

HARMFUL INGREDIENTS

in Cosmetics and Personal Care Products



REASON FOR CONCERN

Each year in the US alone there are around 38,000 cosmetic related injuries which require medical treatment. Many more complications resulting from the indiscriminate use of cheap, allergenic and downright toxic ingredients in cosmetic products go unrecorded. In order to understand the nature of the problems confronting us, we should first examine the nature and function of the skin.

THE SKIN AND ITS FUNCTIONS

The skin is the body's single largest organ and is responsible for protection, respiration and the expulsion of carbon dioxide, toxins and other wastes. Cells in the skin are developed in the basal layer and move through several phases of development before finally reaching the outer layer (stratum corneum) as dead cells and eventually flaking off (exfoliating). This process typically takes around one month (two months in aged skin).

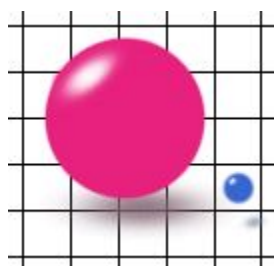


The outer layer of dead cells are vitally significant to the skin and should not be prematurely removed. A well formulated cleanser should gently exfoliate the dead cells when they are ready, similar to picking ripe fruit. Many cleansers on today's market are too rigorous in their exfoliating action due to the use of harsh chemicals and acids.

The skin's ability to respire is also vital to its health and the health of the body generally. Any substance which forms a gas impermeable film is considered seriously detrimental to long term health. Such a substance will not only preclude oxygen from entering the skin but also trap carbon dioxide, toxins and other wastes, preventing them from leaving the body. Research has shown that such inhibition of the skin's natural function can lead to a dramatic rise in toxicity levels within the body and a consequent strain on the immune system. In time the structure of the skin weakens leaving it more susceptible to environmental factors which in turn leads to premature wrinkling and sagging.

A number of ingredients commonly used in cosmetics and particularly in moisturizers can under certain conditions actually have a reverse effect and seriously dehydrate the skin. Prolonged use of such substances can lead to premature ageing where the skin loses many of its protective properties.

MOLECULAR WEIGHT



Large molecule ingredients cannot penetrate the skin.

The skin is like a fly screen. It allows toxins out and oxygen in, but screens out larger substances which could otherwise be detrimental to the body. To enter the epidermis, a substance must have a molecular weight (size) less than 3,000. To enter the cell, it must be below 800. Substances below 75 can enter the bloodstream. 99% of ingredients used in cosmetic products have a high molecular weight which prevents them from entering the skin at all. A few well refined formulations have molecular weights as low as 2,000 which means they can enter the outer layers of the skin, but are still too large to work at a cellular level. The medical industry uses a special process by which almost any substance can be reduced in molecular weight. This process is used to create formulations for use typically in hormone replacement therapy and nicotine patches. There is only one company that we are aware of which owns the patented rights this the high-tech molecular reduction process for use in skin

care products.

POTENTIALLY HARMFUL INGREDIENTS

- MINERAL OIL** Derived from petroleum mineral oils are used commonly as industrial lubricants. Used in cosmetics as a moisturizer, mineral oils form a gas impermeable film that repels water and keeps moisture locked in the skin. The mineral oil film not only traps in moisture but can also trap toxins, carbon dioxide and other wastes from being expelled and also keeps vital oxygen out. Allergic reactions from mineral oils can exacerbate arthritis, migraines, epilepsy and diabetes. Minerals oils are also listed as carcinogenic (cancer causing). Mineral oil has a tendency to dissolve the skin's own natural oils and thereby increase dehydration. Mineral oils are potentially the single greatest cause of breakouts in women who use a new product.
- PETROLATUM** A petroleum-based grease, petrolatum exhibits many of the same potentially harmful properties as mineral oil. While attempting to hold moisture in the skin, it also traps both toxins and wastes and keeps oxygen out.
- PROPYLENE GLYCOL** One of the most commonly used ingredients in skin care products, including moisturizers, hand creams, acne creams and liquid soaps, propylene glycol can trap toxins in the skin. Propylene glycol is used for industrial antifreeze and hydraulic brake fluid. While binding moisture, propylene glycol also acts as a replacement for water which the skin cannot utilize. The skin functions with water, not antifreeze. Material Safety Data Sheets (MSDS) on propylene glycol indicate that contact with the skin can cause liver abnormalities and kidney damage. In many cosmetics, propylene glycol makes up 10% to 20% of typical product formulations. It has also been shown to stimulate acne breakouts.
- GLYCERIN** Glycerin is made by chemically combining water and fat. It improves the spreading qualities of creams and lotions and prevents them from losing water through evaporation. However unless the humidity in the air is over 65%, glycerin actually draws moisture from inside the skin and effectively dries it from the inside out.
- COLLAGEN** With age or poor nutrition, collagen levels in the skin can be depleted. This causes the skin to become thinner and sag. However in the form it is used in cosmetics, collagen has a large molecular size (molecular weight = 300,000) which is too large to penetrate the skin. Consequently it sits on the surface of the skin, clogs the pores and inhibits its ability to expel toxins and wastes. Collagen sources used commonly in cosmetics are from sources which are incompatible with human skin. Collagen implant injections administered by plastic surgeons to reduce wrinkles are treated by the body as an alien substance and systematically removed. Additional collagen injections are needed every six to twelve months to maintain the appearance desired.
- ELASTIN** Elastin fibres make up the mesh which holds our skin in place and give it shape. With age, these elastin fibres deteriorates and stretch causing wrinkling and sagging. Elastin used in cosmetic products has a high molecular weight (size) meaning it cannot penetrate the epidermis. It is derived from bovine sources and has the effect of filming and suffocating the skin. This kind of elastin cannot be utilized by the human body due to its molecular structure. Human elastin is very different in structure than that from animal sources.
- Most chemically modified forms of cross-linked elastin are still too large in molecular weight to penetrate the skin and are structurally incompatible. Only one form of cross-linked elastin we have discovered is both compatible with and able to penetrate human skin; a chemical and enzyme-reduced extract of cross-linked elastin called Desmosine and Iso-desmosine.
- HYALURONIC ACID** This is one of the latest buzz words of cosmetic ingredients. Hyaluronic acid from plant or animal sources is the same as that of human skin and can be used if injected

SODIUM LAURYL SULFATE (SLS)



by physicians or applied in low molecular-weight form. In most cosmetics, it has an extremely high molecular weight (up to 15 million) and cannot penetrate the skin. It sits on the surface and functions much the same as collagen.

This inexpensive detergent is commonly used in cosmetic cleansers, shampoos, bubble baths and liquid soaps. It is possibly the most harmful ingredient used in skin and hair care products. It is used commercially in garage floor cleaners, engine degreasers and car wash soaps. SLS is highly corrosive and readily attacks greasy surfaces. SLS is used throughout the world for clinical testing as a primary skin irritant. Laboratories use it to irritate skin on test animals and humans so that they can then test other products to see how effective they are on irritated skin. Numerous studies have indicated that SLS penetrates into the eyes, brain, heart and liver. It has also been linked to cataracts in adults and retarded eye development in children. SLS causes eye irritations, skin rashes, hair loss, dandruff and allergic reactions. Because SLS is widely used on a daily basis in soaps and shampoos, there is an immediate concern relating to the penetration of these chemicals into the eyes and other tissues. This is especially important in infants because a much greater uptake occurs in tissues of developing eyes.

A variation of SLS is Sodium Laureth Sulfate (SLES). It exhibits many of the same characteristics and is a higher-foaming ethoxylated variation of SLS. Clinical studies show that it could cause hair loss when applied to the scalp.

One of the most serious issues with SLS and SLES is the carcinogenic dioxins and nitrates they produce. SLS and SLES can react with many ingredients used in skin and hair products to form nitrates and dioxins. These toxins can enter the bloodstream in large numbers simply from shampooing, bubble baths, shaving gels, liquid soaps and cleansers. It is estimated that up to as many nitrates can enter the body from one shampooing as from eating a pound of bacon!

ALPHA HYDROXY ACIDS (AHA's)

Many AHA's such as glycolic acid, lactic acid and others are used to strip away the dead cells from the outer layer of the skin and in so doing give the skin a more youthful appearance. Unfortunately however the youthful appearance is actually immature cells which have been exposed to the harsh environment. In time repeated exfoliation of the skin actually ages it much faster. Chemical peels should only ever be done by a qualified surgeon as serious damage can be done. The stratum corneum is the skin's last line of defense against the environment and should be kept intact. A well formulated cleanser will gently remove dead skin cells which are ready to exfoliate without stripping the surface of the skin of its protection.

The FDA itself has also recently been looking into alpha hydroxy acids (AHA), which are added to skin creams to help smooth out fine wrinkles. It has been demonstrated that the use of AHAs increases sensitivity to sunlight. These chemicals may also make skin more susceptible to skin cancer and ironically to even more wrinkling from sun damage.

BENTONITE

Used commercially in fighting bushfires, Bentonite dispels oxygen and effectively suffocates the fire. On the skin it acts in a similar way. Bentonite is used commonly in cosmetic foundations and masks. It forms films which are gas impermeable, trapping toxins in the skin and suffocating it by shutting out oxygen. Bentonite is also very dehydrating to the skin.

FRAGRANCES

Over 4,000 chemicals are used to make fragrances with the majority of them derived from petroleum. Many of these chemicals are neurotoxins which infiltrate the bloodstream and attack the nervous system, brain, spinal cord, liver and immune system. Many fragrance chemicals are listed as carcinogenic (cancer causing) and mutagenic. Many have been directly linked with systemic conditions such as asthma, multiple sclerosis, Parkinson's disease, lupus and Alzheimer's. Multi-chemical sensitivity and allergic reactions are also triggered by many chemical fragrances even if they smell natural.

KAOLIN	A very fine natural clay powder originally from Mt. Kaolin in China, hence the name. Kaolin is very dehydrating to the skin. Used in foundations and masks, it forms films which are gas impermeable trapping in toxins and carbon dioxide which need to escape. It also suffocates the skin by shutting out the vitally needed oxygen.
LANOLIN	Lanolin is a skin sensitizer, causing allergic reactions and rashes in many people. It may also be contaminated with pesticides used on sheep and wool.
LAURAMIDE DEA	A chemical which is used to thicken and improve the lathering properties of various cosmetic products and shampoos. It tends to dry out hair, cause skin and scalp itching and allergic reactions. It is also used in dishwashing detergents for its rigorous cleansing action.
SODIUM CHLORIDE	Salt reacts to thicken the ingredients in many diluted cosmetics and shampoos. It can cause eye and skin irritation if used in too high a concentration.
BENZOPHENONE	Benzophenone and its derivatives (benzophenone-3 and oxybenzone) are used as the active ingredient in many chemical sunscreens. Benzophenone is one of the most powerful free radical generators known to man. It absorbs ultraviolet light and reacts to produce free radicals which in turn are the primary cause of cancer.

Many companies say in defence of their product formulations that their ingredients have been "approved". However in many cases, this was long before science discovered that they were toxic! Even health authorities use the defence that many of these chemicals have not been proven to be harmful to humans. The truth is that most of them have never been clinically tested on humans, and are likely never to be. But do they need to be before we start demanding changes from our manufacturers? If you knew that a particular substance irrefutably caused cancer in rats, would you deliberately choose to expose yourself and your children to it?

A few years ago, the FDA said it was alarmed at the dangerously high levels of carcinogenic dioxins (such as diethanolamine) in shampoos, especially in baby shampoo formulations. The shocking thing about this was that they had made the same observation nine years earlier, and yet the industry had failed to implement any changes. What can you do about it? By only buying products from companies who refuse to put your health at risk by using potentially harmful ingredients. The fact is that the use of individual "safe" ingredients alone is not enough. Many chemicals react together to form other compounds which can be harmful.

Also Island Virgin Coconut Oil is Completely Free Of All These Harmful Ingredients

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