NEW YORK STATE | Climate Smart Communities
Certified Silver
New Lebanon

Microplastics and your health

- Microplastics: tiny plastic particles (<5 mm) found in air, water, food, and soil. They pose emerging health concerns for people of all ages.

Key exposure routes
- Ingestion: seafood, drinking water, salt, and food packaged or processed in plastic.
- Inhalation: airborne fibers and dust indoors and outdoors.
- Dermal contact: from some personal-care products (less evidence of absorption through intact skin).

Potential health effects (current evidence)
- Inflammation and immune activation in the gut and lungs.
- Oxidative stress and cellular damage from particle interactions.
- Endocrine disruption from plastic additives (e.g., phthalates, BPA) that may leach from particles.
- Chemical transport: microplastics can carry absorbed pollutants (PCBs, pesticides) into the body.
- Tissue translocation: very small particles (nanoplastics) may cross biological barriers and reach organs.
- Microbiome changes: emerging evidence for shifts in gut microbes that affect health.
- Respiratory irritation from inhaled fibers; long-term outcomes still under study.
- Increased vulnerability for infants, pregnant people, children, elderly, and those with chronic diseases.

What's still unknown
- Long-term human health impacts, safe exposure levels, and cumulative risks remain uncertain — research is ongoing.

Practical steps to reduce exposure
- Use certified water filters, prefer tap water when possible.
- Reduce single-use plastics and highly packaged foods.
- Wash synthetic clothing in a filter bag and reduce tumble-drying.
- Damp-dust and vacuum with HEPA filters to reduce indoor dust.
- Choose personal-care products without plastic microbeads and limit products with known additives.