Potential Hidden Dangers of Personal Care Products

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Agenda

- Personal care product safety in the US
- Potential EHS effects of personal care products
- Ingredients of concern in personal care products
  - Where are they found?
  - Why are they used?
  - Why are they a concern?
  - Ways to limit our and the environment's exposure
- Children's personal care product use
- Ecofriendly products
- Safe Cosmetics Act of 2011
- Resources for more information

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Areas of Concern

- There are 30 areas of concern in the US Great Lakes
- These are places where chemical contamination of sediments from the lakes has seriously endangered the quality of life for people and wildlife
- There are 6 AOCs in NYS
  - Buffalo River
  - EighteenMile Creek
  - Niagara River
  - Oswego River/Harbor
  - Rochester Embayment
  - St. Lawrence River at Massena

"Safer Chemicals Healthy Families." *Failing the Great Lakes*. (2009)

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Beneficial Use Impairments

Buffalo Area	Syracuse Area	Rochester Area	Massena Area
Buffalo River	**Oswego River/Harbor**	**Rochester Embayment**	**St. Lawrence River**
1. Restrictions on fish and wildlife consumption 2. Fish tumors or other deformities 3. Degradation of aesthetics 4. Degradation of benthos 5. Restriction on dredging activities 6. Loss of fish and wildlife habitat	1. Restrictions on fish and wildlife consumption 2. Degradation of fish and wildlife populations 3. Loss of fish and wildlife habitat	1. Restrictions on fish and wildlife consumption 2. Eutrophication or undesirable algae 3. Restrictions on drinking water consumption, or taste and odor 4. Degradation of fish and wildlife populations 5. Beach closings 6. Degradation of aesthetics 7. Bird or animal deformities or reproduction problems 8. Added costs to agriculture or industry 9. Degradation of benthos 10. Degradation of phytoplankton and zooplankton populations 11. Restriction on dredging activities 12. Loss of fish and wildlife habitat	1. Restrictions on fish and wildlife consumption 2. Loss of fish and wildlife habitat
EighteenMile Creek			
1. Restrictions on fish and wildlife consumption 2. Degradation of benthos 3. Restriction on dredging activities			
Niagara River			
1. Restrictions on fish and wildlife consumption 2. Fish tumors or other deformities 3. Degradation of benthos 4. Restriction on dredging activities 5. Loss of fish and wildlife habitat			

US EPA, Great Lakes Areas of Concern, http://www.epa.gov/glnpo/aoc/

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Personal Care Products (PCPs)

- **Cleansing**: soap, body wash, shampoo, conditioner, bubble bath, toothpaste, mouthwash, etc.
- **Hair styling**: spray, gel, pomade, etc.
- **Shaving:** cream, gel
- **Moisturizing**: face & body lotion
- **Nail:** polish, remover
- **Perfume**, cologne, body spray, etc.
- **Deodorant and antiperspirant**
- **Cosmetics**: foundation, concealer, mascara, eyeshadow, eyeliner, lipstick, lip gloss, etc.

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PCP Safety in the US

- Personal care products & cosmetics are regulated by the FDA
- Cosmetics & ingredients are not tested by the FDA before sale
  - US: 11 chemicals banned/limited
  - Europe: 1,100 chemicals banned/limited
- Companies responsible for ensuring the safety of products before they go to market

Ingredients Prohibited & Restricted by FDA Regulations,
http://www.fda.gov/Cosmetics/ProductandIngredientSafety/SelectedCosmeticIngredients/ucm127406.htm
Europe List of Substances Prohibited in Cosmetics Products,
http://ec.europa.eu/consumers/cosmetics/cosing/index.cfm?fuseaction=search.results&annex_v2=II&search

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FDA Banned & Restricted Ingredients

Banned

- **Bithionol:** may cause photo-contact sensitization
- **Chlorofluorocarbon propellants:** environmental concern
- **Chloroform:** animal carcinogenicity and likely hazard to human health
- **Halogenated salicylanilides (di-, tri-, metabromsalan and tetrachlorosalicylanilide):** may cause photocontact sensitization
- **Methylene chloride:** animal carcinogenicity and likely hazard to human health
- **Vinyl chloride:** prohibited as an ingredient of aerosol products, because of its carcinogenicity
- **Zirconium-containing complexes:** use in aerosol cosmetic products is prohibited because of their toxic effect on lungs
- **Prohibited cattle materials: t**o protect against bovine spongiform encephalopathy (BSE), also known as "mad cow disease," cosmetics may not be manufactured from, processed with, or otherwise contain, prohibited cattle materials.

Restricted

- **Hexachlorophene:** Because of its toxic effect and ability to penetrate human skin, may be used only when an alternative preservative has not been shown to be as effective
  - concentration may not exceed 0.1%
  - may not be used in cosmetics that may be applied to mucous membranes, such as lips
- **Mercury compounds:** compounds are readily absorbed through the skin and tend to accumulate in the body. They may cause allergic reactions, skin irritation, or neurotoxic manifestations.
  - limited to eye area cosmetics at concentrations not exceeding 0.0065%
  - permitted only if no other effective and safe preservative is available for use
  - all other cosmetics may contain less than 0.0001%
- **Sunscreens in cosmetics.** The term "sunscreen" generally causes the product to be regulated as a drug. Sunscreen ingredients may also be used in some products for nontherapeutic, nonphysiologic uses (ie, color additive or to protect the color of the product)

US FDA, Ingredients Prohibited and Restricted by FDA Regulations, http://www.fda.gov/Cosmetics/ProductandIngredientSafety/SelectedCosmeticIngredients/ucm127406.htm

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PCP Safety in the US (cont)

- FDA does not have authority to recall products containing a toxic chemical
- Example: Brazilian Blowout
  - Salon workers & customers began complaining of breathing problems, headache, dizziness, rashes
  - Investigation found formaldehyde
  - Formaldehyde is a known carcinogen
- FDA has yet to limit formaldehyde

FDA Recall Policy for Cosmetics, http://www.fda.gov/Cosmetics/ProductandIngredientSafety/RecallsAlerts/ucm173559.htm
Brazilian Keratin Hair Straighteners Timeline, http://www.safecosmetics.org/article.php?id=844
FDA Letter to Brazilian Blowout, 8/22/11, http://www.fda.gov/ICECI/EnforcementActions/WarningLetters/ucm270809.htm

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Safe Cosmetics and Personal Care Products Act of 2013

Bill introduced March 21, 2013 designed to give the FDA authority to ensure that personal care products are free of harmful ingredients and that ingredients are fully disclosed through:

1. Phase-out of ingredients linked to cancer, birth defects and developmental harm;
2. Creation of a health-based safety standard that includes protections for children, the elderly, workers and other vulnerable populations;
3. Elimination of labeling loopholes by requiring full ingredient disclosure on product labels and company websites, including salon products and the constituent ingredients of fragrance;
4. Worker access to information about unsafe chemicals in personal care products;
5. Required data-sharing to avoid duplicative testing and encourage the development of alternatives to animal testing; and
6. Adequate funding to the FDA Office of Cosmetics and Colors so it has the resources it needs to provide effective oversight of the cosmetics industry.

H.R. 1385: Safe Cosmetics and Personal Care Products Act of 2013
Campaign for Safe Cosmetics, http://safecosmetics.org/section.php?id=74

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PCP use in the US

- On average, women use 12 products containing 168 ingredients every day
- Men use 6 products with 85 ingredients
- Children are exposed to an average of 61 ingredients daily

EWG (Environmental Working Group). 2004. Exposures Add Up – Survey Results. http://www.ewg.org/skindeep/research/exposures.php.
EWG (Environmental Working Group). 2007. Safety Guide to Children's Personal Care Products. http://www.ewg.org/skindeep/special/parentsguide/summary.php

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Body Burden

PERFUME
Avg number of chemicals: 250
Possible side effects: mouth, throat, and eye irritation; nausea; linked to kidney damage

SHAMPOO
Avg number of chemicals: 15
Possible side effects: irritation, possible eye damage

FAKE TAN
Avg number of chemicals: 22
Possible side effects: rashes, irritation, hormonal disruption

DEODORANT
Avg number of chemicals: 15
Possible side effects: eye, skin, and lung irritation; headache; dizziness; respiratory problems

BODY LOTION
Avg number of chemicals: 32
Possible side effects: rashes, irritation, hormonal disruption

NAIL VARNISH
Avg number of chemicals: 31
Possible side effects: linked to fertility issues and problems in developing babies

HAIRSPRAY
Avg number of chemicals: 11
Possible side effects: allergies, irritation to eyes, nose, and throat; hormone disruption

EYESHADOW
Avg number of chemicals: 26
Possible side effects: linked to cancer, infertility; hormonal disruptions and damage to the body's organs

BLUSH
Avg number of chemicals: 16
Possible side effects: rashes, irritation, hormonal disruption

FOUNDATION
Avg number of chemicals: 24
Possible side effects: allergies, disrupts immune system, links to cancer

LIPSTICK
Avg number of chemicals: 33
Possible side effects: allergies, links to cancer

http://www.dailymail.co.uk/femail/beauty/article-1229275/Revealed--515-chemicals-women-bodies-day.html

Potential Health & Environmental Effects

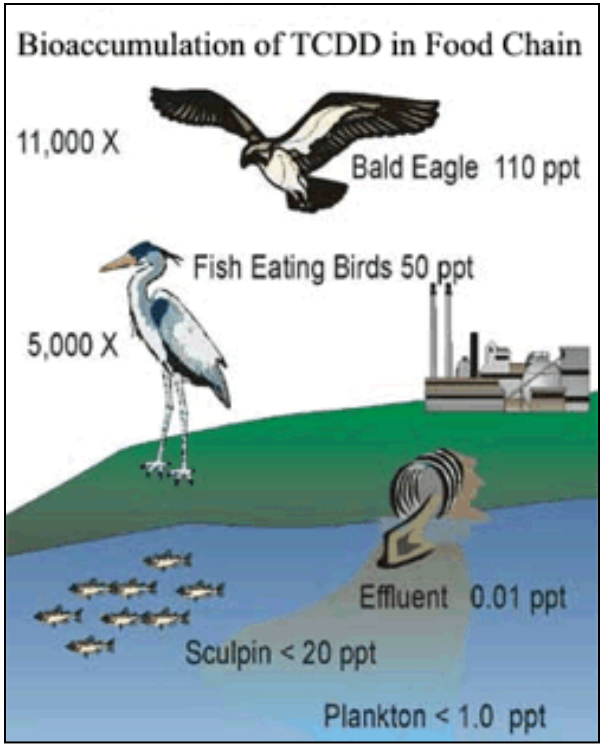
Personal care product ingredients may have or be linked to one or more of the following effects:

Consumer:

- **Irritate eyes & skin**
- **Cause endocrine disruption**
- **Cancer**

Environment:

- **Bioaccumulation**
- **Toxic to fish** or other animals



Environment Canada, http://www.ecoinfo.org/env_ind/region/toxin_descript/toxin_description_e.cfm

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Endocrine Disruption

Disruption of the endocrine system can occur in various ways

1 MIMIC a natural hormone

- Fools the body into over-responding (e.g. growth hormone that results in increased muscle mass)
- Fools the body to respond at inappropriate times (e.g. producing insulin when not needed)

2 BLOCK the effects of hormones

- For example, blocks growth hormones required for normal development

3 DIRECTLY STIMULATE or INHIBIT the endocrine system

- Causes an overproduction or underproduction of hormones (e.g. an over- or under-active thyroid)

Exposure linked to: learning disabilities, severe attention deficit disorder, cognitive and brain development problems, deformations of the body, sexual development problems, feminizing of males, masculine effects on females

US EPA What are endocrine disruptors? http://www.epa.gov/endo/pubs/edspoverview/whatare.htm

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Environmental Effects

- PCPs end up in the environment when they are rinsed down the drain
- Studies have shown PCP ingredients are in our water bodies and more research is needed to determine the extent of harm they cause
- Reasons for concern:
  - Large quantities enter the environment after use
  - There are no municipal sewage treatment plants that are engineered to remove PCPs from water
  - The risks posed are uncertain because the concentrations are low
  - In 2007, over 100 different PCPs were identified in environmental samples and drinking water

US EPA, Pharmaceuticals and Personal Care Product FAQs, http://www.epa.gov/ppcp/faq.html
US EPA, Beaches, http://water.epa.gov/type/oceb/beaches/seasons_2010_ny.cfm#duration

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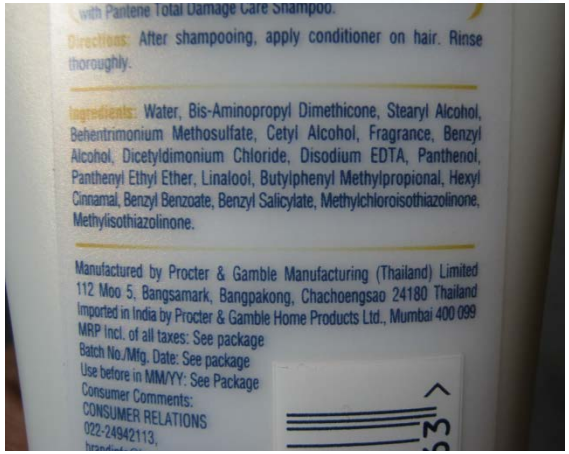
How to read a PCP label

- What's required on a PCP label:
  - Quantity in the container
  - Identity statement
  - Name of the manufacturer & distributor
  - Warning & caution statements
  - Ingredients
- Ingredients listed from highest to lowest quantity



FDA, Cosmetic Labeling & Label Claims, http://www.fda.gov/Cosmetics/CosmeticLabelingLabelClaims/default.htm

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Preservatives

- Prevent bacteria from growing in water based products
- **Parabens** are the most widely used preservatives and the most common parabens are methyl-, ethyl-, and butyl-
- Studies have detected parabens in breast tumors but it's unclear whether the presence leads to cancer

Parabens
Look for *methyl, ethyl, propyl, butyl parabens* on product labels
Found in moisturizers, face & skin cleansers, shampoo, conditioner, sunscreen, toothpaste, makeup
Linked to cancer, endocrine disruption, reproductive toxicity, immunotoxicity, neurotoxicity, skin irritation

FDA Parabens, http://www.fda.gov/Cosmetics/ProductandIngredientSafety/SelectedCosmeticIngredients/ucm128042.htm

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Preservatives

- **Formaldehyde** is used as a preservative & is an impurity released by a number of cosmetic preservatives
- About 20% of cosmetics & PCPs in the US contain a formaldehyde releasing chemical

Formaldehyde & Formaldehyde Releasing Preservatives
Look for *DMDM hydantoin, diazolidinyl urea, Quaternium-15, bronopol, imidzaolodinyl urea, formalin, formic aldehyde, merthaldehyde, methanal* on labels
FORMALDEHYDE has been found in nail treatment, nail polish, eyelash glue **DMDM HYDANTOIN** has been found in shampoo, conditioner, styling gel/lotion, body wash, moisturizer… **DIAZOLIDINYL UREA** has been found in conditioner, styling gel, foundation, moisturizer… **QUATERNIUM-15** has been found in eye shadow, facial powder, blush, foundation, body wash, mascara, baby & adult shampoo, conditioner…
Known human carcinogen, asthmagen, neurotoxicant, developmental toxicant **Can** cause allergic skin reactions

Environmental Working Group, SkinDeep database, http://www.ewg.org/skindeep/

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Antimicrobials

- Kills or slows the growth of bacteria
- **Triclosan** is commonly used in consumer products

Triclosan
Look for *triclosan* on the product label
Found in antibacterial soap, toothpaste (to prevent gingivitis), deodorant, face & body wash, cosmetics, mouthwash, and other consumer products
Linked to thyroid function and emergence of bacteria resistant to antibacterial products, studies show it's interaction with hormone receptors
Toxic to aquatic bacteria at levels found in the environment and inhibits photosynthesis in algae

December 2013 - The US FDA issued a proposed rule to **require manufacturers of antibacterial hand soaps and body washes to demonstrate their products are safe for long-term daily use and more effective than plain soap and water in preventing illness and the spread of certain infections**. If companies do not demonstrate such safety and effectiveness, these products would need to be reformulated or relabeled to remain on the market.

FDA, Triclosan: What Consumers Should Know, http://www.fda.gov/forconsumers/consumerupdates/ucm205999.htm
FDA News Release, FDA issues proposed rule to determine safety and effectiveness of antibacterial soaps, http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm378542.htm

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Fragrance

- Add scents to cosmetics and personal care products
- Usually made up of a blend of chemicals
- Can hide many chemicals as the composition does not have to be disclosed on the label

Phthalates	Synthetic musks
Look for *fragrance, -phthalate* on the product label	**Look for** *fragrance, synthetic musk, musk* on the product label
Found in fragrance **Also found in** nail polish and moisturizers (helps chemicals absorb into the skin)	**Found in** fragrance
Linked to diabetes and asthma, potential risks to reproductive system & thyroid	**Linked to** endocrine disruption, bioaccumulates

Agency for Toxic Substances and Disease Registry, Public Health Statements

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Phthalate Use in PCPs

- Used at concentrations of less than 10% in nail polish, hair spray, and solvents & perfumes in other products

Common Uses	Potential Effects
Dimethyl phthalate (DMP)	
Dye carrier, plasticizer in hair spray, plasticizer in PVC, used in the past as a pesticide[f]	Human immune system toxicant[b] Limited evidence of reproductive toxicity[b]
Dibutyl phthalate (DBP)	
carpets, paints, glue, insect repellents, hair spray, nail polish, and rocket fuel[a]	Human immune system toxicant[b] Strong evidence of endocrine disruption[c] Possible human developmental toxicant[e] Limited evidence of reproductive toxicity[b]
Diethyl phthalate	
toothbrushes, automobile parts, tools, toys, food packaging, cosmetics, insecticides, and aspirin[a]	Human immune system toxicant[b] Strong evidence of endocrine disruption[c] Limited evidence of reproductive toxicity[b]

US FDA, Phthalates and Cosmetic Products, http://www.fda.gov/Cosmetics/ProductandIngredientSafety/SelectedCosmeticIngredients/ucm128250.htm

[a] Agency for Toxic Substances and Disease Registry, Public Health Statements
[b] National Library of Medicine, HazMap — Occupational Exposure to Hazardous Agents
[c] European Commission on Endocrine Disruption
[d] EPA, Hazardous Air Pollutants
[e] California, Proposition 65
[f] US Hazardous Substances Data Bank

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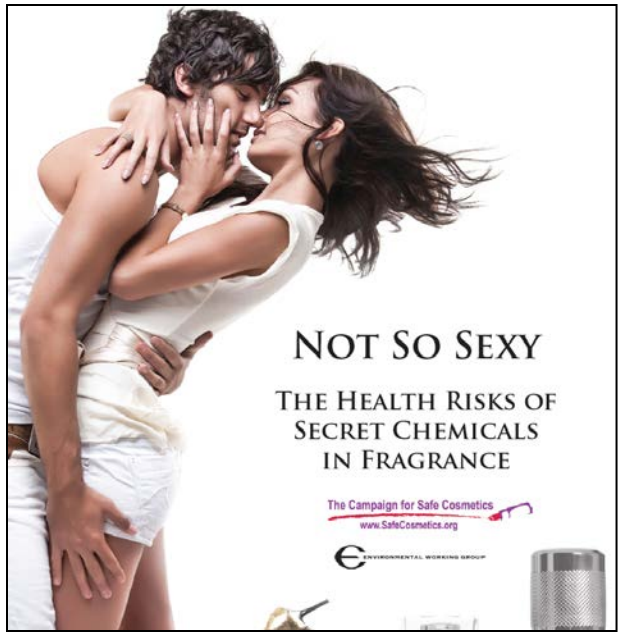
Perfume

Environmental Working Group & Campaign for Safe Cosmetics tested 17 name brand fragrances in 2010 & found:

- 24 chemical sensitizers
- 12 hormone disrupting chemicals
- 38 chemicals detected that were not listed on the product label



	Average for all 17 fragrances	Extreme product (highest number)
Chemical ingredients (tested + labeled)	29	40 - Giorgio Armani Acqua Di Gio
Secret chemicals (found in testing, not on label)	14	24 - American Eagle Seventy Seven
Sensitizing chemicals (can trigger allergic reactions)	10	19 - Giorgio Armani Acqua Di Gio
Hormone disruptors (can disrupt natural hormones)	4	7 - Halle by Halle Berry, Quicksilver, Jennifer Lopez J. Lo Glow
Chemicals not assessed for safety (by government or industry)	12	16 - Chanel Coco, Halle by Halle Berry, American Eagle Seventy Seven

Source: EWG analysis of 91 chemicals in 17 products – including 51 chemicals listed on product labels, and 38 unlabeled chemicals found in tests commissioned by the Campaign for Safe Cosmetics – combined with analysis of chemical hazard and toxicity data from government and industry assessments and the published scientific literature.

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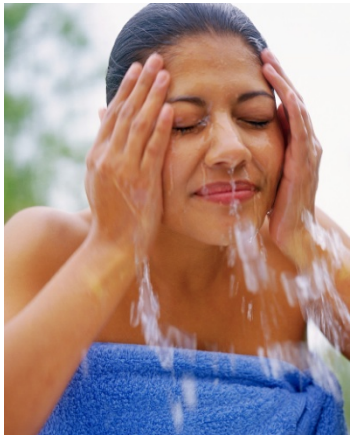
pH Balance

- pH of skin is below 7, typically basic solutions are used to clean the skin
- Triethanolamine typically used and works well at removing make up
- Potential for TEA to convert to carcinogenic nitrosamines



Triethanolamine
Look for *triethanolamine* on the product label
Found in mascara, shampoo, face cleanser, face moisturizer, skin lotion, and other pH balanced products
Linked to allergic skin reactions; suspected immunotoxicant, respiratory toxicant, skin or sense organ toxicant
Possibly toxic to fish with short term and long term exposure

Cosmetic Ingredient Review, http://www.cir-safety.org/sites/default/files/120_final_tea.pdf

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Lather & Penetration Enhancer

- Lather: causes soaps to foam up
- Penetration enhancer: makes it easier for other chemicals to absorb through the skin, meaning more chemicals will enter the body

Sodium lauryl sulfate	Sodium laureth sulfate
Look for *sodium dodecyl sulfate (SDS or NaDS), sodium laurilsulfate* or *sodium lauryl sulfate (SLS)* on the product label	**Look for** *sodium laureth sulfate* or *sodium lauryl ether sulfate* on the product label
Found in bubble bath (thickens & lathers), toothpaste, shampoo, saving cream, and other cleaners that remove oil	**Found in** products that lather
Linked to skin & eye irritation	**Linked to** skin & eye irritation

National Library of Medicine, Hazardous Substances Database, http://toxnet.nlm.nih.gov/cgi-bin/sis/search/r?dbs+hsdb:@term+@rn+151-21-3

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Skin Conditioner

- **Propylene glycol** is commonly used as a skin conditioner
- Is also used as a fragrance ingredient, solvent, and humectant (provides moisture)
- Penetration enhancer

Propylene Glycol
Look for propylene glycol, 1,2-propanediol, methylethyl glycol, 1,2-propylene glycol on labels
Has been found in conditioner, styling gel/lition, shampoo, hair color, moisturizer, foundation, anti-aging, mascara, body wash, facial cleanser, hair spray, eye liner…
Known skin irritant **Environment Canada** classifies it as “expected to he toxic or harmful” **Cosmetics Ingredient Review Assessment** deems “safe for use in cosmetics with some qualifications”

Environmental Working Group, SkinDeep, Propylene Glycol, http://www.ewg.org/skindeep/ingredient/705315/PROPYLENE_GLYCOL/

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Anti-Dandruff

- **Coal tar** is a by-product of the distillation of coal to produce coke or gas
- Active ingredient in OTC products

Coal Tar
Look for *tar,coal; coal tar solution; carbo-cort; coal tar solution usp; coal tar, aerosol; crude coal tar; estar; impervotar; KC 261; lavatar; picis carbonis; aminophenol; diaminobenzene; phenylenediamine* on product labels
May be found in prescription & non prescription preparations to treat skin conditions, such as cleansing bars, gels, lotions, shampoos, and other topical solutions; ointments (1-10% coal tar) prescribed for psoriasis; shampoos to treat dandruff; ointments to treat eczema; hair dye
Known human carcinogens **Linked to** cancer, endocrine disruption, reproductive toxicity, immunotoxicity, neurotoxicity, skin irritation

National Toxicology Program, http://ntp.niehs.nih.gov/ntp/roc/twelfth/profiles/CoalTars.pdf

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Antiperspirant & Deodorant

- **Aluminum** compounds slow the flow of sweat
  - Usually listed as *Aluminum Zirconium Tetrachlorohydrex GLY*
- Controversial research: *There is no conclusive research linking the use of underarm antiperspirants or deodorants and the subsequent development of breast cancer.*
  - Some research suggests that aluminum-based compounds may be absorbed by the skin and cause estrogen-like effects
  - Estrogen has the ability to promote the growth of breast cancer cells
  - Some scientists suggest that aluminum-based compounds may contribute to the development of breast cancer
- Alternatives: aluminum free products, reduced aluminum content

National Cancer Institute at the National Institute of Health, Antiperspirants/Deodorants and Cancer, http://www.cancer.gov/cancertopics/factsheet/Risk/AP-Deo

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Nail Polish

- May contain the "toxic trio": dibutyl phthalate, toluene, and formaldehyde
- DBP is prohibited in cosmetics in Europe because it's a possible human reproductive or developmental toxin[1]
- USEPA restricts toluene in drinking water because it can cause nervous system disorders and damage the liver and kidneys[2]
- Formaldehyde is "known to be a human carcinogen"[3]

Dibutyl phthalate (DBP)	Toluene	Formaldehyde
Adds flexibility Moisturizing sheen Helps dissolve other ingredients	Helps suspend color Forms a smooth finish	Found in nail hardeners
Reproductive & developmental toxin, linked to feminizing effects in boys	Can cause headaches, dizziness, fatigue and is a possible reproductive & developmental toxin	Known carcinogen; irritates the eyes, nose, and throat; can cause skin irritation

[1]EC (European Commission of the European Union). 1999-2006. Enterprise Directorate-General Pharmaceuticals and Cosmetics. The rules governing cosmetic products in the European Union, Volume 1, "Cosmetics legislation."
[2] US EPA, Technical Factsheet on Toluene, http://www.epa.gov/ogwdw/pdfs/factsheets/voc/tech/toluene.pdf
[3] US National Toxicology Program, Report on Carcinogens, 12th Edition, 2011, http://ntp.niehs.nih.gov/ntp/roc/twelfth/roc12.pdf
Campaign for Safe Cosmetics, Nail Products & Salons, http://safecosmetics.org/article.php?id=224

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Nail Polish

- Look for brands that advertise as “three free” on the product packaging or company website
- May contain other ingredients of concern

three free brands

Organic Solvents	Acrylics	Prevents Chipping
Xylene: toxic by all routes of exposure, can cause headache, dizziness, skin and eye irritation, kidney and liver impairment[1]; very persistent in air[2]	**Methyl methacrylate**: vapors irritate eyes, nose, and throat; irritates skin[1]; toxic to fish[2]	**Benzyl acetate**: irritating to skin, eyes, and respiratory tract[1]; toxic to fish, very persistent in air[2]
Methyl ethyl ketone: vapors irritate eyes, nose & throat[1]; very persistent in air[2]	**Ethyl methacrylate**: vapors irritate eyes and respiratory system, irritates skin[1]; toxic to fish[2]	
Acetone: vapors irritateseyes, nose, and throat[1]; very persistent in air[2]		

[1] National Library of Medicine, Hazardous Substances Data Bank, http://toxnet.nlm.nih.gov
[2] PBT Profiler, http://www.pbtprofiler.net

Funding provided by the US Environmental Protection Agency Great Lakes Restoration Initiative in the amount of $104,192 and by the NYS Pollution Prevention Institute through a grant from the NYS Department of Environmental Conservation.

Cosmetics

Product	Common ingredients	Ingredient concerns
Blush	Talc , powdered silica, alumina, coal tar dyes, acrylates, parabens	Neurotoxic, strong irritants, endocrine disruptors
Mineral makeup	Bismuth oxychloride	Irritate sensitive skin, cause redness & itching
Face powder	Talc, powdered silica, coal tar dyes, quaternium-15, lanolin, fragrances, parabens, triclosan	Can release formaldehyde, allergic reactions, skin irritation, endocrine disruption
Foundation	Talc, powdered silica, alumina, octenylsuccinate, mineral oil, TEA, parabens, quaternium-15, fragrance, coal tar dyes	Neurotoxic, irritate skin, promote acne, may contain formaldehyde
Concealer	Propylene glycol, polyethylene glycol, parabens, retinyl palmitate, may be contaminated with 1.4-dioxane and ethylene oxide	Skin irritants, endocrine disruption, cause gene mutations & damage DNA, contaminants are suspected & known carcinogens
Eyeshadow	Coal tar dyes, talc, powdered silica, BHA, parabens Cream: mineral oil, petrolatum, & lanolin oil Glitter: aluminum or bronze	Carcinogens, endocrine disruptors Creams: allergens Glitter: linked to cancer & neurotoxic effects
Mascara	Petroleum distillates, phenoxyethanol, propylene glycol, TEA, parabens, synthetic plastics, parabens	Skin & eye irritation, endocrine disruption, immune system toxicant
Lipstick	Coal tar dyes, parabens, sunscreen chemicals, fragrance	Skin irritation, endocrine disruption

Environmental Health Association of Nova Scotia, Guide to Less Toxic Products, http://lesstoxicguide.ca/index.asp?fetch=personal

Funding provided by the US Environmental Protection Agency Great Lakes Restoration Initiative in the amount of $104,192 and by the NYS Pollution Prevention Institute through a grant from the NYS Department of Environmental Conservation.

Colorants

- Metals are traditionally used to give cosmetics & PCPs color

Products contained the metal[1]	Potential effects[2]
0% mercury	neurotoxin
14% selenium	high exposure can cause neurological effects, brittle hair & deformed nails
20% arsenic	long term exposure causes kidney damage in animals
51% cadmium	damages the kidneys, lungs, and bones
61% thallium	large amounts cause vomiting, diarrhea, temporary hair loss, and effects on the nervous system, lungs, heart, liver, and kidneys
90% beryllium	may become sensitive to beryllium, which causes inflammatory reaction in the respiratory system
96% lead	damage the nervous system, kidneys, and reproductive system
100% nickel	contact may cause an allergic skin reaction

[1]Environmental Defense, Heavy Metal Hazard: The Health Risks of Hidden Heavy Metals in Face Make up, May 2011, http://environmentaldefence.ca/sites/default/files/report_files/HeavyMetalHazard%20FINAL.pdf
[2]ATSDR, ToxFAQs, http://www.atsdr.cdc.gov/toxfaqs/index.asp

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Metals in Cosmetics

May 2011 study of 49 cosmetics for heavy metals

- Foundation, concealer, powder, blush/bronzer, mascara, eye liner, eye shadow, lip tint/gloss/stick

Products contained the metal[1]	Potential effects[2]
0% mercury	neurotoxin
14% selenium	high exposure can cause neurological effects, brittle hair & deformed nails
20% arsenic	long term exposure causes kidney damage in animals
51% cadmium	damages the kidneys, lungs, and bones
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[2]ATSDR, ToxFAQs, http://www.atsdr.cdc.gov/toxfaqs/index.asp

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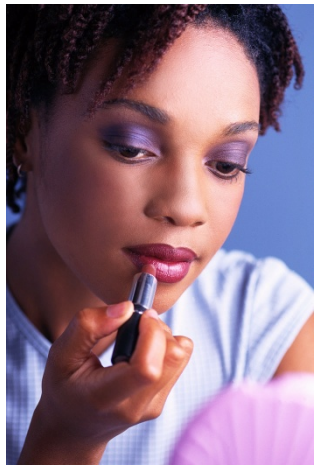
Lipstick

- Lipstick contains wax, oils, antioxidants & moisturizers
  - Wax provides the structure
  - Oils and fats are used for shine - more than 50% of lipsticks made in the US contain pig fat or castor oil
  - Colorants – usually a blend of D&C Reds; pinks made from blending Reds with titanium dioxide
- Matte lipsticks contain more filling agents like silica
- Creme lipsticks contain more waxes than oils
- Sheer and long lasting lipstick contain a lot of oil
  - Long lasting lipsticks contain silicone oil
  - Glossy lipsticks contain more oil
- Shimmery lipstick may contain mica, silica, fish scales, and synthetic pearl particles



Environmental Working Group, lipstick results
Wikipedia Lipstick, http://en.wikipedia.org/wiki/Lipstick#Ingredients

Funding provided by the US Environmental Protection Agency Great Lakes Restoration Initiative in the amount of $104,192 and by the NYS Pollution Prevention Institute through a grant from the NYS Department of Environmental Conservation.

Lipstick & Lead

- FDA limit for lead in colorants used in cosmetics, typically 20ppm
- FDA 2010 survey of 400 lipsticks
  - Average lead concentration 1.11 ppm
  - Results ranged from the detection limit of 0.026 ppm to 7.19 ppm

FDA: **Is there a safety concern about the lead levels FDA found in lipsticks?** No. We have assessed the potential for harm to consumers from use of lipstick containing lead at the levels found. Lipstick, as a product intended for topical use with limited absorption, is ingested only in very small quantities. **We do not consider the lead levels we found in the lipsticks to be a safety concern**. The lead levels we found are within the limits recommended by other public health authorities for lead in cosmetics, including lipstick.

CDC: no threshold for adverse health effects in young children has been demonstrated (**no safe blood level has been identified**), all sources of lead exposure for children should be controlled or eliminated.

FDA Lipstick and Lead: Questions and Answers, http://www.fda.gov/Cosmetics/ProductandIngredientSafety/ProductInformation/ucm137224.htm
USCDC, Water, http://www.cdc.gov/nceh/lead/tips/water.htm

Funding provided by the US Environmental Protection Agency Great Lakes Restoration Initiative in the amount of $104,192 and by the NYS Pollution Prevention Institute through a grant from the NYS Department of Environmental Conservation.

FDA Analyses for Lead in Lipstick

Brand	Parent Company	Lipstick line, Shade #, Shade	Lead (ppm)
10 BEST (LOWEST LEAD LEVELS)			
Clinique	Estée Lauder	Almost, 06, Black Honey	<0.026
L'Oréal	L'Oréal USA	Colour Juice, 240, Cherry On Top	<0.026
M.A.C	Estée Lauder	Satin, M.A.C Red	0.03
Lori Anne	Mood Magic	Mood, Blue	0.03
Estée Lauder	Estée Lauder	Pure Color, 161, Pink Parfait	0.04
Fashion Fair	Johnson Publishing Company	Lipstick, 8014, Earth Red	0.05
Iman Cosmetics	Iman Cosmetics	Luxury Moisturizing, 005, Iman Red	0.05
M.A.C	Estée Lauder	Matte, Lady Danger	0.05
Lori Anne	Mood Magic	Mood, Yellow	0.05
Fashion Fair	Johnson Publishing Company	Lipstick, 8018, Magenta Mist	0.06
10 WORST (HIGHEST LEAD LEVELS)			
Maybelline	L'Oréal USA	Color Sensational, 125, Pink Petal	7.19
L'Oréal	L'Oréal USA	Colour Riche, 410, Volcanic	7.00
NARS	Shiseido	Semi-Matte, 1005, Red Lizard	4.93
Cover Girl Queen Collection	Procter & Gamble	Vibrant Hues Color, Q580, Ruby Remix	4.92
NARS	Shiseido	Semi-Matte, 1009, Funny Face	4.89
L'Oréal	L'Oréal USA	Colour Riche, 165, Tickled Pink	4.45
L'Oréal	L'Oréal USA	Intensely Moisturizing Lipcolor, 748, Heroic	4.41
Cover Girl	Procter & Gamble	Continuous Color, 025, Warm Brick	4.28
Maybelline	L'Oréal USA	Color Sensational, 475, Mauve Me	4.23
Stargazer	Stargazer	Lipstick, 103	4.12

REMINDER: lipsticks were purchased Feb-July 2010; formulations may have changed and the data above may not represent what's in stores now

Read the full list online here

http://www.fda.gov/Cosmetics/ProductandIngredientSafety/ProductInformation/ucm137224.htm#expanalyses

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Lipstick

- May contain other ingredients of concern

Ingredient	Concern
fragrance	Ecotoxicology, Allergies/immunotoxicity, Irritation (skin, eyes, or lungs), Miscellaneous, Organ system toxicity (non-reproductive)
retinyl palmitate - composed of palmitic acid and retinol (Vitamin A)	Biochemical or cellular level changes, Cancer, Developmental/reproductive toxicity, Organ system toxicity (non-reproductive), Use restrictions
Parabens – preservative	Developmental/reproductive toxicity, Ecotoxicology, Endocrine disruption, Allergies/immunotoxicity, Use restrictions
cetyl lactate – skin conditioner	Cancer, Ecotoxicology, Use restrictions
tocopheryl acetate - consists of acetic acid and tocopherol (vitamin E)	Cancer, Ecotoxicology, Allergies/immunotoxicity, Contamination concerns
octinoxate - most widely used sunscreen ingredient	Enhanced skin absorption, Biochemical or cellular level changes, Developmental/reproductive toxicity, Endocrine disruption, Allergies/immunotoxicity, Organ system toxicity (non-reproductive), Persistence and bioaccumulation
BHT - toluene-based ingredient used as a preservative in food and PCPs	Cancer, Developmental/reproductive toxicity, Allergies/immunotoxicity, Irritation (skin, eyes, or lungs), Organ system toxicity (non-reproductive)
geraniol – naturally occurring scent	Ecotoxicology, Allergies/immunotoxicity, Use restrictions
Citral - naturally occurring scent	Allergies/immunotoxicity, Irritation (skin, eyes, or lungs), Use restrictions

Environmental Working Group, lipstick results
Wikipedia Lipstick, http://en.wikipedia.org/wiki/Lipstick#Ingredients

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Alpha and Beta Hydroxy Acids

AHAs: cause exfoliation and may be found in products marketed to **"reduce the signs of aging"** (smoothing fine lines & wrinkles, improving skin texture & tone, unblocking and cleansing pores, improving skin condition)

- FDA received 114 reports of adverse effects from 1992 - 2004; more serious reactions most often with products that cause the greatest degree of exfoliation, such as "skin peelers"

BHAs: reduce the appearance of fine lines and wrinkles and improve overall skin texture without the occasional irritation associated with use of AHAs

- BHA ingredients may be listed as **salicylic acid** (or salicylate, sodium salicylate, willow extract), beta hydroxybutanoic acid, tropic acid, or trethocanic acid

Studies have determined that applying **glycolic acid (an AHA) to the skin can make people more susceptible to the damaging effects of the sun, including sunburn**.

FDA advises precautions be taken for the use of cosmetics containing AHAs and BHAs:

- Test any product that contains a BHA on a small area of skin before applying it to a large area. If you experience skin irritation or prolonged stinging, stop using the product and consult your physician.
- Follow the use instructions on the label. Do not exceed the recommended applications.
- Avoid using BHA-containing products on infants and children.
- Use sun protection if you use a BHA product.

US FDA, Alpha and Beta Hydroxy Acids (AHAs & BHAs),
http://www.fda.gov/Cosmetics/ProductandIngredientSafety/SelectedCosmeticIngredients/ucm130912.htm

Funding provided by the US Environmental Protection Agency Great Lakes Restoration Initiative in the amount of $104,192 and by the NYS Pollution Prevention Institute through a grant from the NYS Department of Environmental Conservation.

Mercury Poisoning Linked to Skin Products

FDA warning consumers not to use skin creams, beauty and antiseptic soaps, or lotions that might contain mercury.

- Products marketed as skin lighteners and anti-aging treatments that remove age spots, freckles, blemishes and wrinkles
- Products with mercury have been found in at least seven states
- Products manufactured abroad and sold illegally in the United States—often in shops in Latino, Asian, African or Middle Eastern neighborhoods and online

Exposure & dangers

- Mercury can damage the kidneys and the nervous system, and interfere with the development of the brain in unborn children and very young children
- Children can be exposed to mercury from breathing vapors from a product or touching the product and then putting their fingers in their mouth

US FDA, Mercury Poisoning Linked to Skin Products, http://www.fda.gov/ForConsumers/ConsumerUpdates/ucm294849.htm

Funding provided by the US Environmental Protection Agency Great Lakes Restoration Initiative in the amount of $104,192 and by the NYS Pollution Prevention Institute through a grant from the NYS Department of Environmental Conservation.

How to Protect Yourself from Mercury containing Products

1. **Check the label** of any skin lightening, anti-aging or other skin product you use. If you see the words “mercurous chloride,” “calomel,” “mercuric,” “mercurio,” or “mercury,” stop using the product immediately.
2. **If there is no label or no ingredients are listed**, do not use the product. Federal law requires that ingredients be listed on the label of any cosmetic or drug.
3. **Don’t use products labeled in languages other than English** unless English labeling is also provided.
4. **If you suspect you have been using a product with mercury, stop using it immediately.** Thoroughly wash your hands and any other parts of your body that have come in contact with the product. Contact your health care professional or a medical care clinic for advice.
5. **If you have questions**, call your health care professional or the Poison Center at 1-800-222-1222; it is open 24 hours a day.
6. **Before throwing out a product** that may contain mercury, seal it in a plastic bag or leak-proof container. Check with your local environmental, health or solid waste agency for disposal instructions. Some communities have special collections or other options for disposing of household hazardous waste.

US FDA, Mercury Poisoning Linked to Skin Products, http://www.fda.gov/ForConsumers/ConsumerUpdates/ucm294849.htm

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Sunscreen Regulation Update

New regulations effective 12/17/12:

- **Standards for testing the effectiveness** of sunscreen products and require labeling that accurately reflects test results
- Proposed regulation to **limit the maximum SPF value on sunscreen labeling to "SPF 50+"**

Labeling changes

- Sunscreens with broad protections labeled "Broad Spectrum" and "SPF 15" (or higher)
- Sunscreens that are not broad spectrum or are SPF 2 to14 have a warning that they have been shown only to prevent sunburn

USFDA, Sheds Light on Sunscreens, http://www.fda.gov/forconsumers/consumerupdates/ucm258416.htm

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Sunscreen Labeling According to 2011 Final Rule

If used as directed with other sun protection measures, this product reduces the risk of skin cancer and early skin aging, as well as helps prevent sunburn.

Only products labeled with both "Broad Spectrum" AND SPF15 or higher have been shown to provide all these benefits.

Drug Facts

Active Ingredients — **Purpose**

Avobenzone 3%
Homosalate 10%
Octyl methoxycinnamate 7.5%
} Sunscreen

Uses
- helps prevent sunburn
- if used as directed with other sun protection measures (see ***Directions***), decreases the risk of skin cancer and early skin aging caused by the sun

Warnings
For external use only

Do not use on damaged or broken skin

When using this product keep out of eyes. Rinse with water to remove.

Stop use and ask a doctor if rash occurs

Keep out of reach of children. If product is swallowed, get medical help or contact a Poison Control Center right away.

Directions
- apply liberally 15 minutes before sun exposure
- reapply:
  - after 40 minutes of swimming or sweating
  - immediately after towel drying
  - at least every 2 hours
- **Sun Protection Measures.** Spending time in the sun increases your risk of skin cancer and early skin aging. To decrease this risk, regularly use a sunscreen with a broad spectrum SPF of 15 or higher and other sun protection measures including:
  - limit time in the sun, especially from 10 a.m. – 2 p.m.
  - wear long-sleeve shirts, pants, hats, and sunglasses
- children under 6 months: Ask a doctor

Inactive ingredients
aloe extract, barium sulfate, benzyl alcohol, carbomer, dimethicone, disodium EDTA, jojoba oil, methylparaben, octadecene/MA copolymer, polyglyceryl-3 distearate, phenethyl alcohol, propylparaben, sorbitan isostearate, sorbitol, stearic acid, tocopherol (vitamin E), triethanolamine, water

Other information
- protect this product from excessive heat and direct sun

Questions or comments?
Call toll free 1-800-XXX-XXXX

FDA

Funding provided by the US Environmental Protection Agency Great Lakes Restoration Initiative in the amount of $104,192 and by the NYS Pollution Prevention Institute through a grant from the NYS Department of Environmental Conservation.

Sunscreen Tips

- **Avoid sprays and powders**, as they contain tiny particles that may not be safe to breath and **choose creams** instead
- **Avoid retinyl palmitate** aka Vitamin A, as tumors & lesions develop on skin coated with Vitamin A faster in studies and **oxybenzone**, a synthetic estrogen that penetrates the skin; **choose zinc, titanium, avobenzone or Mexoryl SX**, as they protect from UVA radiation and most remains on the skin
- **Avoid sunscreens with insect repellant** and **purchase separate products** instead
- **Reapply often** as sunscreen breaks down in the sun, washes off, and is rubbed off on towels and clothes

	⊘ Avoid these	✓ Look for these
Ingredients	Oxybenzone Vitamin A (retinyl palmitate) Added insect repellent	Zinc Titanium dioxide Avobenzone or Mexoryl SX
Products	Sprays Powders SPF above 50+	Cream Broad spectrum protection Water resistant for beach, pool & exercise SPF 30+ for beach & pool

Environmental Working Group, Top Sun Safety Tips, http://www.ewg.org/2012sunscreen/top-sun-safety-tips/

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ENVIRONMENTAL WORKING GROUP

faq | info | Get the Guide!

EWG's 2013 Guide to Sunscreens | EWG Research | Best Sunscreens | Sunscreen Don'ts | Sun Safety Tips | Press

Advanced Search | Search | Search

http://www.ewg.org/2013sunscreen/

- **Rates the safety and efficacy of 1,800 SPF products**
- **Products with high ratings provide broad spectrum, long lasting protection, with ingredients that pose low human health concerns**
- **Anticipate 2014 released mid-May**

to get a free Sunscreen Guide!

BE SAFE IN THE SUN THIS SUMMER

Pick the best

See All Products

Beach & Sports Sunscreens

Moisturizers with SPF

Lip Balms with SPF

Make Up with SPF

Coming This Spring: EWG's 2014 Sunscreen Guide

Companies: To have your sunscreen products included in this year's guide, email skindeep@ewg.org for submission instructions.
The deadline for submitting your formulations is March 21.

Children's Vulnerability

Children are at higher risk of suffering effects than adults

1. Hand to mouth behavior
2. Children have greater pound-for-pound intake of air, water, and food
3. Heightened sensitivity as their bodies are growing and developing
4. Skin is 30% thinner than adults & can absorb more from the skin's surface
5. May not have the same ability to excrete toxins
6. The blood brain barrier that helps block chemicals from penetrating the brain isn't fully developed until 6 months of age
7. More years of future life left

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Ingredients in Children's PCPs

2007 survey of 3,300 parents to find out what PCPs their children use

The survey found:

- Children are exposed to 61 PCP ingredients every day & 27 of those have not been found safe for kids
- 82% exposed to 1+ ingredients linked to brain and nervous system damage
- 69% exposed to 1+ ingredients that are endocrine disruptors
- 3.6% exposed to 1+ ingredients linked to cancer
- 41% of products warn "keep out of reach of children"

Source: EWG analysis of 3,300 online survey responses on personal care product use for children from birth through age 9, coupled with EWG database of ingredients in more than 23,000 personal care products. Ingredients were compared against chemicals assessed for safety by the industry safety panel and by FDA.

Environmental Working Group, Hazardous and Untested Chemicals in Children's Products, http://www.ewg.org/files/Child%27sStudyAttachment.pdf

Funding provided by the US Environmental Protection Agency Great Lakes Restoration Initiative in the amount of $104,192 and by the NYS Pollution Prevention Institute through a grant from the NYS Department of Environmental Conservation.

Case Study: J&J Baby Shampoo

- March 2009: Compact for Safe Cosmetics reports that Johnson's baby shampoo contains **2 cancer causing chemicals that aren't listed on the label**
- October 2011: J&J to phase out the carcinogenic preservatives from baby products
- January 2014: cancer causing preservatives replaced, will start seeing the product on store shelves in first half of 2014

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Revising a Formula for Baby Shampoo

Responding to pressure from consumers' groups, Johnson & Johnson revised the ingredients in its baby shampoo to remove a formaldehyde-releasing preservative called quaternium-15.

Johnson's No More Tears Baby Shampoo

OLD FORMULATION

Ingredients: Water, Cocamidopropyl Betaine, PEG-80 Sorbitan Laurate, Sodium Trideceth Sulfate, PEG-150 Distearate, Fragrance, Tetrasodium EDTA, Polyquaternium-10, Quaternium-15, Sodium Hydroxide, Citric Acid, Yellow 10, Orange 4.

REMOVED:

Quaternium-15 *a formaldehyde-releasing preservative*

NEW FORMULATION

Ingredients: Water, PEG-80 Sorbitan Laurate, Cocamidopropyl Betaine, Sodium Trideceth Sulfate, PEG-150 Distearate, Phenoxyethanol, Glycerin, Citric Acid, Fragrance, Sodium Benzoate, Tetrasodium EDTA, Polyquaternium-10, Ethylhexylglycerin, Sodium Hydroxide, Potassium Acrylates Copolymer, Yellow 6, Yellow 10.

ADDED:

Potassium Acrylates Copolymer
helps maintain proper shampoo thickness

Phenoxyethanol, Sodium Benzoate and Ethylhexylglycerin
components of the new preservative system

Glycerin
helps with moisturization

Graphic source: http://www.nytimes.com/2014/01/18/business/johnson-johnson-takes-first-step-in-removal-of-questionable-chemicals-from-products.html

Funding provided by the US Environmental Protection Agency Great Lakes Restoration Initiative in the amount of $104,192 and by the NYS Pollution Prevention Institute through a grant from the NYS Department of Environmental Conservation.

Environmental Impact

- Some ingredients take a long time to break down into non-toxic counterparts when they enter the environment
  - The longer a chemical persists, the higher the potential for exposure
- Some ingredients are also toxic to fish

Chemical	Days to be removed from water	Days to be removed from sediment	Toxic to Fish
Methyl paraben (preservative)	90	840 (~2.3yr)	YES
Triclosan (antibacterial)	360	3240 (~8.8yr)	YES
Dibutyl phthalate (nail polish, fragrance)	52	468 (~1.3yr)	YES
Formaldehyde (nail polish, preservative)	90	840 (~2.3yr)	MODERATELY
Propylene glycol (skin conditioner)	8.7	78 (~1.5mo)	NO
Oxybenzone (sunscreen)	38	340 (~11mo)	MODERATELY

Data from the US EPA's PBT Profiler, http://www.pbtprofiler.net

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Alternatives

- Products free of parabens, triclosan, fragrance, phthalates
  - Price range varies significantly
  - Performance range varies significantly from better than to not as good as conventional counterparts
  - Consider products without these ingredients may perform differently – ie. shampoo without sodium lauryl sulfate will not be as foamy
  - Consider if the ingredient is necessary – ie. Does my soap have to be antimicrobial? Does my face soap have to be pH balanced? Does the scent matter?
- Deodorant with lower levels of aluminum or aluminum free
  - Many lower level aluminum versions are cost competitive
  - Aluminum free versions may cost more
  - Consider performance of products with less aluminum
- Nail polish without DBP, toluene, formaldehyde
  - Cost competitive, function as good as if not better than polish with these ingredients
- Organic products

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Eco Friendly Products

- The use of most eco friendly terms are not defined or regulated
- Third party certifications (someone other than the company) are preferable
- Just because a product or ingredient is 'organic', doesn't mean it's safe!

Unregulated terms	Preferable terms & labels
Non Toxic Natural Eco-friendly Eco-healthy	USDA Organic Label USDA Certified Biobased Product Label NSF/ANSI 305: Personal Care Products Containing Organic Ingredients with logo Free of phthalates, sulfates, parabens, etc

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Certified Organic Products

- FDA does not define or regulate “organic”
- USDA regulates “organic” as it applies to agricultural products through the National Organic Program
- If a PCP contains agricultural ingredients, and meets the USDA organic production, handling, processing and labeling standards, it may be eligible to be certified

Package says	Composition of the PCP	
100% Organic	Must contain 100% organic ingredients	USDA Organic Seal Certifying agent’s name &address
Organic	Must contain at least 95% organic ingredients	USDA Organic Seal Certifying agent’s name &address
Made with organic ingredients	Must contain at least 70% organic ingredients	Certifying agent’s name &address Indicate which ingredients are certified organic
Cannot be labeled organic	Products with less than 70% organic ingredients	Indicate which ingredients are certified organic

USDA National Organic Program, http://www.ams.usda.gov/AMSv1.0/nop

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Certified Biobased Products

- Identify biobased content of products and packaging
- Biobased products: commercial or industrial products (other than food or feed) that are composed in whole, or in significant part, of biological products, renewable agricultural materials (including plant, animal and marine materials) or forestry materials
- Product must meet or exceed the minimum biobased content percentage in its given category in order to use the Certified Biobased Product label

Product type	Min. biobased content
Hand cleaners	64%
Hand sanitizers	73%
Lip care products	82%
Bath products	61%
Shampoo	66%
Conditioner	78%

USDA CERTIFIED BIOBASED PRODUCT
PRODUCT 57%
FP

USDA Biopreferred Program, http://www.biopreferred.gov/Labeling.aspx

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Report Reactions to the FDA

To report a reaction to a cosmetic product:

- Report by phone to the Consumer Complaint Coordinator at your nearest FDA district office

  New York - (toll-free) 866-446-9055
- Report to FDA's MedWatch adverse event reporting system
  - Online via https://www.accessdata.fda.gov/scripts/medwatch/,
  - Call Medwatch at 1-800-332-1088 to request a reporting form by mail
  - *MedWatch reports are covered under the HIPAA privacy rule*
  - *Report effects associated with FDA regulated drugs, biologics, medical devices, nutritional products, and cosmetics*
  - *DO NOT report effects associated with vaccines or investigational/study drugs*

If you are a salon worker and want to file a complaint about your workplace conditions or chemicals used in the workplace, contact OSHA http://www.osha.gov/as/opa/worker/complain.html

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What You Can Do

- Choose products without harsh chemicals
  - Shampoos & body washes without SLS, phthalates, parabens
  - Lotions without parabens
  - Nail polish without the toxic trio
  - Skip perfume & antibacterial products
- Eliminate unnecessary products
- Prioritize high exposure, frequently used products for replacement
- Buy from companies you trust
- Make your own products

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Resources for More Information

Understand health & safety of specific products, product classes, and manufacturers

California Safe Cosmetics Program Product Database, http://safecosmeticsact.org/search/

EWG's SkinDeep Cosmetics Database www.cosmeticsdatabase.com, mobile app available

The GoodGuide, www.goodguide.com , mobile app for iPhone and Android with bar scanner

Information about ingredients and the industry

Cosmetic Ingredient Review http://www.cir-safety.org

US FDA Cosmetics (regulatory & safety information), http://www.fda.gov/Cosmetics/default.htm

Campaign for Safe Cosmetics, http://safecosmetics.org

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California Safe Cosmetics Program Product Database

Click here to search the database

What is the California Safe Cosmetics Program Product Database?

The California Safe Cosmetics Act (the Act) requires companies that manufacture cosmetics to report any cosmetics products that contain ingredients known or suspected to cause cancer, birth defects, or other reproductive harm. The California Safe Cosmetics Program (CSCP) collects this data and makes it available to the public through this website.

Are you curious to see what ingredients have been reported for your shampoo? Want to compare the ingredients of different sunscreens? You can search the database for a **type of product; a specific product name; or a brand or company name.**

You can also read more about chemical ingredients, learn about how chemical exposure can affect your health, or learn more about the California Safe Cosmetics Program by clicking on links to the right.

More information on the California Safe Cosmetics Act, cosmetics in the news, and links to other government agencies overseeing cosmetics are also available through the California Safe Cosmetics Program website.

Which chemical ingredients have been reported to the CA Safe Cosmetics Program?

What do these search results mean - and other FAQ topics

- About the Program
- How to Search the Database
- Questions about Products and Search Results
- More about Cosmetics
- Introduction to Toxicology
- Glossary of Terms
- Website Organization
- Additional Resources

For cosmetic companies:

Report products through the CSCP Online Reporting System

Is this website not displaying correctly on your screen?
Check the compatibility view on your browser. Click here for more information.

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California Safe Cosmetics Program Product Database

Product Name: Dove Beauty Bar (all variants)

Reported By: Conopco, Inc.
Brand: Dove
Category: Bath Products - Body Washes and Soaps
Date Reported: 10/9/2009
Updated On: 6/30/2010

Ingredients reported for this product include:

Chemical Name	Date Reported	Date Removed *
Titanium dioxide	10/9/2009	

* If a product has been reformulated and the reported ingredient removed from the product, "Date Removed" refers to the date of reformulation.

The cosmetics ingredients listed here were reported to the California Safe Cosmetic Program (CSCP). Not all information has been verified. Reporting is required regardless of the amount of the ingredient in the product. Inclusion of a product in this database does not necessarily mean that it has been shown to cause harm. For more on which companies are required to report to the CSCP and the chemicals included in the CA Safe Cosmetics Act, please refer to the FAQ section of this website.

Search for products, chemicals, or companies:

Click to search...

What do these search results mean - and other FAQ topics

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Individual Chemical Profile: Titanium dioxide

Also known as: titanium white; Pigment White 6; CI 77891; E171

Source: Titanium dioxide is the oxidized form of titanium. It is naturally occurring in mineral form. It is added to cosmetics, as well as paint, paper, food, plastics, inks, toothpaste, and other products. Manufacturers use titanium dioxide as a pigment to make a product appear white or to make a product opaque (non-transparent). Titanium dioxide can also be used to thicken a product. Sunscreens can contain nanoparticles (very small particles) of titanium dioxide coated with silica or alumina to reflect light away from the skin.

Potential Health Impacts: People may be exposed to titanium dioxide by inhalation or ingestion, depending on the specific product. Studies of rats that inhaled high concentrations of titanium dioxide have found increased rates of respiratory tract cancers. Some scientists believe that consumer exposure to titanium dioxide is low because of the low potential for inhalation of products that are not in powdered form. California Proposition 65 categorizes titanium dioxide as a carcinogen when it is in a form that can be breathed in. The International Agency for Research on Cancer (IARC) lists titanium dioxide in all its forms as an animal carcinogen and a possible human carcinogen.

Toxicologists are evaluating the toxicity of titanium dioxide nanoparticles, which may have different properties than larger particles of titanium dioxide. Studies of mice exposed to titanium dioxide nanoparticles have shown increases in inflammation and genetic damage. IARC has not yet released a specific evaluation for titanium dioxide nanoparticles.

Additional resources:

IARC Information on Titanium Dioxide (PDF)

Search for products, chemicals, or companies:

Click to search...

Which chemical ingredients have been reported to the CA Safe Cosmetics Program?

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For cosmetic companies:

Report products through the CSCP Online Reporting System

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EWG's Skin Deep® Cosmetics Database

ENVIRONMENTAL WORKING GROUP

Skin Deep is Mobile!

Get critical information about your personal care products right at your fingertips!

Search more than 73,000 products... Search

Smarter Choices, Healthier Living

Coming This Spring: EWG's 2014 Sunscreen Guide

Companies: To have your sunscreen products included in this year's guide, email skindeep@ewg.org for submission instructions.

The deadline for submitting your formulations is March 21.

EWG's Healthy Living Corner

Quick Tips for Safer Cosmetics

EWG's Guide to Healthy Cleaning

Featured Research & News

Exposing the Cosmetics Cover-up

Read more »

Why Skin Deep®?

Essential Tips and Facts

See that long list of ingredients on the back of the bottle? Some probably aren't as safe as you'd hope.

1. Top tips for safer products
2. Frequently asked questions (FAQs)
3. Why Skin Deep®?
4. Myths on cosmetic safety
5. User's guide to Skin

EWG's Skin Deep
Cosmetics Database

Dove beauty bar soap with moisturizing lotion for sensitive skin

Score 2

Data: Limited

Health Concern	LOW
Product Type	bar soap
Made by	Dove by Unilever
Data last updated	February 2010

how to read the score

Get the Guide

Want a free Cosmetics Guide? Just make a $5 donation today to EWG!

Donate Now!

Health concerns of ingredients

About the ratings

	low	moderate	high
Overall Hazard	■		
Cancer			
Developmental & reproductive toxicity			
Allergies & immunotoxicity	■		
Use restrictions	■		

Other HIGH concerns: Multiple, additive exposure sources, Occupational hazards

Other MODERATE concerns: Organ system toxicity (non-reproductive), Contamination concerns

Other LOW concerns: Ecotoxicology, Data gaps, Enhanced skin absorption

COMPANY POLICIES

Compact for Safe Cosmetics	Non-signer
Animal Testing Policy	According to PETA, this company **conducts** animal tests.

LABEL INFORMATION

Ingredients from packaging:	Sodium Lauroyl Isethionate, Stearic Acid, Sodium Tallowate, Sodium Palmitate, Lauric Acid, Sodium Isethionate, Water, Sodium Stearate, Cocamidopropyl Betaine, Sodium Cocoate, Sodium Palm Kernelate, Sodium Chloride, Tetrasodium EDTA, Tetrasodium Etidronate, Maltol, Titanium Dioxide (CI 77891).

WHERE TO PURCHASE

EWG's Skin Deep
Cosmetics Database

Dove beauty bar soap with moisturizing lotion for sensitive skin

Score 2

Data: Limited

Health Concern	LOW
Product Type	bar soap
Made by	Dove by Unilever
Data last updated	February 2010

how to read the score

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Donate Now!

INGREDIENTS	concerns	score
COCAMIDOPROPYL BETAINE	Allergies/immunotoxicity, Ecotoxicology, Contamination concerns (NITROSAMINES-in the presence of nitrosating agents), Use restrictions	5 Data: Good
TITANIUM DIOXIDE	Organ system toxicity (non-reproductive), Occupational hazards	0 Data: Fair
SODIUM PALMITATE	Multiple, additive exposure sources, Ecotoxicology	2 Data: Limited
TETRASODIUM EDTA	Organ system toxicity (non-reproductive), Enhanced skin absorption, Occupational hazards	2 Data: Fair
SODIUM TALLOWATE	Ecotoxicology	1 Data: Limited

GoodGuide

Search scientific product & company ratings...

Personal Care | Food | Household | Babies & Kids | Pet Food | Apparel | Electronics | Appliances | Cars | Community

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Best Shampoo Ratings

Search this category

Rating Distribution

8-10
6-8
4-6
2-4
0-2

See All Ratings →

Related Categories

Personal Care (63092)
Makeup (24697)
Skin Care (15589)
Lipstick, Lip Gloss, & Lip Balm (9227)
Hair Care (8567)

More Categories

Filters

Not Tested On Animals
Fragrance Free

Products | Rating Methodology | Comments (1099) | Share

Our scientists have rated 1,735 Shampoo products

The average U.S. consumer uses about 10 cosmetic products every day, including soap, shampoo, lotions, deodorants and fragrances. These products can contain hundreds of ingredients, and their regular use can result in chronic exposures to low levels of potential hazards. Read below to learn about important issues associated with shampoos, including ingredient concerns, product certifications, and animal testing. **Read More**

Top Rated

8.5 A Wild Soap Bar Yucca Root Shampoo & ...
10 Health
7.9 Environment
7.6 Society

8.5 Burt's Bees Rosemary Mint Shampoo Bar
10 Health

Bottom Rated

3.0 CVS Color Protect Moisturizing Shampoo
1.0 Health
4.0 Environment
4.0 Society

3.5 Freeman Papaya Pro-Vita Miracle Shampoo For Ult...
0 Health

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Green Homes for Cleaner Lakes — NYSP2I

GoodGuide

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Home » Personal Care » Hair Care » Shampoo

8.5
Scientific Rating

Burt's Bees Rosemary Mint Shampoo Bar

Rank: 1 out of 1,735 shampoos · Company: Burt's Bees, Inc.

10 **Health**
This product has no ingredients that raise a health concern.

8.1 **Environment**
The company that makes this product has one of the highest scores in **water use**.

7.3 **Society**
Compared to other companies in the same industry, this company **gives a lot to charities**.

Buy from | Save to List

Recommend 226 | Avoid 46 | Comment 12 | Share

Top Alternatives

Compare to Selected

Great Lakes RESTORATION

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Choosing Safer Products

Product Type	tips
Soap	**Avoid** triclosan, triclocarban
Skin moisturizer & lip products	**Avoid** retinyl palmitate, retinyl acetate, retinoic acid & retinol in daytime products
Hand sanitizers	**Choose** ethanol or ethyl alcohol in at least 60% alcohol
Sunscreen	**Avoid** SPF>50, retinyl palmitate, aerosol spray, powder, oxybenzone, added insect repellant **Choose** hats & shade, zinc oxide or titanium dioxide as the active ingredient, avobenzone at 3%, apply frequently
Hair care	**Avoid** dark permanent hair dyes & chemical hair straighteners
Toothpaste	**Avoid** triclosan
Nail polish	**Avoid** formaldehyde & formalin, hardeners, toluene, dibutyl phthalate
Make up	**Avoid** loose powders, vitamin A (listed as retinol, retinyl palmitate, retinyl acetate) in skin & lip products
Anti-aging products	**Avoid** alpha & beta hydroxy acids

Environmental Working Group, Top Tips for Safer Products, http://www.ewg.org/skindeep/top-tips-for-safer-products/

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Summary

- PCP ingredients are not tested by the FDA prior to sale
- Many PCP ingredients are endocrine disruptors
- Avoid common ingredients of concern in products
- Choose ecofriendly products, preferably those that are third party certified, like USDA Organic
- Read product labels & use SkinDeep and GoodGuide to identify EHS impacts of your products

Ingredient of concern	Products found in
“fragrance”, phthalates, musk	scented products
Parabens	water based products
Triclosan	antimicrobial products
Triethanolamine	pH balanced products
Sodium lauryl & laureth sulfates	products that lather
Aluminum	deodorant/antiperspirant
Dibutyl phthalate, toluene, formaldehyde	nail polish

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