


NO Plastics, Please!



7 ways to reduce
exposure to microplastics
and the toxic chemicals
in everyday plastics.



There are over 16,000 chemicals used in plastics, including those added to give properties like flexibility, durability and colour. Of these 16,000 chemicals, at least 11,000 have not been assessed for human health and environmental harm.

Of those that have been assessed, at least 4,200 of these chemicals are considered to be hazardous, including chemicals for which there is evidence that they cause disturbance in thyroid hormones, changes in anogenital distance in girls or boys, endometriosis, decreased birth weight, miscarriage, type 2 diabetes, polycystic ovary syndrome, IQ/cognitive development, obesity, and cardiovascular disease.

Due to the huge volume and prevalence of plastics in everyday life, the impacts of the chemicals within them are magnified. However, there are ways you can reduce your exposure to everyday plastics that may contain problematic chemicals.

Here are 7 easy things you can do, vetted by our scientists.

THE EVIDENCE:

PlasticChem report. <https://plastchem-project.org/>

Buy Now Pay Later. <https://onlinelibrary.wiley.com/doi/10.1111/jpc.15777>

Minderoo-Monaco. <https://pubmed.ncbi.nlm.nih.gov/36969097/>

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Vacuum regularly

It may surprise you to know that you can be exposed to plastic's toxic chemicals through the air you breathe. These chemicals can transfer from plastic products, such as electronic devices and furniture, into dust, which you then inhale or ingest. Textiles, such as carpets, rugs and curtains, can also shed microplastics. But by frequently vacuuming your home, you can reduce your exposure to these microplastics and toxic chemicals accumulating in dust.

THE EVIDENCE:

Ageel et al., (2021). <https://doi.org/10.1039/D1EM00301A>

O'Brien et al., (2023). <https://doi.org/10.1016/j.scitotenv.2023.162193>

Salthammer (2022). <https://doi.org/10.1002/ange.202205713>

Zhu et al., (2023). <https://doi.org/10.1016/j.scitotenv.2023.162374>

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TIP!

Non-synthetic fashion can be more expensive but there are ways you can make it more affordable. Consider thrifting to save on high-quality items over time. These natural items last longer, so you will get more wear out of them, and they are easier on the environment because they won't shed microplastics.

Avoid synthetic clothing

With the rise of fast fashion, plastic-based fabric is commonly used, sometimes in combination with natural fibres. Try to buy clothing made from natural fibres such as linen, hemp, wool, cotton, silk and bamboo, rather than viscose, polyester, acrylic and nylon. Non-synthetic activewear can be hard to find, but showering immediately after working out can minimise your exposure to microplastic fibres released from the fabric during exercise.

THE EVIDENCE:

Sait et al., (2021). <https://doi.org/10.1016/j.envpol.2020.115745>

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TIP!

If you don't have access to a farmers' market, you can grow your own herbs and greens from seeds or share bulk plastic-free or low-plastic-packed items with friends. Use local farmer/food markets or go grower direct where it's produced in your area.

Reduce consumption of food and drink stored in plastic packaging

Toxic chemicals can leach into our food and drinks from the plastic packaging used to store them. Microplastics can also flake off or be released from plastic containers. To reduce your exposure, try not to purchase foods and beverages that are packaged in plastic wrappers (such as fruit/vegetables and candy bars/confectionery) or bottles (such as juice and milk). At home, you can also consider phasing out plastic packaging such as thin plastic wrap, snap-lock bags, plastic food storage containers, plastic cups and drink bottles. Alternatives to plastic storage containers include glass, ceramic and stainless steel.

THE EVIDENCE:

Gambino et al., (2022). <https://doi.org/10.3390/ijerph19095283>

Food Packaging Forum Foundation (2022) "FCMigex Database."

<https://www.foodpackagingforum.org/fcmigex>

Geueke et al., (2022). <https://doi.org/10.1080/10408398.2022.2067828>

Muncke et al., (2020). <https://doi.org/10.1186/s12940-020-0572-5>

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Reduce consumption of canned food

Metal food cans, including canned fish, vegetables, beans and soft drinks, are often lined with a plastic (epoxy) coating. Toxic chemicals from plastic lining can transfer to food. You can reduce your exposure to these chemicals by limiting the number of canned foods you eat. Bulk buying, buying fresh produce or choosing food and drink packaged in glass containers can eliminate this exposure.

THE EVIDENCE:

Cao et al., (2010). <https://doi.org/10.4315/0362-028X-73.6.1085>

Gonzalez et al., (2020). <https://doi.org/10.1016/j.envint.2020.105760>

Manzoor et al., (2022). <https://doi.org/10.3389/fnut.2022.1047827>

TIP!

Check out farmers' markets for more cost-effective fresh produce. Bring re-usable bags, re-use old jars or re-use cardboard boxes to transfer these items.

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Avoid heating food in plastic containers

One simple thing you can do straight away is to avoid consuming hot food and beverages served in plastic or plastic-lined containers, such as takeaway containers and takeaway coffee cups. Microwaving food or drink in plastic containers can also release toxic chemicals and microplastics into food. If you need to heat up your food or drink, consider using a glass or ceramic/porcelain container or serving ware instead.

THE EVIDENCE:

<https://www.ohchr.org/sites/default/files/Documents/Issues/Environment/SREnvironment/ToxicWastes/CFI-lifecycle-plastics/fpf.pdf>

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TIP!

Second-hand shops, salvage yards and online community groups can be a great place to find affordable (even free!) pieces that are unique and plastic-free – even if they do require a little elbow grease/TLC to restore them.

Avoid plastic furnishings inside and outside of the home

Your living space can be filled with a surprising number of plastic furnishings. Where possible, avoid purchasing these items or consider replacing plastic furnishings, such as plastic shower curtains and plastic outdoor furniture, which can release toxic chemicals and microplastics with use over time.

THE EVIDENCE:

Andrady et al., (2023). <https://doi.org/10.1007/s43630-023-00377-6>

Bohlin-Nizzetto (2023). <https://hdl.handle.net/11250/3062306>

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Avoid synthetic lawn

Synthetic lawn can be another everyday source of toxic chemicals and microplastics (in the environment) because it breaks down with use and exposure to environmental conditions. Some councils in Australia have limited or banned the use of synthetic lawn in their communities. Speak to your local landscaper or garden centre (or call up a turf farm) for alternative ideas and advice on landscaping and gardening solutions. Native plants are always a good way to go!

THE EVIDENCE:

De Hann et al., (2023). <https://doi.org/10.1016/j.envpol.2023.122094>

Olshammar et al., (2021). <https://www.diva-portal.org/smash/get/diva2:1663995/FULLTEXT01.pdf>

TIP!

If you already have synthetic lawn in your garden or verge, follow the manufacturer's instructions and ensure it's well maintained because this can help reduce microplastic leakage into the environment.



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Thanks for reading our mini ebook. If it has been helpful and you would like an extended version, please let us know on socials.

