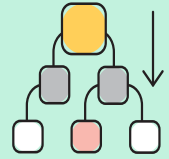


MICROPLASTICS

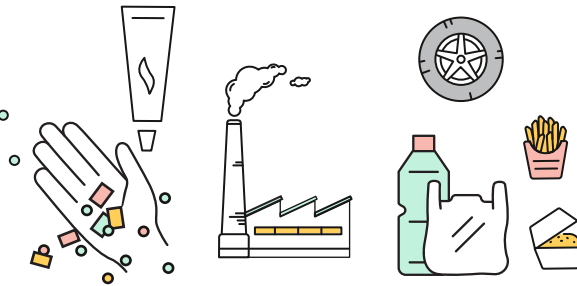


Microplastics (MPs), defined as plastic particles with a diameter of less than 5 μm , are among the most common pollutants in water, air, and soil. Despite their ubiquity, our understanding of their impact on human health is insufficient. However, we do know that plastic chemicals like BPA and phthalates, which are present in MPs, are associated with health issues such as allergies, brain-based disorders, and infertility in later life. While we cannot yet fully comprehend all the potential health impacts of consuming plastics, there is no evidence to suggest that they benefit our health. Therefore, it makes sense to avoid them whenever possible!

MECHANISM OF MICROPLASTICS IN THE ENVIRONMENTS

PRIMARY MPs

are tiny plastics designed for commercial use, such as microfiber of synthetic textiles, micro beads in cosmetics, pellets used for industrial manufacturing, etc.

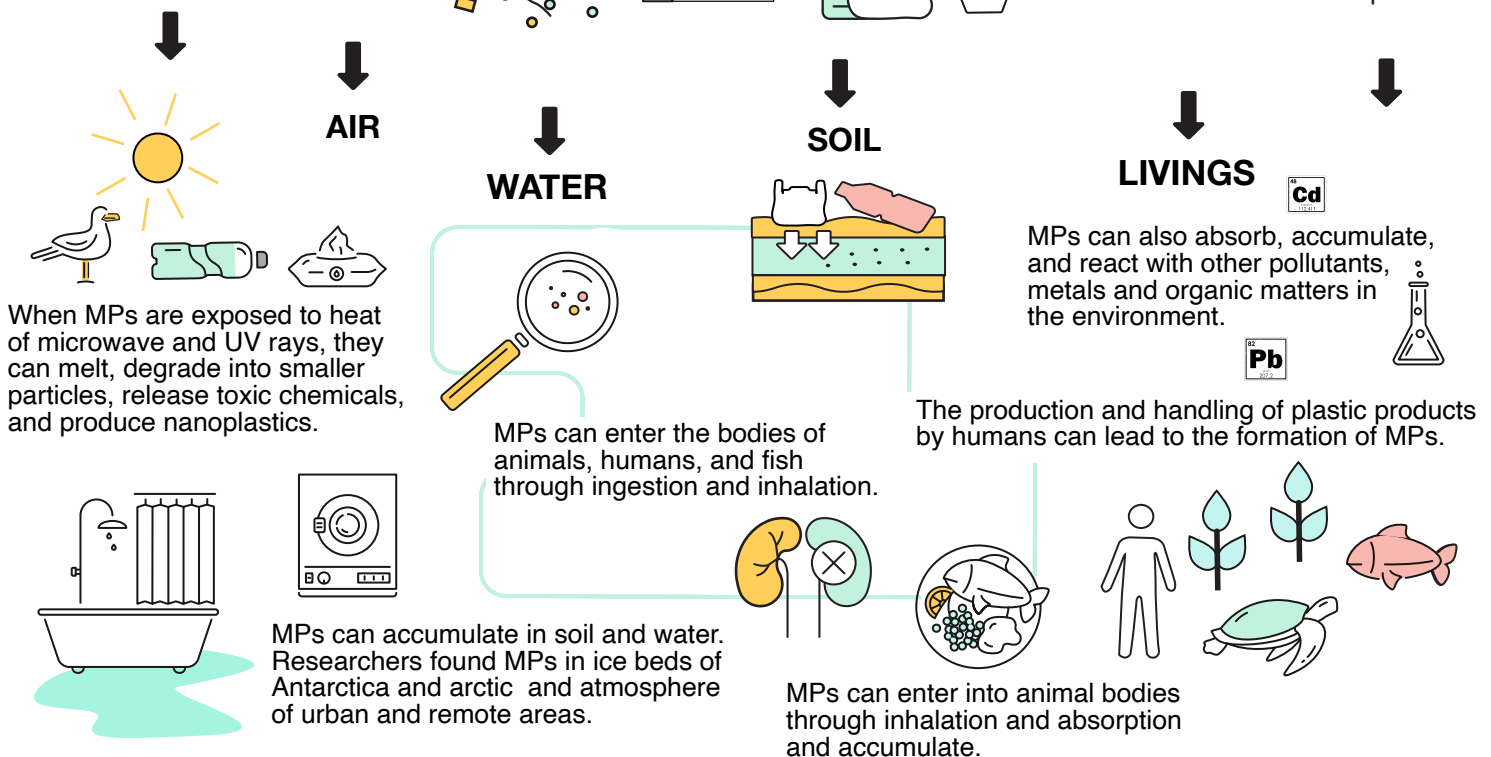


SECONDARY MPs

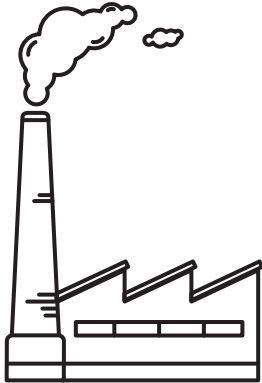
are particles that result from the breakdown of any plastic materials.

NANOPLASTICS

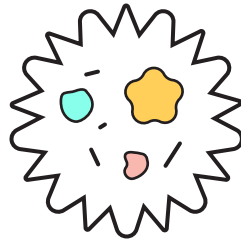
are defined as particles between 1 nm and 1 μm .



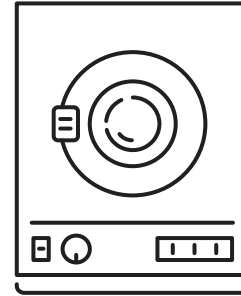
SOURCES OF MICROPLASTICS



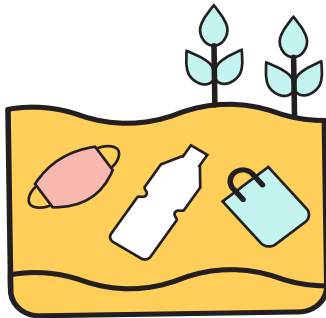
Manufacturing dusts



City and house dusts



Laundry lint



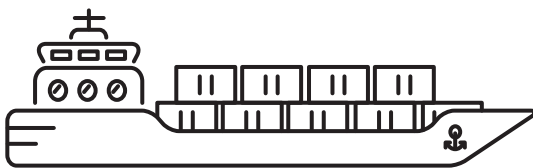
Weathered plastics



Road and tire markings



Micro beads in cosmetic products



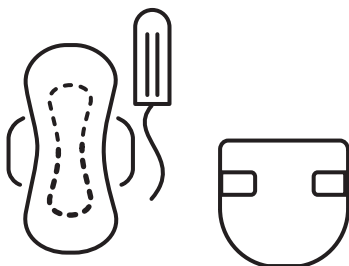
Marine paints, coating & fishing nets



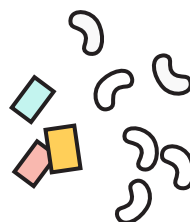
Fragmented plastic materials



Synthetic textiles



Sanitary products & Diapers



Packaging materials



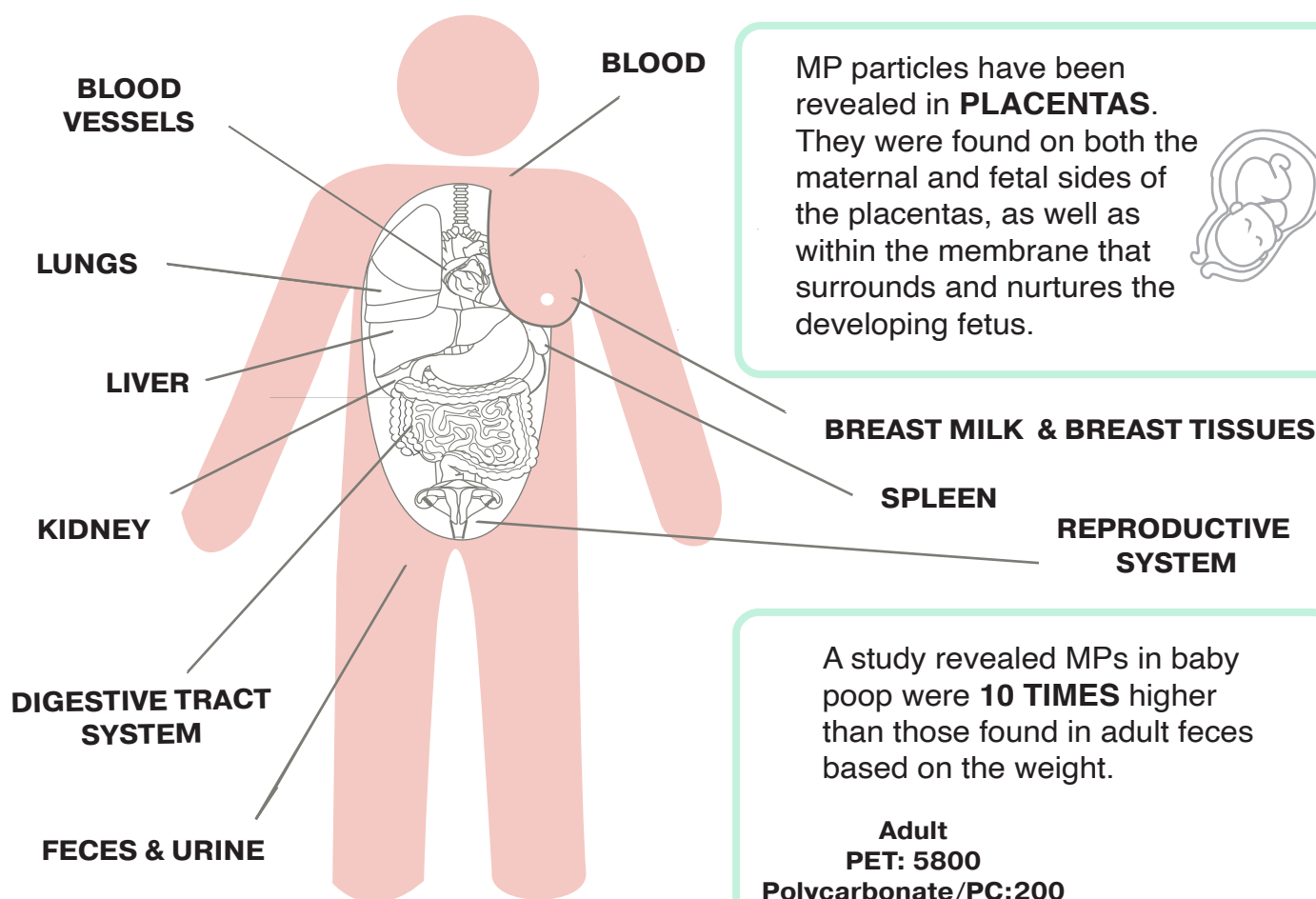
Plastic cups, straws, & utensils

WHERE IN THE HUMAN BODY HAVE MICROPLASTICS BEEN FOUND SO FAR?

According to a study, micro and nano plastics could be fragmented so small that they can be filtered through the cell membrane and possibly leak into the circulatory system.



MPs have been detected in human vascular tissue and blood, indicating that they may be able to enter human tissue via blood vessels.



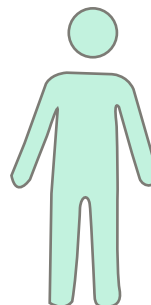
MP particles have been revealed in **PLACENTAS**. They were found on both the maternal and fetal sides of the placentas, as well as within the membrane that surrounds and nurtures the developing fetus.



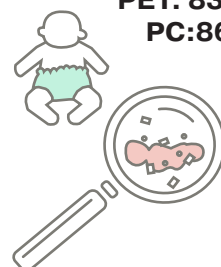
MP concentrations were found to be significantly higher in cirrhotic liver tissues compared to those without underlying liver disease. Six different MP polymers, ranging in size from 4 to 30 μm , were detected in the samples.

A study revealed MPs in baby poop were **10 TIMES** higher than those found in adult feces based on the weight.

Adult
PET: 5800
Polycarbonate/PC:200



Baby
PET: 83000
PC:860





EDUCATE CHILDREN ABOUT MICROPLASTICS AND RECYCLING

By teaching children about the impact of plastic waste on the environment and the importance of recycling, we can instill a sense of responsibility and environmental stewardship in the next generation.



WASH HANDS AFTER PLAYING & RETURNING HOME

Surface-level MP often stick to the skin when touching plastic toys, crawling on synthetic carpet, playing outside, or making crafts with synthetic material. As a result, Children may inadvertently ingest MPs by touching their faces or putting their hands in their mouths after playing with plastic items. By washing their hands, you can significantly reduce exposure.



USE GLASS BOTTLES INSTEAD OF PLASTICS

Similarly, using glass bottles instead of plastic bottles can help to reduce the risk of leaching and plastic fragmentation. Moreover, by reusing glass bottles, you minimize the amount of plastic pollution in the environment.

HOW TO AVOID MICROPLASTIC EXPOSURE



EAT FRESH UNPROCESSED FOOD

Eating unprocessed foods can be a simple and effective way to reduce the risk of MP exposure and promote overall health. By choosing whole, natural foods that are minimally processed and packaged, individuals can reduce the number of MPs in their diet and support a cleaner and healthier environment. In addition, don't forget to wash your fruits and vegetables.



REDUCE THE AMOUNT OF MPs PRODUCED FROM YOUR LAUNDRY

Washing synthetic textile always produces MPs. Wash with cold water with lesser detergent can reduce the amount of shedding. Installing a laundry filter can significantly reduce the amount of MPs released into air or water.



AVOID HYGIENE AND COSMETIC PRODUCTS WITH MICRO

Choose Personal Care products: avoid personal care products that contain MPs, such as exfoliating scrubs and toothpaste. instead choose products made with natural ingredients.



DRINK FILTERED WATER

Install a water filtration system or use a pitcher with a filter that helps reducing MPs.



AVOID EXPOSING PLASTICS TO HEAT OR SUNLIGHT

Thermal degeneration occurs when plastics get heated, such as being microwaved or left in a hot car. By avoiding heating plastics up, we prevent the leaching of plastics into food, water, etc., and reduce the fragmentation of plastics into smaller particles, including MPs. A simple example is choosing loose tea instead of tea bags.



WET-WIPE, DUST, AND VACUUM WITH A HEPA FILTER REGULARLY

Use a vacuum with a HEPA filter. Vacuuming with a HEPA filter can help reduce the amount of MPs and other particles in your indoor air. Wet wiping surfaces of your furniture removes MPs more efficiently than dry wiping.

HOW TO AVOID MICROPLASTIC EXPOSURE



CHANGE AIR REGULARLY, AND USE AN AIR PURIFIER WITH A HEPA FILTER

Indoor air tends to have higher MPs floating in the air than outdoor. Change air regularly by opening windows. Run a HEPA air purifier regularly.



AVOID SINGLE-USE PLASTICS

Studies indicate less than 10% of plastics have been recycled in recent years. Avoid single-use plastics such as straws, utensils, plastic bags, and cups. Consider alternative sources.



REDUCE, REUSE, & RECYCLE

Be a part of circular economy by recycling, reusing, and reducing.