My Drift

Title: Microplastics

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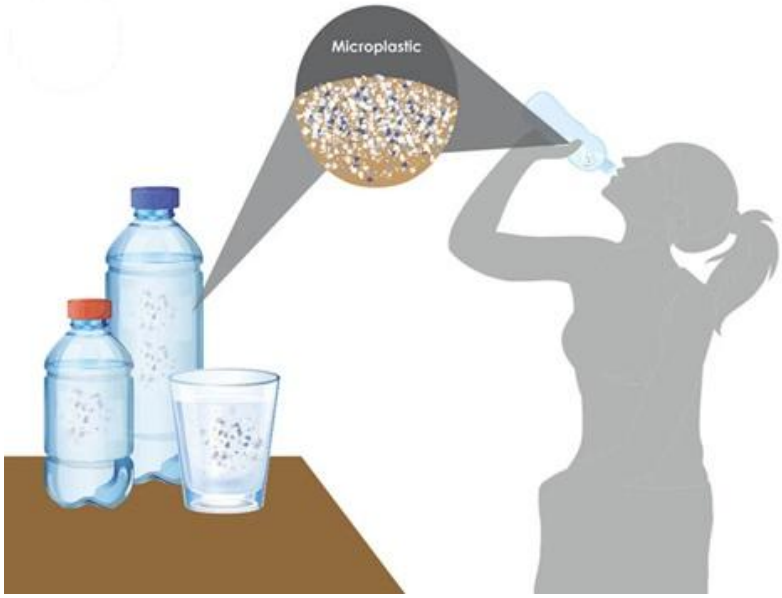
I admit that I have lived a sheltered life since I have never heard of microplastics along with many other things. Well, the other day I was having lunch with a good friend of mine, and she mentioned that microplastic might be a good topic for one of my articles. She also mentioned that microplastics is slowly killing us all. That sparked my interest so let's learn about this substance or whatever it is.



Did you know that one bottle of bottled water contains thousands of microplastic particles?

What the heck are microplastics?

AI Overview

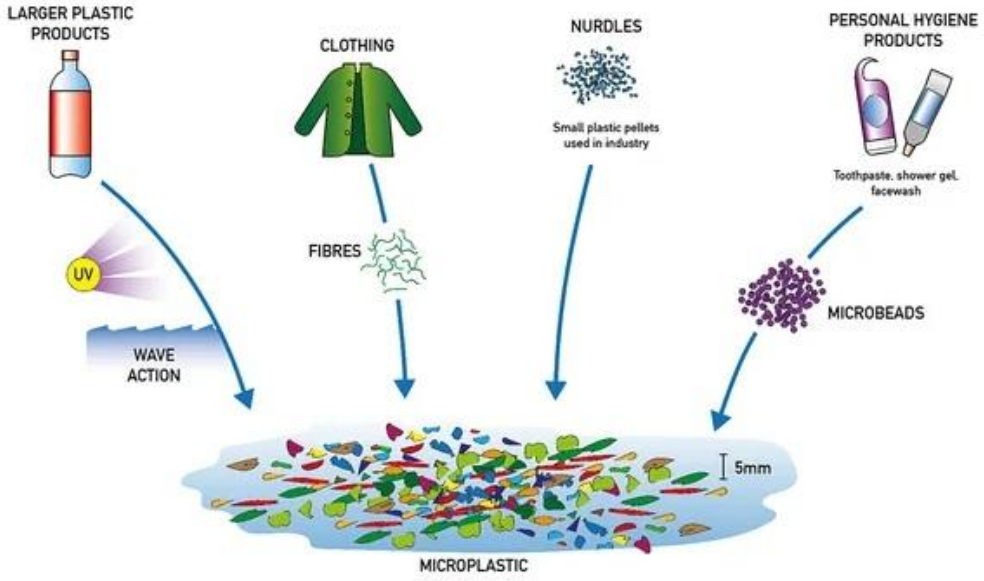
Microplastics are plastic particles smaller than 5 millimeters that contaminate the environment, food, water, and air. They originate from the degradation of larger debris (secondary) or are intentionally manufactured (primary) for products like cosmetics and industrial pellets. These particles can bioaccumulate, potentially causing endocrine disruption and toxicity in animals and humans.

Key Aspects of Microplastics

- **Size: Generally defined as being between 1 nanometer and 5 millimeters in size.**

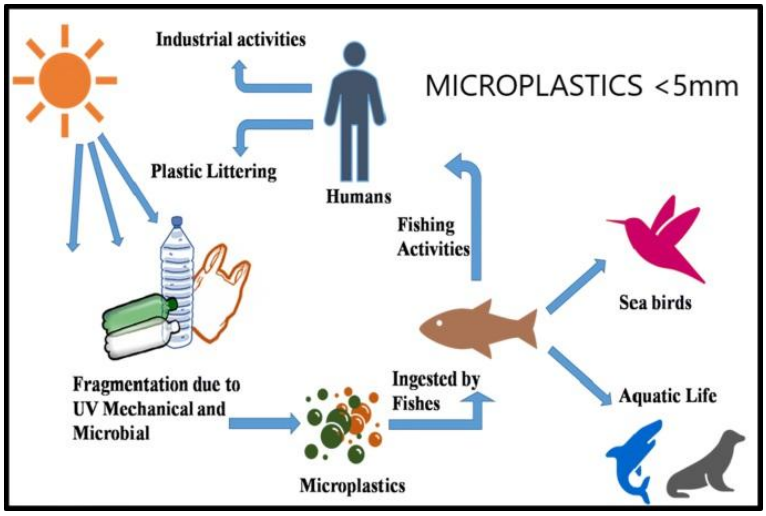
- **Types:**
  - **Primary Microplastics: Intentionally produced, such as microbeads in personal care products, nurdles (raw plastic pellets), and plastic glitter.**
  - **Secondary Microplastics: Formed from the breakdown of larger items like plastic bags, bottles, fishing nets, and synthetic clothing fibers due to UV light and weathering.**

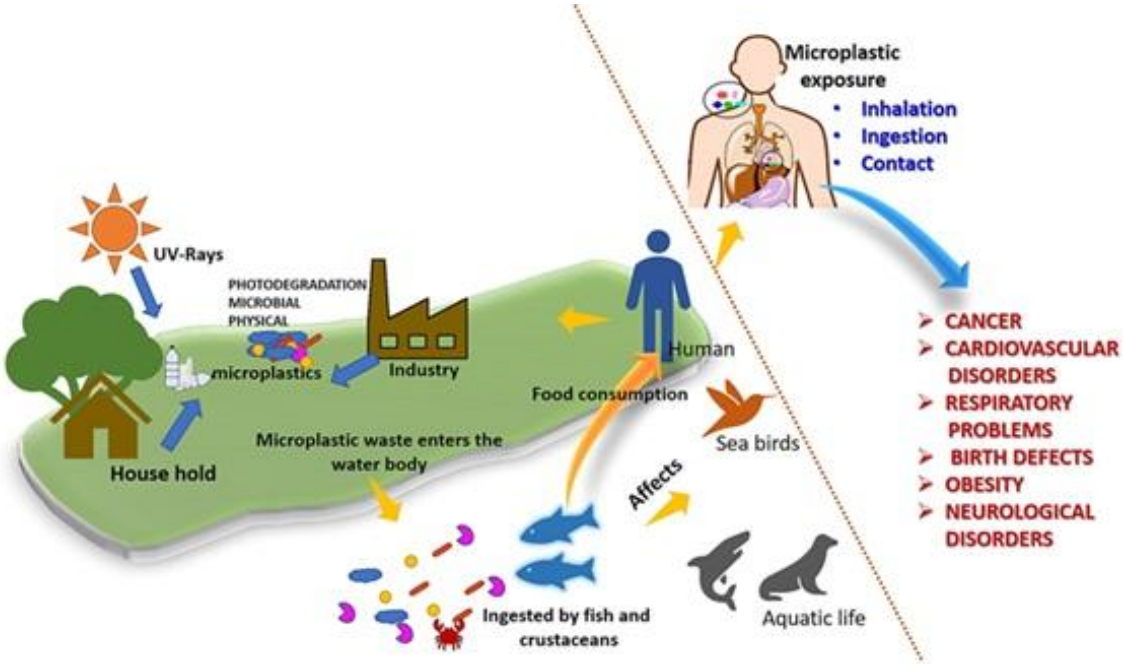
- **Common Sources:**
  - **Synthetic Textiles:** Polyester and nylon clothing shed fibers during washing.
  - **Tire Wear:** Vehicle tires degrade into microplastics on roads.
  - **Personal Care Products:** Exfoliating scrubs and toothpaste.
  - **Plastic Packaging:** Degraded food and beverage containers.



- **Environmental & Health Impact:**
  - **Ubiquity:** Found in oceans, soil, air, drinking water, and human tissues (e.g., lungs, placenta).

- **Toxicity:** Can carry heavy metals and organic pollutants, potentially causing inflammation, oxidative stress, and metabolic issues.
- **Wildlife Impact:** Mistaken for food by marine life, leading to potential starvation or toxic chemical ingestion.

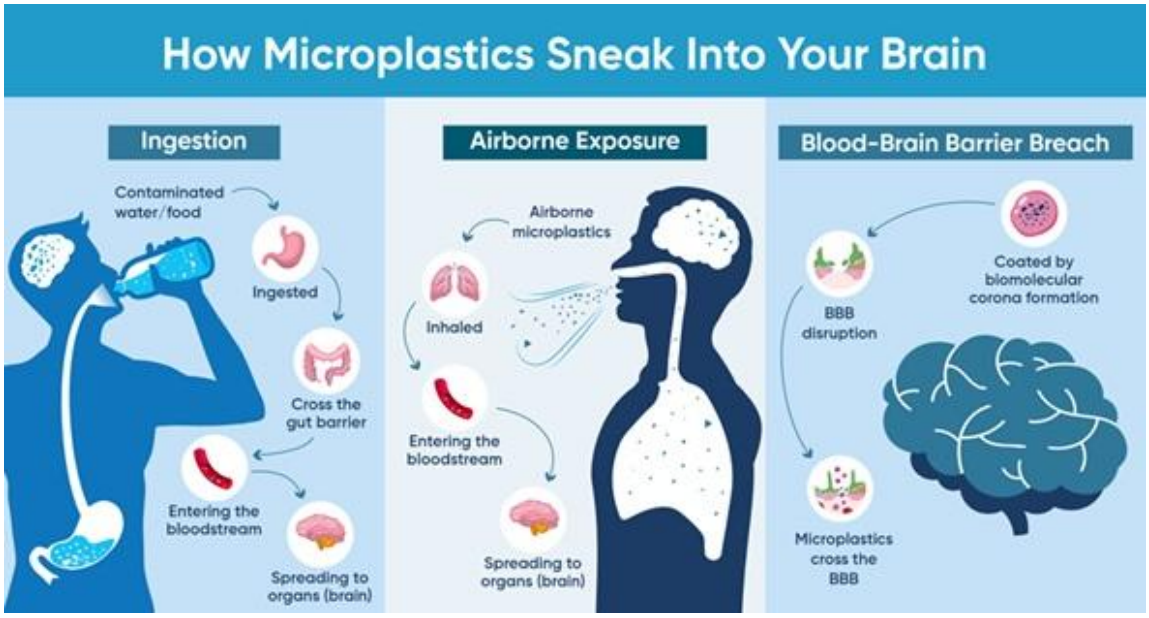




How to Reduce Exposure

Microplastics are everywhere—in our kitchenware, clothes, tea bags, chewing gum, air, and even our brains and hearts.

There are three primary ways you can be exposed to microplastics: through ingestion (eating and drinking), inhalation (breathing), and absorption (through the skin).



Here's some suggestions for how you can reduce your intake of microplastics:

- **Avoid plastic water bottles. Instead, use water bottles made of stainless steel or glass. Drinking out of plastic water bottles might seem convenient, but it's also an easy way for microplastics to potentially sneak into your body. Researchers have found that, on average, a liter of bottled water contains about 240,000 tiny pieces of plastic. That's a whole bunch of plastic you didn't sign up for.**
- **Don't microwave food in plastic containers. Heating can increase the breakdown of plastics, causing them to get into food. Use microwave-safe glass or ceramic containers for microwaving food.**
- **Leave space between plastic wrap and food. Don't allow plastic wrap to come into contact with food, especially in a microwave, where it could melt. As an alternative, use wax paper, parchment paper, or paper towels in the microwave.**
- **Store food in non-plastic containers. Leftovers should be stored in glass, ceramic, or stainless-steel containers instead of plastic. Likewise, wrap foods in aluminum foil instead of plastic wrap.**
- **Replace plastic kitchen items. For mixing bowls, spoons, cutting boards, and other kitchen items, products made of glass, wood, or metal are preferable. Silicone is a plastic, but it is less likely to shed microplastics than other types of plastic.**
- **Avoid non-stick cookware. Pots and pans with non-stick coatings may release microplastics, especially if the coating is scratched or damaged. Alternatives are cookware made of stainless steel, cast iron, or ceramics.**

- **Buy food in metal or glass containers.** Whenever possible, opt for food products packaged in non-plastic containers such as glass jars or metal cans.
- **Limit single-use plastics, such as plastic straws, cups, plates, and bags.**
- **Filter tap water.** Running drinking water through a reverse osmosis (RO) filter can reduce microplastics. Countertop filters are available that don't require any plumbing installation. Commercial bottled water can contain microplastics, so tap water and better yet filtered tap water is a better alternative.
- **Wear clothes made of natural fibers.** Spandex, polyester, and nylon clothes are made from plastics. Whenever possible, choose clothes made from natural fibers like cotton and wool.
- **Seek plastic-free cosmetics and toiletries.** Several brands make products that are not packaged in plastic and/or do not contain microplastics.
- **Don't let young children play with plastic toys.** Younger kids (up to age 3) tend to put toys in their mouths. Opt for wood toys or those made from natural fibers.
- **Buy organic produce.** Eating fruits and vegetables grown organically reduces exposure to pesticides, which can contain microplastics.
- **Limit consumption of shellfish.** Bivalves such as mussels, oysters, and clams filter water to get food and may have higher concentrations of microplastics in them.
- **Make your own cleaners.** Instead of using commercial cleaning products, which may contain microplastics, make your own cleaners from baking soda or vinegar. Check out these homemade cleaner recipes.

Protect Your Health and the Environment

While you're likely not eating a credit card's worth of plastic each week, microplastics are accumulating in your body through food and beverages you consume and products you use. Fortunately, there are many practical steps you can take to reduce your exposure to microplastics. Limiting the use of plastics can protect your health, and it will also help protect the environment.

Microplastics, plastic particles under 5mm have infiltrated the environment, seafood, and drinking water, with studies suggesting humans ingest substantial amounts weekly. They are linked to potential health issues like inflammation, cardiovascular disease, and reproductive problems. Environmentally, they persist in ecosystems, causing physical harm to marine life.

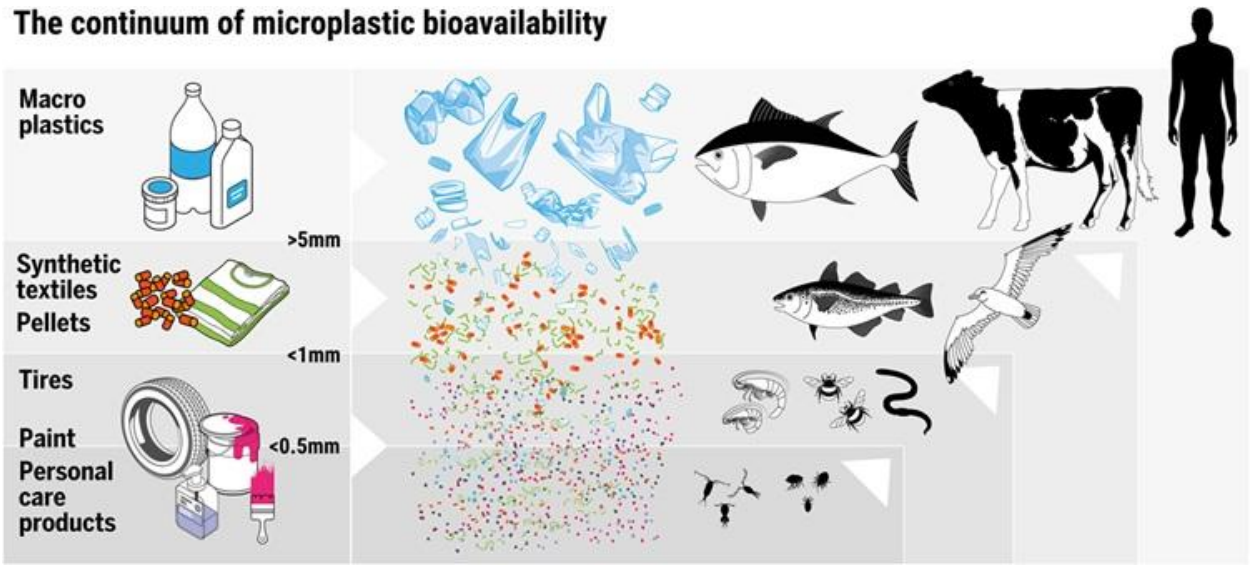
Health Impacts of Microplastics

- **Presence in Body:** **Microplastics have been found in human blood, lungs, liver, brain, heart, kidneys, feces, and placentas, suggesting widespread systemic exposure.**
- **Disease Risk:** **Exposure is linked to increased risks of heart attack, stroke, chronic inflammation, and cancer.**
- **Cellular/Organ Damage:** **Studies show they can cause oxidative stress, DNA damage, and metabolic disorders in human cells.**
- **Reproductive/Developmental:** **Exposure is linked to reduced sperm quality and potential developmental delays.**
- **Entry Routes:** **Ingestion (food, water) and inhalation are the primary routes of exposure.**

Once in the body, microplastics can bioaccumulate, meaning they can build up over time. Researchers are still investigating how microplastics break down inside the body. One study found microplastics in feces, implying that at least a portion of them can be excreted.

Environmental Impact of Microplastics

- **Persistent Pollution:** **They are found in oceans, soil, and air, and are nearly impossible to remove once released.**
- **Marine Ecosystem Damage:** **Marine organisms ingest them, causing physical obstruction and potential toxicity from plastic additives.**
- **Food Chain Contamination:** **They move through the food chain, carrying heavy metals or persistent organic pollutants with them.**
- **Microbiota Disruption:** **They can alter essential microbial communities in the environment.**



Microplastics: Are we facing a new health crisis?

There's a growing body of evidence about how widespread microplastics have become – across land, sea and air – and the impact they could be having on human health. It is estimated that people inhale 68,000 microplastic particles every day and some experts believe we are in the midst of a plastic health crisis.

Microplastics have now been detected throughout the human body – including the blood, lungs, liver and even lower limb joints. Scientists have found evidence of microplastics in our brains, and further studies have revealed how these microplastics are accumulating and rapidly rising.

So, is the human lifespan getting shortened by all these microplastics in the human body?

Emerging evidence suggests microplastics are likely affecting human health and potentially shortened lifespans by increasing the risks of cardiovascular disease, cancer, and chronic inflammation. Studies have linked high concentrations of microplastics in human tissues and blood with increased rates of heart attacks, strokes, and death.

How to get microplastics out of your body

There is currently no way to remove ALL microplastics from your body. There are no medicine or supplements available to do that. You can get rid of some of them by following the guidelines in this article.

Here is a recap

Removing microplastics from the body involves supporting the gut's natural elimination processes through a high-fiber diet, fermented foods, and increased hydration. Key strategies include consuming gel-forming fibers (like chia or flax seeds) that act as binding agents in the gut, eating kimchi for its plastic-binding probiotic bacteria, and using sauna/exercise to expel chemicals via sweat.

How to Support Removal and Reduce Accumulation:

- **Boost Fiber Intake: Soluble fiber helps trap microplastics and moves them out of the body through feces.**

- **Consume Fermented Foods:** Research indicates that lactic acid bacteria (specifically in kimchi) can bind to nanoplastics in the intestine and aid in their excretion.
- **Use Binders:** Natural adsorbents such as activated charcoal or bentonite clay may help bind toxins in the gut, aiding excretion.
- **Support Gut Health:** Repair the gut lining to prevent microplastic absorption into the bloodstream. Key nutrients include bone broth, collagen, zinc carnosine, and glutamine.
- **Sweat Regularly:** Regular exercise or using a sauna aids in excreting plastic-related chemicals like BPA and phthalates through sweat.
- **Stay Hydrated:** Consistent water intake helps kidneys flush waste from the blood.

Methods to Minimize Ongoing Exposure:

- **Avoid Heating Plastic:** Avoid microwaving food in plastic containers and steer clear of hot food in plastic packaging.
- **Choose Natural Fabrics:** Opt for clothing made from cotton, wool, or linen over synthetic materials like polyester or nylon, which shed fibers.
- **Filter Water & Dust:** Use high-quality water filters to reduce intake and frequently vacuum with a HEPA filter to remove microplastics found in household dust.

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