## What are
# Persistent Organic Pollutants(POPs)?

Persistent Organic Pollutants (POPs) are a group of toxic chemicals that are dangerous to human life, animals and the environment. They can be found in households, consumer products, the food we eat and contaminated soils at waste storage / disposal sites.

### The four main characteristics of POPs are:

**Persistence:**
POPs chemicals can last for an astonishing extended period of time, as they are difficult to destroy and are resistant to degradation.

**Toxicity:**
These chemicals are incredibly toxic to all living things, from human beings to animals. Prolonged or concentrated exposure to POPs can result in the development of a wide range of health issues. It can also reduce the quality of soil, plants and the general environment.

**Bioaccumulation:**
POPs are lipophilic (fat-loving). Therefore, over time, the chemicals tend to accumulate in the fatty tissue of humans. Some also accumulate in the liver and kidneys.

**Long-range Dispersion:**
Once POPs are released into the atmosphere, they can spread over far distances across the air, land and sea.

## Why should you protect yourself and your family against Persistent Organic Pollutants (POPs)?

POPs take a long time to degrade, these toxic elements stay entrenched in the environment for an extended period of time, causing extensive and detrimental consequences. Anyone who comes into contact with POPs are at risk for developing skin diseases, immune deficiencies, reproductive problems, cancer, and other potentially fatal medical conditions.

Together we can be free of

# POPs

**Contact the following near you for support on combatting these pollutants.**

Environmental Management Agency

Waste Management Agency

Ministry of Agriculture (Pesticide Boards)

STOP THE POPs!
Identify, Learn & Act!

Learn More Today! **stopthepops.com**

BCRC CARIBBEAN
Basel Convention Regional Centre for Training and Technology Transfer for the Caribbean

UNIDO UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
gef GLOBAL ENVIRONMENT FACILITY INVESTING IN OUR PLANET
STOCKHOLM CONVENTION

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Safeguard your family from the dangers of

# Persistent Organic Pollutants (POPs)

Persistent Organic Pollutants (POPs), sometimes known as "forever chemicals" are a group of toxic chemicals that can survive for long periods of time in the environment. They can be found in households, workplaces, agricultural products and even the very food we eat. It's time to protect yourself and "Stop the POPs" today!

# Persistent Organic Pollutants (POPs)

As listed under the Stockholm Convention (April 2020)

## Pesticides:

| | |
|---|---|
| Aldrin | Alpha hexachlorocyclohexane |
| Chlordane | Beta hexachlorocyclohexane |
| Chlordecone | Lindane |
| DDT | Mirex |
| Dicofol | Pentachlorobenzene (1) |
| Dieldrin | Pentachlorophenol and its salts and esters |
| Endrin | Technical endosulfan and its related isomers |
| Heptachlor | Toxaphene |
| Hexachlorobenzene (1) | |

## Industrial Chemicals:

| | |
|---|---|
| Decabromodiphenyl ether | Polychlorinated naphthalenes (2) |
| Hexabromobiphenyl | Perfluorooctanoic acid , its salts and related compounds |
| Hexabromocyclododecane | Perfluorooctane sulfonic acid, its salts and perfluorooctane sulfonyl fluoride (3) |
| Hexabromodiphenyl ether and heptabromodiphenyl ether | Short-chain chlorinated paraffins |
| Hexachlorobutadiene (2) | Tetrabromodiphenyl ether |
| Polychlorinated biphenyls (2) | Pentabromodiphenyl ether |

## Unintentional POPs (UPOPs)

| | |
|---|---|
| Polychlorinated dibenzo-p-dioxins | Polychlorinated dibenzofurans |

### Notes

1 Also relevant under Industrial chemicals and UPOPs
2 Also relevant under UPOPs
3 Also relevant under Pesticides

# STOP THE POPs!

**Identify, Learn & Act!**

## The truth is, danger lurks where you least expect it.

Understanding the dangers of POPs

**Identify**
The sources and uses of POPs/UPOPs.

**Learn**
How you and your family are exposed and affected.

**Act**
By minimising your exposure.

**www.stopthepops.com**

# Common Exposure Pathways

Look out for the following POPs sources

### Electrical and Electronic Equipment

POPs such as PBDEs are used as 'flame retardants' in electrical and electronic equipment.

### Pesticides in Agricultural Use

Farmers and farm workers can be exposed to POPs and other hazardous pesticides in agriculture through the treatment of crops, plants, and grain stores for pest control.

### Fire fighting foams and Transformer Oils

Several types of firefighting foams and transformer oils may contain PFOS and PCBs, respectively. Long term and direct exposure to these can lead to human health concerns.

### Meat from Contaminated Animals

Food contamination is a major source of exposure to POPs. Several POPs tend to accumulate in the fatty tissues of animals. POPs can be potentially found in meat, poultry, fish, shellfish and dairy products.

### Furniture, Upholstery and Building Insulation

Many consumer products such as furniture, upholstery, building insulation, textiles, may contain POPs such as HBCD and PBDEs are BFRs. If these items are torn, damaged, or burnt, this can lead to the inhalation of contaminated dust particles.

Safeguard your health!

# How to Reduce Exposure

- Practice proper waste disposal of items such as electronics, furniture and end-of-life vehicles. Do not burn waste or indiscriminately dump. Consult with the responsible authorities for guidance on proper disposal and recycling of items.
- Always wash and clean food and produce thoroughly before eating to remove POPs residue such as pesticides.
- Ensure that you trim the excess fat and skin from meat, poultry and fish to minimise exposure to POPs. It is also advisable to consider dietary changes such as choosing lean meat over animal foods with fatty tissues.
- When purchasing consumer goods, check the labels first to see if they contain any of the toxic chemicals listed as POPs.
- Consider using organic and non-toxic alternatives to consumer goods such as bio-based food packaging and clothing, carpets and mattresses that are not treated with flame retardants.
- For farmers and other agricultural workers, it is important to stop using POPs pesticides. Use safer alternatives such as Integrated Pest Management. Also, always use Personal Protective Equipment (PPE) to avoid inhalation or contact with highly hazardous pesticides.
- Discourage children from playing with old appliances, electrical equipment or transformers. Children should also avoid areas downstream of landfills or other waste storage/disposal sites.
- Regularly clean household and office areas with non-toxic products to prevent the accumulation of contaminated dust particles. The use of damp cloths or HEPA Filter Vacuums are recommended in order to minimise the re-circulation of dust.