

Your Personal Care Product Bin: Botanical Bonanza or Toxic Wasteland?

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Personal care products have become a \$50-billion industry in the United States, yet the U.S. government does not require any mandatory testing for these products before they end up in your shopping cart.

We are seduced on a daily basis by the intoxicating aromas, flashy packaging and enticing promises of everlasting youth these products offer. But what is the *real cost* of applying these products to your body? The answer is the subject of this report.

For our purposes, examples of personal care products include:

- Hand and body soaps
- Body washes
- Shampoos, conditioners, hairsprays and other hair care products
- Hair dye
- Toothpaste
- Perfume
- Cosmetics such as lipstick, mascara, eye shadow, foundation, etc.
- Deodorants and antiperspirants
- Baby care products, including diaper rash creams
- Sunscreen products



The Skinny on Skin

Why bother taking care of your skin?

Your skin is much more than a wrap to keep you from sliding down into a puddle of formless biomass. It is your body's largest organ, protecting you from pathogens and flying debris and other environmental assaults.

Your skin:

1. **Protects** your internal organs from injury and infection
2. Helps **eliminate** wastes through perspiration

3. Assists your immune system by providing a **protective barrier** to viruses and bad bacteria, thus preventing infections
4. Provides a friendly habitat for **good bacteria**
5. Helps maintain **body temperature** by controlling heat flow between you and your environment
6. Produces and stores **Vitamin D**, which is important for your immune system
7. Being rich in receptors, sends **sensory feedback** to your brain such as hard/soft and hot/cold, so that you can react to dangerous conditions around you
8. Seals in **moisture**, maintaining your body's delicate fluid balance



Skin is vital to health, yet many people fail to take care of it. Because your skin has the ability to absorb whatever you put on it, informed choices are critical. **You should give your skin the same thoughtful care you give your internal organs.**

You Are What You... Slather

The growing awareness of chemical ingredients in the foods you eat has led many of you to begin reading labels. If you are doing this as part of your regular shopping routine, you are to be commended and will live longer for it.

But what about the products you are smearing all over yourself?

Eye makeup can be absorbed by your highly sensitive mucous membranes. Hair sprays, perfumes and powders can be inhaled, irritating your lungs. Lipstick is often licked off and swallowed. Sunscreen and lotions are absorbed through your skin.

The Environmental Working Group (EWG) estimates that one out of five cosmetics might be contaminated with a cancer-causing agent.¹ This nonprofit public-interest research group is known for making connections between chemical exposure and adverse health conditions. But who has time to worry about these *fluffers and buffers* when there is already so much to learn about healthful eating?

Putting chemicals on your skin or scalp is actually **worse** than ingesting them.

When you eat something, the enzymes in your saliva and stomach help to break it down and flush it out of your body. However, when you put these chemicals on your skin,

they are absorbed straight into your bloodstream without filtering of any kind, and go straight to your delicate body organs. You lack the necessary enzymes to break them down so they accumulate with time.

Chemicals are absorbed into your bloodstream in a number of ways.

Powders have the least absorption, whereas oily solutions or those designed to moisturize are more readily absorbed. The United Nations Environmental Program estimates that approximately 70,000 chemicals are in common use across the world with 1,000 new chemicals being introduced every year.²

Petrochemicals are already in your bathroom cabinet. They are present in the vast majority of American made products such as shampoo, bubble bath, body lotion, baby care products, make-up, and soap. Petrochemicals are now being linked to cancer and other serious illness.

“But I Only Use Natural Products”

The booming interest in natural, preventative health care has been a gift to the organic product industry. Sales of organic personal care items in the US reached \$350 million in 2007, increasing 24 percent from 2005.³

There are no federal regulations for beauty products, so anyone can claim their product is “natural” or “organic”. If someone scooped hog manure onto your salad and told you it was natural and organic, would you eat it? Just because something is natural does not make it good for you.



In terms of the natural products that ARE good for you, a label with the word “natural” does not mean the product contains only natural ingredients.

In fact, some "organic" beauty products contain only a single-digit percentage of organic ingredients.

Some brands use ingredients that were simply derived from natural sources but are no longer natural or organic. When it comes to the labeling of cosmetics and body care products, it's a free-for-all.

A classic example of this is sodium laureth/laurel sulfate (SLES/SLS) which, although derived from coconut oil, has little resemblance to its original form and offers none of the moisturizing benefits of coconut oil.

The real problem with SLES/SLS is that the manufacturing process (ethoxylation) results in SLES/SLS being contaminated with dioxane, a carcinogenic by-product.⁴

Dioxane will be discussed more fully in the section about petroleum by-products.

SLES/SLS is frequently used in anti-freeze and engine degreasers. Unless you want your face to look like a piece of farm equipment, you'd be better off avoiding it.

The Noxious Truth About Cosmetic Regulations

You are being damaged by personal care products. The effect is cumulative over decades. We now understand that the long-term accumulation of chemicals in body tissues from very *small but frequent exposures* can be more detrimental than a few larger exposures due to the *cumulative effect*.

This is discussed in detail by Theo Colborn in her book *Our Stolen Future* and more recently by Dr. Doris Rapp in *Our Toxic World: A Wake Up Call*.

Women, it seems, may be most at risk. If you use make-up on a daily basis, for instance, you can absorb almost 5 pounds of chemicals into your body each year.⁵ Many women even use more than 20 different beauty products each day. We are body care product junkies.

But men aren't out of the woods either.

In 2004, a six-month computer investigation was done as a personal care safety assessment.⁶ More than 10,000 body care product ingredients were evaluated, involving 2,300 participants.

One of the findings was that the average adult uses nine personal care products each day that contain 126 different chemicals. It also revealed that more than a quarter of a million women, and one out of every 100 men, use an average of 15 products daily.



Most consumers would be disturbed by the investigation's findings:

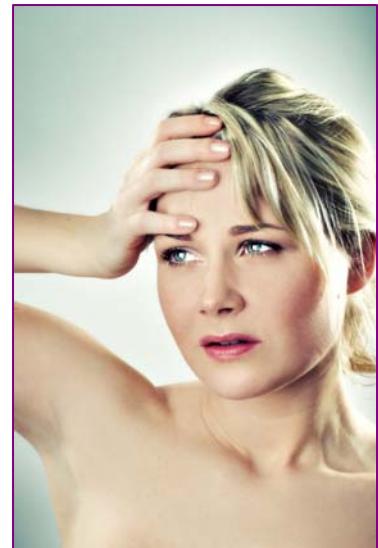
- Only 28 of the 7,500 products in the study were fully tested by the cosmetic industry's self-regulating panel
- An alarming one-third of all the products assessed contained at least one ingredient that fell under the classification of human carcinogen

- 71 percent of the hair dye products evaluated had carcinogenic coal tar as part of their ingredient list⁷
- Nearly 70 percent of the products reviewed were found to have ingredients that could be tainted with impurities that have been linked to cancer and other health problems
- 54 percent of the products violated safety recommendations proposed by the self-regulating Cosmetic Ingredient Control Board
- Over the course of monitoring the cosmetic industry, the FDA has banned a mere **nine** personal care products

Based on these findings, researchers concluded that the lack of monitoring by the FDA has led to a huge leniency toward the testing of cosmetic ingredients and has contributed to the large number of products available on the market that pose health risks to consumers.

One government agency found out that cosmetic manufacturers could use just about any raw materials in their products and then put them on the market without needing approval by the FDA.

Additionally, The National Institute of Occupational Safety and Health stated that nearly 900 of the chemicals used in cosmetics are toxic,⁸ although other groups insist that figure is far too conservative.



In its Third National Report on Human Exposure to Environmental Chemicals, the Center for Disease Control (CDC) identified 148 chemicals that you are exposed to in your daily life that can cause you harm by accumulating in your body.

All of this points to the fact that you are becoming a toxic waste dump from the products you use. Why aren't government agencies doing more to protect us? Many consumers are unaware of the dangers of cosmetic chemicals. They fail to realize that many of the same poisons that pollute your environment are also lurking in the jars and bottles that line your bathroom shelves.

The Devil's in The Dreadlocks

So what, exactly, are these chemicals in your shampoo, lotion, and body wash doing to you?

Health effects include skin irritation and allergic reactions, lowered immunity, neurological and reproductive damage to potential sterility, birth defects, endocrine disruption, and cancer.

The sad fact is, we don't really know the scope of what these chemicals will do after accumulating in your body for decades, confusing your hormone receptors and altering your basic body functions. The half-life of some of these chemicals is almost as long as the shelf life of the product they pollute.

It is well known that women seem to be predisposed to far more autoimmune disorders than men. Disorders such as thyroid disease, fibromyalgia, and multiple sclerosis are far more common in women.

Perhaps one of the major contributing factors is that women tend to use far more cosmetics than men. If you are a woman, acting on the information in this report is particularly important.

It is an especially challenging task to establish a link between environmental chemical exposures and health problems because the adverse effects might not show up until many years after exposure. As Theo Colburn discusses in *Our Stolen Future*,⁹ in some cases, effects do not show up in the person exposed but do appear in the offspring. This has been seen in the animal kingdom, as well as in humans. Some adults have been known to suddenly show a disease many decades after prenatal exposure.



Endocrine Disruption 101

An endocrine disruptor is any substance that can alter your natural hormones.

When your body absorbs a substance that is an endocrine disruptor, it mimics a natural hormone by interfering with, or altering the function of, the endocrine (hormone) system, thereby damaging your body.

Endocrine disruptors can be found in plastics, clothing, cookware, foods, medications, detergents, industrial chemicals, pesticides, and unfortunately in body care products.¹⁰ These man-made substances have half-lives of **years**. A half-life is the time it takes a living organism to eliminate/excrete *half* of the substance ingested or absorbed.

Endocrine disruption poses a direct threat to the human population because it is linked to reproductive impairment and sterility. We have already seen the tragic effects of endocrine disruption on our wildlife, with the extinction of many species.

Two major endocrine-disrupting chemicals found in personal care products are phthalates and parabens.

Phthalates... P'tooney

Phthalates are plasticizing ingredients that have been linked to birth defects in the reproductive system of boys and lower sperm-motility in adult men, among other problems. Phthalates were found to be present in nearly three-quarters of 72 products tested by the Environmental Working Group, although the word “phthalate” never appeared on any label.¹¹

Phthalates are commonly detected in *fragrances*, which can contain hundreds of chemicals per fragrance. The documentation of the adverse effects of phthalates on rats is widely accepted. However, the degree that the risk translates to humans is the subject of ongoing debate.

Parabens Everywhere

Parabens are a group of chemicals found in underarm deodorants, shampoos, soaps, toothpaste, lipstick and other body care products that have been shown to mimic the action of the hormone estrogen.¹²



These substances, called “xeno-estrogens,” are fat-soluble, which means they can store themselves in your body.

They can also often be found in many prepared foods, like mayonnaise, mustard, salad dressings, and candy. The only ingredient used more frequently is water.¹²

The female breast contains cells called estrogen receptors, which are stimulated by the presence of estrogen (or xeno-estrogens) into producing more mammary tissue. It is possible that stimulating these cells artificially after menopause, when natural hormone levels drop, could contribute to breast cancer.

Other paraben side effects include male breast growth (gynecomastia), excess fat storage, and diminished muscle mass. They have also been linked to a variety of cancers. Parabens may be listed on a label as *methyl* paraben, *ethyl* paraben, *propyl* paraben, *butyl* paraben, *isobutyl* paraben or E216 and are typically added to products as preservatives.

Sniffing Out The Truth About Underarm Products

Studies show that parabens can seep into underarm tissue after being applied to your skin as deodorant.

In a recent study, researchers found traces of parabens in every sample of tissue taken from 20 different breast tumors.¹³ However, this study showed no direct evidence that deodorants were linked to an increased risk of breast cancer. Researchers concluded that further studies are needed to examine whether there is indeed an association between estrogen and other chemicals found in deodorants, and breast cancer.

Until more is known, it is prudent to avoid deodorants containing parabens.

The issue with antiperspirants is different than the issue with deodorants.

Deodorants work by neutralizing the smell of sweat via antibacterial action but do not prevent sweating. On the other hand, antiperspirants actually prevent sweating by clogging, closing, or blocking the pores that release sweat--with the active ingredient being aluminum.

The first problem with antiperspirants is that, by preventing sweating, they are blocking one of your body's natural detoxification methods. The second issue is with the aluminum they contain. Aluminum is absorbed into your body and has detrimental effects on your brain, including being a likely culprit in the growing numbers of people developing Alzheimer's disease.¹⁴



In a 2004 study, Chicago allergist Dr. Kris McGrath¹⁵ believes he has found a connection between antiperspirants, underarm shaving and cancer.

He believes the toxins in aluminum salts, such as aluminum chlorohydrate, don't normally penetrate your skin enough to cause a problem. However, once your skin is disrupted by shaving, the chemicals can be absorbed much more readily and hitch a ride on the lymphatic system, just under your skin, to nearby breast tissue.

More research is needed on this issue before it can be definitively concluded that antiperspirants cause breast cancer, but it would certainly seem safer to avoid all antiperspirants and deodorants until a verdict is reached.

Using good old soap and water is usually all you need. If you are convinced you need a deodorant, make sure that the deodorant you choose does not contain parabens.

Other Notorious Villains

Modern cosmetics contain a host of dubious ingredients that would be better suited to a high school chemistry lab than your face. Here are just *some* of the chief offenders you can be soaking up with every primping session:

- Lead
- Phenylenediamine
- Benzene
- Formaldehyde
- Coal tar (in hair dyes)¹⁶
- Methylisothiazolinone (MIT)
- Sodium Laureth/Laurel Sulfate (SLES/SLS)
- Propylene Glycol
- Dioxane
- Oxybenzone
- Phenol carbolic acid
- Acrylamide
- Toluene

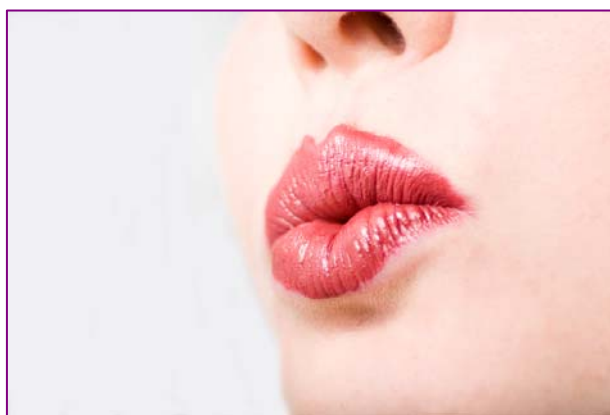
The list goes on and on. A few are worthy of special consideration.

The Kiss of Death?

As unbelievable as it is, lead is still detected in the majority of name-brand lipsticks manufactured in the United States.

In September 2007, the Campaign for Safe Cosmetics did a study examining lead content of lipsticks.¹⁷

They found that 61 percent of 33 name-brand lipsticks contained lead levels ranging from 0.03 to 0.65 parts per million (ppm). One-third of the lipsticks had more lead than the U.S. Food and Drug Administration's 0.7ppm limit for lead in candy.



Lead is a neurotoxin that is known to cause learning, language, and behavioral problems. In a pregnant woman, lead can cross the placenta and interfere with normal fetal development and even cause miscarriage. It can also cause infertility. The small amount of lead in body care products builds up over time, resulting in a significant accumulation in body tissues.

Although lipstick is absorbed directly into your body, the FDA has not set a lead limit for this cosmetic. The Campaign for Safe Cosmetics is calling for cosmetics makers to remove lead from their products, and for the FDA to more strictly regulate personal care products. Obviously, if 39 percent of lipsticks tested contained no detectable lead, then it is certainly possible to make lead-free lipstick.

What this means to you is, if you apply lipstick several times a day, you could be ingesting high amounts of lead over the course of your lifetime-- along with any number of other chemical stowaways.

The amount of lipstick consumed by the average woman in her lifetime is 4 to 10 pounds (for fun—you can Google this for yourself), depending on whom you listen to, and that's lead you *don't* want in your pencil—or in any part of your body.

Petrochemicals: Bathing in Motor Oil

Environmental health consumer advocate David Steinman, who oversees the Organic Consumers Association¹⁸ (OCA), poignantly stated,

At a time when our nation is dangerously dependent on foreign oil and attempting to wean itself off unnecessary dependence on petroleum-based ingredients in major consumer products for national security reasons, it is self-defeating that we are literally bathing ourselves and our children in toxic petroleum compounds.

Although gas prices are skyrocketing, petrochemical derivatives remain very inexpensive and are widely used in the personal care products industry.

Ethoxylation, a cheap short-cut companies use to provide mildness to harsh ingredients, requires the use of the cancer-causing petrochemical Ethylene Oxide, which generates 1,4-Dioxane as a by-product.

In addition to being a known cancer-causing agent, 1,4 Dioxane is also suspected to be toxic to your kidneys, brain and lungs and is a leading groundwater contaminant.¹⁸

You won't find dioxane on the jar label as a listed ingredient. Instead, it will be present within other ingredients such as "polyethylene," "polyethylene glycol," "polyoxyethylene," "oxynol," "PEG," "myreth," "oleth," "laureth," "cetareth," any other "eth." SLES/SLS is often contaminated with dioxane, according to the Environmental Working Group.



Just because a product says it's "organic" doesn't mean your concerns about petrochemical ingredients are over.

In a report released on March 14, 2008, the OCA found at least one toxic, cancer-linked chemical in over 40 percent of products that call themselves "natural".¹¹ Testing by the EWG showed that dioxane might be present in 22 percent of all cosmetics, including:

- 55percent of bubble baths
- 57percent of baby shampoos
- 55percent of baby soaps
- 43percent of body firming lotions
- 37percent of anti-aging lotions
- 35percent of around-eye creams¹⁸



Although previous studies have revealed 1,4-Dioxane is often present in conventional body care products, this new study indicates the toxin is also present in leading "natural" and "organic" products, none of which are certified under the USDA National Organic Program.

On a brighter note, all USDA-certified brands tested in the study were dioxane-free.

The FDA continues to take the stance that the levels of dioxane in body care products are too low to be considered harmful.¹⁹ Given there are products out there that have NO dioxane, why take a chance with your health? Your best bet is to purchase products that are certified under the USDA National Organic Program, and if those aren't available, select products whose ingredients you recognize and can pronounce.

Wax On, Wax Off: Mineral Oil, Paraffin and Petrolatum

Mineral oil is present in the vast majority of American body care products because it is incredibly cheap. Mineral oil, as well as paraffin and petrolatum, are petroleum products that coat your skin like a sheet of plastic wrap, clogging pores and creating a build-up of toxins. This skin sludge can accumulate and lead to dermatological issues.

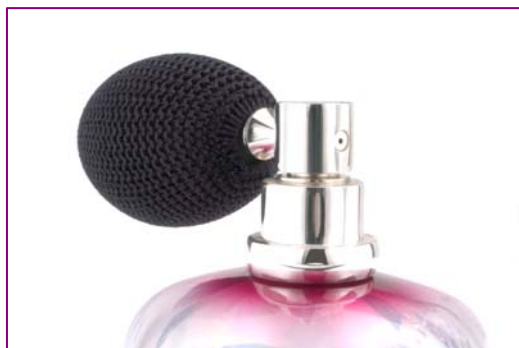
It is a fallacy that mineral oil moisturizes your skin.

In fact, it interferes with your body's own natural moisturizing mechanism, leading to dryness and chapping. Manufacturers continue to use it because it is so inexpensive.

Mineral oil can be found abundantly in most baby products. In fact, conventional baby oil is just mineral oil and fragrance. Do you want to treat your baby like a person or a little piece of industrial machinery?

Making Scents of it All

Many raw materials used in the manufacture of body care products have odors that may be considered offensive to consumers. Our preoccupation with smelling good has prompted cosmetic manufacturers to add ingredients to cover offensive odors and satisfy our scent addiction. Good scents equal good marketing sense, equal manufacturers making lots of cents.



There are *thousands of chemicals* available for use in the production of fragrances and perfumes -- many of which are quite toxic.

The FDA specifically bans only about *ten chemicals* from use in cosmetics and fragrances. Legally, any other chemical can be used in making a fragrance.²⁰

In the case of products labeled as "fragrance-free" or "unscented," manufacturers generally add fragrance ingredients to cover the offensive odor, but less than what is needed to impart a noticeable scent. If fragrance is added to a product to mask the odor of other ingredients, listing it on the label is not required.²⁰

Because scents are considered "trade secrets," hundreds of ingredients can be lumped together under the heading "fragrance." Although companies are required by law to list all chemical ingredients in a personal care product, this regulation loophole allows them to list "fragrance" as a general category instead of a specific one.

Companies are not required to test cosmetics for safety before they are sold, and the FDA does not systematically review the safety of fragrances. In fact, many of the ingredients used in fragrances have little to no safety testing done on them. Most of the safety testing that has been done has revolved around the dermatological effects of fragrance chemicals.

The effects on your respiratory system, brain, and other organs of your body have not been determined on individual chemicals -- much less in the combinations in which they are used.

Artificial fragrances are among the top five known allergens and are a frequent trigger for asthma attacks. Many of the chemicals in fragrances have been linked to allergies, skin reactions, migraine headaches, endocrine and hormone disruption, and possibly even birth defects. One of the worst constituents of these smelly chemical blends is phthalates, the hazards of which have already been discussed.

Musks

Synthetic musks are very commonly used in fragrances and can accumulate in your body, in the same manner as other synthetic chemicals.



Musks have been linked to skin irritation, hormone disruption, and cancer in laboratory studies.¹¹ Chances are very good that a synthetic musk can be found **in any consumer product** with a pleasant smell, from shampoo to air fresheners, according to one New York toxicologist.

In one Massachusetts study, levels of synthetic polycyclic musk fragrances were found to be higher in the breast milk of American mothers than in mothers from other countries.

Among the chemicals found were Xylene, ketones, HHCB, HHCB-lactone (the oxidation product of HHCB) and AHTN. HHCB was found to be **five times higher** than levels reported in Denmark and Germany ten years ago.²¹

You know we have a serious problem in this country when these chemicals are finding their way into breast milk.

Methylisothiazolinone (MIT)

Methylisothiazolinone, or MIT, sometimes erroneously called methylisothiazoline, is used as a preservative because of its powerful ability to inhibit microbe growth in water-based products.

MIT is used in many different body care products, including shampoos and hand lotions.

Like many artificial preservatives, two recent studies reveal that MIT is toxic to experimental animals. Most alarming is the finding that prenatal exposure in laboratory rats resulted in disorientation and destruction of immature nerve cells. This research raised the possibility that the neural development of unborn human babies could also be disrupted.²²

Although definite toxicity to human beings has not yet been established, most researchers agree that additional testing is needed due to the wide use of MIT in the body care industry.



Oh, Baby

Your children might be suffering the most damage from our personal product industry. The Environmental Working Group surveyed 3,300 parents, comparing the baby products they use to lists of chemicals known to cause allergies, hormone disruption, damage to the nervous system, and cancer. They found that children are exposed on a daily basis to 27 chemical ingredients that have never been assessed for safety by the industry or by the government.²³

Dr. Rebecca Sutton, the environmental scientist who conducted the study, points out the following:

- 2 bromo, 2 nitropropane, and 3-DIOL create allergies and skin irritations, and in certain products can break down to form new cancer-causing agents
- Desitin diaper cream contains sodium borate, which can collect in your child's brain and liver, causing detrimental health effects
- Sunscreen with oxybenzone can trigger allergies and disrupts your delicate hormone system



Surprisingly, 89 percent of products labeled “Recommended by Doctors” are actually some of your *worst offenders*, containing what Dr. Sutton considers to be dangerous chemicals. The Cosmetic, Toiletry and Fragrance Association responded to Dr. Sutton’s concerns with the following statement:

Companies utilize a complex, multi-tiered scientific approach to extensively evaluate the safety of individual ingredients and finished products. These processes can take many months to several years to complete and utilize the expertise of leading chemists, toxicologists, biologists, dermatologists and experts from other scientific disciplines and medical specialty areas.

You might want to be more concerned about **what we don't know** than what we do know, in terms of how your babies are going to respond to the barrage of chemicals they are exposed to from birth, onward.

There are some excellent natural baby products available, but you must make the time to do your due diligence in finding them. Skin Deep (www.cosmeticsdatabase.com) and the Organic Consumers Association (<http://organicconsumers.org/btc/BuyingGuide.cfm>) are good sources.

Going Overboard With Sunscreen

A new study by the CDC released in March 2008 discovered that 97 percent of Americans are contaminated with a widely used sunscreen ingredient called **oxybenzone** that has been linked to allergies, hormone disruption, and cell damage.²⁴



A related study published just one day earlier showed this chemical is linked to low birth weight in baby girls whose mothers were exposed during pregnancy.²⁴ Oxybenzone also has the property of helping other chemicals penetrate your skin.

The EWG identified nearly 600 sunscreen products sold in the United States that contain oxybenzone, as well as 172 facial moisturizers, 111 lip balms, and 81 different types of lipstick.

EWG research shows that 84 percent of 910 name-brand sunscreen products offer inadequate protection from the sun, or contain ingredients, like oxybenzone, with significant safety concerns.²⁴

We have gone *overboard* on sun protection at the expense of the *good things* the sun offers you, such as vitamin D and lifting your mood. Let's face it: the sun just makes you feel good.

Sun exposure, when used wisely, actually helps to *prevent* skin cancer.

In some societies where clothing traditionally covers most of the body year-round, a greatly increased risk of rickets and osteomalacia have been observed. You need to expose at least 40 percent of your body for up to an hour or more each day, optimally. You can adjust the time depending on the time of year and your skin type.

A diet rich in antioxidants from whole fruits, berries and vegetables is one of the best ways you can create an "internal sunscreen" thereby protecting yourself from skin cancer. Vitamins A and C are particularly important as your cells use these vitamins to regulate light absorption and protect against overexposure. Good nutrition will give you built-in protection from burning, which is particularly important if you're fair skinned.

If you are going to be exposed to the sun more than your skin can safely handle, you can cover your skin with light clothing. If you must use a sunscreen, look for products that are free of petrochemicals. Formulas with zinc or titanium don't appear to have the same toxic side effects as those with oxybenzone.

The Dirt on Antibacterial Soaps

Antibacterial soaps used to be found mainly in clinical health care environments. Today, antibacterial soaps can be found on household countertops and in public restrooms all over the country and have become a \$16-billion-a-year industry.

Some 72 percent of all liquid soap sold in the United States contains antibacterial ingredients. Not only is hand soap antibacterial but so are today's laundry detergents, shampoos, toothpastes, body washes, dish soaps and many household cleaning products.

But are antibacterial ingredients really necessary, and are they really **promoting your health**?

The answer is a resounding **NO** for the following five reasons.



1. Scientists have found that using antibacterial products offers little protection against even the **most common germs**. In a study published in the March 2, 2004 journal *Annals of Internal Medicine*, people who used antibacterial soaps and cleansers developed a cough, runny nose, sore throat, fever, vomiting, diarrhea and other symptoms just as often as people who used products that did not contain antibacterial ingredients.

The researchers pointed out that the majority of symptoms experienced by the study participants were most likely caused by viruses, against which antibacterial soaps are useless. And for symptoms like vomiting and diarrhea, which might be caused by bacteria, the people who used regular soaps had no greater risk than those who used antibacterial soaps.

2. Antibacterial soaps, as well as some toothpastes and mouthwashes, often contain the chemical **triclosan**, an antibacterial agent that kills bacteria and inhibits bacterial growth. Unfortunately, it also kills human cells²⁵.

Triclosan is a known **endocrine disruptor**, upsetting the delicate hormone balance of animals. It has been shown to hasten the transformation of tadpoles into frogs. It has also been found to accumulate in the aquatic food chain and to contaminate human breast milk.²⁶

The effects of triclosan on the tadpoles included significant weight loss and accelerated hind-limb development. The tadpoles were also impaired by decreased gene activity in the tail fin and increased activity of genes associated with uncontrolled cell growth.

Triclosan alone does not cause these effects, but triclosan in the presence of thyroid hormones does, suggesting that *triclosan increases the potency and impact* of thyroid hormones. Proper thyroid function is essential for the development of the human brain and body, so these findings suggest that triclosan could have a negative impact on your health.²⁶

3. Multiple studies now confirm that common consumer antibacterial soaps do not remove any more bacteria from your hands during washing than do plain soaps.

Allison Aiello of the U-M School of Public Health and her team found that washing hands with an antibacterial soap was no more effective in preventing infectious illness than plain soap.²⁷



4. Scientists fear that widespread use of antibacterial products could lead to strains of resistant bacteria, or "superbugs," in a similar way that excessive use of antibiotics has led to mutated bacterial strains that are resistant to drugs. This phenomenon would cause the agents to lose effectiveness for the times when they are really needed.
5. According to information presented at the 96th International Conference of the American Thoracic Society in Toronto, Canada, children actually **benefit** from exposure to some bacteria in early childhood in order to strengthen their immune systems. Children who are not exposed to common bacteria, which are wiped out by antibacterial soap, may be more prone to allergies and asthma.

Even the American Medical Association does not recommend antibacterial products.²⁸

So why do these products persist? Manufacturers are adept at **using fear** to convince you that you need to use them to stay healthy.

You *can avoid* being duped by these companies! All you need to stay clean and healthy is a basic, chemical-free soap that you can pick up at your local health food store, and a good hand-washing technique.

Use only natural dish soaps and cleaning products since your body does not care if it is a body care product or a household cleaner; it will absorb whatever contacts your skin. You will find organic household products in health food stores, nutrition sections of department stores, and through online resources such as the Organic Consumer's Association (www.organicconsumers.org).

What You Can Do to Look Young and Healthy Without Adding to Your Toxic Load

According to researchers, environmental and lifestyle factors play a major role in human disease -- accounting for perhaps 75 percent of most cancers. And if you are not healthy, you're certainly not going to look young and vibrant.

But don't panic. There *is* good news in all of this! It is not that difficult to choose healthful personal care products, once you become a practiced label-reader. Here are some suggestions to help you along the way.

1. Switch over to more natural brands of toiletries including shampoo, toothpaste, deodorants, and cosmetics. These can be found at your local health food store. And many ordinary grocery and department stores are beginning to incorporate nutrition sections where more natural products can be found.



I will also be offering my own line of 95-100 percent certified organic skin care products made with high quality botanical extracts, which includes a castile-based citrus cleanser, a sugar-based citrus exfoliator, toner, day and night time moisturizers, as well as an anti-aging serum and under-eye cream.

2. Read the ingredients on the label, not just the marketing hype. Just because something says "organic", "natural", or "botanical" doesn't mean it contains natural ingredients. Pay attention to the order in which the ingredients are listed. Manufacturers are required to list ingredients in descending order by volume, meaning the first few ingredients are the most prominent. If calendula extract is the last ingredient on the list, your Calendula Body Wash isn't very natural. Look for the USDA Organic Seal.²⁹
3. If you can't pronounce it, you probably don't want to put it on your body. Ask yourself, would I eat this? You will be **feeding** it to your skin.
4. Look for products that are fragrance-free.
5. Stick to the basics. Women, do you really need to use 682 products to get ready for your day? Minimize the number of creams, lotions and powders you use. This will not only be a boon to your health but also to your bank account! Simplify your life.

6. Some of the best personal care products are in your own kitchen. For example, olive oil and coconut oil make effective moisturizers for your skin. A pinch of baking soda mixed into water is an effective all-day deodorant. A bit of olive oil rubbed inside your nostrils can keep them from getting dry.¹²
7. Many nutrition stores now carry deodorant salt crystals that are effective and aluminum-free. You simply wet them and apply to your underarm.
8. Check out products at Skin Deep (www.cosmeticsdatabase.com), a safety guide to cosmetics and personal care products brought to you by the Environmental Working Group. Skin Deep pairs ingredients in more than 25,000 products against 50 definitive toxicity and regulatory databases, making it the largest integrated data resource of its kind.⁶
9. Buy products that come in glass bottles rather than plastic, when possible, due to the chemicals that can leach out of plastics and into the contents—then into you. Bisphenol A (BPA)³⁰ is a serious concern.
10. Avoid using sunscreen if possible. Use light clothing and hats instead. If that is not possible, then look for sunscreens that use zinc or titanium rather than oxybenzone and use these sparingly.
11. Drink plenty of filtered water every day to assist your body in flushing out unavoidable environmental toxins.
12. Eat lots of organic fruits and vegetables to keep your body well stocked with antioxidants so that it can fight free radicals effectively.
13. Be kind to the earth. Look for products that are made by companies who are earth-friendly, animal-friendly and recyclable.³¹ Support companies who do not do animal testing. For more information about how to buy cruelty-free, go to Group for the Education of Animal-Related Issues³² (GEARI).



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