




# Are you being exposed?

Find out how to identify and avoid harmful chemicals in everyday products that are linked to breast cancer.



**Not all chemicals are harmful, but some are capable of causing cancer (carcinogens) and others can interfere with normal hormone functions; these are known as endocrine disrupting chemicals or EDCs. Some EDCs mimic the female hormone, oestrogen, which is a known risk factor for breast cancer.<sup>1</sup>**

This mini guide will help you to identify what to look out for and what to avoid.

See back of guide for more information on some of the chemicals we have concerns about.

# Cosmetics & personal care products

## Watch out for

- ⚠️ **Parabens such as butyl/methyl/ethyl/propyl paraben:** found in cosmetics, body creams, make up, hair products and UV sunscreens
- ⚠️ **Alkyl parahydroxybenzoate:** another name for parabens
- ⚠️ **Aluminium:** often used in deodorants
- ⚠️ **Synthetic musks or parfum:** used to fragrance many cosmetics and personal care products
- ⚠️ **Triclosan:** used in toothpastes and hand washes

## How to avoid

- ✓ Opt for paraben and aluminium free
- ✓ Choose essential oil based fragrances or buy un-fragranced products
- ✓ Avoid using antibacterial soaps and hand washes which contain triclosan



# Plastic containers, bottles & packaging

## Watch out for

- ⚠️ **Polyvinyl Chloride (PVC):** ♻️ 3 in cling film and some children's lunch boxes
- ⚠️ **Bisphenol A (BPA):** ♻️ 7 in plastic food packaging and in hard plastic polycarbonates
- ⚠️ **Polyethylene terephthalate (PET):** ♻️ 1 used in plastic bottles

## How to avoid

- ✓ Avoid plastic bottled drinks
- ✓ Opt for tap water or use stainless steel bottles
- ✓ Do not reuse or refill plastics labelled ♻️ 7 ♻️ 1
- ✓ Don't allow drinks in PET containers to become warm for prolonged periods
- ✓ Discard old plastic plates, beakers, cups and cutlery



## Fresh food & confectionery

### Watch out for

- ⚠️ **Pesticides:** on non organic fruit and veg
- ⚠️ **Parabens:** used in confectionery



### How to avoid

- ✓ Choose organic and locally grown products
- ✓ Avoid confectionery containing E214, E215, E218 and E219

## Tinned food

### Watch out for

- ⚠️ **Bisphenol A (BPA):** used in resins to line tin cans

### How to avoid

- ✓ Opt for fresh not tinned food
- ✓ Source tins labeled BPA-free



## Garden sprays

### Watch out for:

- ⚠️ **Glyphosate:** used in weed killers
- ⚠️ **Insecticides, herbicides and fungicides:** used to treat garden and household plants

### How to avoid

- ✓ Go organic in the garden
- ✓ Avoid using insecticides, fungicides and herbicides
- ✓ Remove or deter garden and household pests by other methods, such as mesh netting and biological pest control for glasshouses and some outdoor plants

## Household cleaners

### Watch out for

- ⚠️ **Triclosan / Microban:** used in chopping boards, jay cloths and washing up liquid
- ⚠️ **Phthalates (“fragrance” or “parfum”):** used in cleaners and dishwashing liquids and air fresheners
- ⚠️ **Synthetic musks:** used in washing powders, detergents, air fresheners

### How to avoid

- ✓ Regular cleaning with hot soap and water is sufficient for good household hygiene
- ✓ Antimicrobials kill beneficial bacteria too
- ✓ Use citric acid based cleaners and avoid scented washing agents



## Soft furnishings & other household items

### Watch out for:

**⚠ Polybrominated diphenyl ethers (PBDEs), decabromodiphenyl ether (DecaBDE) and hexabromocyclododecane (HBDD):** used as flame retardants in furniture, carpets, and other soft furnishings



### How to avoid

- ✓ Choose less flammable materials such as leather, wool and cotton for home furnishings
- ✓ If flame retardants are listed, avoid DecaBDE and HBDD

## A-Z of harmful chemicals

### **Aluminium**

Aluminium chloride and aluminium chlorohydrate are EDCs<sup>2</sup> and limited scientific evidence may suggest they are associated with increased breast cancer risk.<sup>3</sup>

### **Bisphenol A (BPA)**

BPA is found in plastics, white dental fillings, lenses, computer and mobile phone casings, CDs and some till receipts. BPA is a known EDC and is linked to early puberty and breast cancer.<sup>4</sup>

### **Brominated flame retardants**

Polybrominated diphenyl ethers (PBDEs) and other brominated flame retardants are used in TVs, furniture, computers, carpets, polyurethane foam and paints to make them less flammable. Several PBDE flame retardants are EDCs with potential links to breast cancer.<sup>5</sup> Many are suspected to be carcinogenic, toxic, persistent and bioaccumulative.<sup>6</sup> An EU-wide restriction on DecaBDE is proposed and will be decided upon in late 2015.

### **Glyphosate**

Glyphosate is classified by the International Agency for Research on Cancer (IARC) as probably carcinogenic to humans<sup>7</sup> and it may interfere with oestrogen signaling that could lead to breast tumour formation or progression.<sup>8</sup>

### **Parabens**

In the EU, parabens are permitted in confectionery, dry meat products, cereal or potato-based snacks and coated nuts.<sup>9</sup> They act as preservatives and lengthen a product's shelf life. Parabens are known EDCs and have been linked to breast cancer.<sup>10</sup> They can be ingested and absorbed through the skin.





## **Parfum**

Parfum refers to fragrance ingredients used in cosmetics products, and may include phthalates or musks which are EDCs.

## **Perfluoroalkyl Substances (PFASs)**

PFASs (e.g. PFOA) are used in non-stick cookware, some food packaging and as water-resistant coatings on clothing, furniture and carpets. PFASs release toxic fluorochemicals upon heating and over time. They are environmental pollutants, bioaccumulative, and are EDCs that have been linked to cancers<sup>11</sup> and possibly to breast cancer.<sup>12</sup>

## **Pesticides**

Pesticides (e.g. insecticides, fungicides and herbicides) are used on food crops, garden weeds and in the home to kill pests and weeds. Residues may remain in food, run-off into water supplies and sprays can be inhaled. Many of these are toxic<sup>13</sup> and classified as carcinogenic.<sup>14</sup> Some are EDCs<sup>15</sup> with potential links to breast cancer.<sup>16</sup>

## **Phthalates**

Phthalates increase the durability of plastics and are also used in inks, paints, perfumes and other fragranced products. Phthalates are used in nail varnish, shampoo, disposable medical products and polyvinyl chloride (PVC) products such as cling films, flooring and window frames. It is sometimes listed as DEHP or DBP. Phthalates are EDCs which may be linked to breast cancer.<sup>17</sup> They have been found to be toxic to human reproductive, developmental and immune systems.<sup>18</sup>

## **Polyethylene terephthalate (PET)**

PET is used to make plastic water and juice bottles, food containers and clothing (polyester). Although safe for short term use, after heat or prolonged storage, PET containers may release very small quantities of the heavy metal antimony<sup>19</sup> a suspected carcinogen and EDC, which may be linked to breast cancer.<sup>20</sup>

## **Synthetic musks**

Synthetic musks (e.g. galaxolide and tonalide) are often used to fragrance cosmetics, perfumes, aftershaves, laundry detergents and fabric softeners. They are EDCs with possible links to breast cancer.<sup>21</sup> All are bioaccumulative, some are carcinogenic.<sup>22</sup>

## **Triclosan**

Triclosan is used in personal care products such as toothpaste, deodorants, soaps and liquid washes to prevent the growth of bacteria and fungi. It is sometimes added to consumer items such as socks and chopping boards. Triclosan is a known EDC which may be linked to breast cancer.<sup>23</sup> It is also bioaccumulative.

**Disclaimer:** This work in no way claims to be a comprehensive treatment of the subject of all chemicals associated with breast cancers. Breast Cancer UK has used all reasonable endeavours to ensure that the content of this leaflet is correct at the time of publishing, but no warranty is given to that effect nor any liability accepted for any loss or damage arising from the use of this leaflet.

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Breast Cancer UK works to save lives and reduce breast cancer rates by tackling the environmental and chemical causes of the disease.

For more information on how to reduce your risk, or how harmful chemicals are linked to breast cancer please visit our website [www.breastcanceruk.org.uk](http://www.breastcanceruk.org.uk)



**0845 680 1322**

**info@breastcanceruk.org.uk**

**www.breastcanceruk.org.uk**

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BM Box 7767

London

WC1N 3XX

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