THAT’S A KILLER LOOK

A study of chemicals in personal care products

The average adult American uses 9 personal care products every day, exposing themselves to 126 different ingredients, including many industrial chemicals. Most people assume that everyday consumer products, and the chemicals they contain, have been tested for safety. Unfortunately, that’s not true. Our national chemical safety system is broken, and we are paying the price – in health problems and increased costs to our health care system and economy.

Cosmetics and personal care products are one significant source of exposure to dangerous and untested chemicals. Because we put cosmetic products directly on our bodies, the potential for immediate absorption or ingestion is high. These products may be made from 12,500 different ingredients, most of which have not been assessed for safety by any publicly accountable body. Only 11 cosmetic ingredients have ever been banned or restricted by the U.S. government. The sad reality is that most times we put a mainstream cosmetic or personal care product on our bodies, we are dosing ourselves with hazardous and untested chemicals.

Fortunately, public pressure is creating change. Consumer demands are forcing many companies to replace some toxic ingredients. Smart companies are prospering by making safer products. Several states have passed innovative laws to identify and phase out the most hazardous chemicals in everyday products. Momentum is building for national change to protect our health, reduce unnecessary health care costs, and grow our economy through investment in “green” chemistry and safe products.

Out of 12,500 different ingredients in cosmetics and personal care products, nearly 90% have not been assessed for safety by any publicly accountable entity.
What We Did
We analyzed twelve cosmetic and personal care products used by young people in Maine to assess their safety. We studied how ingredients of these products are regulated, and researched the specific ingredients listed on the product labels. We also tested the products for the presence of three chemicals that would not be listed on labels, but that we thought the products might contain.

To research ingredients listed on product labels, we accessed the extensive Skin Deep cosmetics safety database maintained by the Environmental Working Group, which compares ingredients to over 50 toxicity and regulatory databases. We assessed which ingredients of the products studied have been named as Chemicals of High Concern by the State of Maine. (Maine CHCs have been proven hazardous to humans by an authoritative government body.) We also sent all 12 products to an analytical testing laboratory, where they were tested for the presence of three chemicals (phthalates, formaldehyde, and 1,4-Dioxane) using approved methods and protocols.

What We Found
Our safety analysis produced three key findings.

1. Cosmetic and personal care product ingredients are almost entirely unregulated. Many are toxic, and most have not been tested for safety.

2. Almost every product we analyzed contains ingredients linked to cancer, reproductive and developmental problems, immune system problems, and other health effects, in addition to many ingredients for which no health and safety information is available.

3. Several products we tested contain dangerous chemicals that are not listed as ingredients on the product labels.

Cosmetics and personal care products may contain 12,500 different ingredients. Almost 90% of these ingredients have not been assessed for safety by any publicly accountable authority (including the U.S. government and the cosmetics industry’s self-regulating body). The U.S. Food and Drug Administration (FDA) cannot require pre-market safety testing of cosmetic and personal care products or their ingredients. FDA does not even have authority to require approval of cosmetic labels for accuracy before the products are marketed.

Ingredients for which there is no publicly available safety information are found in almost every product on the market. Ingredients linked to cancer are found in over 1/3 of cosmetics and personal care products. Only 11 ingredients have ever been banned or restricted by the U.S. FDA. Products may also contain chemicals not listed on the label, because they are present as byproducts of the production process, breakdown products of listed ingredients, or components of a “fragrance” that do not have to separately listed.
Key Findings

Many ingredients are hazardous

- At least 7 of 12 products contain chemicals already determined to be hazardous by the State of Maine.
- 7 of 12 products contain chemicals linked to cancer.
- 7 of 12 products contain chemicals linked to reproductive or developmental problems.
- 8 of 12 products contain chemicals subject to prohibitions, restrictions, or warnings.
- All 12 products contain at least one chemical linked to allergic reactions or immune system problems.
- Only 1 of the 12 products is manufactured by a company that has signed the Compact for Safe Cosmetics (an agreement to remove the most hazardous chemicals from their products and publicly report progress).

Three Hazardous Chemicals Not Listed on Labels Were Found in Several Products

- Formaldehyde was found in all three of the products tested for it, including in one product labeled as “Formaldehyde Free”.
- 1,4-Dioxane was found in one-third of the six products tested for it.
- Two of the twelve products tested still contain toxic phthalates, and we still don’t know what’s in the “fragrances” included in the other 10 products.

For a complete description of the analytical and research methods used for this study, visit www.CleanAndHealthyMe.org

Chemicals vs. Pharmaceuticals

Both industrial chemicals used in everyday products and pharmaceuticals (medicinal drugs) often end up in our bodies. The pharmaceuticals do because they are taken or applied as medicines, and the chemicals because many of them leach out of the products in which they are used. But U.S. laws treat these two types of products very differently.

<table>
<thead>
<tr>
<th>CHEMICALS</th>
<th>PHARMACEUTICALS</th>
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<tbody>
<tr>
<td>(Toxic Substances Control Act)</td>
<td>(Food and Drug Act)</td>
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<tr>
<td>No pre-market safety testing required</td>
<td>Several stages of safety testing</td>
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<td>EPA must prove that restrictions proposed are the least burdensome to industry possible</td>
<td>FDA reviews data to determine safety and effectiveness</td>
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<tr>
<td>Only 5 of 80,000 chemicals have ever been restricted (.006%)</td>
<td>Only 1 in 5 drugs that enter clinical testing are approved (80% fail)</td>
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Every Product Has a Story: Highlights from the Study

Sinful Colors Professional Nail Enamel (Labeled as “Toluene, Formaldehyde, DBP and Camphor Free”)

Most consumers assume that ingredients have been tested for safety, and that product labels are accurate. But the U.S. FDA cannot require pre-market testing of cosmetic ingredients, and does not approve product labels for accuracy. We need reform that requires chemicals to be proven safe before they are used in everyday products.

What we found:
We found formaldehyde in this product, despite the label that clearly says “Formaldehyde Free”

Ingredients in this product are linked to:
- Cancer
- Reproductive & Developmental toxicity
- Immune reactions/allergies
- Endocrine (hormone) disruption
- Neurotoxicity

Details Bath and Body Tropical Garden Hand and Body Lotion

Products that do not contain toxic phthalates or contaminants like 1,4-Dioxane may still be harmful. Many of the 12,500 different ingredients used in cosmetics and personal care products are known to harm our health, and almost 90% of them have not been tested for safety.

We need stronger laws to stop the use of known hazardous chemicals in everyday products.

What we found:
This product contains 32 different ingredients, some of which have been banned or restricted in other countries.

Ingredients in this product are linked to:
- Cancer
- Reproductive & Developmental toxicity
- Immune reactions/allergies
- Endocrine (hormone) disruption
- Neurotoxicity
- Biochemical or cellular changes

Salon Grafix Professional Freezing Hair Spray

Because of public pressure, many companies have stopped using toxic phthalates in their products. Some laggard companies (like this one) are still using these dangerous chemicals. And we still don’t know what chemicals most companies are using in unspecified ingredients like “fragrance.” We need government action to quickly replace toxic chemicals like phthalates with safer alternatives.

What we found:
We found the toxic chemical diethyl phthalate in this product. Diethyl phthalate was not listed as an ingredient on this product’s label. (It’s probably contained in the unspecified “fragrance” ingredient.)

Other ingredients in this product are linked to:
- Cancer
- Reproductive & Developmental toxicity
- Immune reactions/allergies
- Neurotoxicity

Burt’s Bees Coconut Foot Creme

Making safer products is clearly possible, and some of the most successful companies are doing so. Smart businesses are appealing to the rapidly growing consumer demand for safer products, and customers should support these forward-thinking companies.

What we found:
We did not find phthalates in this product (confirming the manufacturer’s claim that the product is phthalate-free).

This manufacturer has committed to make safer products by signing the Compact for Safe Cosmetics.

No ingredients in this product are linked to cancer, reproductive or developmental problems.

This product is made from low-toxicity ingredients.
Who’s Looking Out for Our Health?

Most people believe that our government makes sure that chemicals and consumer products are safe, especially for children. Here’s what’s really happening.

The Toxic Substances Control Act (TSCA), passed in 1976, should ensure that chemicals used in everyday consumer products are safe. But TSCA is broken and does not protect our health. More than 80,000 chemicals are registered for use in the United States, and an additional 2,000 are introduced for use each year. The U.S. Environmental Protection Agency (EPA), which oversees TSCA, has been able to require safety testing for just 200 chemicals in 34 years, and has only been able to restrict the use of 5 chemicals under the law.

The Food, Drug, and Cosmetic Act (FDCA) gives the U.S. Food and Drug Administration (FDA) authority to ensure the safety of “cosmetics” (the formal term that includes not only “beauty” products like lipsticks, hair colors, nail polishes, and perfumes, but also most personal care products like lotions, shampoos and conditioners, toothpastes, and deodorants). FDA cannot require pre-market testing of ingredients or products, cannot force manufacturers to recall unsafe products, and cannot even require that product labels be approved for accuracy. Only 11 cosmetic and personal care product ingredients (out of 12,500 used) have ever been banned or restricted by the FDA.

In the face of our broken national chemical safety system, public health organizations, consumers, and states have stepped forward. Consumer demands for safe products and public action campaigns have encouraged some companies to phase out some toxic ingredients. New laws passed by states are also making an impact. We still need national reform to ensure that all chemicals and all products are safe for everyone.

Public action campaigns are changing laws in Maine and other states, and pushing Congress toward action. Individuals and families are making a difference by demanding accountability and action from government agencies and companies. Find out how you can join them at www.CleanAndHealthyMe.org.

What’s Hiding in Our Products?

In addition to 12,500 possible ingredients (many of which are toxic, and 90% of which have not been tested for safety), cosmetic and personal care products often contain contaminants and chemicals not listed on the label (such as components of “fragrances”). We tested twelve products for three chemicals commonly found but not listed on the label.

**FORMALDEHYDE** and preservatives that release formaldehyde are used in many personal care products (especially shampoos and liquid body soaps) to prevent the growth of bacteria. Formaldehyde is a probable human carcinogen, and can cause allergic skin reactions. Some companies add formaldehyde-releasing preservatives to their products, so formaldehyde itself may not be listed on the label.

**1,4-DIOXANE** is a chemical present in many cosmetic and personal care products, most commonly in those that create suds (like shampoo and liquid soap). It is a byproduct of ethoxylation – a production process using ethylene oxide. Because 1,4-Dioxane is considered a contaminant rather than an ingredient, manufacturers do not have to list it on product labels. The U.S. EPA considers 1,4-Dioxane a probable human carcinogen.

**PHTHALATES** are a widely used group of industrial chemicals often found in cosmetic and personal care products as carriers for fragrances and colors. Phthalates are usually not listed separately on product labels. Phthalates have been linked to a wide variety of health effects including male reproductive damage. In response to public pressure, some companies have removed the most toxic phthalates from their products. Unfortunately, we still don’t know what other chemicals may be hiding inside “fragrances.”

We tested for three common contaminants and unlisted ingredients. Some products may contain other chemicals not listed on the label.
Solutions – How We Can Protect Our Health and Grow Our Economy

Because federal law requires some disclosure of cosmetic and personal care product ingredients on labels, consumers and retail businesses know more about these products than about most others. Unfortunately, most of that information isn’t very helpful.

We can’t shop our way out of this problem by just buying safer products. With 12,500 different ingredients used in cosmetics and personal care products, thousands of different products on store shelves (many with tiny, unreadable labels), no safety testing of most ingredients, and many proven hazardous chemicals used in these products, we need a better solution.

We must fix our broken chemical safety system to ensure that all chemicals and all products are safe. Chemicals should be tested for safety before they are used in any consumer products, especially those we put on our bodies. Hazardous chemicals should be phased out whenever safer alternatives are available.

The good news is that simple, common sense steps can move us toward safe chemicals and products, reduce health care and education costs, and grow our economy.

- **Support Maine’s Kid-Safe Products Law**
  In 2008, Maine adopted the groundbreaking Kid-Safe Products Act, which establishes a system to identify and phase out the most hazardous chemicals used in everyday products that endanger children. Hazardous chemicals commonly used in cosmetic and personal care products (such as phthalates) should be designated as Priority Chemicals targeted for immediate action.

- **Fix our National Chemical Safety System**
  Momentum is building to fix the national laws that should protect us from dangerous chemicals in everyday products. Legislation to reform the Toxic Substances Control Act should require public disclosure of safety information on all chemicals in use, take immediate action to phase out the most dangerous chemicals, and set safety standards based on real world exposures.

Campaigns to ensure safer chemicals and safer products in Maine and across the country are underway. **YOUR ACTION makes a difference.** Get involved at [www.CleanAndHealthyMe.org](http://www.CleanAndHealthyMe.org)
Acknowledgments

This safety analysis of twelve cosmetic and personal care products was prepared by the Environmental Health Strategy Center (www.preventharm.org) for the Alliance for a Clean and Healthy Maine. The research greatly benefited from assistance provided by the Campaign for Safe Cosmetics (www.safecosmetics.org) and the Environmental Working Group’s Skin Deep cosmetics database (www.cosmeticsdatabase.org).

Endnotes

2 FDA and EWG – see cites elsewhere.
7 Ibid EWG.
11 Reproductive and developmental effects include infertility, reproductive organ cancers, birth defects, and developmental delays in children.
12 These ingredients are prohibited for use in cosmetics, or subject to restrictions or warnings based on industry safety guidelines or government standards in the U.S., Canada, the European Union, or Japan.
We’re Paying with Our Health and Our Dollars.
A 2009 University of Maine report found that the annual cost to Maine’s health care system and economy caused by just four childhood diseases related to chemical exposures is $380 million, and possibly as high as $484 million. That’s $300 for every person in Maine, every year.¹⁸

People across Maine are working to change that. Learn how inside.

Young women in Waterville, Maine take action to demand safer products

Alliance for a Clean and Healthy Maine
For more information on the Alliance, visit www.CleanAndHealthyMe.org