

PERSISTENT ORGANIC POLLUTANTS (POPs)



Introduction: Canada is a leader in the science of identifying and assessing past and current sources of POPs and in predicting their global movement through the earth's atmosphere. Many POPs have been used as pesticides in the past and some continue to be used as such today. Others are used in industrial processes and in the production of a range of goods such as: solvents, polyvinyl chloride (PVC), and pharmaceuticals. There are a few natural sources of POPs, but most are created through industrial processes, either as an end-product itself or as byproducts.

What they do: Persistent organic pollutants are a group of chemicals that do not breakdown in the environment well or quickly. Because of this, many POPs can travel very long distances in air and water and build up in the fatty tissue of animals near the top of the food chain.

Where they are found: Persistent organic pollutants include the “dirty dozen” identified as a global priority. The “dirty dozen” include industrial chemicals like (PCBs), pesticides like DDT and unwanted waste chemicals like dioxins and furans. Unfortunately many POPs are still being produced, such as dioxin, PBDEs (flame retardants) and PFOS (used in consumer products and manufacturing). Please see the other Chemical Fact Sheets for more information on these particular chemicals.

CHEMICAL *FACTSHEETS*

Health Effects Summary: Scientists have observed a range of adverse health effects in both wildlife and humans exposed to POPs. There is strong scientific evidence for POPs causing negative health impacts such as: cancers, learning disorders, behavioural changes, immune system changes, reproductive deficits and sex-linked disorders. Humans are at the top of the food chain and therefore are at risk of high exposures and of some very serious health impacts. When in a pregnant woman's body, these chemicals pass through the placenta and impact the developing foetus. While all First Nations are at risk to the negative health impacts of POPs, it is children and foetuses that are most threatened as they are still developing.

How we're exposed: Many persistent organic pollutants have been taken off the market. Although the levels of many of these contaminants have declined (since most developed countries restricted their use decades ago), they are persistent and remain in the environment and our bodies for long periods of time. Although the substances may be banned, First Nations are still exposed to POPs through air, food and water. The persistency of POPs means that they can still be found everywhere in our environment and in our bodies. POPs are found particularly in fatty tissue of those living in Northern climates which means many First Nations and Inuit are at higher risk of exposure. The primary source of exposure to dioxins and dioxin-like compounds is from food high in the food chain; especially meat, milk, dairy, eggs, and fish.

How to reduce exposure: The Stockholm Convention on POPs (2001), to which Canada is a signatory, is an international treaty among countries aimed at protecting human health and the environment from POPs. The Convention commits governments to proceed towards controls and bans on the production, generation and use of POPs and emissions of unintended by-products. It also promotes and requires appropriate substitution with cleaner products, materials, processes, and environmentally sound management and disposal of POPs waste.

Although POPs are restricted in Canada, they are capable of traveling onto First Nations lands from other countries that have not banned their use or do not effectively enforce their standards. This makes it difficult to manage exposure. However, refraining from burning or incinerating garbage is an excellent way to reduce exposure in your community to POPs like dioxins.