

Study Finds Microplastics in Most Prostate Tumors

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STORY AT-A-GLANCE

- › Researchers found microscopic plastic particles embedded in 90% of prostate tumor samples, with cancerous tissue containing about 2.5 times more plastic than nearby healthy prostate tissue
- › Microplastics enter your body through everyday exposure – including food packaging, plastic containers, synthetic clothing fibers, contaminated air, and drinking water – allowing these particles to circulate through organs
- › Scientists suspect that once trapped in tissues, microplastics trigger chronic inflammation that damages cells and increases the risk of genetic mutations that lead to cancer
- › You can significantly reduce your exposure by avoiding heated plastic food containers, improving indoor air filtration, filtering drinking water, choosing natural fiber clothing, and avoiding personal care products that contain plastic ingredients
- › Strengthening mitochondrial energy production by eliminating seed oils, consuming adequate carbohydrates and maintaining sufficient protein intake supports your body's ability to repair cellular damage caused by environmental toxins such as microplastics

When researchers at NYU Langone Health examined cancerous prostate tissue under specialized laboratory equipment, they found something they weren't looking for: microscopic fragments of plastic embedded inside the tumors. The discovery, reported in February 2026, adds a disturbing new variable to a disease that already affects 1 in 8 American men.¹

Prostate cancer begins in the prostate gland – a small organ below the bladder that produces fluid for semen – and early stages often develop silently. When symptoms appear, they frequently include difficulty urinating, weak urine flow, pelvic discomfort, or sexual dysfunction. Once the disease progresses beyond the prostate, treatment becomes far more complicated, and survival rates decline sharply.

Now a troubling discovery adds a new dimension to the conversation. Researchers at NYU Langone Health examined prostate tissue from men undergoing surgery to remove cancerous prostates and found something unexpected: microscopic plastic particles embedded in the tissue.² The findings raise urgent questions about whether everyday plastic exposure plays a role in one of the most common cancers affecting men.

Plastic contamination isn't confined to landfills and ocean gyres – it's happening inside your kitchen, your closet, and your bathroom. Everyday items such as food packaging, cosmetics, and consumer plastics break down into microscopic particles called microplastics.

These fragments enter your body through food, air, and even skin contact. Previous research has already detected microplastics in organs throughout the human body, including the lungs, bloodstream, and placenta, which shows that these particles circulate widely once they enter your system.

Microplastics Detected in Most Prostate Tumor Samples

A study presented during the American Society of Clinical Oncology's Genitourinary Cancers Symposium in February 2026 examined an unsettling question: Do **microscopic plastic particles** accumulate inside prostate tumors? The research team focused on identifying whether plastic fragments existed inside the tumors and whether levels differed from nearby healthy tissue.

- **Tumor samples contained plastic in nearly every case examined** – When researchers evaluated tumor tissue from 10 prostate cancer patients, they detected microplastics in 9 of the 10 samples – a 90% contamination rate. Even nearby

noncancerous prostate tissue showed contamination, with plastic particles detected in 70% of benign samples. These findings demonstrate that plastic fragments circulate throughout the prostate environment once they enter the body.

- **Cancerous tissue contained far higher plastic concentrations** – Tumor tissue contained dramatically higher amounts of plastic compared with surrounding healthy prostate tissue. On average, cancer samples contained about 40 micrograms of plastic per gram of tissue. In contrast, the nearby benign tissue averaged roughly 16 micrograms per gram.

That means tumor samples contained approximately 2.5 times more plastic than the healthy prostate tissue collected from the same patients. This comparison raises a simple but important question for your health: why would cancer tissue accumulate more plastic than normal tissue? Researchers view this imbalance as an early signal that environmental pollutants interact with the biology of tumors.

- **Scientists examined common plastic chemicals inside the tissue** – Researchers searched specifically for 12 of the most widely used plastic molecules that appear in consumer products. Using specialized laboratory equipment, they identified the chemical composition and structure of the particles embedded in the prostate tissue. This approach allowed scientists to confirm that the particles truly came from plastic materials rather than contamination from other substances.

To make the analysis more reliable, the team used extremely careful handling procedures. Standard laboratory tools contain plastic components that could contaminate samples. Researchers replaced these materials with aluminum instruments, cotton supplies, and other nonplastic equipment. They also processed the tissue inside "clean rooms," which are highly controlled environments designed to prevent airborne plastic contamination during testing.

- **Plastic exposure comes from everyday products you encounter daily** – Plastics break down into smaller particles when exposed to heat, friction, or chemical reactions. Food packaging, plastic containers, cosmetics, and synthetic materials

all contribute to this breakdown process. Once plastics fragment into microscopic pieces, people ingest them through food, inhale them from the air, or absorb them through the skin.

Consider a single morning. You wake up wrapped in polyester sheets that have been shedding plastic fibers into the air all night. You walk barefoot across carpet made from synthetic materials. In the kitchen, you **microwave yesterday's leftovers** in a plastic container, pour coffee into a plastic-lined travel mug, and pack lunch in a plastic bag.

By the time you leave the house, you've already inhaled, ingested, and absorbed plastic particles from a dozen different sources – and the day has barely started. Multiply that morning by 365 days and then by decades, and you begin to understand how these fragments **accumulate in organs** like the prostate over a lifetime.

- **Scientists believe chronic inflammation may drive the damage** – Researchers suspect microplastics trigger inflammation inside organs. Inflammation refers to your body's immune response when it encounters something foreign or harmful. Short bursts of inflammation help your body heal injuries. Long-term inflammation, however, damages cells and disrupts normal tissue function.

Plastic fragments trapped in tissue act like tiny irritants. The immune system detects these particles and activates defensive responses around them. These immune cells release reactive oxygen species – aggressive molecules that act like friendly fire, damaging not just the foreign particle but also the DNA of nearby healthy cells.

Over long periods this reaction stresses surrounding cells. Damaged cells accumulate genetic errors. When those errors build up, the normal controls that regulate cell growth break down. That breakdown forms cancer cells.

Dr. Stacy Loeb, the study's lead author and a professor at NYU Grossman School of Medicine, emphasized the significance of the discovery, stating, "Our pilot study provides important evidence that microplastic exposure may be a risk factor for prostate cancer."

The researchers also pointed out that plastic pollution has become nearly unavoidable. Senior study author Vittorio Albergamo explained that plastic contamination now exists throughout the environment, noting, "Our findings highlight the need for stricter regulatory measures to limit the public's exposure to these substances, which are everywhere in the environment."

How to Reduce Microplastics Exposure and Restore Cellular Energy

Stricter regulations may take years to materialize. In the meantime, you're still eating, breathing, and drinking in a world saturated with plastic. The good news is that many of the highest-exposure pathways run directly through choices you make every day — what you store food in, what you wear, what filters you use, and how you fuel your cells. While you can't eliminate every microscopic particle, you can dramatically reduce the total burden your body has to manage.

Plastic fragments now show up in human organs, including prostate tumors. That discovery moves plastic pollution from an environmental concern into a direct health issue. You can approach this challenge in two ways: lower the amount of plastic entering your body and strengthen your cellular energy systems so your tissues repair damage efficiently.

When your mitochondria — the small energy generators inside every cell — produce energy effectively, your body maintains stronger defenses against inflammation, oxidative stress — a state where damaging molecules overwhelm your cells' repair capacity — and cellular injury. When mitochondria run efficiently, your cells have the energy to detect damage, repair DNA, and clear out toxins.

When they falter, that maintenance backlog grows. If you want to lower your risk, start with practical changes that cut daily plastic exposure while strengthening your metabolism. Small decisions repeated every day accumulate powerful benefits over time. The steps below address the main drivers discussed in the research.

- 1. Eliminate hidden microplastic exposure in clothing, air, and dust** — If you wear **synthetic fabrics** such as polyester, nylon, or acrylic, microscopic plastic fibers shed from those materials constantly. These fibers float through **indoor air** and **enter your lungs** without you noticing. Drying synthetic clothing indoors releases even more airborne plastic particles. Switch to natural clothing materials whenever possible.

Cotton, wool, linen, and hemp release far fewer synthetic fibers into the air. If you already own synthetic clothing, wash those items less often because each wash releases thousands of plastic fibers into water and air. Line drying clothing also lowers fiber release compared with heated drying cycles. Laundry bags designed to capture microfibers trap loose plastic fragments before they escape into the environment.

- 2. Avoid heating food in plastic and switch to safer storage** — Heat breaks plastic down rapidly and releases microplastics and nanoplastics into food. Many people expose themselves daily by microwaving leftovers in plastic containers or drinking hot beverages from plastic-lined cups.

Replace plastic food containers with glass or stainless steel storage whenever possible. Transfer food out of plastic before reheating meals. Avoid plastic wrap when heating leftovers and avoid placing hot liquids into plastic bottles or cups. These simple adjustments reduce a major source of plastic contamination entering your diet.

- 3. Filter the air you breathe and the water you drink** — Air and water represent two major pathways for plastic exposure. Indoor air often carries plastic fragments from clothing fibers, dust, and household materials. Drinking water also contains small

plastic particles that pass through many municipal filtration systems.

Install high-efficiency particulate air (HEPA) filtration in the rooms where you spend the most time, especially bedrooms and work areas. Choose filters designed to capture extremely small particles such as PM2.5, which includes microscopic plastic dust. Household dust also contains large amounts of plastic debris.

Vacuum regularly with a sealed HEPA system and wipe surfaces with a damp cloth so particles remain trapped instead of floating back into the air. At the same time, install a high-quality water filtration system capable of removing particles down to the micron level. These upgrades reduce the amount of plastic that enters your body through breathing and hydration.

- 4. Avoid personal care products that contain plastic ingredients** — Many cosmetics and personal care products contain microscopic plastic particles. Face scrubs, exfoliating cleansers, toothpaste, and thickened lotions often include ingredients such as polyethylene or polypropylene. These compounds function as microbeads or texture stabilizers.

When you apply these products to your skin, plastic particles come into direct contact with your body. During rinsing and drying, fragments disperse into the air or water. Choose personal care products that avoid plastic-based ingredients. Reading ingredient labels carefully helps you identify these additives and select cleaner alternatives.

- 5. Strengthen cellular energy by improving diet and mitochondrial health** — Microplastics represent one source of cellular stress, but they don't act in isolation. When your mitochondria are already compromised by other factors — such as seed oils high in oxidation-prone **linoleic acid** (LA) — your cells have fewer resources to handle the additional burden of plastic-induced inflammation.

Strong **mitochondrial energy production** improves your body's ability to repair damage and maintain cellular balance. I view impaired mitochondrial function as a major contributor to chronic disease, including cancer.

Begin by removing seed oils. These oils, including soybean oil, canola, corn, sunflower, safflower, grapeseed, cottonseed, or rice bran oil, interfere with mitochondrial energy production and increase oxidative stress. Replace them with stable fats such as grass fed butter, ghee, or beef tallow and avoid ultraprocessed foods and most restaurant meals, which often contain these unhealthy oils.

Next, support your metabolism with adequate carbohydrate intake. Many adults function best with roughly 250 grams of carbohydrates daily. Active individuals often require more. Start with whole fruit and white rice.

As your tolerance improves, you can expand into well-cooked root vegetables, then non-starchy vegetables, starchy vegetables like sweet potatoes or squash, beans, legumes, and, finally, minimally processed whole grains. If bloating, pain, or loose stools appear, back down and proceed gradually.

Adequate protein intake also supports tissue repair. Aim for about 0.8 grams of protein per pound of lean body mass, or 1.76 grams per kilogram, with approximately one-third of that coming from collagen-rich sources like bone broth, slow-cooked meats with connective tissue, or a quality collagen supplement. I'm also developing a detox solution designed specifically to address microplastic exposure.

This project reflects one of the most urgent health challenges of our time. My forthcoming book explores how microplastics affect virtually every organ system — and lays out a comprehensive protocol for reducing your body's plastic burden while restoring cellular resilience. Lowering plastic exposure while strengthening mitochondrial energy production gives your body a stronger foundation for long-term cellular health.

FAQs About Microplastics and Prostate Cancer

Q: What did the new study discover about microplastics and prostate cancer?

A: Researchers analyzing prostate tissue from men undergoing cancer surgery found microscopic plastic particles in 90% of tumor samples. Microplastics also appeared in 70% of nearby noncancerous prostate tissue.

Even more concerning, cancerous tissue contained about 2.5 times more plastic — roughly 40 micrograms per gram of tissue compared with about 16 micrograms per gram in healthy tissue. These findings show that plastic fragments accumulate inside the prostate and appear in higher concentrations within tumors.

Q: How do microplastics enter the human body?

A: Microplastics form when larger plastic materials break down through heat, friction, or chemical exposure. These microscopic fragments enter your body through food, drinking water, air, and skin contact. Heating food in plastic containers, drinking from plastic bottles, breathing indoor air filled with synthetic fibers, and using personal care products containing plastic ingredients all contribute to exposure.

Q: Why are scientists concerned about microplastics in prostate tumors?

A: Researchers suspect microplastics irritate tissues and trigger chronic inflammation. Inflammation is your body's immune response to foreign substances. While short-term inflammation helps healing, long-term inflammation damages cells and disrupts normal tissue function. Over time this damage allows genetic errors to accumulate, which contributes to the development and growth of cancer cells.

Q: What are the most effective ways to reduce microplastic exposure?

A: Switch from synthetic fabrics to natural materials like cotton or linen, avoid heating food in plastic containers, and use glass or stainless steel instead. Improve indoor air quality with HEPA filtration, vacuum regularly with a sealed filter system, filter your drinking water, and choose personal care products that avoid plastic ingredients such as polyethylene or polypropylene.

Q: How does improving mitochondrial health help protect against environmental toxins?

A: Your mitochondria generate the cellular energy required for tissue repair and detoxification. When mitochondrial energy production declines, your body struggles to repair cellular damage caused by environmental pollutants. Eliminating seed oils rich in LA, consuming adequate carbohydrates, and maintaining sufficient protein intake supports mitochondrial function and strengthens your body's ability to recover from environmental stressors such as microplastic exposure.

Sources and References

- [1, 2 NYU Langone Health February 23, 2026](#)