

The Household Toxic Tour: Laundry

A number of products are likely to contain toxic ingredients: bleach, brass or other metal polishes, drain cleaner carpet cleaner, room deodorizer, dishwashing detergent, fabric softener, laundry detergent, anti-cling sheets, mould and mildew cleaner, mothballs, and spot remover all usually contain irritating or toxic substances.



Laundry detergents contain perfume or fragrance chemicals to give laundry that "clean laundry smell" of lemons or pine. Many of these fragrances are made from chemicals which can cause health effects. These chemicals can "volatise" (become airborne) and breathed in. The commonly used citrus fragrance, d-limonene, can cause skin and eye irritation, difficulty breathing and bronchial irritation. It can also react with ozone in indoor air to form tiny particles that aggravate lung and heart disease. Also, the residue from laundry products, which remains on clothes and linen after washing, can become air borne and be breathed in. Chemicals in the residue can also irritate the skin. A group of chemicals called phthalates, which are used to make the perfume last for a long time, may disrupt hormones and cause birth defects.

Detergents also usually contain petroleum distillates, which may cause cancer (if they contain benzene) and damage the skin and eyes. Petroleum distillates give off toxic fumes which may provoke asthma attacks and irritate the air passages. Some detergents may contain naphthalene, which has been linked to cancer and may also damage the eyes, liver, kidneys, skin, and the central nervous system. Children may get brain damage from breathing naphthalene fumes. If inhaled over a long period of time, naphthalene may cause kidney and liver damage; skin allergy/dermatitis; cataracts and retina damage. Inhaling naphthalene can cause brain damage in infants. Naphthalene has caused cancer in test animals inhaling it. (Use a *safe alternative*)



Fabric softeners can contain ammonia (see below), petroleum distillates and very strong artificial fragrances, which can irritate the skin, cause stuffy noses and they make clothes highly flammable. Fabric softeners may also contain chloroform, benzyl acetate and pentane that are known to cause cancer and/or damage to lungs, brain, and nerves. These chemicals are even more dangerous when heated in a tumble dryer. (Use a *safe alternative*)

Ammonia is used as a product on its own and is also an ingredient in other cleaning products. Even in low concentrations, ammonia vapours can cause severe eye, lung, and skin irritation. Children with asthma may be particularly sensitive to ammonia fumes. Ammonia fumes is very irritating and corrosive to the eyes, nose and airways. Fumes may cause a burning sensation, coughing, wheezing, shortness of breath, laryngitis and watery eyes, even at low levels. Exposure to ammonia fumes over a long period of time may cause damage to the eyes, liver, kidneys, and lungs, and may cause bronchitis to develop, with cough, phlegm and shortness of breath. **Ammonia can cause even greater damage if it is mixed with chlorine bleach (or cleaners containing bleach).** This mixture forms highly poisonous chloramine gas that cause coughing, choking and lung damage.

Spot removers and carpet cleaners commonly contain several highly toxic chemicals. The worst is probably trichloroethylene which is used in both spot removers and carpet-cleaning fluids. Trichloroethylene is one of the chemicals suspected of causing a cluster of childhood leukemia cases due to water contamination in Woburn, Massachusetts, in the 1980s. The subsequent court case against the polluting company was the subject of a book and film called *A Civil Action*. Children can be exposed to TCE by breathing in fumes from these products. TCE also has possible links to birth defects such as heart and respiratory system defects, cleft palate and hearing and speech problems. Breathing in TCE fumes may cause headaches, dizziness, confusion and difficulty concentrating. At higher amounts, may cause unconsciousness and death. (Use a *safe alternative*)

Mothballs contain naphthalene and may also contain paradichlorobenzene. Eating, touching or breathing naphthalene over a long period of time may cause cancer and may also damage the eyes, liver, kidneys, skin, and the central nervous system. Young children may get brain damage from breathing naphthalene fumes. Paradichlorobenzene, is also suspected to cause cancer and can also harm the central nervous system, liver and kidneys. This chemical can affect you if it is swallowed, inhaled or comes into skin contact.

Jeyes Fluid contains carbolic acid (also known as phenol). Very high concentrations of phenol can cause death if swallowed, breathed in or absorbed through skin. Long- term exposure may cause liver and kidney damage. Skin contact may result in pigmentation, chemical acne and even cancer. Skin and lung cancers developed in mice that were exposed to this substance. Exposure can damage the liver and cause headaches, cardiac depression, nausea, vomiting, blurred vision, dizziness, a feeling of intoxication, and irritations of the eyes, nose, mouth, and throat. (Use a *safe alternative*)

Air fresheners and deodorisers should be renamed air pollutants! Several toxic chemicals are used in air fresheners/deodorisers including some chemicals which are possibly cancer causing. Air fresheners and deodorizers that come in aerosol form usually contain petrochemical propellants such as butane, isobutane and propane - all of which are neurotoxic at high concentrations. These chemicals are easily inhaled into the lungs, where they can irritate airways, especially among children and asthmatics. They are also highly flammable.

Fragrance chemicals in air fresheners and deodorizers can irritate the skin, eyes or airways. Some air fresheners also contain formaldehyde - which has been linked to nose and throat cancers. Paradichlorobenzene (PDB), which is suspected to cause cancer and damage to the reproductive systems, liver and nerves, is also found in air fresheners. As is naphthalene, which can damage or destroy red blood cells, causing a condition called hemolytic anemia. If breathed in over a long period of time, it may cause kidney and liver damage, skin allergies, cataracts and retina damage. Inhaling naphthalene can cause brain damage in infants. Naphthalene has caused cancer in test animals inhaling it. Remember that the tiny droplets which air fresheners spray into the air do not disappear, even if you can no longer see them or smell them! (*Safer alternatives*)

Furniture and floor polishes may contain nitrobenzene (which may cause skin discolouration, cancer and birth defects) and formaldehyde, which may cause cancer. (Use a *safe alternative*)

Dishwashing detergents usually contain naphtha (a central nervous system depressant), diethanolamine (a possible liver poison) and chlorophenylphenol (a toxic metabolic stimulant). Dishwashing machine detergents may also contain chlorine.

Some toilet bowl cleaners and rim blocks may contain naphthalene (see air fresheners above for the health effects of naphthalene). (Use a *safe alternative*)

Window cleaners - *Windex Aerosol Glass Cleaner* contains a chemical called Butyl Cellosolve, which may irritate the eye and skin, damage the central nervous system, kidneys and liver. It is readily absorbed through the skin. It also damages the blood and body's ability to make blood. This household product also contains Isobutane, which is also toxic to the central nervous system and brain. (Use a *safe alternative*)

Metal polishes contain petroleum distillates, which can cause temporary eye clouding, damage to the nervous system, skin, kidneys, and eyes. (Use a *safe alternative*)

Here are some safe, home-made recipes for cleaning agents:

- **All-purpose cleaner** can be made from a vinegar-and-salt mixture or from 4 tablespoons bicarbonate soda dissolved in 1 litre warm water.
- **Drain cleaner** - Pour 1/2 a cup of bicarbonate soda down the drain, add 1/2 cup white vinegar, and cover. The resulting chemical reaction can break fatty acids down into the soap and glycerine. Do not use this method after trying a commercial drain opener - the vinegar can react with the drain opener to create dangerous fumes.
- **Disinfectant and Toilet Cleaner** - Mix 1/2 cup borax and some lemon juice with about 3,5 litres hot water. Alternatively pour 1 cup borax into the toilet bowl and leave overnight. The next morning scrub and flush.
- **Washing Powder** - use soap, soap flakes (for example Sunlight soap powder) or a cup or bicarb per load in place of detergent. To brighten clothes add one cup of vinegar OR half a cup of lemon juice to the rinse cycle can help keep colours bright. A quarter of a cup of vinegar in the rinse cycle will completely remove detergent from clothes. (But DO NOT use vinegar if you are using bleach - the resulting fumes are hazardous).
- **Fabric Softener** - add half to three-quarters of a cup of bicarbonate soda to the wash.
- **Furniture polish**: Make your own polish using 1 part lemon juice to 2 parts vegetable oil
- **Floor cleaner** can be made by adding a few drops of vinegar to the cleaning water. For vinyl or linoleum, add a capful of baby oil to the water to preserve and polish. For tiles, use 1 cup white vinegar in 1 litre of water and rinse with clear water.
- **Deodorise carpets** by sprinkling bicarbonate soda on carpets ½-hour before vacuuming.
- **Window and glass cleaner** can be made by mixing vinegar-and-water solution, or corn-starch, vinegar and water solution, or lemon-juice-and-water. Wipe with newspaper.
- **Air fresheners** - Open windows, simmer lemons, vanilla pods or cinnamon sticks in water, use flower essence oils, or use fresh flowers. Install a ceiling fan or an extractor fan. Sprinkle ½-cup borax in the bottom of rubbish bins to stop mould and bacteria growth which can cause bad smells.



- **Oven cleaner or pot scourer** can be made by sprinkling bicarbonate soda and dry table salt on moist surface and scrubbing with steel wool or a damp sponge.
- **Bath and tile cleaner** can be as easy as rubbing in bicarbonate soda with a damp sponge and rinsing, or wiping with vinegar first followed with bicarb as a scouring powder.
- **Metal cleaners and polishes** are different for each metal. Brass may be polished with a soft cloth dipped in lemon-and baking-soda solution, or vinegar- and-salt solution. Clean copper by boiling the article in a pot of water with 1 tablespoon salt and 1 cup white vinegar, or try differing mixtures of salt, vinegar, bicarb, lemon juice, and cream of tartar. Clean gold with toothpaste, pewter with a paste of salt, vinegar, and flour. Silver can be polished by boiling it in a pan lined with aluminium foil and filled with water to which one teaspoon each of bicarb and salt have been added. Stainless steel can be cleaned with undiluted white vinegar.