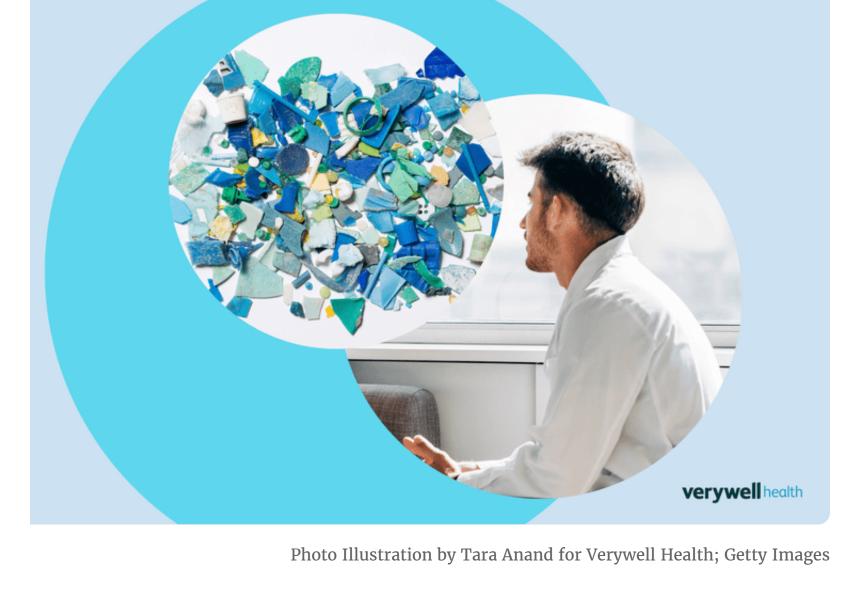
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Scientists Found Microplastics in Human Testicles. What Does It Mean for Male Fertility? By John Loeppky | Published on May 30, 2024

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Researchers found microplastics in all human and canine

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Key Takeaways

Higher concentrations of certain microplastics, like PVC, in dog testes were associated with lower sperm counts and testis weights.

three times more microplastics than those from dogs.

testes samples tested, with human samples containing nearly

- Microplastics, which can carry endocrine-disrupting chemicals and heavy metals, could interfere with sperm production, but more research is needed to understand their full impact.
- When microplastics first came to the attention of the health community, researchers were mainly concerned about their impact on marine life.

body, from blood to lung tissues. [1] A recent study published in the journal Toxicological Sciences identified

Increasingly, microplastics are now a topic of concern for human health.

Researchers have found microplastics in almost every part of the human

The human testes had almost triple the amount of microplastics than canine testes. The researchers chose to test samples from dogs because both dogs and humans have shown a historical decline in sperm count, and dogs tend to share similar environmental exposures to humans. [2]

microplastics in all 23 human testis samples and 47 testes from pet dogs.

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All of the samples tested contained at least one of 12 microplastics, with

the highest average concentrations found being polyethylene (found in

Other commonly used plastics detected were polyvinyl chloride (in PVC

piping), polyurethane, polyethylene terephthalate (PET, widely used in

plastic bags and films), and acrylonitrile butadiene styrene (ABS).

food and drink containers), and polypropylene. Related: Can Boiling Tap Water Get Rid of Microplastics? Amy Pearlman, MD, a board-certified urologist at Florida's Prime

reproductive issues as having a lot of comorbid conditions," Pearlman told Verywell. "But what about the guy who looks very healthy, comes into the office, has no other comorbid conditions, but still has drastic issues going

on with his hormones and reproductive health?"

"We typically think about guys who have abnormal hormones or

She said the patient's environment is usually what comes into mind,

besides the possibility of idiopathic low testosterone. However,

Institute, said these results are unsurprising but alarming.

microplastics are rarely discussed as a risk factor for reproductive health. The number of testes samples was limited in this study, and researchers had minimal background information on the cause of death for the human subjects. They also cited the small sample size as a reason to broaden and diversify future studies.

The study found that dog testes with higher concentrations of certain

polymers, such as PVC, were associated with lower sperm counts and

testis weights. However, it can't prove microplastics had led to these outcomes. Related: Bottled Water Is Full of Tiny Plastics. Here's How to Make It Safer for Drinking

Consortium, scientists concluded that microplastics can carry endocrine-

disrupting chemicals, heavy metals, and pesticides. These chemicals could

essential for regulating reproductive processes. [3] Pearlman suggested that future studies could include testicles removed during gender-affirming surgery or following conditions such as prostate

cancer.

it."

3 Sources +

interfere with sperm production and the body's hormones, which are

In a 2022 systematic review by the California State Policy Evidence

Since micro and nanoplastics are ubiquitous, how should scientists study the impact of these particles on human health when it's nearly impossible to find a control group of people with no microplastics in their bodies? "I think it's tough, too, because it reminds me of nutrition studies,"

Pearlman said. "How do you figure out the impact of certain nutrients on

even quantify how someone objectively reports their exposure to plastics?

Most people have no idea about all the different places they interact with

health? And a lot of it is based on [self-reporting data]. So, how do you

Although the risk to reproductive health remains unclear, Pearlman said that simple actions, like using fewer plastic bags, could reduce one's exposure to microplastics. "When I think about how I store my food, now I'm using more glass

versus plastic containers," Pearlman said. "When I am drinking water,

I'm trying to reduce my water intake from a plastic bottle."

studied, it's a good idea to minimize your exposure. Simple actions, like choosing paper over plastic bags and using glass containers instead of plastic ones, can help reduce the amount of microplastics you encounter in your daily life.

While the full health implications of microplastics are still being

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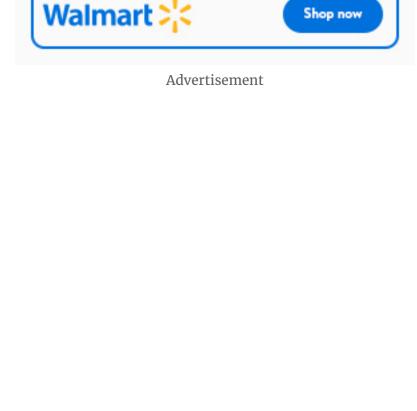
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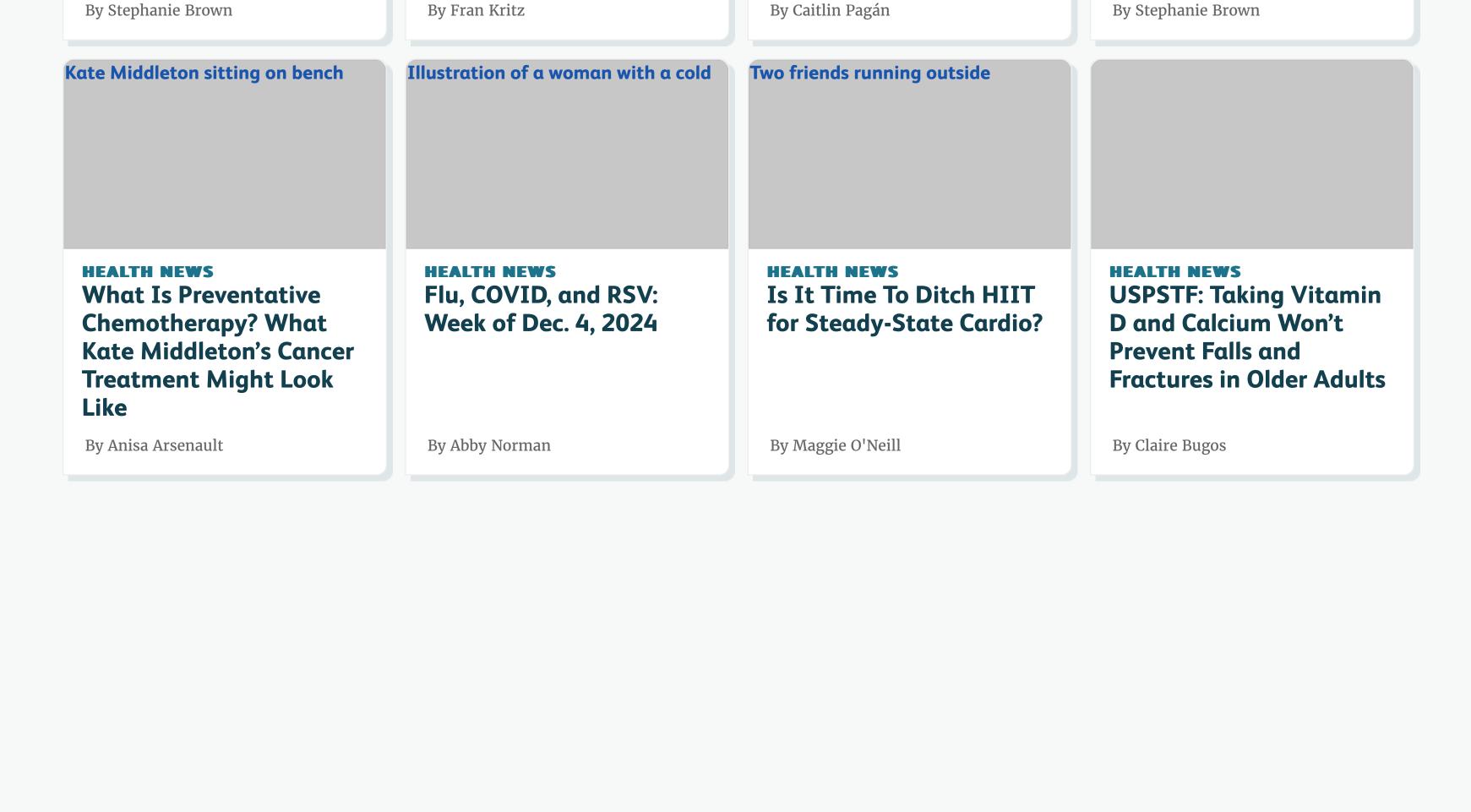
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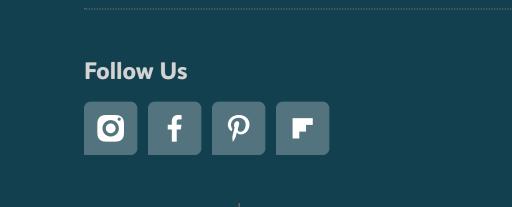


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