

## **Teens Turning Green: Empowering Youth to Create a Greener Future**

MA seniors Cora Went, Mari Vial-Golden, and Michael Perlstein will lead a panel of policymakers and industry experts in a discussion about the work of Teens Turning Green, the groundbreaking organization working to empower youth to eliminate the dangers of exposure to toxic chemicals in their daily lives.

Featured panelists include Marin County Supervisor Charles McGlashan; Stacy Malken, author of Not Just a Pretty Face and co-founder of National Campaign for Safe Cosmetics; Debbie Raphael, San Francisco Department of the Environment and Toxics Reduction/Green Building Program; Karl Palmer, Manager, Pollution Prevention and Green Technology, Department of Toxic Substances Control.

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The following articles may be read online at:

<http://www.newsreview.com/chico/content?oid=799305>

<http://www.nytimes.com/2009/07/16/opinion/16kristof.html?pagewanted=print>

<http://www.scientificamerican.com/article.cfm?id=how-safe-are-cosmetics>

Also, please visit:

<http://www.teensturninggreen.org>

## **Chemical romance**

### **The truth about the beauty industry sure isn't pretty**

By [Sena Christian](#)

**High cheekbones, long neck, plump lips**, glossy hair, no cellulite, eternal youth. These idealistic standards are what Naomi Wolf calls “the beauty myth,” the societal force that keeps women and girls vulnerable, insecure and preoccupied. And it does.

Women use an average of a dozen personal-care products a day and men use about six. Female teenagers tend to use even more. But makeup and tanning creams and teeth-whitening strips and age-defying lotions aren't only about the outside appearance. We're putting more and more

chemical compounds into our bodies through personal-care products, with incomplete knowledge of the effect of these synthetic materials on our health, and, for pregnant women, the health of their unborn babies.

Meanwhile, chronic illness and disease in the United States is on the rise, affecting almost half of the population, according to the Centers for Disease Control and Prevention. As the use of synthetic chemicals increased after World War II, so did infertility, birth defects, testicular cancer and learning disabilities. Breast cancer used to be relegated to post-menopausal women. Now women in their 20s are afflicted.

As science tries to get a handle on the situation and figure out what direct link, if any, exists between industrial chemicals and the chronic illnesses that plague us, the beauty industry conveniently uses this uncertainty to excuse its continued use of toxic chemicals.

This industry is the least regulated under the U.S. Food and Drug Administration, an agency that essentially looks the other way as companies go about their business, leaving the American public to cross our fingers and hope that when it comes to consumer safety, the \$250 billion global personal-care products industry tells us the truth.

**During a recent interview in Berkeley**, Stacy Malkan, author of *Not Just a Pretty Face: The Ugly Side of the Beauty Industry*, and co-founder of the Campaign for Safe Cosmetics, talked about her participation in an event in San Francisco with Teens for Safe Cosmetics, a group of teenagers from Marin County, which has one of the highest rates of breast cancer in the nation.

The young women gave free manicures using water-based nail polish. Last year, the group held an event called Project Prom and wore formal dresses and tiaras with combat boots to “combat” all the toxic makeup teenagers wear for prom night.

“The most exciting part of this work is seeing young people learning about science, and organizing and lobbying and learning that they have the power to make change,” said Malkan, who obsessed over cosmetics as a teenager, exposing herself to more than 200 chemicals a day before getting on the school bus in the town of Lynn, Mass., where she grew up.

Malkan has spent the last several years working to reduce the prevalence of toxins in our lives, including those found in makeup.



## TOXIN AVENGER

Stacy Malkin, co-founder of Campaign for Safe Cosmetics, went from being a cosmetics-obsessed teen to a staunch opponent of toxins in beauty products.

“We need to take an objective look at the beauty industry and what they’re telling us,” Malkin said. “We trust and believe in our beauty products. But billions of dollars go into marketing to make us feel like we have to have these products in order to be whole.”

Women, and increasingly girls, are routinely held up against unattainable images of outer beauty, and we’ll paint, starve and disfigure ourselves trying to get there. Forget having a strong sense of self. No, we must feel continually compelled to change into something different.



Back in the late 1800s, skin whitening was a widespread face-altering practice done by African-American women hoping to escape the psychological binds left over from slavery. Lightening creams continue to be big sellers today among both African-American and Asian women. Many of the creams contain hydroquinone, an animal carcinogen that is toxic to the brain, immune system and reproductive system. The European Union banned hydroquinone, but the United States has not.

**Last fall, the Campaign for Safe Cosmetics** commissioned an independent laboratory to test red lipsticks for lead, a neurotoxin that accumulates in the body. Exposure can cause learning, language and behavioral problems; seizures and brain damage; lowered IQ; anemia; kidney damage; and it has been linked to infertility, miscarriage and delays in the onset of puberty in girls. Pregnant women and children are more vulnerable, along with unborn babies, as lead crosses the placenta and enters the fetal brain.

Sixty-one percent of 33 brand-name lipsticks tested contained detectable levels of lead, though none of the offending products listed it on the label. (Following this report, the FDA decided to conduct its own test, but the results are not yet available.)

Although federal law requires that cosmetics sold to consumers declare ingredients on the label, the cosmetic companies didn’t do anything wrong; lead is actually a byproduct introduced through the use of other commonly used cosmetic materials, such as zinc oxide and titanium dioxide.

This summer, Teens for Safe Cosmetics unleashed themselves in the halls of the State Capitol in Sacramento. Three determined young women marched up to their Assembly representative's office with one thing on their mind: the passage of Senate Bill 1712, which would have required companies to make lipstick with the lowest possible amount of lead. The bill had already passed the Senate, and the teenagers believed it would sail through to the governor's desk. How could it not?

Seventeen-year-old Erin Schrode was one of the young women at the Capitol that day. She's the spokeswoman for Teens for Safe Cosmetics, and was unexpectedly called up to testify before the Assembly during a hearing on the bill.

"I looked those people right in the eyes and told them that this is one step they could take to protect the future generation," Schrode said.



#### COSMETICS COMBATANT

Erin Schrode of Teens for Safe Cosmetics testifies before the State Assembly.

A few days after her visit, S.B. 1712 failed by one vote in the Assembly Health Committee. The industry had come out in full force to oppose the legislation. Proctor & Gamble sent lobbyists, along with Estée Lauder. Even Johnson & Johnson—a company that doesn't sell lipstick—made its presence known. This pack mentality protects the industry, although it may frustrate the rest of us.

**In terms of safety, here's the problem:** Cosmetics, unlike food and pharmaceuticals, aren't subject to FDA pre-market approval. The cosmetics industry polices itself. Additionally, cosmetic manufacturers aren't required to file data on ingredients or report cosmetic-related injuries to the federal government.

Congress doesn't authorize the FDA to require recalls of cosmetics, although the agency may request them. From January 2001 to May 2008, the industry recalled 49 cosmetic products, according to Linda Katz, director of the FDA's Office of Cosmetics and Colors.

Products with untested ingredients must print the following label: "Warning—The safety of this product has not been determined."

But the rules of the game may be changing, especially if California has anything to say about the matter.

In March, the Organic Consumers Association released a report that found almost 50 percent of personal-care products labeled "organic" or "natural" contained 1,4-dioxane, the byproduct of a petrochemical process called ethoxylation. Dioxane is a known animal carcinogen and a probable human carcinogen, according to the EPA.

Following this report, California Attorney General Jerry Brown filed a lawsuit against manufacturers who failed to provide a warning about 1,4-dioxane in their products, as required by the state's Proposition 65: The Safe Drinking Water and Toxic Enforcement Act.

Then there's Senate Bill 484, the California Safe Cosmetics Act. With the passage of the legislation in 2005, California became the first state in the nation to regulate toxic ingredients in cosmetics. The state also established the California Environmental Contaminant Biomonitoring Program to collect information about toxins and require companies to disclose information about any ingredients identified as causing cancer or birth defects.

While disclosure may not seem like much—companies remain allowed to sell products containing ingredients that haven't been tested for safety—the information obtained will eventually be posted online, available to the public.

"It's a revolutionary step in the obvious direction," Malkan said. "...But the real story is that *we* have the power to choose what companies we buy from and what we put on our bodies."



[Features](#) - May 5, 2009

## Saving Face: How Safe Are Cosmetics and Body Care Products?

**The government knows just about as much as you do about what you're putting on your skin—that is to say, not much**

By Katherine Harmon

*Editor's Note: This story is part of an In-Depth Report on [the science of beauty](#). Read more about the series [here](#).*

Cosmetics—makeup, creams, fragrances—have been around for thousands of years. Ancient Egyptian and Roman women famously caked on lead-based foundation. (Lead, a metal, can cause nerve, muscle and organ damage.) But surely lead-laden cosmetics have been phased out along with lead-lined water pipes, right? Not necessarily.

Today, the [U.S. Food and Drug Administration](#) (FDA) oversees the multi-billion-dollar-a-year cosmetics industry but it lacks the power to approve products or ingredients before they hit store shelves, even though their contents have been shown to enter the body.

According to the FDA, a cosmetic is anything used for "cleansing, beautifying, promoting attractiveness or altering the appearance." An average U.S. consumer uses about 10 cosmetic products every day, including makeup, soap, shampoo, lotion, hair gel and cologne, says Lisa Archer, the national coordinator for [The Campaign for Safe Cosmetics](#) (CSC), a nonprofit advocacy group based in San Francisco and financed in part by the Breast Cancer Fund, a nonprofit organization. As a result, she says, people are exposed to roughly 126 different chemicals daily, many of which haven't been thoroughly tested.

"We're operating in a vacuum in terms of safety," Archer says. "The FDA doesn't even define what 'safe' is, so it's totally up to the discretion of cosmetic companies."

### Soaking it in

Slathering, powdering, spritzing. The skin is the body's largest organ and its shield against the surrounding environment. But it is a porous protector, allowing some substances in and others—most notably moisture—out. Some compounds that are applied to the skin's surface can be absorbed into the body, including the estimated four pounds (1.8 kilograms) of lipstick an average lipstick-wearer consumes in a lifetime, [according to the Environmental Working Group](#) (EWG), a nonprofit public interest organization based in Washington, D.C.

As chemistry has ramped up in the past century, ingredients in cosmetics have become increasingly complex and cutting-edge. But "there's no need," Archer says, for some potentially harmful chemicals now in cosmetics to be in the mix. Among those that should be nixed, the CSC says: formaldehyde (a known carcinogen that's used as a preservative) and [1,4-dioxane](#) (an industrial solvent or foaming agent that is a suspected carcinogen).

Archer notes that some other ingredients in cosmetics may be benign in one state but toxic in others. For example, titanium dioxide (a naturally occurring mineral often used as a pigment or thickener) is considered to be safe when put into a viscous mixture, such as in [sunscreen](#) or toothpaste. But in powder form, such as in mineral makeup powders, it can [cause cancer when inhaled](#), according to the International Agency for Research on Cancer (part of the World Health Organization).

Still on the cusp of regulation, [phthalates](#), chemicals used in everything from nail polish to household cleaners, have recently been garnering negative headlines because of growing concerns about their possible link to health issues. Originally developed in the 1920s, phthalates help make plastics, including food containers and baby bottles, more pliable. Earlier this year Congress banned the use of some phthalates in toys amid mounting evidence that they disrupt

the production of hormones, especially in boys, possibly causing reproductive disorders. But John Bailey, chief scientist at the [Personal Care Products Council](#) (PCPC), a cosmetic industry organization, says that phthalates are a large class of compounds and that not all of them are associated with health issues.

He points out that one common phthalate, diethyl phthalate used in fragrances, is still legal in the U.S. as well as in the E.U.—where there are much stricter cosmetic safety standards. He says another cosmetic-based phthalate, dibutyl phthalate, which is [in nail polish](#) and is a suspected endocrine disruptor, is not risky in the low doses in which it's used. Nevertheless, some companies have removed it from their products voluntarily.

Want to avoid some of the iffy chemicals? Reading cosmetic labels may not be enough. Under the [Federal Food, Drug and Cosmetic Act](#) of 1938, cosmetic firms are required to list the so-called intended ingredients in products. That means that contents, such as 1,4-dioxane and lead, might not make it onto labels because they are considered "unintended" by-products (or impurities) of the manufacturing process or of contaminated constituents.

The components of scents also bypass the labeling process. The law requires only that these complex cocktails, which may contain hundreds of ingredients—including phthalates—be listed as "fragrance." From an industry standpoint, the rule guards trade secrets and simplifies packaging. It "wouldn't be practical to list all of them," Bailey says, maintaining that, "consumers basically have the information they need to make [purchasing] decisions."

### Regulation after the fact

The Food, Drug and Cosmetic Act authorized the FDA—which also oversees food and drug safety—to make sure that cosmetics do not contain toxic or contaminated ingredients or provide false or incomplete label information. But cosmetics do not have to be approved by the FDA before they hit stores or the Internet. "It's the [cosmetic] firm's responsibility to assure that its cosmetic products and ingredients are safe and properly labeled," explains the FDA's Web site. Under current law, cosmetics makers also aren't required to register with the FDA or give the agency information on ingredients or cosmetic-related injuries. An FDA spokesperson says, however, that the agency monitors the market for potential dangers.

The FDA will step in "if we start noticing that there are a lot of adverse reports coming in" from consumers, says Linda Katz, director of the FDA's Office of Cosmetics and Colors division. "If we find out that there is a product out there [that's] unsafe, we can gather data and contact the distributor or manufacturer." Recalls of a product, however, are the prerogative of the company that makes or distributes it. If the FDA believes a product to be unsafe, it "may request a recall," but it cannot require one, it notes on its Web site.

"The system for regulating cosmetics [in the U.S.] is virtually nonexistent," Archer says. "Other countries are far ahead." The E.U., for example, has [banned the use of more than 1,000 substances](#) in cosmetics; in contrast, the [FDA has barred the use of eight substances](#) for use in cosmetics: bithionol, chlorofluorocarbon propellants, chloroform, halogenated salicylanilides, methylene chloride, vinyl chloride, zirconium-containing complexes, and prohibited cattle materials (to prevent the spread of mad cow disease).

Other chemicals are restricted to certain uses and require special labeling. Earlier this year, for example, the FDA concluded that [carmine](#), an extract from insects used as coloring in some makeup and food, was a common allergen. As a result, it ruled that beginning next year carmine must be listed as an ingredient rather than simply as "color added" on cosmetic and food labels.

Another government group, the [Federal Trade Commission](#) (FTC), can take legal action if it discovers that companies are making false advertising claims. But its power doesn't extend to some of the most popular buzzwords of today's market. Claims such as "natural," "organic" or "[hypoallergenic](#)" have no specific legal definition in the cosmetic world. Rather, the terms such as hypoallergenic "mean whatever a particular company wants [them] to mean," the FDA's Web site says.

Consequently, consumers should beware, Archer says. "Unfortunately... people see these words and associate them with a better product," she notes.

### Is the fox guarding the henhouse?

A patchwork of voluntary organizations have cropped up in the absence of more robust government regulation.

In an attempt to track ingredients and stave off widespread harm, the FDA runs the [Voluntary Cosmetic Regulation](#)

[Program](#). Participating cosmetic makers and distributors file lists of products and their ingredients with the agency. The FDA can then notify companies in the database if a certain ingredient is found to be potentially troublesome.

The industry-backed Personal Care Product Council (PCPC)—whose membership covers about 15 to 20 percent of U.S. cosmetics companies, which make more than 80 percent of products on the market—encourages companies to do substantial testing before introducing products to the market. Bailey says that most companies perform computer modeling and will run ingredients through a database of toxins. Beyond that, he notes, "finished products typically go through a battery of testing...[and]...usually there will be in-market monitoring, as well" to watch for complaints. He says that the best way to ensure safety is for companies to stick to ingredients that have proven safety track records.

Cosmetic companies have also been receiving guidance from the [Cosmetic Ingredient Review](#) (CIR), which was started (and is funded) by PCPC in 1976 to evaluate ingredients in beauty products. The CIR's Web site promises that "review processes are independent from the Council and the cosmetics industry," noting they are conducted by a nine-member panel that includes a toxicologist, a dermatologist and a consumer representative as well as nonvoting FDA and industry officials. The CIR has reviewed about 1,500 ingredients to date, which Bailey says account for more than 80 percent of the ingredients commonly used in cosmetics.

The CIR's findings, however, are nonbinding. "Their decisions and whatever conclusion they make need to be reevaluated by the FDA to see if we concur," the FDA's Katz says. When tipped off by the CIR, the FDA will go back to the raw data—including toxicology analyses and adverse-reaction reports—and conduct its own analysis before ruling on whether to limit or ban a certain ingredient or suggest recalls.

But Archer says voluntary compliance is not enough—and that companies should be required to meet certain safety criteria. "Unfortunately, it's a case of the fox guarding the henhouse," she says. "We need actual federal authority and regulations to guide companies as to what safe is...so consumers don't have to have [a degree in chemistry](#) to figure out what's safe to use on their families."

In the meantime, she recommends that consumers look for fragrance-free cosmetics with short lists of ingredients.

Need some help? [The Compact for Safe Cosmetics](#), promoted and run by the Campaign for Safe Cosmetics, is a voluntary group of companies that pledge to keep products in line with (or beyond) E.U. standards and to avoid using ingredients that are known or suspected to be hazardous to human health. It currently has a membership of about 1,000 mostly small and midsize U.S. companies. Additionally, the Environmental Working Group's [Skin Deep](#) cosmetic safety database allows users to search ingredients of more than 42,000 products.

"I think the good news for consumers," Archer says, is that "there are many companies in the industry that are waking up to the fact that...consumers want safer products."

## Further Reading

[The Failing U.S. Government--The Crisis of Public Management \[Extended version\]](#)

[Electric Companies Set to Spend on Efficiency](#)

[With Natural Gas Drilling Boom, Pennsylvania Faces Flood of Wastewater](#)

[Readers Respond on "Obama's Science"](#)

[What Will U.S. Climate Legislation Look Like?](#)

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[Wild Meat Raises Lead Exposure](#)

[Is That Species Endangered?](#)



July 16, 2009

OP-ED COLUMNIST

## Chemicals and Our Health

By [NICHOLAS D. KRISTOF](#)

However careful you are about your health, your body is almost certainly home to troubling chemicals called phthalates. These are ubiquitous in modern life, found in plastic bottles, cosmetics, some toys, hair conditioners, and fragrances — and many scientists have linked them to everything from sexual deformities in babies to obesity and diabetes.

The problem is that phthalates suppress male hormones and sometimes mimic female hormones. [As I've written before](#), chemicals called endocrine disruptors are believed to explain the proliferation of “intersex fish” — male fish that produce eggs — as well as sexual deformities in animals and humans. Phthalates (pronounced THAL-ates) are among the most common endocrine disruptors, and among the most difficult to avoid. They're even in tap water, and levels soar in certain plastic water bottles.

They probably are not harmful to us adults, but it is another story for children. In girls, some research suggests that phthalates may cause early onset puberty. Most vulnerable of all, it seems, are male fetuses in the first trimester of pregnancy, just as they are differentiating their sex. At that stage, scholars believe, phthalates may “feminize” these boys.

“Commonly used phthalates may undervirilize humans,” [concluded a study](#) by the University of Rochester. The study, which was small, based its conclusion, in part, on measurements of “anogenital distance” — the distance between the anus and the genitals, which is typically twice as long for males as for females. Some scholars believe that shrinkage of this distance reflects “feminization” of male anatomy.

The researchers found that pregnant women with higher levels of phthalates delivered babies with a shorter anogenital distance. It's possible this won't cause any complications. But baby boys with shorter anogenital distance were more likely to have undescended testicles and less penile volume, and phthalates have been linked in humans to problems with sperm count and sperm quality.

In China, researchers found that female rats given phthalates gave birth to males with a penis deformity called hypospadias (in which the urethra exits the side or base of the penis, not the tip).

Many other animal studies around the world have found similar results.

Some endocrinologists refer to the “phthalate syndrome,” including hypospadias and undescended testicles.

“Accumulating human epidemiological data point to a relationship between adverse fetal development and phthalate exposure,” concluded an article this spring in the journal *Trends in Endocrinology and Metabolism*. Just last month, [the Endocrine Society](#) — composed of thousands of doctors in the field — [issued a powerful warning](#) that endocrine disruptors including phthalates are “a significant concern to public health.”

One of the conundrums for scientists and journalists alike is how to call prudent attention to murky and uncertain risks, without sensationalizing dangers that may not exist? Increasingly, endocrinologists are concluding that the mounting evidence is enough to raise alarms.

Indeed, there has also been a flurry of scientific articles questioning whether endocrine disruptors are tied to obesity, autism and allergies, although the evidence there is less firm than with genital abnormalities and depressed sperm count.

The [American Chemistry Council](#) argues that [phthalates are not a problem](#), that they do not migrate out of products easily and that they quickly break down in the body. The chemical industry has noted [an apparently reassuring study](#) in the *Journal of Urology* finding that hypospadias does not seem to be increasing in New York State (although different studies showed increases both in the United States and in Denmark).

James Yager, a professor of toxicology at the Johns Hopkins Bloomberg School of Public Health, agrees that there are huge uncertainties but says that pregnant women and children should be cautious. “When my wife was pregnant, we worried about drinking or smoking,” Professor Yager said. Now, he said, he would be more focused on exposure to chemicals such as phthalates in baby bottles.

Dr. Theo Colborn, the founder of [the Endocrine Disruption Exchange](#), goes further. She tells researchers working with her to toss out plastic water bottles and use stainless steel instead. “I don’t have plastic food containers in my house,” she added. “I use glass.”

Certain phthalates have been banned from new toys sold in the United States, but kids continue to be exposed to these chemicals from the moment they are conceived. Dr. Ted Schettler of the Science and Environmental Health Network says that the way regulators examine risks — studying the impact of one chemical at a time — is bankrupt, for we’re exposed to a cocktail of them daily. Regulation is so pathetic that there’s not even disclosure when products contain phthalates.

If terrorists were putting phthalates in our drinking water, we would be galvanized to defend ourselves and to spend billions of dollars to ensure our safety. But the risks are just as serious if we're poisoning ourselves, and it's time for the Obama administration and Congress to show leadership in this area.

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