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Human Health & Drinking Water

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Human Health & Drinking Water

Cover Page Footnote

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Human Health & Drinking Water



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Abstract

How plastic pollution affects our environment and our own health.

Human Health & Drinking Water

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Plastic in our environment



Plastic has found multiple ways into the environment that eventually enter the body. Ingestion and inhalation are two of the main pathways. Microplastics can be found in many food and drink items such as honey, sugar, beer, seafood, and even our drinking water. Plastics outside of the body can accumulate toxic chemicals and heavy metals such as lead and cadmium. Once ingested or inhaled, these microplastics can release toxic chemicals they were holding. In addition, plastics as a whole contain additives that interfere with hormone systems and can be cancer causing.

Drinking Water

Drinking water has been known to be contaminated from industrial processes like fracking. This can be attributed to chemical spills and improper handling of wastewater. Up to 81% of tap water in 14 countries show levels of microplastics. Compared to tap water, bottled water has levels of microplastics almost two times higher. Similar to plastic food packaging, the plastic bottles release particles into the water.

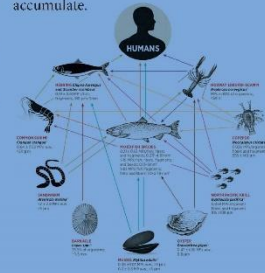


Micro Plastics

Microplastics in the body are able to move throughout organs and accumulate. Accumulation can cause inflammation, tissue damage, and cell death. A study done in mice showed that plastic in the body causes changes in metabolism, neurotoxic effects, and stress which can be related to human health. Once these plastics accumulate in the body, they unfortunately show high resistance to being broken down.

Plastic in our body

Uptake of microplastics into humans through eating seafood. Larger aquatic organisms accumulate more plastic particles from their food, which we then eat and accumulate.



Example of Multiple Pathways for Human Exposure to Microplastics through Seafood

Ways in which plastics enter the body through various multiple pathways. Plastic in the body has many harmful and lasting effects.

