

The mission of WWF – the global environment network – is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by:

- conserving the world's biological diversity
- ensuring that the use of renewable resources is sustainable
- promoting the reduction of pollution and wasteful consumption

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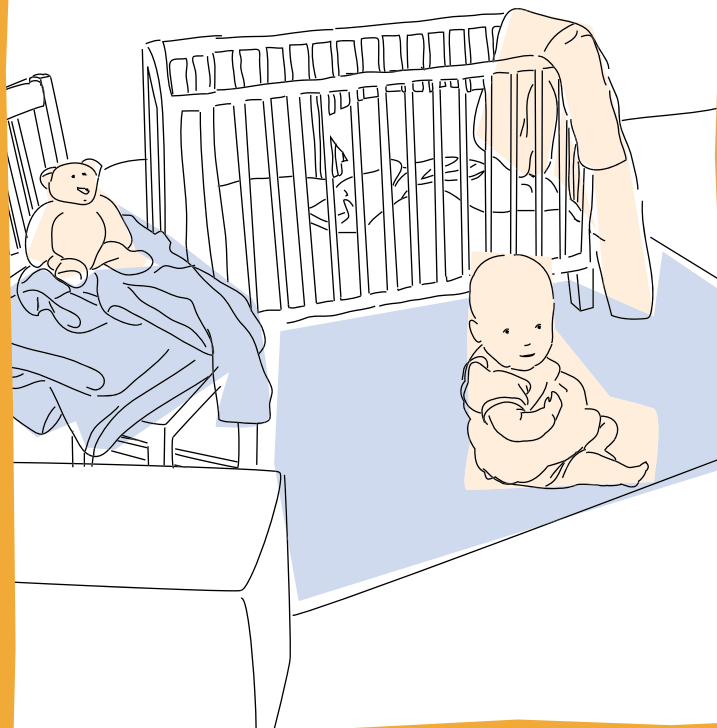
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Taking action for a living planet



CHEMICALS AND HEALTH IN THE HOME

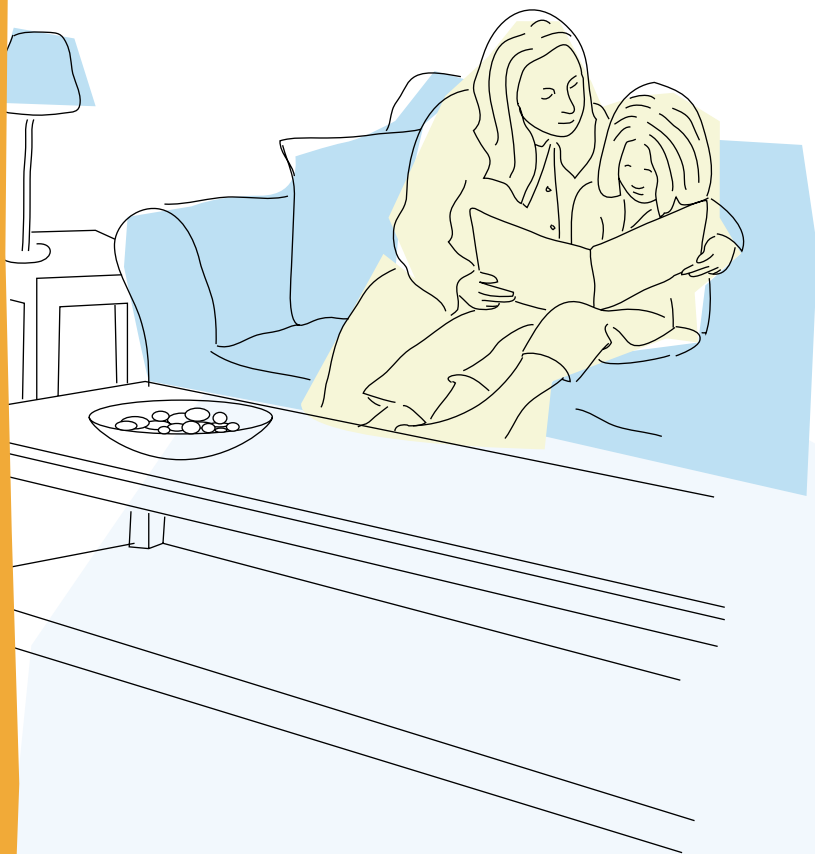
a guide to reducing your exposure to
hazardous chemicals around the home



A GUIDE TO REDUCING YOUR EXPOSURE TO HAZARDOUS CHEMICALS AROUND THE HOME

This leaflet offers practical advice on how to avoid chemicals of concern commonly found in our homes. It's as easy as **ABC**

Avoid **B**uy **C**hange



THE ISSUE

People and wildlife around the world are contaminated by man-made industrial and agricultural chemicals.

We are all exposed to a cocktail of chemicals every day of our lives. It's a new threat – one which our great-grandparents didn't have to face, and one which comes from the growing number of hazardous man-made chemicals being manufactured and used in our everyday synthetic products.

More than 300 man-made chemicals have been found in human bodies. However, the full extent of the risk is unclear, because only a small handful of the many thousands of chemicals in everyday use come with adequate safety data.

The European Union has banned a flame retardant used in sofas and soft furnishings because alarmingly high levels of the chemical were found in human breast milk.

Quite apart from the potential for serious short-term poisoning, the evidence of subtle long-term damage to humans and wildlife by certain chemicals is mounting.

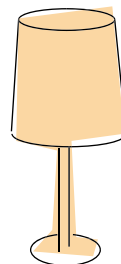
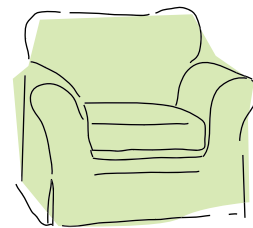
There are ways in which you can limit your own exposure to hazardous chemicals. By following the tips in this leaflet, you'll help protect your own health, your family's health, and the environment upon which we all depend.

THE CHEMICALS IN QUESTION

WWF is campaigning globally for hazardous man-made chemicals to be properly regulated, replaced where safer alternatives exist, or banned. Of particular concern are chemicals which are:

- **Hormone disrupting (or endocrine disrupting)** – these can hijack normal biological processes and may cause neurological, behavioural, developmental or reproductive defects;
- **Persistent** – these linger in the environment for long periods because they do not break down;
- **Bioaccumulative** – these build up in our bodies and in wildlife and can be passed on from generation to generation.

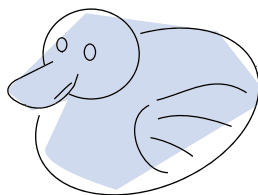
LIVING ROOM ⁷



BEDROOM ⁹

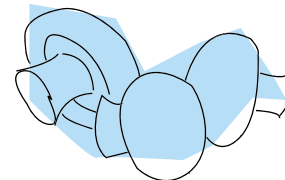


NURSERY ¹¹



BATHROOM ¹³

KITCHEN ¹⁷



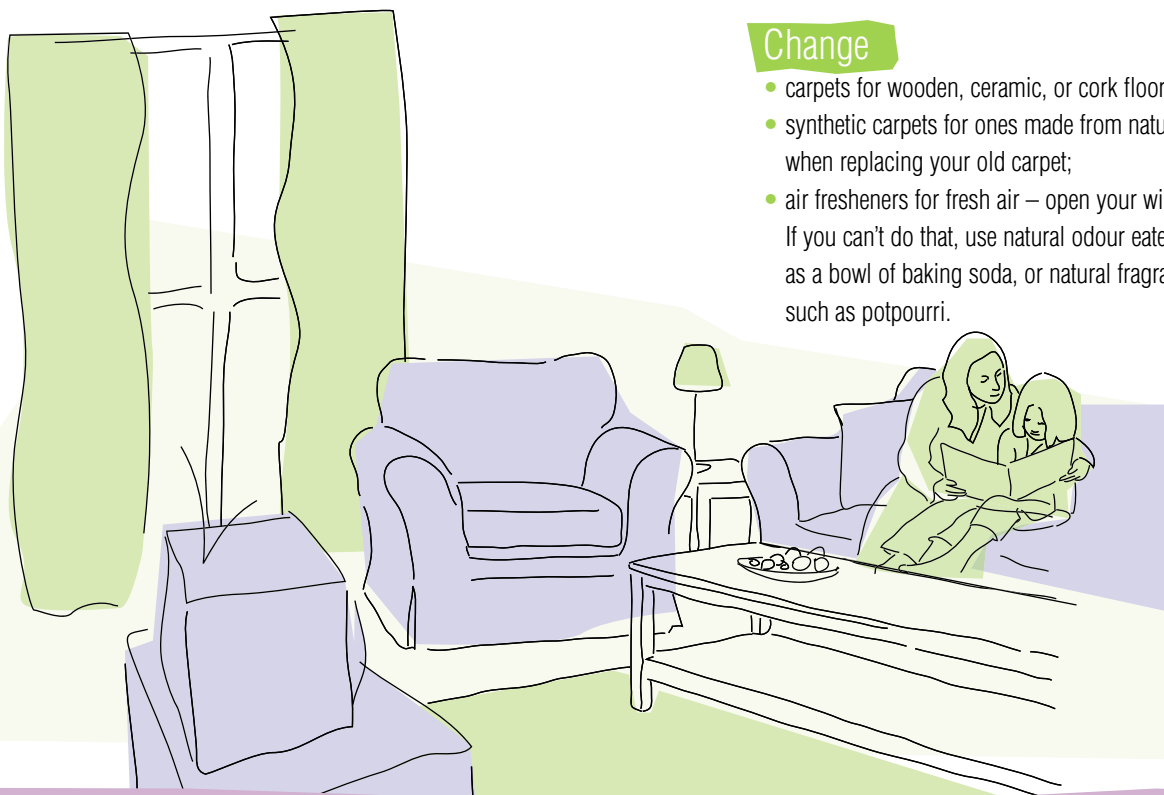
GARAGE AND GARDEN ²¹



LIVING ROOM

Furniture, televisions, other electrical appliances, carpets and rugs often contain chemicals that are stain repellent or fire retardant. Many chemicals used as flame retardants (brominated flame retardants) persist for a long time in the environment, accumulate in our bodies and can disrupt our natural hormone systems. Not all of these chemicals or products can be avoided, of course, but we can reduce our exposure to them in the living room.

Volatile organic chemicals (VOCs) are a range of chemicals, many of which have hazardous properties. Some are carcinogenic and can irritate our lungs, and some may also be greenhouse gases which contribute to climate change.



Avoid

- synthetic carpets, carpet underlay or upholstery with synthetic foams, foam rubber, latex or plastic coverings, because these emit VOCs;
- chemical finishes such as stain repellents and brominated flame retardants on furniture or carpets;
- re-carpeting or ripping out carpets if you are pregnant.

Buy

- carpets made from organic natural fibres such as wool, cotton, rattan or jute;
- curtains, carpets or upholstery containing little or no brominated flame retardants or stain repellents;
- computers and monitors carrying the TCO 95 eco-label, which limits the amount of brominated flame retardant in the product.

Change

- carpets for wooden, ceramic, or cork floorings;
- synthetic carpets for ones made from natural fibres, when replacing your old carpet;
- air fresheners for fresh air – open your windows! If you can't do that, use natural odour eaters such as a bowl of baking soda, or natural fragrances such as potpourri.

BEDROOM

Like living rooms, soft furnishings in the bedroom contain chemicals such as flame retardants and stain repellents. The clothes we keep in our bedrooms, especially if dry-cleaned, also emit chemicals.

Avoid

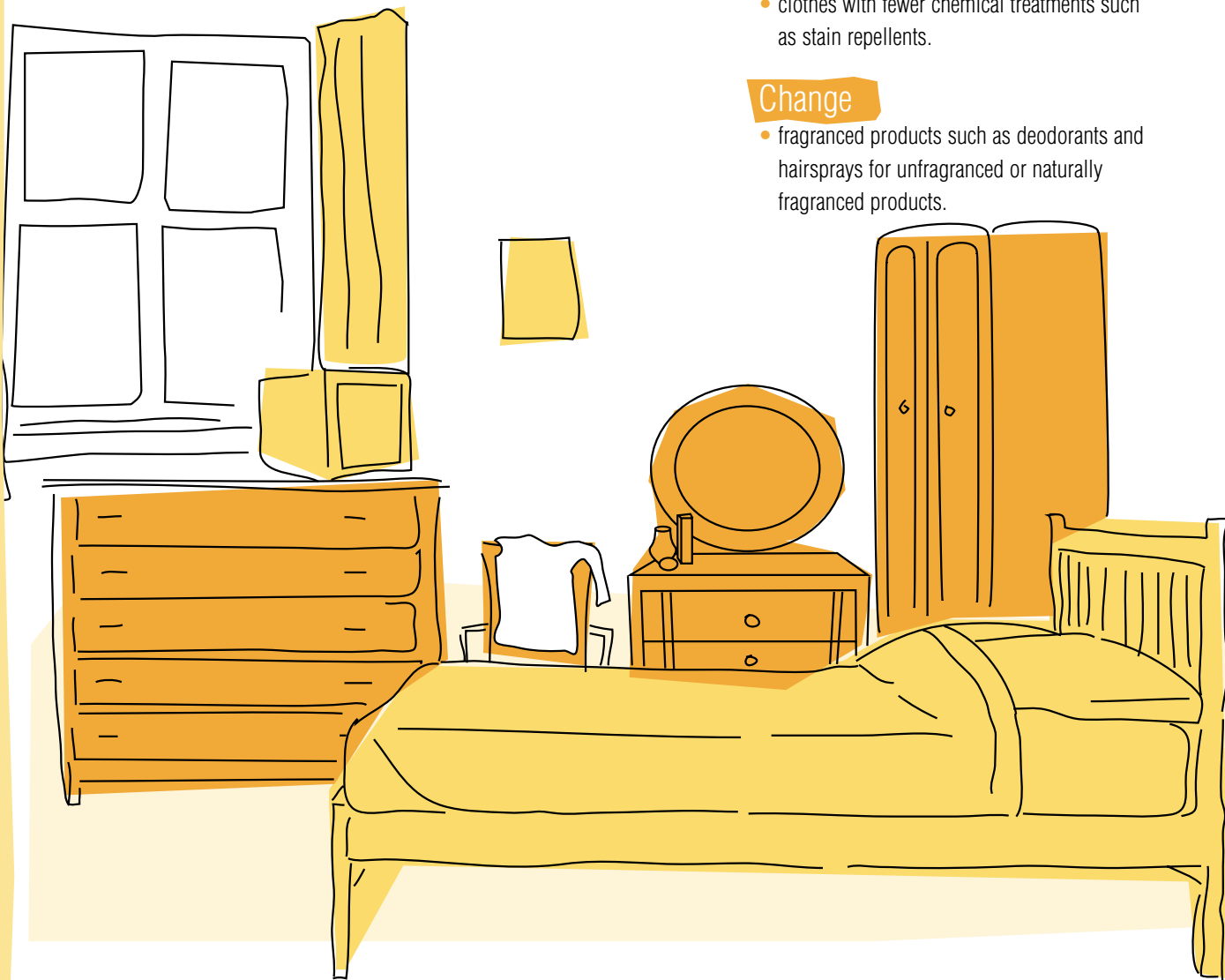
- soft furnishings with chemical finishes such as stain repellents and flame retardants;
- dry-cleaning clothes wherever possible;
- having too many electrical appliances in your bedroom such as computers, TVs and videos.

Buy

- machine washable clothes;
- clothes with fewer chemical treatments such as stain repellents.

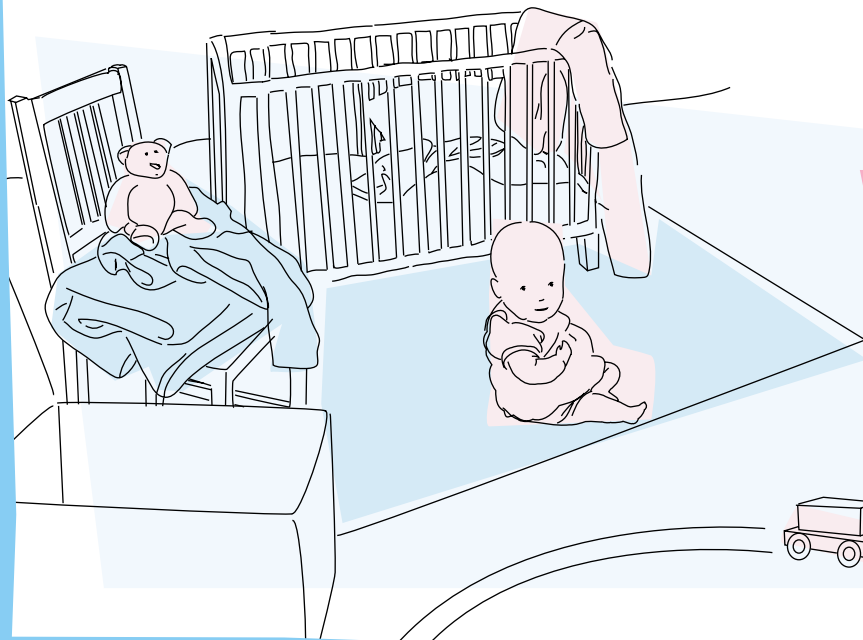
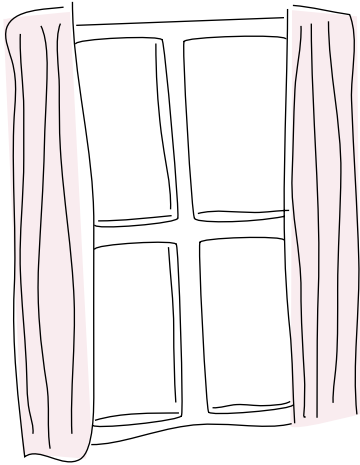
Change

- fragranced products such as deodorants and hairsprays for unfragranced or naturally fragranced products.



NURSERY

Babies are more susceptible to the adverse effects of toxic chemicals than adults, so it's particularly important to pay attention to their wellbeing. Most of the advice contained in the Bedroom section is relevant to the nursery, but in addition:



Avoid

- polycarbonate-plastic baby feeding bottles. The vast majority of plastic feeding bottles are made from polycarbonate which contains bisphenol A, a hormone disrupting chemical that can leach into the liquid inside. Polycarbonate can be identified by looking on the packaging for PC7 or looking inside the recycling triangle for the number 7. Wherever possible, breast feeding is always the best option;
- using old and worn plastic baby bottles;
- using dummies and PVC toys that are more than two years old – they may contain phthalates, which are now banned in newer dummies and children's plastic toys;
- painting, stripping old paint or using DIY products which emit fumes, when you're pregnant.

Buy

- baby bottles that are not made of polycarbonate;
- children's teething products and dummies from a reputable source;
- non-flexible plastic or wooden toys;
- children's clothes and pyjamas without plastic logos or chemical treatments.

Change

- your baby's food to organic produce, wherever possible;
- polycarbonate feeding bottles for alternatives – and replace scratched and worn ones every few months.

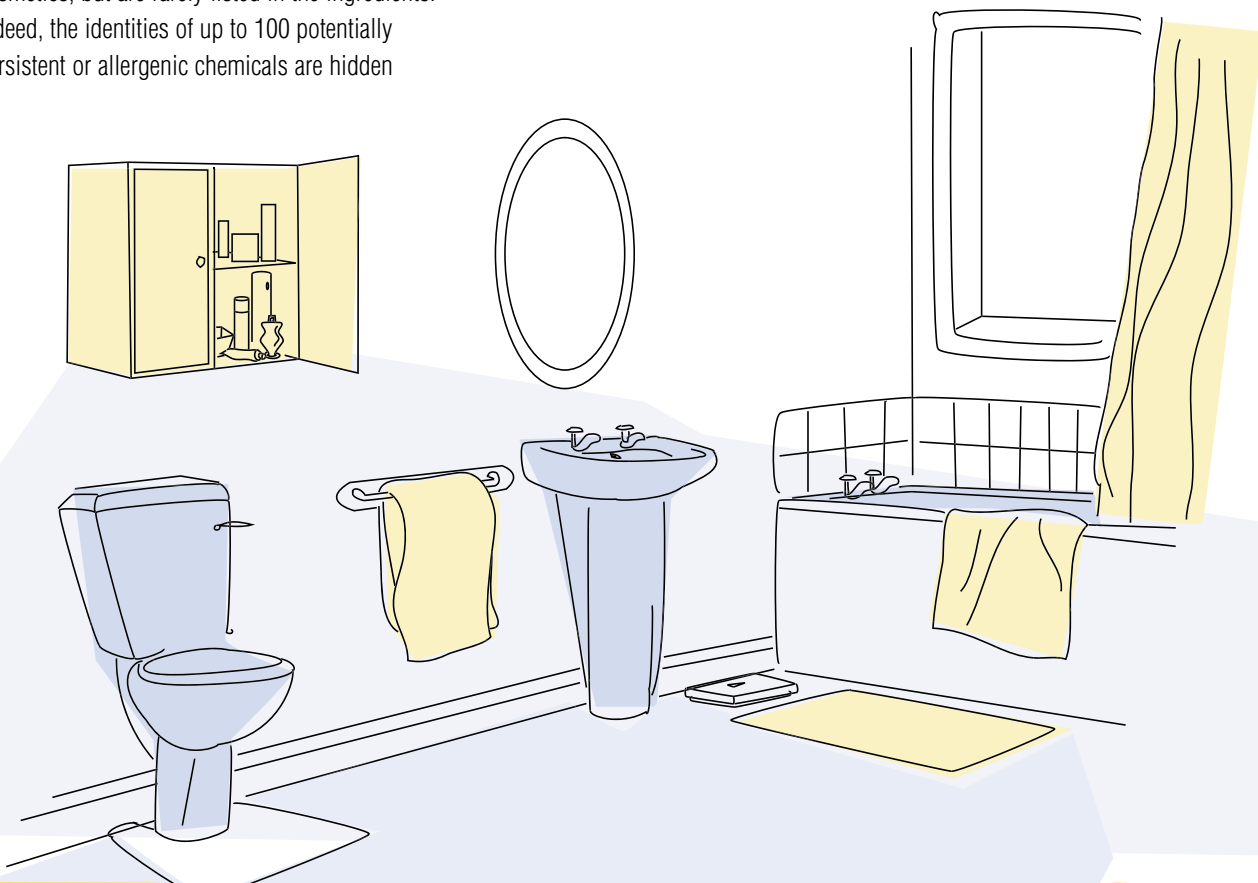
BATHROOM

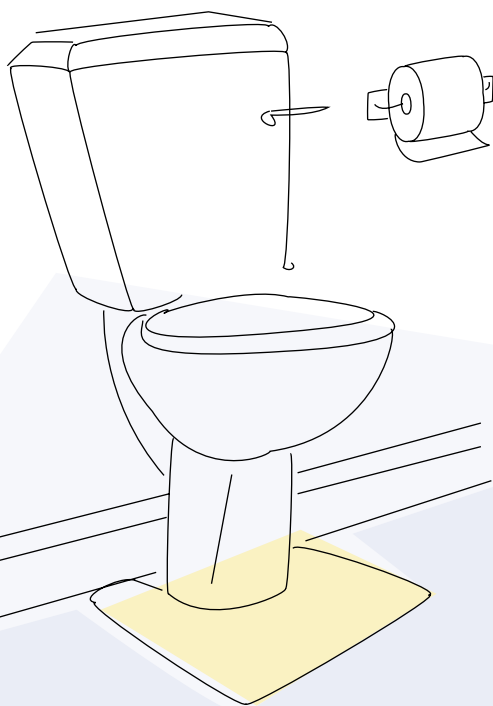
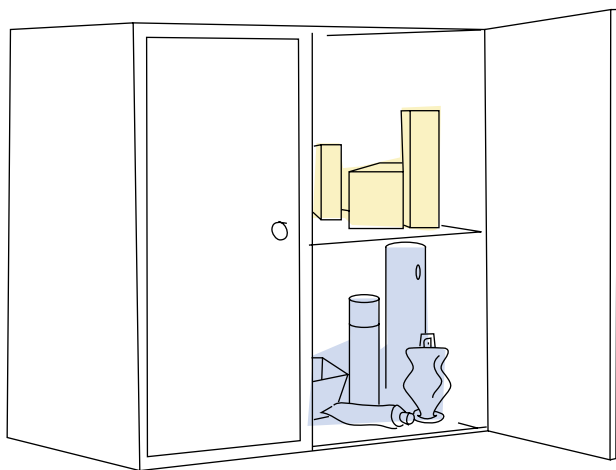
The idea of relaxing in a bath after a hard day often creates the image of the bathroom as the sanctuary in our home. Sad to say, however, that it's far from being a sanctuary from chemical exposure. Like kitchen cleaning products, many items traditionally kept in the bathroom contain artificial fragrances, anti-bacterial agents and solvents which are harmful to the environment, wildlife and our own health.

Buying cosmetics is a lottery, because we're often unable to determine whether or not hazardous chemicals are present in a product. This is especially true of phthalates. They are found in cosmetics, but are rarely listed in the ingredients. Indeed, the identities of up to 100 potentially persistent or allergenic chemicals are hidden

by the use of the word *parfum* on cosmetics or toiletries. Research also indicates that regular long-term use of hair dyes may be associated with the development of allergic reactions or bladder cancer in some people.

The manufacture of bleached paper goods, including sanitary products, are often associated with the production of highly toxic and persistent chemicals called dioxins, which are among the most toxic man-made chemicals. But by choosing products that are unbleached or whitened with chlorine-free bleaches, you can help reduce the production of some of the dioxins which ultimately end up in our bodies.





Avoid

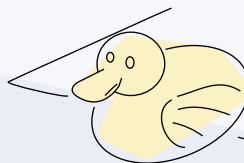
- cosmetics, toiletries and perfumes with synthetic fragrances;
- toothpaste, toothbrushes and mouthwashes containing triclosan;
- long-term use of permanent hair dyes, especially those carrying a warning that they “can cause an allergic reaction. Do not use to colour eyelashes or eyebrows”;
- vinyl flooring, as it may emit hazardous fumes and VOCs;
- sanitary products bleached with chlorine.

Buy

- beauty products such as soaps, shampoos, conditioners and hair care products made from natural ingredients;
- fragrance-free products;
- beauty products from companies that state they do not use phthalates;
- unbleached toilet paper and sanitary products.

Change

- the use of air fresheners for fresh air (open the windows, or use natural air fresheners such as baking soda or potpourri);
- pesticide-based anti-lice shampoos and lotions for natural product alternatives or “bug-busting” (combing wet hair using a plastic anti-head lice comb);
- chemical insect repellents for those using natural products, such as citronella.

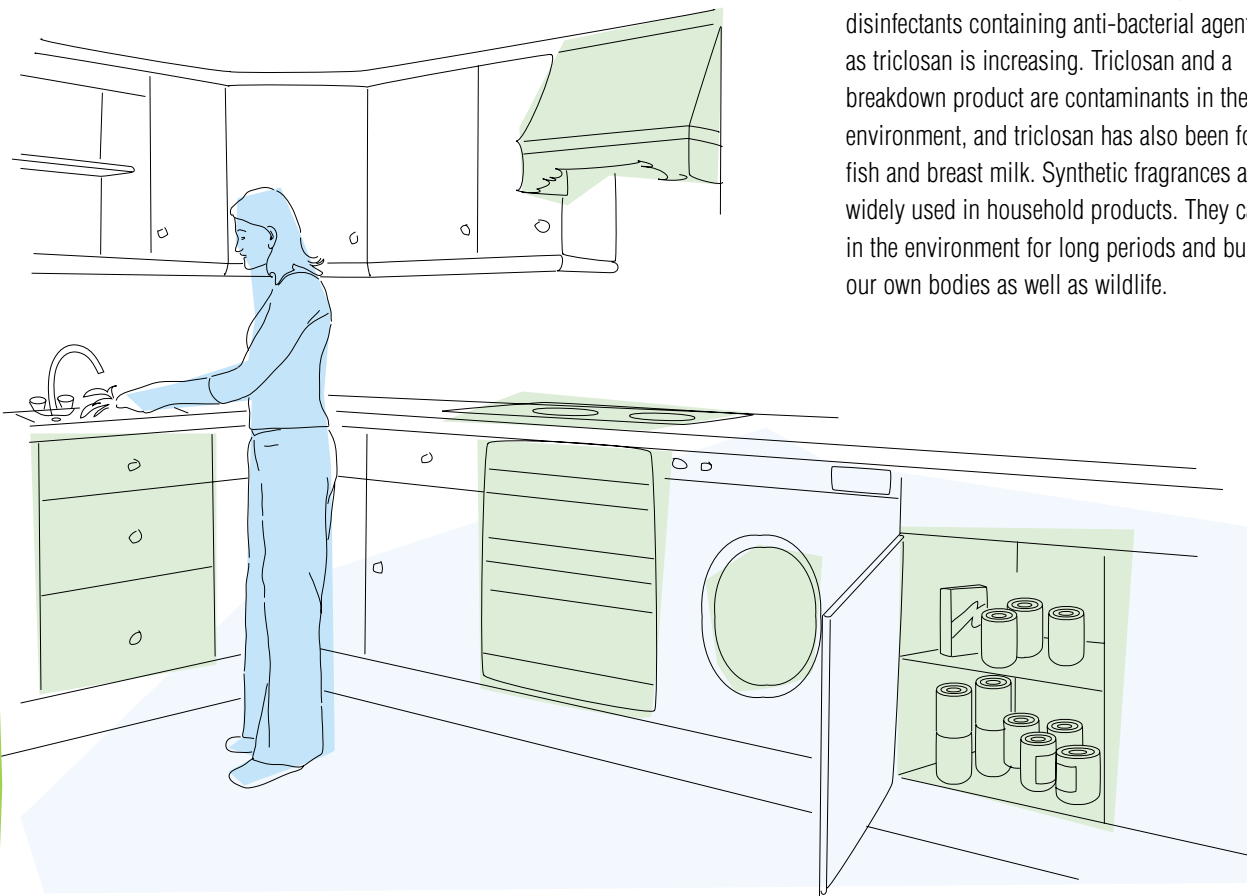


KITCHEN

Cleaning products, plastic wrapping and food itself can all contain a number of hazardous chemicals.

Food

Watch what you eat: around 1,000 different chemicals might be present in our food! UK government data shows that over 90 per cent of fresh salmon, more than a third of fruit and vegetables and 40 per cent of cereal products contain pesticide residues. Fruit and vegetables are essential parts of a healthy diet, of course, but the amount of contaminants they carry needs to be reduced.



Plastic Wrapping

Most food tins are lined with a plastic which contains a hormone-disrupting chemical called Bisphenol A, which can leach from the tin into the food inside. Bisphenol A is also found in Polycarbonate (PC) plastics, from which some bottles and storage containers are made. Many food products come in PVC packaging such as cling film or plastic wrapping. PVC wrapping contains man-made chemicals called adipates, known hormone disruptors, which can leach into the wrapped food.

Cleaning Products

The number of household cleaning products and disinfectants containing anti-bacterial agents such as triclosan is increasing. Triclosan and a breakdown product are contaminants in the environment, and triclosan has also been found in fish and breast milk. Synthetic fragrances are also widely used in household products. They can persist in the environment for long periods and build up in our own bodies as well as wildlife.

Avoid

- eating fresh fruit and vegetables that have not been washed and peeled;
- tinned food products;
- eating shark, marlin or swordfish if you are pregnant, trying to become pregnant or breastfeeding, because they can contain high levels of chemical contaminants. The Food Standards Agency also recommends that infants and children under 16 don't consume these species, either.
- products containing triclosan, such as certain plastic chopping-boards, washing-up cloths, sponges, liquids, soaps and disinfectants;
- chemical air fresheners or heavily scented cleaning products such as dishwashing liquids, floor cleaners and washing powders;
- using cling film in contact with high fat foods, unless the manufacturer's advice states it is suitable for this (high fat foods include dairy products, meat, pastries and cakes);
- using cling film when re-heating or cooking food in a microwave oven;
- using silicon-based baking paper;
- microwaving food in plastic containers, unless they are designed for that purpose;
- PVC and PC plastics (look on the packaging for either PVC3 or PC7, or look inside the recycling triangle for the numbers 3 or 7).

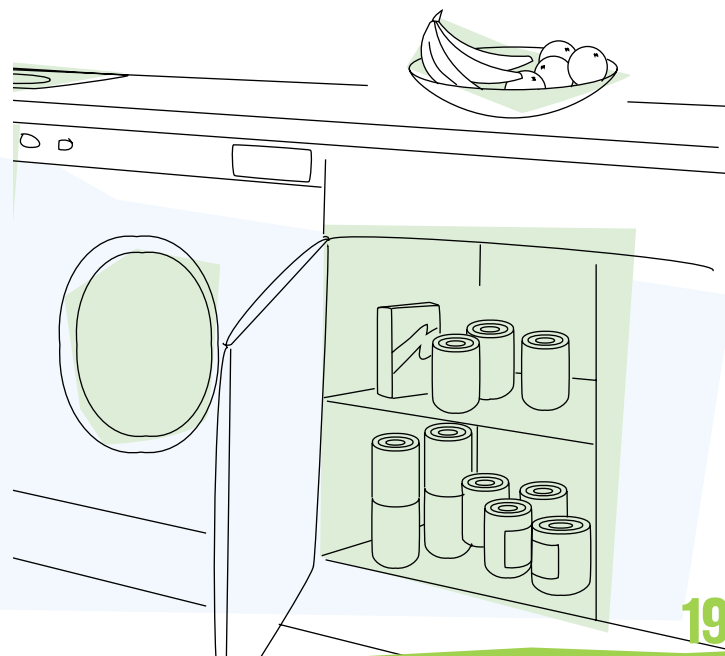
Buy

- fresh, frozen or dried food rather than tinned food;
- organic products wherever possible;
- a variety of fish to reduce your chances of consuming species that are contaminated. The government recommends eating two portions of fish, one of which should be oily, every week. Consider species such as mackerel and herring.

- a water filter to reduce the levels of chemical contaminants in drinking water;
- fragrance-free "green cleaners" or ones with a natural fragrance;
- products that don't contain triclosan.

Change

- processed foods for fresh, organic products wherever possible;
- your diet and reduce your intake of fatty meats and other high-fat foods such as cheese and cream;
- your fish consumption patterns if you are pregnant, trying to become pregnant, or breast feeding. The Food Standards Agency recommends that in such circumstances, women should eat no more than two medium-sized cans of tuna – an oily fish – or one fresh tuna steak, a week;
- any lead water pipes in your house;
- from using anti-bacterial cleaners containing triclosan to products which don't contain anti-bacterials – they give perfectly adequate protection against potentially harmful bacteria.



GARAGE AND GARDEN

Perhaps unsurprisingly, our gardens, garages, sheds and cars are all sources of hazardous chemicals. DIY, now a national pastime, exposes us to a range of products including paints, solvents, varnishes, preservatives, pesticides, oils and sealants, all of which contain toxic chemicals, especially volatile organic chemicals (VOCs). The heady smell of these products should be enough to let us know that the fumes they emit are harmful to ourselves, our environment and wildlife. One tablespoonful of spilled pesticide concentrate could pollute the water supply of 200,000 people for a day.



Avoid

- painting, paint stripping or using DIY products with high levels of VOCs, especially if you or someone in your house is pregnant;
- occupying a newly-painted room – first, open the windows and ventilate it for as long as possible;
- exposing passengers to fumes when re-fuelling your car – shut the doors and windows;
- using pesticides indoors or in the garden – use alternatives and try gardening organically;
- using creosote-based preservatives. They are now banned for domestic use. Take any remaining products you may have to a proper hazardous waste disposal facility;
- using products pre-treated with creosote such as fences or garden furniture.

Buy

- water-based cleaning products, paints, stain removers, sealants and adhesives, or ones with low levels of VOCs;
- organic or natural paints made from plants oils – ask in the store to find which products are available.

Change

- your gardening habits – go organic to minimise the use of pesticides;
- chemical pesticide treatments for natural pet treatments in the “flea war”. Natural treatments can help keep fleas at bay – place dried lavender and rosemary around your pet’s bed, and add a chopped clove of garlic to your dog’s food twice a week. If your pet becomes infested, ask your vet to treat it professionally rather than using hazardous pesticides in your own home;
- your car as infrequently as practical. That “new car smell” comes from high levels of chemicals escaping from the plastic, upholstery, carpeting and other synthetic materials used in a car.

THINGS TO AVOID



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PVC and **PC** plastics (look on the packaging for either PVC3 or PC7, or look inside the recycling triangle for the numbers 3 or 7). PVC wrapping contains man-made chemicals called adipates, known hormone disruptors, which can leach into the wrapped food.



THINGS TO LOOK OUT FOR



The European Union ecolabel. This label is an official award for products which meet a high environmental standard. Manufacturers can apply to show it on a wide range of household goods, including kitchen towels, toilet rolls, washing powder and paint.



'Low VOC content' – VOCs are 'volatile organic compounds'. They are found in many paints and cleaning agents and they contribute to air pollution, which is linked to asthma and other breathing problems. Look for labels that show a minimum or low VOC content.



WWF'S TOP TEN TIPS ON REDUCING EXPOSURE TO HAZARDOUS CHEMICALS

- 1 Buy organic produce whenever possible.
- 2 Wash and peel fruit and vegetables before eating.
- 3 Avoid the use of pesticides in the home or garden by going organic.
- 4 Avoid canned food: choose fresh, frozen or dried foods instead.
- 5 Avoid food coming into contact with PVC cling film.
- 6 Use non-polycarbonate baby feeding bottles or, better still, breast-feed babies.
- 7 Open your windows instead of using air fresheners.
- 8 Use environmentally friendly cleaning products.
- 9 Buy soap, shampoos and cosmetics that don't contain synthetic fragrances.
- 10 Use paints, varnishes and glues with a low VOC content, or those that are water-based.