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Beauty Myth Busters

For centuries, Japanese women have known a secret, the secret of beautiful skin. Prepare to discover the secret of SK-II for yourself. Many years ago, a Japanese monk noticed that the workers in a sake brewery had extraordinarily smooth hands. He was determined to discover why. After many experiments, he discovered a liquid that seemed to defy aging ...

— *Advertisement for the premium brand of SK-II skin care products*¹

More recently Chinese authorities made a discovery of their own about SK-II products: the high-end skin whitening cream and powders contained the toxic heavy metals chromium and neodymium. “Hundreds of angry Chinese women have taken to the streets of Shanghai demanding refunds for US-Japanese cosmetics after authorities detected banned chemicals in some of the products,” reported the *Agence France Presse* in September 2006. “Security guards were called in Thursday to control a crowd of about 300 people, infuriated over being made to wait over promised refunds for the affected SK-II cosmetics owned by US consumer products giant Procter and Gamble.”²

P&G temporarily suspended sales of the SK-II line and closed sales counters across China after “security incidents” broke out between employees and customers and a furious mob smashed a glass door at the company’s Shanghai branch.³ Thousands of consumers demanded refunds of the elite brand that sells for more than \$100 a bottle. It was a dramatic interruption in the otherwise relatively smooth and recent entry of multinational cosmetics corporations into the world’s largest market.

The heavy metals chromium and neodymium, which can cause eczema and allergic dermatitis, are banned from cosmetics in China, although there are few other restrictions on personal care products. Procter & Gamble said the metals exist naturally, were not intentionally added to SK-II products and were safe at the low levels found in the products. In October, Chinese authorities announced the trace levels of metals would not harm consumers with normal use of the products, and by December SK-II products were slowly making their way back onto stores shelves.

Back at P&G company headquarters in the US, the episode presented no apparent difficulties. “The interruption is not expected to affect P&G’s financial results,” reported the *Cincinnati Enquirer*, in the city where the company’s headquarters are based. “Sales in mainland China are only about 7% of global SK-II sales, and Procter said it removed SK-II from shelves simply to remove its products from the controversy until they were declared safe. China is P&G’s fastest-growing market, with beauty-care products making up the bulk of the company’s more than \$2 billion in sales there.”⁴

White Hot

Skin whitening is all the rage in Asian countries like the Philippines, where the most popular actresses are light skinned, thin-nosed and appear in the ads for products that promise pale skin. “We’re bombarded with advertisements like that every day. Every beauty product in the Philippines has a lightening aspect. Even lipstick promises to make dark upper lips more pink,” said Anne Larracas from Quezon City near Manila.

Products in the category called “skin fading/skin lighteners” are among the most toxic cosmetics in the *Skin Deep* database. Many contain hydroquinone, which works as a skin lightener by decreasing the production of melanin pigments in the skin. The chemical — a confirmed animal carcinogen that is toxic to the skin, brain, immune system and

reproductive system — is banned in the European Union but allowed in products sold in the US in concentrations of up to 2%. The US Cosmetic Ingredient Review panel warns the chemical is unsafe for use in products left on the skin, but the recommendation is sometimes ignored. Physicians Complex Skin Bleaching Cream with 2% hydroquinone, for example, advises consumers to “Apply to clean skin twice daily. Desired results are achieved with consistent use of this product.” The product, made by CosMed, contains a dozen problematic ingredients, including three chemicals with potential to increase skin cancer risk by intensifying UV exposures in deep skin layers. “Application of Physicians Complex® sunblock SPF #30 is mandatory on a daily basis,” advises the package.⁵

In the Philippines, where there are no regulated limits, some products, such as the popular Maxi Peel by Splash Corporation, contain 4% hydroquinone. Anne Larracas has friends who use such products, and she said the effects are startling. “When you first use it, as fast as three days, the skin starts to peel and it gets really red. Then the skin gets taut, you can see the veins because it peels too much, and the peeling doesn’t stop. The skin gets lighter and lighter and thinner and thinner. Then the face starts to get light and white, but the neck is still dark, so it looks like there is a permanent foundation.” Many women don’t know they are supposed to also use sunscreen, Anne said. “It’s so sad. I don’t know why girls would like to whiten their skin.”

According to dermatologists, skin color is genetic and no chemical can permanently lighten skin — although hydroquinone can produce temporary whitening effects, as can the heavy metals chromium and mercury, both of which have been detected in skin whitening creams sold in Asia. After the SK-II incident in China, media organizations in Hong Kong tested a range of skin whitening creams and reportedly found chromium in products made by Clinique, Estée Lauder, Christian Dior, Max Factor, Lancôme and Shiseido.⁶ Mercury has also been detected in several products made in China and Taiwan. When a patient turned up in his office with mercury poisoning, Dr. Christopher Lam, chair at the department of chemical pathology at Hong Kong’s Prince of Wales Hospital, examined her skin whitening cream and found mercury levels 65,000 times higher than amounts allowed in the US. Follow-up product tests conducted by Lam found mercury in eight of 38 skin whitening creams made in China and Taiwan. Some of the products were labeled “mercury free.”⁷

Nevertheless, the “thriving *bihaku* (white beauty) boom remains one of the most significant driving forces for overall growth as manufacturers cater to the Asian preference for a fair complexion,” reported *Euromonitor*. “According to leading industrial sources, up to 60% of Japanese women use skin whitening products in their daily regime, presenting manufacturers with a strong opportunity for continued growth.” The major players have sought to maximize sales by offering “complete skin whitening regimes, comprising not only of moisturizers, but also cleansers, toners, day and night nourishers and even facial cleansing wipes.”⁸

Sales are particularly promising in China, which has recorded double digit increases in recent years. The country is now the second largest market by volume for Procter & Gamble, and will someday be first if Daniela Riccardi, president of P&G Greater China, has her way. “Maybe it will take 10 years, but my staff, my company and I are very clear that it will eventually happen,” the P&G executive told the *China Daily*. “Now our strategies are designed to touch as many customers in China as possible, step by step,” Riccardi said. “Our future objective is to try to reach towns and villages where there are hundreds of millions of people.”⁹

Not everyone is thrilled with the market potential. “I’m so pissed about this whitening stuff. It’s everywhere,” said Anne Larracas from the Philippines. “Every actress we have is light skinned, so when you’re a *monena* like me, dark skinned, you have to use whitening products to become famous.” Her cousin, a plastic surgeon, keeps teasing her to get a nose job. “The beauty stuff is symbolic of how we’ve been brainwashed about Western culture. It’s the best thing to look Caucasian and blonde, with pretty light skin. And it’s not just about beauty products, it’s about clothes, iPods, books, TV shows, everything,” Anne said. “What needs to happen is that we have to reconnect with who we really are.”

Mirror, Mirror on the Wall

Ken Harris admits to feeling a bit guilty about what he does for a living. As a “digital photo retoucher,” he airbrushes fashion photos of the glamorous models who broadcast idealized images of beauty around the world. We know, of course, about the airbrushing. Still, it’s surprising to see Harris in action in Jesse Epstein’s award-winning documentary film *Wet Dreams and False Images*.¹⁰ In the film, Harris demonstrated how he changes skin color, reshapes body parts and shaves pounds off models.

“Almost always the first thing I’ll do is fix the nose,” Harris explained, zipping the computer mouse over a photo. “Every picture has been worked on some 20 or 30 rounds going back and forth between the retouchers and the client and the agency. They’re perfected to death,” he said. “I don’t see these photographs as being authentic or real. I see them as being mechanical and inhuman.”

Digital retoucher Dominic Demasi demonstrated in the film how he reworked a photo of actress Halle Berry to remove pockmarks, change her skin tone to match her makeup and even shave down her knuckles to make them “seem less obtrusive.” Product manufacturers are “not going to keep something that looks flawed or natural. They’re not concerned with natural. They’re concerned with selling their product,” Demasi explained. “If it looks like it hasn’t been touched at all, I’ve been successful.”

The reshaped bodies, the smoothed-out wrinkles, “all that is there to alter your mind, to alter your conception of what physical beauty is ... and what the means of attaining it are,” Harris said. “In that the central point of retouching is to enforce an unrealizable standard of beauty, I suspect of myself some sort of covert obscure misogyny, because I’m really screwing with people’s sense of identity and self-worth by doing this.” But, he said, he gets paid really well.

The Straight Story

Felicia Eaves was eight when she started with the hair relaxers. Like many African-American girls, her hair was thick and tangled easily, causing many frustrating sessions under the brush. So twice weekly she used hair relaxer and styling aides — pomade or hair grease, as Felicia calls it, which kept her hair from drying out.

Of all the products in *Skin Deep*, those that change the shape and color of hair, such as relaxers, perms and dyes — along with nail products and skin lighteners — have the most toxic ingredients. The conditioners marketed to African-American women can also be problematic. “Instantly repair dry and damaged hair” is a typical marketing claim on hair products containing placenta, the nourishing fetal organ expelled after birth. Placenta products supposedly make hair stronger and more manageable, but they can also contain estrogenic hormones that are linked to early puberty and breast cancer. Some scientists believe that early and lifelong exposure to hormone-containing personal care

products may be partly to blame for the high rates of breast cancer in young African-American women.¹¹

It's not just the type of products used by African-American women that raises concern, but also the frequency of use. As Felicia Eaves, an organizer for Women's Voices for the Earth, explained, "We use more beauty products than other women, way more." According to market surveys, African-American women are more likely to take bubble baths, get facials and manicures, use scented products, wear lipstick and use bath additives than women of other ethnic groups. Nine out of ten African-American women use health and beauty products to express their individuality, compared to just over half of general market women. Though they comprise just 12% of the US population, African-American women account for 21% of all hair care expenditures.¹² Part of the reason, Felicia believes, is a special love affair with beauty products that stems from African heritage. The Egyptians were the first to discover and use cosmetics for the purposes of adornment some 6,000 years ago, and the bath ritual has always been an important part of African culture. "So I would say that we are subconsciously remembering what it was like to be in the motherland," said Felicia.

But another part of it, according to Felicia, is "the whole legacy of racism, the feeling that you need to look a certain way to be accepted in this society. The Eurocentric ideal of beauty in this country has really done a psychological job on African Americans. Every actress has a weave, even Oprah. Nobody is wearing their natural hair anymore." Traditional locks and afros are referred to as "extreme hair styles" in the popular culture, and young girls get the clear message about what's acceptable. Felicia has heard of girls as young as five getting weaves or extensions — these can be done naturally, but some involve glues and require acetone- or formaldehyde-based removers to get them off.

Felicia takes it back to "the whole crazy reason women do all this stuff to our bodies in the first place, because of a lack of self-esteem and a need to feel accepted. And it's not just Black women, it's all women." But there's a special pressure on Black women. "Throughout the history of slavery, Black women and men were used as a commodity, and because our look was so different, it was a point to ostracize us. There is this pressure that you have to look a certain way to be accepted. The way I look is still not quite as accepted as the way a White woman looks," Felicia said. "So part of it is about wanting to project a nice-looking

image, but it also harkens back to how we've been perceived in this country, as different and other. We tend to want to be very careful about the way we're perceived with looks and hygiene."

In her view, women should be able to do whatever they want for a beauty routine without having to worry about toxic chemicals. "I like wearing makeup; I do get a lift from it. I like trying new colors and matching them with my outfits," Felicia said. "Women should be able to get that lift, but not at the expense of their health. The onus is on the manufacturers to make products that are safe."

Paint Me Poison

As dark-skinned women dreamed of "white beauty," I was booking appointments at the tanning beds and lying for hours on end under the sun. The mineral oils and suntan lotions that promised bronze beauty littered my highschool vanity table along with dozens of jars, tubes and wands that covered up my anxieties. For me it was all about the Christie Brinkley fantasy — her flawless skin, that perfect nose! I studied the contours of the supermodel's face, scrutinized my profile, agonized; filled my little makeup bag with the tempting tropical hues that offered up the easy breezy Cover Girl dream.

Applying new knowledge to old habits, I take a trip back in time to see what secrets I can discover about my frequent forays to the Osco Drug aisle of hope. I typed my teen beauty routine into the *Skin Deep* database. The five shower products, liquid foundation, Clean Pressed Powder and Cheekers Blush; the Perfect Blend Eye Pencil, Expert Wear Shadows and Marathon Mascara, topped off with the daily cloud of Aqua Net Extra Super Hold. I counted 19 products in all — 230 chemicals, according to *Skin Deep*,¹³ most of them applied to my body before I even left the house to catch the bus to Lynn Classical High. That's well above the average person's estimated daily exposure to cosmetic chemicals. Well, as I said, it was an obsession.

The first thing I notice is: so much for truth in advertising. Healing Garden Mintherapy Moisturizing Body Lotion by Coty Inc. gets the highest toxicity score of all the products on my list — a 4.1 (5 is the highest). Suave Lavender "Naturals" Shampoo and Conditioner by Unilever have 17 problematic ingredients between them. *Skin Deep* tells me: 81 of the chemical ingredients in my former daily routine raise health concerns. Some highlights:

- 22 daily doses of parabens, along with four other suspected hormone-disrupting chemicals.
- 17 hits of chemicals with limited or mixed evidence of carcinogenicity. One ingredient, petroleum distillates in my Cover Girl Marathon Waterproof Mascara, is banned in the European Union.
- 17 applications of penetration enhancers, which can draw the other chemicals more deeply into my body.
- 15 doses of chemicals that persist in the body or accumulate up the food chain.
- 15 products with fragrance — an unspecified mix of chemicals likely to contain phthalates and allergens.
- Less than half the ingredients in my products have been assessed for safety.

My head is spinning. I feel like Alice who fell down the rabbit hole. Down, down, down, until thump she goes into a long dark hallway with big keys and tiny locks. What does it all really mean? What does it mean, for instance, that the triethanolamine (or TEA) in my Ban de Soleil sunscreen, Healing Garden body lotion and Cover Girl “clean liquid” makeup has “limited evidence of carcinogenicity”? I delve deeper in the database and find that the chemical (spelled 32 different ways on product labels) forms carcinogenic nitrosamine compounds if mixed with other ingredients that act as nitrosating agents. It is also a skin sensitizer and possibly toxic to the lungs and brain.

I keep searching online and turn up a Material Safety Data Sheet on triethanolamine.¹⁴ “Warning! Harmful if swallowed, causes skin irritation and severe eye irritation,” says the emergency overview. The chemical has a moderate health rating, a slight rating for flammability and reactivity, and a severe contact rating. Goggles, gloves and lab coat are recommended in the lab. “Repeated ingestion has caused kidney and liver damage in animals.” Doesn’t sound so good; all sources agree the chemical has hazardous properties. But let’s get real, there’s probably only a tiny bit of TEA in my face makeup. What’s the actual risk to my health?

The Mad Hatter appears, clipboard in hand, to explain that in order to calculate a risk assessment, one must review the science to determine the chemical hazard, and then estimate how much of the chemical a

person is exposed to: Risk = Hazard + Exposure. These are the type of calculations the Cosmetic Ingredient Review panel used to review TEA and determine the chemical is “safe with qualifications” in cosmetics, with concentration limits for leave-on-the-skin products. So, assuming the companies stuck to the concentration limits, I am safe?

Not so fast. Triethanolamine, I learned in my research, is also used in floor polish, pool cleaners, rug cleaners, laundry detergent, toilet bowl cleaners and other products I may have been exposed to on the day I used the three beauty products. The risk assessment didn’t account for that. It also can’t tell me what happens when TEA is mixed in combination with the 16 other potential carcinogens, two dozen endocrine disruptors and other toxic substances in my daily routine. Few, if any, of the chemicals in my cosmetics have been tested in mixtures to understand the long-term health impacts of chronic use over time. And since most risk assessments are calculated to figure risk for a typical 160-pound male, it may not accurately account for the impact on a teenage girl whose breasts and body were developing when the products were applied. Hmmm. All very curious.

So what’s young Alice to do? As the landscape tilts and twirls, a picture comes clear: it is exactly the complicating factors of it — the dozens of toxic chemicals, combined into mixtures that have never been assessed for safety — that are the truest truth of all. Nobody can tell me what impact these daily chemical cocktails had on my body. Now, as the Lewis Carroll story goes, wise young Alice already knew to check the bottle to see if it was marked “poison” — “for she had read several nice little stories about children who had got burnt, and eaten up by wild beasts, and other unpleasant things, all because they *would* not remember the simple rules their friends had taught them: such as, that a red-hot poker will burn you if you hold it too long and that, if you cut your finger very deeply with a knife, it usually bleeds; and she had never forgotten that, if you drink much from a bottle marked ‘poison,’ it is almost certain to disagree with you, sooner or later.”¹⁵ But, of course, none of the 19 bottles and tubes on my vanity table carried such a warning.

Still, it’s just a little bit of poison, right? What’s the harm in that? After all, I am healthy, energetic and relatively intact two decades after my teen-beauty-queen phase. Many women and men who have enough disposable income to buy beauty products will go on to live long, happy and healthy lives. There are plenty of other things to worry about as the

newspaper reminds me: terrorism, war, global warming and murders in nearby Oakland. All true.

But I also can't help wondering about the two benign lumps in my body that required surgical removal and my four-year struggle with infertility in my 20s. I asked my doctor — a brilliantly talented surgeon who has removed the thyroids of thousands of young women in the Massachusetts area — why I developed a lump on my thyroid (the size of a lemon, it turned out) and why so many other young women are getting them too. Could mine have had anything to do with the fact that I grew up a mile from the largest polluting trash-burning facility in the state? “Hmmm,” he replied, giving me a funny look. “Don't know. Nobody has ever asked me that before. We don't know why thyroid lumps happen, they just do.” It was the same story with the infertility. After many expensive tests, the doctors declared unknown cause and suggested I try the pharmaceutical drug Clomid. The doctors will never

be able to tell me if environmental factors — pollution from the RESCO incinerator in nearby Saugus, the black smokestacks of the Salem oil refineries or the chemical exposures in my childhood home — contributed to my health issues.

The way I see it, even the smokestacks aren't separate from the Healing Garden Mintherapy lotion and its 4.1 toxicity score — coming as it does from oil-derived petrochemicals, and ending up as it often does (plastic case and all) burning up in waste incinerators located near working-class communities like Lynn. In the real world, my lungs breathe the air from the smokestacks and the fumes from the rug cleaner at the same time as my skin absorbs the toxic chemicals from the face lotion.

Back down in the rabbit hole, the most sensible sense of all came from the short e-mail I received from cosmetic chemist Bruce Akers when I asked his opinion about triethanolamine: “It is shitty and there are many better alternatives.”

A friend from Iran reports that her family bugs her to get a nose job whenever she goes home — everyone in Tehran is doing it, even the men. A friend in South Carolina reports that several of her neighbors are getting breast implants. A friend from India remembers being pressured to use “fair and lovely” skin lightener as a little girl. Visit NotJustaPrettyFace.org to join an online discussion about busting the beauty myth.
