



Carcinogens

'It all began 5 years ago when I was pregnant with my daughter. Already aware of the benefits of organic food, I had not yet made the connection between skin care and toxicity until I read an article by Professor Samuel Epstein that changed my life and I hope those around me. Shocked to see ingredients in every day toiletries including baby ones I rushed to my local health food store only to find products labelled organic or natural to contain these very toxins. With my pharmaceutical background I found it easy to identify toxic ingredients but the average consumer who is even unaware of the potential danger would find it a mammoth task.'

On average each of us use between 5-15 products a day from deoderant, shower gel, shampoo, moisturiser, cleanser, foundation, blush, concealer the list goes on and so do the toxins. None of this would matter if the skin did not absorb 60% of what is applied to it. Unfortunately natural does not mean natural and organic does not always mean toxin free. It is very much upto you the consumer to identify which ingredients to look for.

Below you will find a list of the main toxins and what they do. It is not an exhaustive list by any means.

The groups below are separated into Direct carcinogens, Hidden carcinogens or contaminants, Formaldehyde releasers and Hoemonal disruptors.

Direct Carcinogens

DEA & TEA

Diethanolamine & Triethanolamine

DEA and TEA can result in the formation of carcinogens in products containing nitrite preservatives. Chemical reactions between nitrites and DEA/ TEA occur during the manufacturing process and while products are stored in their containers forming carcinogenic nitrosamines.

Talc

Talc has been linked with ovaraian cancer particularly when used in the genitalia and inhaled.

Crystalline Silica

Coal Tar Dyes

Used in cosmetics, lipsticks etc.

Blue1

Green3

Para-Phenylendiamine (PPD) (used for temporary tattoos).

Research indicates:

- Linked to cancer in workers and users
- Suspected mutagen
- Associated with allergic reactions
- Can penetrate the skin
- Skin irritant.

Used in hair dyes particularly dark colours and especially black.

Methylisothiazolinone & Methylchlorisothiazolinone

Preservatives used instead of parabens

Hidden Carcinogens or Contaminants

Contaminants

Organochlorine pesticides in, lanolin

(Lanolin itself is perfectly safe. But cosmetic-grade lanolin can be contaminated with carcinogenic pesticides such as DDT, dieldrin, and lindane, in addition to other neurotoxic pesticides).



Carcinogens

Arsenic, lead in blue1, green 3: in, Coal tar dyes

Dioxane: in, PEG, Polysorbates, Laureth, ethoxylated alcohols

A wide range of personal care products including shampoos, hair conditioners, cleansers, lotions, and creams, besides household products such as soaps and cleaning products, contain surfactants or detergents such as ethoxylated alcohols, polysorbates, and laureths. These ingredients are generally contaminated with high concentrations of the highly volatile 1,4 – dioxane, which is both readily inhaled and absorbed through the skin. The carcinogenicity of dioxane in rodents was first reported in 1965 and subsequently confirmed in other studies including by the National Cancer Institute in 1978; the predominant sites of cancer were nasal passages in rats and liver in mice. Epidemiological studies on dioxane-exposed furniture makers have reported suggestive evidence of excess nasal passage cancers. On the basis of such evidence, the Consumer Product Safety Commission concluded that "the presence of 1,4 – dioxane, even as a trace contaminant, is a cause of concern." These avoidable risks of cancer in numerous personal care, besides other consumer, products is inexcusable, particularly as the dioxane is readily removed from surfactants during their manufacture by a process known as "vacuum stripping."

Nitrosamine Precursors

DEA

TEA

2-bromo-2-nitropropane-1,3-diol

Padmitate O

Formaldehyde Releasers

2-bromo-2-nitropropane-1,3-diol

•may break down in products into formaldehyde and also cause the formation of carcinogenic nitrosamines under certain conditions.

Quaternium 15

Diazolidinyl Urea

Imidazolidinyl Urea

DMDM Hydrantoin

• Artificial Colors

Some artificial colors, such as Blue 1 and Green 3, are carcinogenic. Impurities found in commercial batches of other cosmetic colors such as D&C Red 33, FD&C Yellow 5, and FD&C yellow 6 have been shown to cause cancer not only when ingested, but also when applied to the skin. Some artificial coal tar colors contain heavy metal impurities, including arsenic and lead, which are carcinogenic.

• Hair Dyes

The use of permanent or semi permanent hair color products, particularly black and dark brown colors, is associated with increased incidence of human cancer including non-Hodgkin's lymphoma, multiple myeloma, and Hodgkin's disease. There are several natural hair-coloring products which are relatively effective and safe.

• Talc

Cosmetic talc is carcinogenic. Inhaling talc and using it in the genital area, where its use is associated with increased risk of ovarian cancer, are the primary ways this substance poses a carcinogenic hazard.



Carcinogens

• Silica

Some silica used in cosmetics, especially amorphous hydrated silica, may be contaminated with small amounts of crystalline quartz. Crystalline silica is carcinogenic.

Hormone Disruptors

Phthalates Dibutyl phthalate (DBP) and di(2-ethylhexyl) phthalate (DEHP), butyl benzyl phthalate (BBP or BzBP).

Found in products such as : hair sprays, perfume, nail polishes. Used to soften plastic, skin moisturisers and skin penetration enhancers in cosmetics.

Research indicates:

- Known to cause serious reproductive and developmental effects in lab animals
- linked to premature breast development in young girls and interference with reproductive development in male foetuses
- hormone disruptors

Parabens

A group of artificial preservatives also known as Alkyl parahydroxy benzoates – butyl/methyl/ethyl/ propyl/isobutyl paraben.

Evidence shows them to:

- mimic oestrogens in the body
- penetrate the skin and appear in the blood.
- found in breast tumours.

Sodiumhydroxymethylglycinate

Toluene

Found in: lacquers and nail polish.

- May cause spontaneous abortion in women exposed to it.
- skin irritant and may cause liver damage
- narcotic in high concentrations
- attacks the central nervous system, eyes, blood, liver, kidneys and skin.

Xylene

Found in: lacquers and nail polish.

Names to watch out for: xylol or dimethylbenzene

- skin and respiratory tract irritant
- may cause liver damage
- narcotic in high concentrations

BHT

butylated hydroxytoluene, E321

Used as a synthetic antioxidant.

- Irritation
- Linked to possible behavioural effects and reproductive problems

Propylene glycol

- Can cause contact dermatitis
- Linked to depression of the Central Nervous System.



Carcinogens

Sodium lauryl sulphate

- Skin, eye and respiratory tract irritant
- May damage liver, lungs and immune system
- Some evidence to suggest reproductive effects.