



## **Video Transcript - Contaminants in the Environment: How can I be exposed?**

Hello! This is Dr. Kim Anderson, and I am an environmental chemist at Oregon State University studying contaminants in the environment.

One group of chemicals that we study are the polycyclic aromatic hydrocarbons or PAHs. These are chemicals of concern because some PAHs are toxic or can cause cancer in humans and wildlife. PAHs are often found at Superfund sites and are also one of the principle contaminants of concern in oil spills, such as the recent oil spills in the Gulf of Mexico.

This video will show you where contaminants, such as PAHs, go when they enter the environment and how you can be exposed to them. Knowing where they are can help you avoid those areas and reduce your risk of coming into contact with harmful chemicals.

Contaminants can end up in the air, soil, sands, or water depending on their physical and chemical properties. You could be exposed to these contaminants depending on your activities.

Contaminants enter the air by evaporation such as emitted from a smoke stack or from other burning materials. A chemical in the air can be breathed into the body.

Contaminants enter the water directly as in the case of oil spills. They can also can enter water from the air or move from contaminated areas on shore. If contaminants are present in water, you can be exposed by swimming, playing in the water, or other direct skin contact.

Contaminants also enter soils and sands directly from spills, from the air, or from movement from nearby contaminated areas. Skin exposure can happen by direct contact with contaminated soils and sands.

For recreational scenarios, skin contact is the most likely route of exposure. However, many contaminants do not cross the skin well, so the risk may be lower. Risks are often greater from ingestion and sometimes through inhalation.

You can be exposed by eating foods such as fish or shellfish living in contaminated waters. Exposure depends on how much is present in foods, the type of fish, the fish's behavior in the environment, how the food was prepared, and the contaminant's chemical properties. You can also be exposed by drinking contaminated water.

Be sure to check local fish advisories for information on sport-caught fish. Visit <http://www.epa.gov/ost/fish>

To learn how we study contaminants in the environment, be sure to watch the second video on passive sampling devices. Facebook: <https://www.facebook.com/OSUSuperfund>