# Concerns grow over microplastics and brain health



Health concerns surrounding microplastics have gained serious attention following recent studies linking these microscopic particles to potential brain health issues. Researchers have discovered significant amounts of microplastics in the human brain, with those suffering from dementia exhibiting levels three to five times higher than their non-demented counterparts. This discovery, labelled "alarming" in a study published in Brain Medicine, highlights the growing prevalence of these particles in our environment and food.

In a separate piece shared by Get Surrey, Dr Eric Berg, a nutritionist and health educator, has raised concerns specifically about tea bags, many of which contain plastic materials that may leach microplastics into beverages. In his video titled "Critical: detoxify your brain from microplastics," Dr Berg emphasises that the brain accumulates more microplastics than any other organ, affecting health over time. "The brain accumulates the most microplastics of all the organs; it accumulates seven to 30 times more microplastics than the liver and kidneys," he stated.

Recent findings from the University of New Mexico indicate the average brain contains about seven grams of microplastics—a figure that has increased by 50% compared to similar studies conducted in 2016. The particles predominantly come from common plastic materials, with tea bags identified as a contributor due to the polypropylene used in sealing them. According to a study published by the American Chemical Society, plastic tea bags can release billions of fragments into tea. Research from McGill University further quantified the issue, revealing that a single plastic tea bag can emit approximately 11.6 billion microplastic and 3.1 billion nanoplastic particles into a cup of tea.

“Given the widespread presence of microplastics in the environment, completely eliminating exposure is unrealistic,” noted experts from the findings in Brain Medicine. However, they recommend taking practical steps to reduce sources of contamination, particularly recognising that tea bags are a significant concern due to the transition from paper to plastic materials by many manufacturers.

Dr Berg's recommendations for reducing microplastic ingestion include opting for natural tea bags free from plastic, with a push towards brands that use fully biodegradable materials. He advises that consumers should look for bags made from organic cotton or those free from chemicals like epichlorohydrin, which are used to enhance durability. Additionally, he spoke about the necessity of quality sleep, fasting, and diet rich in antioxidants as ways to manage and detoxify the body from microplastics.

The ramifications of consuming microplastics are still under scrutiny, as studies have pointed towards various health implications, including their presence in air and seafood. One study conducted by Environmental Science and Technology identified bottled water as a significant source of microplastics, along with air pollution and seafood consumption. Transitioning from bottled water to tap water could dramatically lower the intake of these particles for consumers.

Research indicates that even food prepared in plastic containers can channel microplastics into the body. The potential health risks linked to high plastic consumption underscore the emphasis on finding alternatives to plastic in everyday items and food storage practices.

The exploration into microplastics' effect on human health is ongoing, with breakthroughs anticipated as researchers develop improved methods of measuring and studying these particles in living humans.

Source: [Noah Wire Services](https://www.noahwire.com)

## References

* <https://ryaninstitute.uri.edu/microplastics/> - This URL supports the claim that microplastics can affect brain health by crossing the blood-brain barrier and inducing cognitive changes in mice, similar to dementia symptoms. It highlights the growing concern over microplastics' impact on human health.
* <https://www.smithsonianmag.com/smart-news/the-human-brain-may-contain-as-much-as-a-spoons-worth-of-microplastics-new-research-suggests-180985995/> - This article corroborates the finding that microplastic levels in the human brain are increasing over time and are higher in individuals with dementia. It also notes that microplastics accumulate more in the brain than in other organs like the liver and kidneys.
* <https://www.aamc.org/news/microplastics-are-inside-us-all-what-does-mean-our-health> - This source discusses the health implications of microplastics, including their presence in the brain and potential links to cognitive decline. It emphasizes the need for further research on human health effects.
* <https://www.sciencedirect.com/science/article/pii/S0043135421001104> - This study from McGill University quantifies the release of microplastics from plastic tea bags, supporting the claim that tea bags are a significant source of microplastic contamination in beverages.
* <https://pubs.acs.org/doi/abs/10.1021/acs.est.9b04641> - This article from the American Chemical Society supports the claim that plastic tea bags can release billions of microplastic fragments into tea, contributing to human exposure.
* <https://www.pubs.acs.org/doi/abs/10.1021/acs.est.8b02236> - This study highlights bottled water as a significant source of microplastics, supporting the recommendation to transition from bottled to tap water to reduce exposure.