

Q&A About Pharmaceutical Impacts on the Environment

Q: How are pharmaceuticals in the environment impacting fish and wildlife?

A: While we don't know all of the specific impacts of medications on fish and wildlife, we do know that they are present in our aquatic systems.

Q: So, if we don't know the impacts, what's the problem?

A: Various studies have shown specific pharmaceuticals including antibiotics and hormonal drugs, such as birth control pills, in surface waters throughout the nation. And these contribute to accumulations of what is known as endocrine disrupting chemicals, which mimic natural hormones. The concern about endocrine disrupting chemicals is that they are causing changes and deformities in fish and other aquatic creatures.

Q: What does this mean for human health?

A: Again, we are just starting to see impacts, so we don't have a lot of answers. Whether the presence of medications in water translates into human health impacts is still being studied. What we do know is that the World Health Organization indicates that human risk assessments have shown low concentrations of pharmaceuticals in drinking water have a negligible health risk. But WHO also points out that long-term exposures have not been evaluated, especially in populations with other illnesses or with compromised immune systems. Also, according to the WHO, antibiotics in water supplies are a potential concern because the most frequently used antibiotics are becoming less effective as the infections they are designed to combat become resistant. That resistance increases with heightened exposure to the drugs.

Q: So, we need another government study?

A: That's certainly part of the solution, but your question is the reason why we are here today. Medication disposal is very complex. Traditional consumer advice has been to flush excess medications down the toilet. However, based on the impacts we are seeing, for most of the medications, we don't believe this is still a viable option, and to our delight, this is the also APhA's position. So, while government studies need to be part of the solution, our partnership with APhA will be another part. Through SMAR_xT DISPOSAL, we plan to elevate this issue and provide consumers with a variety of more environmentally-friendly disposal alternatives as an interim step. However, it is important to remember that our partnership will evolve as research provides new answers. Ultimately, we want to come up with a more sustainable solution that fits everyone's needs.

Q&A About **SMAR_xT DISPOSAL** Brand

Q: How is the Fish and Wildlife Service going to tell consumers that flushing is no longer appropriate and that some other alternative is better for the environment?

A: The Fish and Wildlife Service, by itself, is not going to tell consumers anything. That is not our role; that is not our mission. As the nation's leading fish and wildlife conservation agency, we work with others to conserve our fish and wildlife resources. That is why we are here today. APhA, our partner, represents our country's pharmacists and they have a direct responsibilities to and connections with our country's pharmaceutical consumers. By working directly with APhA, we will initiate a consumer awareness and educational campaign called **SMAR_xT DISPOSAL** to elevate awareness about the medication disposal issue, and how consumers, through their actions relating to medication disposal, can protect the environment.

Q: How will **SMAR_xT DISPOSAL** be delivered?

A: That's a good question. How I explain this is something I'm very familiar with, hunting. If I'm going out to hunt for quail, I'll need to proper tools: a good hunting dog, the appropriate firearm and the requisite skills and knowledge. So, when applied to elevating consumer awareness about an issue and promoting everyday stewardship behaviors in the context of a retail setting, I also need the proper tools. And in this case, those tools are marketing and branding. We are still working with APhA to finalize the details, but it is our desire to prominently feature the **SMAR_xT DISPOSAL** brand in pharmacies across the country. This will serve as jumping off point for consumers to understand the issue and the proactive steps they can take to address it.

Q: Can you explain the **SMAR_xT DISPOSAL** brand?

A: The brand creates an identity for the medication disposal issue and makes it relevant to consumers. It will serve as the focal point for the campaign, but a variety of supporting materials will accompany it. Ultimately, through the brand,

- We want to people to understand that their everyday choices and actions count when it comes to protecting the environment, and we believe this brand does this.
- We think this brand empowers people and speaks to their personal responsibility for conserving our natural resources.
- We believe people will identify with the proactive nature of the brand and will positively respond to the call for action.