

Cardiovascular Effects of Micro Plastic Exposure in the Environment and Human Diets

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DESCRIPTION

In recent years, the issue of micro plastic pollution has gained significant attention worldwide. These minuscule plastic particles, measuring less than five millimeters in size, have infiltrated every corner of our planet, from the deepest ocean trenches to the air we breathe. While their environmental impact is well-documented, a new concern is emerging: The potential cardiovascular effects of micro plastic exposure.

Micro plastics originate from various sources, including the breakdown of larger plastic items, synthetic fibers shedding from textiles, and microbeads in personal care products. Once released into the environment, these particles persist for hundreds of years, continually fragmenting into smaller pieces. As a result, micro plastics have become ubiquitous, contaminating not only aquatic ecosystems but also terrestrial and atmospheric environments.

The journey of micro plastics from the environment to our dinner plates is a complex one. These tiny particles are ingested by marine organisms, making their way up the food chain. Eventually, they find their way into seafood, which is a significant source of protein for billions of people around the world. Additionally, micro plastics can enter our bodies through contaminated water and air, further exacerbating the issue.

Cardiovascular health at risk

While the direct health effects of micro plastic exposure on humans are still being studied, there is growing concern about their potential impact on cardiovascular health. Researchers are beginning to explore the various mechanisms through which micro plastics could affect the cardiovascular system.

Inflammation and oxidative stress: Studies have shown that micro plastics can trigger inflammation and oxidative stress in the body. Chronic inflammation and oxidative stress are known risk factors for cardiovascular diseases like atherosclerosis, heart attacks, and strokes.

Disruption of hormonal regulation: Some types of micro plastics

contain endocrine-disrupting chemicals that can interfere with hormonal regulation in the body. Hormonal imbalances have been linked to heart diseases, particularly in women.

Impaired blood flow: Micro plastics can accumulate in blood vessels, potentially leading to the narrowing and hardening of arteries. This condition, known as atherosclerosis, is a primary contributor to cardiovascular diseases.

Blood pressure regulation: Emerging research suggests that micro plastics might influence the regulation of blood pressure, potentially leading to hypertension, another risk factor for heart disease.

Human diets and micro plastics

A significant concern arises from the presence of micro plastics in our food and water. Seafood, such as fish and shellfish, is a primary source of micro plastic exposure through diet. Studies have shown that these particles can accumulate in the tissues of marine organisms, raising concerns about the long-term health implications for seafood consumers. Moreover, micro plastics have been detected in drinking water, including bottled and tap water. Plastic pollution has reached such alarming levels that micro plastics are now a part of our daily water intake. The potential health consequences of this continuous exposure are still not fully understood.

CONCLUSION

Micro plastics have emerged as a global crisis with far-reaching consequences, including potential cardiovascular effects on human health. While research on this topic is still in its infancy, the evidence suggests that micro plastic exposure may contribute to the development of heart diseases. To safeguard our cardiovascular health and the well-being of future generations, it is crucial that we take immediate action to reduce plastic pollution and mitigate our exposure to these tiny, yet potentially harmful, particles. The time to address this hidden threat is now, as the consequences of inaction may prove catastrophic in the long run.

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