



MICROPLASTICS IN OUR WATER...?

Think about a day that you don't use plastic. Do you think you could actually get through a day where you don't use any type of plastic at all? Our use of plastic is as commonplace as our use of water. Look around where you are right now; do you see any plastic? The use of plastic products has become so convenient that for us to do without it (or even use plastics less) seems daunting, but this huge convenience has now broken down into a world-wide problem for our water and soil quality.

Microplastic pollution (MP) has been found around the world. Researchers have found them in our oceans, lakes and streams, in our aquifers (news.illinois.edu/view/6367/743561), in our soil, in several foods and even floating in the air (Ohio State University OSU.EDU). Microplastics are the result of the continual breakdown of plastic sources into smaller and smaller pieces until they are able to transport anywhere (by water or wind). Most of these plastics can only be seen with a microscope.

Studies of the MP problem began in the 1970s and primarily focused on its impact on our oceans, but we have quickly learned that the magnitude of this issue is much bigger than expected. "Tiny plastic beads used in hundreds of toiletries like facial scrubs and toothpastes are slipping through water treatment plants and turning up by the tens of millions in the Great Lakes. There, fish and other aquatic life eat them along with the pollutants they carry - which scientists fear could be working their way back up the food chain to humans." (New York Times Dec 14, 2013). Also, "MP is present in 90 percent of table salts tested worldwide". (Dayton Daily News Oct 21, 2018 & Environ. Sci. Technol. 2018, 52, 21, 12819-12828)

Other significant sources of MPs come from washing synthetic clothes, the abrasion of tires on the road, road marking materials, plastic pellets (the raw plastic prior to product creation) and litter. (Dris R., Gasperi J., Tassin B. (2018) Sources and Fate of Microplastics in Urban Areas: A Focus on Paris Megacity. In: Wagner M., Lambert S. (eds) Freshwater Microplastics. The Handbook of Environmental Chemistry, vol 58. Springer, Cham & Primary Microplastics in the Oceans: A Global Evaluation of Sources. Gland, Switzerland: IUCN. 43pp. 2017). These microscopic pieces have found their way into our waters and soil now for decades.

BUT (AS ALWAYS) WE CAN BE PART OF THE SOLUTION!

You can help by:

1. Avoid products with "micro beads"
2. Buy clothes made from organic materials
3. Use cloth bags for shopping
4. Don't buy bottled water! Use clean tap water instead
5. Switch to glass or metal drinking & eating containers
6. Use real dishes for parties, not plastic
7. Pack your lunch in reusable containers, not in baggies
8. Use non-plastic containers to microwave food
9. Buy products with minimal plastic packaging
10. Shop at your local farmer's market
11. Eliminate "single-use" items - straws, cups, bottles, bags, etc.

FOR MORE INFORMATION:

owi.usgs.gov/vizlab/microplastics ■ u.osu.edu/extensioncd/tag/microplastics ■ epa.gov/trash-free-waters/toxicological-threats-plastic