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The Next STEP

Toward a Healthier Future

A Bi-monthly Newsletter of the Sebastopol Toxics Education Program

Keeping Plastics Out of Our Bodies & World

Certainly, most of us wouldn't eat plastic intentionally. Yet studies suggest that we are, and regularly!

In a 2019 study by the University of Newcastle, Australia, researchers gathered data from over 50 studies of microplastics in human food and beverages. They concluded that, on average, people are consuming about 5 grams of plastic every week — the weight of a credit card! Our actual total consumption could be much higher, since just a small number of dietary sources have been studied, and the researchers didn't include packaged products and other exposure routes such as inhalation.

Adding to concern is a 2018 study by scientists from the Medical University of Vienna, the first study of its kind, which showed that plastics are getting into our guts. (The study tested for, and found, tiny plastic pieces in every participant's stool. Eeps!)

These researchers estimated that each participant passed 800 to 1,000 pieces of microplastic every day. While larger studies are needed, they estimated that more than half of the world's population might have plastic passing through their bodies.

Where's the Plastic From?

So how are these plastics getting into our bodies? Studies have found them in seafood, salt, sugar, honey, drinking water, and beer — but most foods haven't been tested. Plastics could also come from our food packaging, dishware, various kitchen and household items — and the environment at large.

That's because we're producing 400 million tons of plastic a year globally, and much of that goes into our homes and shared ecosystems — including at least eight million tons of plastic waste (mostly single-use) flowing into the world's oceans annually. Plastic has been found in the world's most remote areas — and accumulating in ocean spirals, such as the Great Pacific Garbage Patch.

And, because plastics are nearly always made of petroleum, they don't biodegrade. Instead, they break down into smaller and smaller pieces and infiltrate, well, everything. They also can soak up and carry harmful toxic chemicals within them.

As a result, plastic pollution impacts the natural environments of most species on the planet, according to the nonprofit WWF (World Wide Fund for Nature, formerly World Wildlife Fund). Animals (including mammals, reptiles, birds, and fish) regularly get tangled in large plastic debris, leading to injury or death. Plus, microplastics have been found in nearly every fish and aquatic animal tested, even ones from deep oceans. These plastics have been found to block animals' digestion, damage internal organs, inhibit brain activity, impair immune systems, harm breeding, and cause or contribute to their deaths.

*See **Plastics**, over*

It's Our Birthday!!

With this issue, we're celebrating 19 years of publishing *The Next STEP (TNS)!*

Our goal with this innovative City project is to nurture a healthier Sebastopol for everyone by reducing our exposure to toxics.

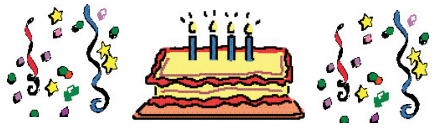
Thus, we help folks reduce the toxics in all areas of our lives — including our homes, schools, businesses, parks, food, and environment.

TNS is produced by a small team of local citizens, working on a volunteer basis (which keeps costs very low) because we support this goal. We're grateful to the City Council and staff for acting in the community's best interest with this project.

Now we need your help! Please fill out the enclosed survey card to give us your feedback about our efforts.

Also let us know how we can best support your toxics reduction in the coming year, including any questions, tips, story ideas, or success stories. (The Feedback card is also in the City's online bill paying system.)

We want to hear from you! Your support makes this project possible. Thank you!



Did You Know?

***The Next STEP* costs the City almost nothing**. Created entirely by volunteer efforts, and with no added postage expense, its primary cost is copying. This is literally a drop in the bucket of Sebastopol's $19 million annual budget. Given the consistent evidence that common toxics are harming us all, this is a bargain for our shared health, now and long into the future.

Plastics, continued

Human Health Impacts?

So are the microplastics in our bodies impacting our health? Human studies are sparse. However based on related human studies plus animal studies, experts are concerned that microplastics in our bodies could damage our immune systems, trigger inflammation, upset gut balance, disrupt endocrine hormones, increase cancers, decrease sperm counts, and bring in toxics such as mercury or pesticides.

Vienna researcher Dr. Schwabi says, "the smallest microplastic particles are capable of entering the bloodstream, lymphatic system, and [might] even reach the liver."

"We're running this big human experiment on how they will affect us," warns Alice Bernard, a lawyer for the environmental advocacy group ClientEarth. And, if we keep increasing our plastic use and pollution, experts say, our exposure and risk will also just keep increasing.

What We Can Do

Certainly plastic has its appropriate uses and can offer advantages, including moldability, durability, water resistance, and reduced weight. However, it often isn't needed, and swapping to better options can help keep it out of our bodies, homes, waterways, wildlife, and ecosystems.

Here are some things you can do to reduce your exposure and trim the unnecessary harm from plastics.

ABOUT STEP

The Next STEP (TNS) is published six times a year by the **Sebastopol Toxics Education Program** (STEP). **STEP is a project of the City of Sebastopol**, implemented by local citizen volunteers. **STEP's mission** is to support city residents in reducing their toxic use and exposure, creating a healthier and safer Sebastopol for everyone.

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■ **Choose food products with less or no plastic packaging**.

■ **Skip single-use plastics.** Studies have found plastic particles in nearly all bottled water brands. And single-use items are a key source of waste. Plastic bottles, bags, and straws are among the most common plastics found in our ecosystems! All for just a brief moment of use.

So get cloth shopping bags and a refillable stainless steel bottle or coffee mug. Skip plastic straws and coffee pods, reuse your produce bags — or get reusable versions of these. Bring washable dishware to potlucks. Gift these items to others! Also, find options to single use plastics at work, school, and events. And get multiple uses out of any plastic you have.

■ **Buy from the bulk aisle, ideally into your reusable containers.** See my tips for reducing your waste with the bulk aisle at *www.patriciadines.info/EcoGirl4a.html*.

■ **Avoid "silken" tea bags. Instead choose "plastic-free" paper teabags or reusable options.** So-called "silken" teabags are actually made of nylon or polyethylene. When brewed, they can release billions of microplastic particles into a cup, according to a published study from McGill University in Montreal. This level far surpasses what's found in other tested foods. The human health impacts are unknown. But water fleas exposed to them had "significant behavioral effects and developmental malformations," says study co-author, Nathalie Tufenkji.

Plastic can also be hidden in paper teabags, as a sealant or paper reinforcement. Learn more at *www.treadingmyownpath.com/2018/04/05/plastic-teabags.*

So choose "plastic-free" teabags. (Check product labels or company websites.) Or prepare loose leaf tea with a stainless steel strainer or infuser. (Sebastopol's Rosemary's Garden has lovely options!) Or get a pretty mug with a built-in strainer.

■ **Dispose of plastics properly, and encourage others to do the same.** Many plastic containers can go into your blue recycling can. Discard plastic bags in the special bins at grocery stores. At least keep these items out of our environment! Also, provide recycling receptacles at your work, school, events, and more. Make signs to help folks drop items into the right bin.

■ **Prioritize wearing natural fiber clothing.** Microfibers regularly shed from nylon, acrylic, and polyester cloth, and are commonly found in the environment. These fibers can enter waterways directly or through washing machine wastewater.

■ **Support government and community-level action to reduce plastic waste and litter.** That's key for larger-scale change.

SOURCES: For this article with its sources, plus more information and tips, see www.healthyworld.org/plastics2.html.

Timely Toxic Tips

■ **The next Sebastopol Toxics Collections Day is April 7**, from 4 to 8pm. To make an appointment, call 707/795-2025 or 877/747-1870 at least 24 hours before the event. You can also drop items at the Household Toxics Facility.

■ **For more about local toxics disposal**, see *www.zerowastesonoma.gov*. Or call 707/565-3375.

"Your article on apple trees is just what we needed for our four apple trees. Lots of good advice, including the proper disposal of infested apples. Thank you very much!"

~ Carol Goodwin Blick

Got a pest problem? Or a toxics question?

The STEP Online Index can help! It makes it easy to look up your topic of interest and find our well-researched, condensed, and useful information — to help you get up-to-speed and into action. It also makes it easy to share this information!

www.healthyworld.org/STEP