

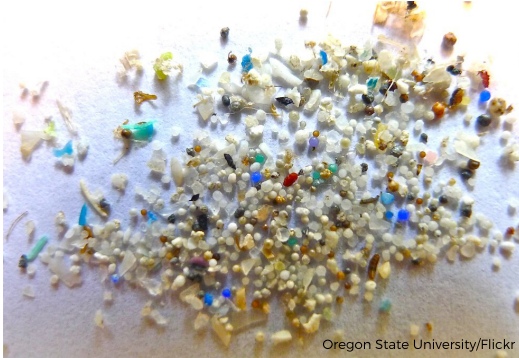
SUSTAINABILITY CHALLENGE

PLASTIC PLEDGE
JUNE 2020 - WEEK 4



DISCOVER>

EXPOSURE AND EFFECTS OF PLASTIC ON HUMAN HEALTH



Oregon State University/Flickr

Our 4th and final week of June's Sustainability Challenge focuses on how plastic affects human health. Humans are exposed to plastic particles such as microplastics (less than 5 millimeters) and nanoplastics (less than 100 nanometers) as well as chemical additives leaching out of the plastic. **We ingest micro/nanoplastics** through animal sources such as seafood that have accumulated plastic particles in their bodies as well as other food items like beer and honey ([Revel et al. 2018](#)). These small plastic particles are also present in our drinking water (see [this report](#) for more detailed information), and we can even be exposed through inhalation ([Revel et al. 2018](#)). While some studies have detected microplastics in our food, water, and air, far less is known about health impacts.

As far as leaching, there are many chemicals of concern known as **endocrine-disrupting compounds** because of their ability to affect the endocrine system. Some of these include bisphenol A (BPA), polybrominated diphenyl ethers (PBDE), and phthalates. These chemicals make plastic more durable and flexible yet can leach out of the plastics during use, disposal, or when heated or scratched ([Talsness et al. 2009](#)).

Because some studies with these chemicals raise concern for human health (see [this study](#) for a full review), it is best to limit our exposure to these chemicals in plastic and strive to find and use alternatives to plastic.

ADJUST >

TIPS TO PROTECT YOUR HEALTH

While we don't know all the specifics of how plastic may be affecting our health, we do know enough to be concerned. It is best to reduce our use of it as well as alter how we use it.

Do Not Heat Plastic - Heating plastic can release endocrine-disrupting chemicals into your food/drink. If you do need to heat something up, use glass.

Use Glass or Stainless Steel - Store food and beverages in glass or stainless steel containers. When you carry a reusable water bottle, make sure it's either of these materials. Even BPA-free bottles can leach other potentially harmful chemicals.

Use Reusable Cutlery - Whether you're getting take-out or eating out, bring your own reusable fork and spoon. Some cutlery sets even come with a knife, straw, and chopsticks, but no need to buy something if you can use a set from home. Plastic cutlery is not recyclable, and this is a simple way to avoid chemicals from the plastic. (*We're giving away sets like this one pictured here each monthly challenge!*)

If Using Plastic for Food, Focus on the Safer Ones - If you choose to use plastic in some instances, use plastic with codes #1, 2, 4, and 5 as these are deemed safer ([see guide](#)).

Pick up Litter - Yes, we've said this one before, but for such a simple act, it has so many benefits. Picking up litter prevents plastic from getting in our waterways and turning into micro/nanoplastics. Leave an area better than you found it by picking up trash!

Be a Conscious Consumer - When you purchase items, choose or use less plastic packaging. There are endless ways to do this such as buying in bulk, making things, eating more fresh and less processed food, supporting companies who use less plastic, using reusables such as reusable produce bags, etc. Companies take note of what consumers are doing and asking for!



GO BEYOND >

GO DEEPER

Want to learn more? Here are just a few resources:

- [Smart Plastic Guide](#) - A concise guide for understanding different types of plastic and health concerns with each one
- [Plastic and Health](#) - A very detailed yet user-friendly report on how plastic affects our health
- [CDC's Factsheet on Phthalates](#) - A short summary on some of what we know about phthalates
- [Waste-Free PhD](#) - A well researched blog featuring articles on health and plastic.
- [12 Cheap and Easy Tips to Reducing Waste](#) - A video talking you through ways to reduce your waste (particularly plastic waste)
- Documentaries on Plastic:
 - [A Plastic Ocean](#) (1h 42m)
 - [Plastic is Forever](#) (20m)
 - [Bag It](#) (1h 18m)