- Plastics



Plastic-free July

10 FACTS ABOUT MICROPLASTICS (AND HOW TO STEM THE FLOW)

Should we be worried about these tiny plastic particles? *VFL*'s editor Holly Johnson takes a look at what the latest research has to say

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1. SKIN DEEP

Often invisible to the human eye, these minute pieces of plastic are less than 5mm in size, and are not biodegradable. Some are manufactured to be small, such as in certain cosmetic products, while others are the result of larger plastics eroding.

The cosmetics industry is one of the largest contributors to the microplastics problem, and the EU has set deadlines for the phasing out of their use. Rinse-off products like shampoos and shower gels have a 2027 deadline, while leave-on products like make-up have until 2035.

TIP Unsure whether your cosmetics contain microplastics? You can download an app to scan your skincare products at beatthemicrobead.org.

2. A BREATH OF FRESH AIR

Microplastics are now present in our oceans, rivers, soil and even in the air we breathe. They've also been detected in rainfall and snow, as well as remote areas like the Arctic. Research suggests we could be inhaling up to 16.2 particles of plastic every hour.

TIP Minimise the amount of particles in your home by dusting and hoovering regularly. House plants can also help to purify the air.

3. IT'LL ALL COME OUT IN THE WASH

Synthetic fibres, like polyester and nylon, release thousands of microplastic particles into our water systems with each wash. The tiny plastic pieces can't easily be filtered, meaning they enter our waterways and eventually our drinking water.

TIP You can reduce microplastic shedding by avoiding synthetic fibres, but also by washing on a cool temperature setting with a full wash or by using a microfibre filter or wash bag. Avoid tumble drying where possible and hang your washing outside instead.

4. PLASTIC FOR TEA?

From bottled water to seafood and salt, microplastics are now present across our entire food chain. Evidence suggests these particles are able to enter our bloodstream and circulate throughout our bodies, and can even enter our organs. They've been linked to certain types of cancers, as well as decreased fertility, strokes and more.

TIP Skipping seafood is one of the best ways to avoid ingesting high levels of microplastics, but experts also recommend using a water filter, not heating food in plastic containers, switching to wooden chopping boards and not storing food in plastic containers – even if they're labelled BPA-free.

5. SINGLE USE BUT HERE TO STAY

Around 45% of our plastic packaging is now recycled in the UK, meaning 55% ends up in landfill or our oceans. Things like bottles and film are hard to recycle, meaning the flow of plastic continues to overwhelm our environment, breaking down into millions of smaller pieces. One exciting recent discovery by bio-engineering firm Biohm uncovered a type of fungus that eats plastic, while Australian scientists stumbled upon a 'superworm' which eats polystyrene. Discoveries like these offer hope for future solutions to our plastic problem.

TIP Avoid single-use plastic by shopping at local markets, signing up to a veg box delivery scheme, or buying loose fruit and veg in the supermarket instead of pre-packed. Refill cleaning and beauty products rather than buying virgin plastic in every shop.



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6. OUR PARENTS WERE RIGHT ABOUT GUM

Remember when your mum told you not to swallow gum, because it would stay in your stomach for years? She might not have been completely wrong. A new study by Queen's University Belfast has found over 250,000 microplastic particles in the saliva of participants who chewed a single piece of chewing gum for one hour. The majority of these tiny pieces of plastic were released in the first 20 minutes.

TIP Switch to a plastic-free chewing gum like Nuud, The Humble Co. or Georganics. Or go fully natural and use parsley or chopped carrots to freshen your breath!

7. CAN WE DETOX?

Knowing that our bodies contain microplastic begs the question: can we get rid of it? While there's little to no research on this yet, it makes sense that a nutritious plant-based diet – rich in antioxidants from things like cruciferous vegetables, berries, turmeric and green tea – helps the body to naturally flush out unwanted chemicals.

TIP Add chlorella and spirulina to your morning smoothies – although not yet proven for microplastics, there is evidence that they bind toxins and support detoxification.

8. STOOL STUDIES

A 2024 report published by Science Direct found that microplastics were present in human stool samples. Those consuming a more processed diet – and more foods packaged in plastic – had higher levels of microplastics in their stools.

TIP Try to cook from scratch as often as possible – avoiding too many ready meals or bottles of fizzy drinks.

9. BREAKING IT DOWN

In 2023, a study by Ocean Conservancy and the University of Toronto tested the release of microplastics during food storage. Particles were found in refrigerated food stored in plastic containers, but even higher amounts were found in foods reheated in the microwave while in plastic tubs.

TIP Store leftover food in stainless steel, bamboo or glass containers and reheat food in a stainless steel pan or air fryer instead.

10. WE'RE LEARNING ALL THE TIME

The good news is that us humans are pretty innovative. Advancements in detection technologies, such as AI-driven image segmentation (for sorting waste) and surface plasmon resonance sensors (SPR), are improving our ability to identify and quantify microplastics in various environments. And once we know the scale of the problem we're dealing with, we can really start to tackle it head-on.

TIP Look out for online petitions that call for more research and legislation against plastic production and how we deal with its impact on human health and the environment. And, of course, take the Plastic-Free July challenge at plasticfreejuly.org.