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Beauty Love & Transformation

Toxic Chemicals Found In Our Skincare Products

Studies show after applying a product to your skin, it takes 26 seconds for that product to absorb into your bloodstream. In addition, studies have showed that the skin absorbs up to 60% of the chemicals in products. Women apply, on an average, up to 168 chemicals to their skin per day as most women use around twelve personal care products daily.

Specialists in the skincare industry have put together a list of the harmful ingredients presently found in many beauty and skincare products. In their studies, they have found a connection between many ingredients and certain health problems.

What we put on our skin should be as clean as what we eat, but most people are unaware of the situation. Many of the chemicals commonly found in beauty products can have a negative impact on our health and our hormones.

Here are a few ingredients to look out for:

1. Parabens

Parabens are an inexpensive and common type of preservative used in many different skincare products to keep the product fresh. They also prevent the product from harbouring harmful bacteria.

Parabens resist the growth of bacteria, fungi and other micro-organisms in skincare products, particularly in hot and humid conditions. Parabens are natural organic compounds, with concerns over its association with health issues.

There was a scare when parabens were found in breast tumors, but there is no conclusive evidence that the parabens caused the tumors. Skincare and cosmetic companies are facing high pressure from consumers and health practitioners who want them to reduce or remove parabens from their products.

Alternatives to parabens are probably phenoxyethanol, sodium benzoate, benzoic acid and benzyl alcohol.

Phenoxyethanol

Phenoxyethanol found in the EU can reach a concentration of up to 1.0% in all product categories. The SCCS9 recently re-confirmed that it is safe for use and no regulatory uncertainty is identified at mid to long term. The optimum pH should between 4 and 9 and, like the parabens, it has the advantage of being inexpensive. The main disadvantage is that it is incompatible with most non-ionic surfactants.

Sodium benzoate

Sodium benzoate (and benzoic acid), in combination with potassium sorbate, is also an acceptable alternative to parabens. You can see it in:

- 2.5% in rinse-off products
- 1.7% in oral care products
- 0.5% in leave-on products
- 0.06% and above is effective against yeasts and molds

This ingredient, together with potassium sorbate, are inexpensive and are abundant in nature.

Benzyl alcohol

Benzyl alcohol is another option. Active against gram+ bacteria from 25 ppm, it is generally combined with acetic acid to better combat yeasts and molds.

Benzyl alcohol is usually used at up to 1.0% and acetic acid (anhydrous) up to 0.6%. This combination is safest at a pH of between 3 and 5. Incompatibility is low except with the non-ionic surfactants and this combination can be sourced from nature.

Look out for ingredient names that end with "-paraben", "methyl-", "ethyl-".

2. Formaldehyde

In its pure form, formaldehyde is a colorless gas. It can't use as a cosmetic ingredient, and usually requires water and then used as formalin. Other ingredients that slowly release formaldehyde may also be added to skincare products as preservatives.

Formaldehyde acts as an anti-bacterial preservative to reduce the growth of bacteria in the product. A minimal amount of formaldehyde is harmless. Formaldehyde is naturally present at low levels in many things, including plants, smoke and food. In low levels, it can be safely and legally used in skincare products.

Nowadays, the cosmetic industry is alternatively using formaldehyde releasers that are a time-release form of formaldehyde because they are more economically feasible. They can cause irritation to the skin.

Using a single product containing a formaldehyde-releasing preservative may not pose a health risk, but that product might not be the only source of exposure. Many products that we use on a daily basis contain these ingredients.

Like formaldehyde, formaldehyde-releasing preservatives are also known allergens and sensitizers. The commonly used formaldehyde-releasers to avoid are:

- Imidazolidinyl urea
- Diazolidinyl urea
- Bronopol
- DMDM hydration
- Sodium hydroxymethylglycinate
- 5-Bromo-5-nitro-1,3-dioxane
- Quaternium-15

Look out for ingredient names that end with Formaldehyde, formalin, bromopol, or glyoxal.

3. Sodium lauryl sulphate/ sodium lauryl sulfate (SLS)

This is a versatile ingredient, and it consists of non-volatile alcohols. Skincare products contain this ingredient because of their surfactant nature, and its many uses include skin-conditioning agents, solvents synthetic detergent, emulsifier and an anionic surface-active agent.

SLS is the ingredient that turns a squirt body wash into a smooth lather. The purpose of this chemical is basically to makes bubbles. This means that it traps dirt and makes it easy to rinse off. This produces a rich lather while giving off a fresh and clean feeling when used.

As an emulsifier, it helps to stabilize and thicken solutions with ingredients of differing solubility. This allows products to achieve a more uniform viscosity for easier and smoother application. It's also common in other industries besides cosmetic use. For example, car wash detergents, engine degreasers and floor cleaners.

Ironically, SLS is one of the most sensitizing ingredients used in skincare products. It is a known skin and eye irritant. SLS can cause dry and flaking skin, allergies and redness. It is a harsh detergent that removes the natural oils from your skin when used. Some of the consequences are dermatitis, dandruff and other skin issues. Especially for people with sensitive skin, the effects of SLS can be detrimental.

Although there is little evidence, SLS may have possible links to cancer. This is due to its potential to create a carcinogen called nitrosamines. When mixed with another chemical called triethanolamine, it forms the toxic substance as it metabolizes.

Look out for: SLS, Sodium Laureth Sulfate, Sodium lauryl sulfate, Sodium dodecyl sulfate

4. Petrolatum

Petrolatum is a rich emollient and FDA-approved skin protectant. It is one of the common ingredients for dry skin, including around the eyes.

While refined petrolatum is approved for human usage, petrolatum is actually a potentially harmful skincare product. There are risks of contamination when using this

ingredient. This is due to the large number of cheap imitations and mass productions, leading to adverse results.

Moisturizing products such as lip balms and moisturizers contain petrolatum. However, they do not have moisturizing properties. Instead, it creates a barrier that retains moisture. At the same time, it also prevents absorption of external moisture. This causes the skin to suffocate and eventually dry out.

Petrolatum-based products are fast-acting, giving quick but temporary results. This ingredient gives the temporary illusion that the skin is soft and hydrated.

Look out for: Mineral oil, Paraffin wax, Benzene, names that end with '-eth'.

Alternative better sources are:

- Waxelene: This feels like Vaseline, but contains soy oil, beeswax, and vitamin E.
- Alba UN Petroleum: This contains a healthy amount of coconut oil to soothe and heal dry skin.
- RMS Beauty Raw Coconut Cream: This multi-use product is the raw material of coconut oil, so it contains living enzymes and nutrients that can nourish the skin.
- Jao Brand Goe Oil: This is not like your average Vaseline-type ointment. It looks and feels similar but contains oils and butters. This product has a great smell.

5. Coal tar

It is believed that almost 10,000 different compounds make up coal tar but only 400 or so are identified. The main compounds making up crude coal tar are 48% hydrocarbons, 42% carbon and 10% water. In its natural form coal tar is a thick, light black, viscous liquid with a characteristic smell.

The chances are, the more vibrant your lipstick color is, the more Coal Tar are present in it. The constant demand for a newer range of colors compels manufacturers to use this ingredient. Coal tar provides the base for vibrant and brighter colors. They make up the many shades of lipsticks and eyeshadows available in the market.

Coal tar is also an extremely heavy substance and weighs down the skin. This causes skin irritation, resulting in acne and allergic breakouts. Studies have shown that coal tar is a carcinogen. Manufacturers use minimal amounts in cosmetics, so it is "safe" for human usage.
Look out for: FD&C or D&C, chemical colours (BLUE 1, GREEN 3, etc.).

6. Hydroquinone

Hydroquinone is an aromatic compound in skincare products that acts as a skin lightening agent. It bleaches the skin and can be helpful in the treatment of different forms of hyperpigmentation. It decreases the number of melanocytes present. Melanocytes are the cells that form melanin, which is what produces the skin's colour. It helps hyperpigmentation which includes acne scars, age spots, freckles, melisma, and post-inflammatory marks from psoriasis and eczema. By reducing melanin, it can cause a temporary whitening of the skin because of the lack of pigment cells. Over time, however, the chemical destroys the skin through its forced and harsh alteration. This leads to skin problems, more blemishes, and even pre-aging.

It is a possible cause of a skin disease called "ochronosis", where permanent patches of black or blue remain on the skin. Hydroquinone is also a possible carcinogen and may contain other toxic substances.

Look out for: Hydroquinone or tocopheryl acetate.

7. Triclosan

Found in soaps, detergents or skincare products, triclosan may still be doubted for its use and effects that are toxic to the body.

According to research, triclosan is linked to several allergies such as skin and eye irritation. To make things worse, it may also be related to hormone disruption in the human body. These side effects can have adverse impacts on the body, especially in the long run. Triclosan also runs the risk of contamination with other toxic substances such as chloroform. This would definitely be harmful to the body.

For some, triclosan may be an environmental hazard. It accumulates in the environment due to its slow breakdown rate. It is also a potentially toxic substance to marine life and would most likely adversely affect the ecosystem.

Despite the negative associations with the ingredient, many manufacturers still utilize triclosan. This is because of its strong anti-bacterial properties. Aside from that, it is used as a strong preservative in cosmetics to prolong shelf life. It also prevents the growth of mold or bacteria.

Look out for: Triclosan (TSC), triclocarban (TCC).

8. Oxybenzone

Oxybenzone (benzophenone-3 or BP-3) is an organic compound that is useful in stabilizing and strengthening the color and scent of skincare products, but its most important use is in the form of sunblock. It absorbs UV Beta and UV Alpha rays and is common in regular lotion sunscreens and makeup foundations with an SPF. It easily dissolves into lotions and creams, producing an easily absorbed product which protects the skin from the sun.

Oxybenzone is found to cause severe skin allergies, redness and irritation. One of the biggest concerns over Oxybenzone is that the body easily absorbs it. This absorption may accumulate in the body, eventually leading to potentially toxic levels which may affect the endocrine system. Oxybenzone is a hormone disruptor. Studies have shown that oxybenzone mimic the hormone estrogen, possibly leading to conditions such as skin and breast cancer.

Look out for: Oxybenzone, "benzophenone-3", "BP-3".

9. Phthalates

This ingredient makes cosmetics flexible and less prone to breaking. Also called a plasticizer, many skincare products and cosmetics contain phthalates to keep them soft and pliable.

Phthalates may disrupt hormones, especially in men and children. It could also possibly cause adverse effects on the reproductive system. It has an association with many health issues, such as diabetes, ADHD and even cancer.

If you want to avoid these chemicals, it's not easy. Manufacturers aren't required to list the specific chemicals that make up fragrances, and those fragrances can often contain phthalates, which help make smells last longer.

Look out for: Phthalate, DEP, DBP, DEHP, fragrance.

Alternatives to phthalates:

- Diethyl Phthalate (CAS 84-66-2) which is useful as a solvent and a fixative in fragrances as the alternative to diethyl phthalate in personal care products.
- Di Propylene Glycol is an excellent, inexpensive and odourless alternative. It is a better solvent than propylene glycol.
- Isopropyl Myristate also represents a well-known option.
- Benzyl Benzoate
- Resins

10. Artificial Fragrances

The scent makes for an attractive product, especially for skincare since they are applied to the face. Often, manufacturers add artificial fragrances to mask unpleasant smells due to the mixture of different ingredients. While this sounds harmless, most fragrances are chemicals and may have toxic effects on the body.

The ingredients of most scents include petroleum- or coal-derived chemicals. These are known skin and nose irritants. Fragrances can also be dangerous for people with respiratory issues. It might cause an allergic reaction when used.

Natural scents can be used to replace artificial fragrances as a healthier choice. But many manufacturers go back to artificial fragrances because it is a lot cheaper than extracting natural scents. In fact, many fragrances labelled as "natural" might not actually be natural.

For a natural alternative, best to use natural scents. These are namely essential oils that are extracted from natural ingredients such as flowers and would be a healthier choice as a fragrance.

Look out for: Fragrance, perfume, parfum, aroma.

11. Alcohol

It may come as a surprise to some to find that alcohol is actually considered a harmful skincare ingredient since it is widely used in the beauty industry. Not all alcohols are harmful to us, however. The ones in question here are what we call "drying" alcohols. Some people might claim that products containing these "drying" alcohols do show results and therefore is not harmful to the skin.

Prolonged usage of alcohol will leave the skin dry and flake as it eats away at the skin surface. This unnecessary stress on the skin will lead to the interruption of the skin renewal cycle, hence resulting in an extremely unhealthy skin condition.

There are market indications that alcohol should be used for people with oily skin types, since these types of skincare claim to prevent pimples caused by oily skin. However, most find an increase in blemishes due to damage was done by the alcohol instead of getting better.

Alcohol in cosmetics

To ensure a smooth finish to a product, manufacturers often utilize alcohol as a solvent to mix different ingredients together. The low evaporation point of alcohol also makes it particularly useful in certain cosmetics that require drying fast. Despite its many negative effects, alcohol does help the skin to absorb products better, which is why it is used in some creams and lotions.

Identify "drying" Alcohols through Ethanol, SD alcohol, Methanol, Denatured alcohol, Ethyl Alcohol. You can read in more detail of alcohol in skincare here.

As mentioned above, not all of the alcohols used in the beauty industry are harmful. In fact, a natural alternative to the harmful skincare ingredient is actually a healthier

version of alcohols. These are called "fatty" alcohols and are derived from natural fats and oils. These "fatty" alcohols do not damage skin and would, in fact, help to moisturize and nourish skin!

Word of caution: People with sensitive skin should still be wary of any alcohol-based products, "drying" or "fatty" as they might still do damage to the skin.

CLEAN BEAUTY

It's important to look for skincare products that contain natural, safe, ingredients.

All in all, for great looking skin, it's equally important to eat a healthy diet that includes fruits and vegetables which are easily available and have no side effects.

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