Microplastic Map Reveals Countries Consuming the Most

Story by Pandora Dewan • 2mo • 3 min read

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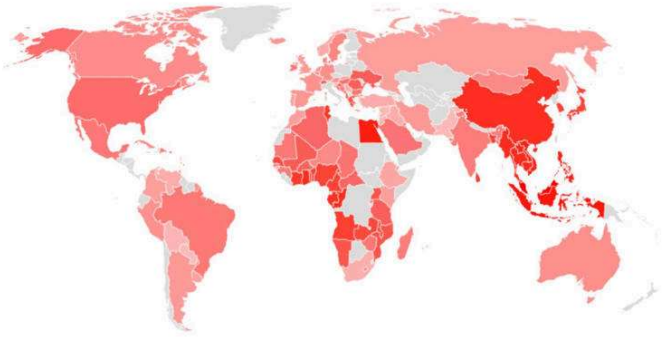

A map shows the dietary microplastic intake ranking of 109 countries around the world.

Scientists have revealed which countries have the highest consumption of microplastics through our food and through the air. So how does the U.S. compare?

Microplastics refer to any plastics smaller than 5 millimeters long. They can be found in industrial waste and beauty products or may form during the degradation of larger pieces of plastic waste.

These plastic particles contain chemicals that can interrupt our body's natural release of hormones, potentially increasing our risk of reproductive disorders and certain cancers. They can also carry toxins

The problem is, microplastics are all around us—in our food, our water, and even our air. In fact, by some estimates, we ingest about a credit card's worth of plastic every single week. However, how much we ingest varies significantly depending on our location.

In a recent study, published in the journal *Environmental Science & Technology,* scientists from Cornell University examined data from around the world to determine which countries had the highest exposure to microplastics through different methods of ingestion.

Microplastic exposure depends on a variety of different parameters, the study's co-author, Fengqi You, told *Newsweek*. Direct factors include dietary microplastic uptake, which is influenced by local food cultures and their microplastic concentrations; and airborne microplastic uptake, which is determined by the amount of microplastics suspended in the air.

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Indirect factors include economic and regulatory support for the monitoring and limitations of microplastics in foods and packaging materials, and industrialization rates and waste generation.

Dietary Intake of Microplastics

When it comes to dietary intake, countries in Southeast Asia such as Indonesia, Malaysia and the Philippines topped the charts. In fact, according to the study, Indonesians eat about 15 grams of microplastics every month, more than any other country, with the majority coming from aquatic sources such as seafood. By comparison, dietary intake in the U.S. was roughly 2.4 grams per month.

The lowest dietary microplastic intake was seen in Paraguay, with 0.85 grams per month.

Microplastic Inhalation

When it comes to microplastic inhalation, Mongolia and China came in joint first place, with citizens of both countries inhaling more than 2.8 million microplastic particles a month. The United Kingdom came in third place, in joint place with Ireland, inhaling 791,500 particles

per month. By comparison, the U.S. came in near the bottom of this list, in position 104 out of the 109 countries assessed, with only 10,500 microplastic particles inhaled per month.

"Compared to other major plastic consumers in Asia, the U.S. has a lower level of microplastics but still demands attention as it could increase with rising plastic use," You said. "This situation could improve if more advanced plastic waste recycling and water management processes are adopted to limit microplastic generation and exposure in natural environments and foodstuffs."

Even so, microplastic exposure is still a concern in the U.S. "Microplastic human uptake, as a direct environmental consequence of post-consumption plastic waste in the current industrialization era, is a novel concept and a newly discovered phenomenon worth further investigation," You said.

"Given its wide distribution and unavoidable risks across all global regions, the severity of microplastic uptake may at least equal that of airborne particulate matter or other ingested foreign particulates."

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So what can you do to minimize how much microplastic you ingest? "Use non-plastic reusable materials, especially containers like glass and metal cups, during food processing, storage, and consumption to reduce microplastic contamination from foodstuffs," You said.

The dangers posed by these particles is still somewhat of a mystery, and You said that more work needs to be done to understand how much of a threat microplastic pollution is to human health.

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