

## Chemicals and cosmetics—what's the problem

For women and increasingly, men, cosmetics are an important health and environmental issue. More and more products are on the market and we feel under increasing pressure to use them. Not only are we putting chemical products into our bodies through 'cleaning' and 'enhancing' our skin, hair, teeth and nails, but we are also washing thousands of potentially toxic chemicals down the drain and into the wider environment. The products and their packaging are often made of petrochemicals and carry a raft of environmental implications. Many are capable of damaging hormone, immune and nervous systems. But it's not all doom and gloom - we can act positively. We can scrutinise the products we use and demand that manufacturers remove harmful chemicals. We can lobby government bodies to provide tougher legislation on labelling. And we can use simple, natural alternatives and safer products to stay beautiful - naturally. To help you take action on this complex subject, here is an introduction to some of the risky chemicals, the concerns and common terms used.

### Did you know?

- Some 300 synthetic chemicals made since 1945 have been detected in human body tissues and secretions, including breast milk.
- It is estimated that 400 million tonnes of synthetic chemicals are manufactured annually worldwide.
- Over 1,000 new chemicals are produced each year.
- It is estimated that 5,000 - 10,000 chemicals are considered hazardous, of which 150-200 are thought to cause cancer.
- Only 14% of chemicals produced in large quantities in Europe have even a minimum set of safety data.

### The right to know, the right to choose

- People should not have to give up using cosmetics and toiletries. But we should have the right to know that the products we choose are safe.
- All cosmetics and toiletries should be adequately safety tested and clearly labelled.
- Risky chemicals should be phased out of use.

### Phthalates

**Found in:** hair sprays, perfume, nail polishes. Names to watch out for: anything ending in phthalate including - Dibutyl phthalate (DBP) and di(2-ethylhexyl) phthalate (DEHP), butyl benzyl phthalate (BBP or BzBP).

**Used as:** plasticisers to soften plastic, skin moisturisers and skin penetration enhancers in cosmetics.

**Research indicates:**

- DBP, DEHP and BBP are all 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
- some phthalates act like hormone disruptors
- growing evidence that phthalates can contribute to allergic disease - one Nordic study linked them to asthma - and other health problems.

Phthalates have been banned in the US from children's toys because of fears about future fertility.

### Parabens

**Found in:** toiletries such as deodorants and moisturisers, and food stuffs such as pie fillings, beers, and jam.

**Names to watch out for:** Alkyl parahydroxy benzoates - butyl/methyl/ethyl/propyl/isobutyl paraben.

**Used as:** preservative.

**Research indicates:**

- parabens are oestrogen mimics
- they can penetrate the skin
- the effect of daily low level exposure to parabens in a number of different products is unknown.

### Triclosan

**Found in:** deodorants, toothpaste, vaginal washes, clothing, liquid soaps, mouthwashes.

**Names to watch out for:** 5-chloro-2-(2,4-dichlorophenoxy)-phenol. May not be listed on label as contained in some trade-marked mixtures.

**Used as:** antibacterial

**Research indicates:**

- levels of triclosan have been found in human breast milk and in fish.
- dioxins (linked to cancer) are formed when it is manufactured or incinerated.

### Toluene

**Found in:** lacquers and nail polish.

**Names to watch out for:** toluol or methylbenzene.

**Research indicates:**

- occupational studies show exposed women likely to experience spontaneous abortions



- skin irritant and may cause liver damage
- narcotic in high concentrations
- toluene is volatile, flammable and 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

**Research indicates:**

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

### Formaldehyde

**Used as:** disinfectant, germicide, fungicide, defoamer, and preservative.

**Found in:** deodorants, nail varnish.

**Names to watch out for:** formalin, formal, and methyl aldehyde

**Research indicates:**

- suspected human carcinogen
- asthma may occur in sensitive individuals
- irritant to eyes and upper respiratory tract and mucous membrane
- individuals can become sensitised after repeated exposure.
- can damage DNA.

### Alkylphenol ethoxylates

**Used as:** surfactants (lower the surface tension of liquids so they can foam or penetrate solids).

**Found in:** shampoos, hair colours, shaving gels.

**Names to watch out for:** nonylphenol, octylphenol.

**Research indicates:**

- hormone disruptors
- extremely toxic to fish
- bio-accumulative (they build up in body fat faster than they can be broken down)
- several alkylphenols are listed internationally to be phased out.

### Acetone

**Used as:** nail polish remover, perfumes.

**Research indicates:**

- toxic if ingested
- irritates lungs
- causes nails to become brittle
- flammable.

### Ethyl acetate

**Found in:** nail varnish

- irritates the eyes and the respiratory tract
- may effect the central nervous system
- irritating to eyes, nose and throat
- anaesthetic effects.

### Perfume/Fragrances

- There are no legal restrictions on the quantities or combinations of fragrance chemicals that may be used in cosmetics.
- The ingredients or perfumes do not have to be listed.
- 95% of chemicals used in fragrances are synthetic compounds derived from petroleum.
- Fragrance chemicals appear on the label as 'Parfum' in the EU or 'Fragrance' in the USA.
- A typical cosmetic can contain 50-100 fragrances, which the industry claims to be too many to be easily listed.

### Some terms explained

#### Endocrine system

- glands such as the pituitary and thyroid, that make hormones, among other activities.

#### Hormones

- regulate how your body grows and functions.

#### Oestrogen

- the female sex hormone.

Chemicals may affect the body in many different ways: attacking the endocrine system, disrupting the normal behaviour of hormones or affecting the nervous and immune systems or triggering cancer. An impact on one aspect may disrupt another, for instance, oestrogen mimics may disrupt hormone behaviour and increase susceptibility to breast cancer. A handy generic term for the chemicals we are most concerned about is 'hormone disruptors'.

### What can you do?

- Order a copy of our new cosmetics briefing, out soon, for more information on the issue and plan a local fact-finding and lobbying campaign
- Use alternatives
- Avoid products containing risky ingredients
- Write to the manufacturer and complain
- Make your own
- Avoid overpackaged goods
- Avoid products tested on animals
- Don't be fooled by advertising.