shown to cause cancer and been implicated as endocrine (hormonal) disruptors.

Safe Sunning

Many sunscreens are formulated with parabens (chemical preservatives), harsh solvents, alcohols, petroleum products, and fragrance chemicals that have been linked to cancer. Yet products that claim to be “natural” and “organic” may still contain synthetic chemicals. So just as we read labels on our food, it’s important to read labels on your skincare products.

Avoid these common chemicals used in sunscreens:

- 4-methy-benzylidencamphor (4-MBC) - A known endocrine disruptor, it has estrogenic effects and suppresses thyroid function
- Homosalate (HMS) - May cause organ system toxicity
- Benzophenone-3, also known as Oxybenzone - A possible photocarcinogen that increases free radical damage and has estrogenic effects
- Octyl-methylcinnamates (OMC) – Known toxin and endocrine disruptor
- Octyl-dimethyl-para-amin-benzoic acid (OD-PABA) – Causes biochemical or cellular level changes

HEALTHFUL ELEMENTS



The two natural ingredients the FDA has allowed to be sold as sunblock are zinc oxide and titanium dioxide. These are the substances found in the safest sunscreens. There is minor controversy about the safety of titanium dioxide, but according to Dr. Andrew Weil, founder and program director of the Arizona Center for Integrative Medicine, "I have always recommended choosing sunblocks containing zinc oxide or titanium dioxide, both inert, opaque compounds that block almost the entire spectrum of the sun's damaging rays without causing irritation. Zinc oxide acts as a mechanical, rather than chemical, sun barrier."

One of the downfalls of using sunscreen is that limiting our ability to absorb the sun's rays greatly inhibits our Vitamin D production. Vitamin D is actually not a vitamin or a nutrient. It's a hormone produced when we receive direct sunlight on our skin. Because the body cannot produce any vitamin on its own, Vitamin D is considered a hormone because it's made within the body via photosynthesis.

It's estimated that 70% of us are deficient in Vitamin D, and inadequate levels have been linked to everything from pancreatic, breast, colon and prostate cancers, to neurological disorders, asthma, heart disease, autism, hypertension, depression, autoimmune diseases, and tooth decay. By using sunscreens to prevent skin cancer, we may actually be contributing to cancer-promoting deficiencies. Couple this with the cancer risks associated with the common chemicals used in sunscreens, and we may be doing more harm than good.

Even 20 minutes in mid-day direct sunlight, sans sunscreen, increases our Vitamin D levels significantly. The more sunlight we are exposed to in the warmer months, the less supplementation we need in winter because our bodies store Vitamin D in our fat cells. As the Italian saying goes, "Where the sun does not go the doctor does."

Better Bug Management

The most commonly used chemical in insect repellents is DEET. While effective, Dr. Weil calls it "nasty and toxic," as it has been linked to nausea, skin rashes, lethargy, and muscle spasms. According to Dr. Joseph Mercola, "... there are other potentially harmful chemicals in bug sprays, one of which is permethrin. Permethrin is a member of the synthetic pyrethroid family, all of which are neurotoxins. The EPA has even deemed this chemical carcinogenic - it causes lung tumors, liver tumors, immune system problems, and chromosomal abnormalities."

Fortunately, we have safe options for keeping bugs at bay. Some of these botanical oils and extracts have been shown to be as effective as DEET. According to Dr. Mercola, cinnamon oil has proven to be better at killing mosquitoes than DEET. Neem, from the Indian tree *Azadirachta indica*, and repellants containing geraniol, a plant-derived compound, both provide significant protection. Other powerful protectors include citronella, peppermint oil, and lemongrass oil.

HEALTHFUL ELEMENTS



Look for repellants containing these natural ingredients, or better yet, make your own super effective oil or spray. Here is a natural insect repellent recipe, courtesy of herbalist Debra Nuzzi-St. Claire:

1/2 ounce citronella oil
1/4 ounce lavender oil
1/8 ounce pennyroyal oil
1/8 ounce eucalyptus oil
1/8 ounce tea tree oil
1/8 ounce jojoba oil

Do not use this blend undiluted on your skin. Follow these instructions for diluting:

Insect Repellent Oil: Add 16 ounces of jojoba or almond oil to the base oil mixture and blend thoroughly.

Insect Repellent Spray: Add 16 ounces of vodka to the base oil mixture, pour into a spray bottle, and shake before using.

Our skin is like a sponge that will mop up whatever chemical soup we feed it. Over time, this toxic build-up can make us sick, especially in the presence of nutritional deficiencies and lack of self-care. While we may not have the luxury of ever finding food-grade bug spray and sunscreen, ditching the toxic chemicals for the safer alternatives is an important part of treating ourselves and our environment well.

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