SPECIAL

Home Detox

The 7 nasty chemicals you must remove from your home.



www.cleanfood.com.au

Clean Food Organic

HOME & GARDEN

SPECIAL



The best way to keep our bodies free from toxic chemical residues is to avoid exposure to them. **Jo Immig**

Research shows that eating organic food reduces our exposure to pesticides and taking simple steps to avoid chemicalladen everyday household products further decreases our personal toxic load. Detoxing the home is especially important for babies and children, as they already have the highest levels of some toxic chemicals in their bodies and are impacted upon by ongoing exposures as they grow. With an increasing range of safe and non-toxic products available, it's easier to make better choices.

Antibacterials

'Antibacterial' has become a selling point in an age of widespread media coverage of pandemics and fear of bacteria. Antibacterial claims are made on a growing list of household items including textiles, bedding, paints, liquid hand soaps, detergents, sponges, breadboards, plastic containers, toothpaste, mouth rinse and children's toys.

Triclosan is a common antibacterial chemical added to everyday products. It may prove to be a lifesaver in hospitals but concerns have been raised about its unregulated use in household products – especially imported products. Selling people 'antibacterial protection' may turn out to be just a gimmick, leading to a false sense of security about our level of protection from bacteria.

There's also concern that excessive use of antibacterial products may be contributing to the rise of resistant bacteria, or 'superbugs', which is a huge problem worldwide.

Triclosan is known to persist and build up in the environment, making its way to waterways where it is toxic to aquatic life. It has been measured in discharges from sewage plants, effluent and biosolids – a point to remember if you have a grey water system.

Triclosan residues have been found in

breastmilk in populations worldwide and it's a suspected hormone disrupter with a chemical structure very similar to the thyroid hormone thyroxin.

Ideally, avoid all products with an antibacterial claim and maintain standard hygiene measures around the home for cleaning and personal care, such as washing hands with plain soap and water.

Brominated flame retardants

The idea is good – retard fires – but unfortunately it turns out that the chemicals used in the flame retarding process cause more trouble than they're worth.

Common in consumer products, particularly in highly flammable synthetic materials, some of the most toxic fire substances are brominated flame retardants (BFRs), which include chemicals known as polybrominated diphenyl ethers (PBDEs).

BFRs are used in electronics, remote controls, mobile phones, whitegoods, carpets, textiles and polyurethane foam in furniture and bedding. The problem is that they offgas into the air and then concentrate in the dust inside our homes.

Australians have twice the level of some BFRs in blood and breastmilk compared with their European counterparts – with the highest levels in children under four.

BFRs have been linked with disruption of thyroid hormones, cancer and reproductive damage. Two of the most toxic BFRs were recently banned under the Stockholm Convention on Persistent Organic Pollutants. Australia is yet to ratify the decision and take action.

Avoiding BFRs is challenging and you'll need to check with retailers and manufacturers when purchasing products.

Contaminated dust is the main route of exposure for children, so removing dust from the home with a quality HEPA filter vacuum cleaner is critical. Limit children's access to floors under desks or beds and around electronics, where levels are higher. Discourage children from placing objects such as remote controls in their mouth and encourage them to wash their hands after playing on the floor. Don't add the contents of your vacuum cleaner bag to the compost bin or garden soil.

When removing old carpets, take care to contain the dust. Natural flooring experts can provide advice on safer floor covering options. Some electronics manufacturers are replacing BFRs and certain retailers, such as IKEA, stock polyurethane foam products made with safer chemicals. Other bedding options include latex/wool and organic cotton mattresses with solid wooden (not particle board) bed frames.

Bisphenol-A (BPA)

You may have heard about the controversy with Bisphenol-A (BPA) in connection with baby bottles? It's now banned from baby products in many countries, but not in Australia.

BPA is found in many household products including polycarbonate plastics in food and beverage containers, baby bottles, utensils, kitchen appliances, CDs, epoxy linings of canned foods and beverages, nail polishes and composite dental fillings.

BPA is a potent hormone disruptor that is now found in the bodies of virtually all people living in developed countries at levels researchers say cause cancer, genital abnormalities, diabetes and behavioural disorders in laboratory animals.

Low doses of BPA exposure during pregnancy can have profound effects on the development of the baby, affecting breast, testicle, mammary gland and brain development.

To minimise contact with BPA, avoid polycarbonate plastics and epoxy linings and opt for glass, stainless steel or plant bioplastics, which are increasingly available. Take extra care during pregnancy and with babies and children.

Perfluorochemicals

Perfluorochemicals (PFCs) are known as the 'slippery substances' and different types are used in products including 'non-stick' SPECIAL

cookware, irons, stain-, dirt- and water-repellent textiles, carpets, paints, electronics, food packaging and some personal care products.

Perfluorooctane sulfonate (PFOS) is a reproductive toxin recently listed under the Stockholm Convention. Perfluorooctanoic acid (PFOA) has been labeled a 'likely carcinogen' by the US EPA. Both are extremely persistent and build up in our bodies.

Government testing has shown that PFOS and PFOA concentrations in the blood of adult Australians are high compared to those in other countries. While PFOS is restricted in Australia to the fire fighting industry, PFOA is subject only to voluntary action.

To reduce your exposure to PFCs avoid non-stick cookware, choose stainless steel, cast iron or glass instead. Avoid clothing, furniture, curtains, carpets and footwear that are pre-treated for stain, dirt and water resistance. Avoid personal care products such as lotions, nail polish and shaving cream with the prefixes 'fluoro-' or 'perfluoro-' on the ingredients list.

Phthalates Phthalates, or plasticisers, are a group of chemicals used in vinyl and polyvinyl chloride (PVC) products such as shower curtains, furnishings, flooring and raincoats. They're also added to personal care products and cleaning agents but may not be specifically listed –

instead they're included under 'fragrance' or 'parfum'. Phthalates are in some plastic packaging and can leach into fatty foods such as meat, oils, cheese and butter. Children's toys, teething

teething rings

"Detoxing the home is especially important for babies and children, as they already have the highest levels of some toxic chemicals in their bodies"

and sex toys may also contain phthalates.

A *Choice* study found high levels of phthalates in 13 out of 25 glass jars of food with PVC-based plastic lids at levels that exceed the limits set by the European Union. Australian food regulations don't set limits for phthalates.

They're suspected hormone disruptors and have been linked with 'demasculinisation', obesity and increasing rates of allergies and asthma. Phthalates cross the placenta, placing foetuses at risk.

To reduce your level of exposure, avoid vinyl and PVC products, switch to 100 per cent plant-based cosmetics, cleaning and personal care products, choose natural rubber, fabric or wooden toys and non-plastic utensils and glass jars without PVC-plastic lids. Choose fresh unpackaged organic food.

Australia has an 'interim ban' prohibiting the supply to children under three years of age plastic toys and utensils containing more than one per cent by weight of the most toxic phthalate DEHP (Di-2-ethylhexyl phthalate). Do your own research and ask retailers for specific information before purchasing products for young children.

Lead Many people believe the problem with lead and its impacts on children has been solved. Not so. While leaded petrol has been phased out, there's still a lot of lead in our homes and environment.

Lead doesn't just 'go away'. It is still found in old paint, soils, dust in roof voids and under floors, lead sinkers for fishing, plumbing and taps and lead soldered cans.

Tiny amounts of lead are known to cause serious health problems, especially in young children. Leaded dust is the most common way people are exposed to lead.

A front door mat and a 'no shoes inside' policy help to reduce lead indoors. Regular hand washing can make a big difference to lead levels. Wash hands with soap after playing, touching pets and before eating. Wash soft toys, cloth books and security blankets and filter drinking water, which may contain lead residues. Avoid carpets, which act as 'sinks' for lead and other chemicals. A HEPA filter vacuum cleaner will reduce lead contaminated dust.

Mercury

Mercury levels are rising in our bodies and environment. Fish everywhere are contaminated and our diet is likely the main source of exposure to mercury, although it's also in amalgam dental fillings. A major source of global mercury pollution comes from coal-fired powered stations.

In humans, methylmercury is incorporated into hair, which is used to reliably test levels of mercury in the body.

Mercury in our bodies targets the nervous system, affecting memory and coordination. Foetuses and children are particularly sensitive, as their brain and nervous system are under development. It crosses the placenta and is found in breastmilk, which is why authorities in many countries advise pregnant and breastfeeding women to reduce fish consumption.

Review your fish and seafood consumption and ensure old thermometers and blood pressure machines do not contain mercury. One fungicide used in Australia on conventionally grown sugarcane contains a form of mercury, so opt for organic sugar instead.

A United Nations treaty on mercury is underway, with the aim to ban the mining, trade and use of mercury and focus on cleanup of contaminated soils and safe storage of mercury stockpiles.

Further reading: *Slow Death by Rubber Duck: How the toxic chemistry of everyday life affects our health*, Rick Smith and Bruce Lourie, UQP 2009

Global Lead Advice and Support Service: www.lead.org.au