POLYCHLORINATED BIPHENYLS

What are Polychlorinated Biphenyls?

Polychlorinated biphenyls (PCBs) are synthetic chemicals that can have negative impacts in many different ways. Often, these chemicals enter the environment through industrial processes, leading to contamination. PCBs can be present as oily liquids or solids, as well as in the air. Since PCBs contain a mixture of various chlorinated biphenyl components, exposure to them can have harmful effects on human health.

How do they Cause Diabetes?

Human studies have shown PCBs can cause biological effects such as: type one diabtes, type two diabetes, insulin resistance and obesity. PCBs have the ability to lower insulin levels, leading to increased blood glucose.

Ways to Avoid Exposure

PCBs are often ingested through excess consumption of contaminated farmed fish, aquatic species, meat and diary. Small organisms and fish living in contaminated water or fed contaminated agricultural feed absorb PCBs, which are then taken up by other animals that consume them as food. To minimize exposure, it's best to avoid and limit exposure to contaminated food such as farm-raised fish and seafood.

Highest Food Sources of PCBS

Farm raised salmon

Canned Tuna

Beef steak

Butter

Farm raised Tilapia

Catfish

POLYCYCLIC AROMATIC HYDROCARBONS

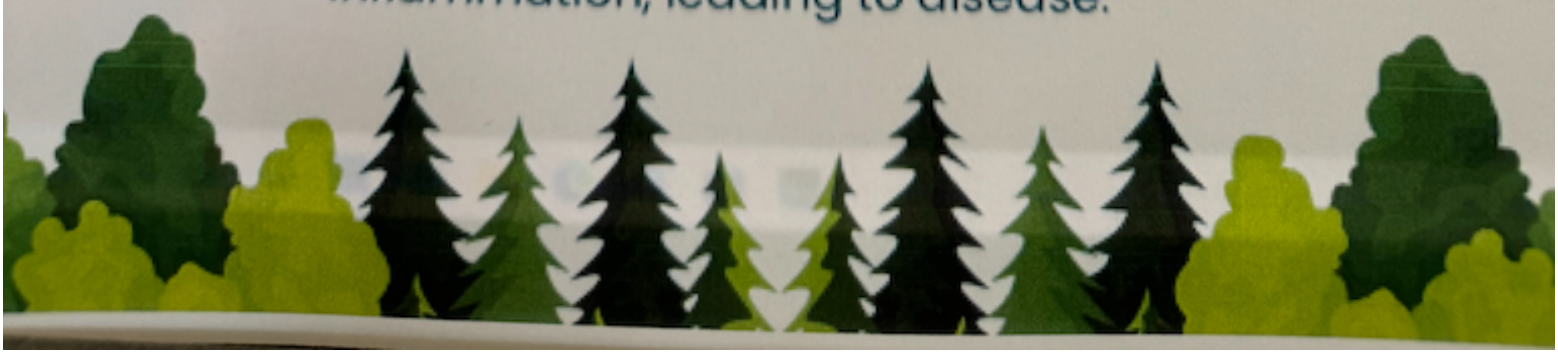
Impact on Diabetes

What are Polycyclic Aromatic Hydrocarbons?

Polycyclic aromatic hydrocarbons (PAHs) are a class of environmental pollutants that can cause harmful health effects. Exposure to PAHs can occur through breathing in chemicals from vehicle exhaust, city air, cigarette smoke, wood burning, coal burning, fumes from recent renovations, new furniture and industrial sources. Internal exposure can also happen through excessive consumption of certain foods like char-grilled meats, smoked meats, non-organic foods and food dyes.

How do they Cause Diabetes?

It is important to understand the risks of exposure, as PAHs are responsible for contributing to up to 16% of diabetes cases due to their harmful effects on human health. PAHs directly impact diabetes by poisoning insulin receptor sites and increasing overall inflammation, leading to disease.



Reduce Risk of Overexposure: Tips to Follow

1. *Quit smoking and avoid being in close proximity to smoke.*
2. *Decrease your intake of smoked meat and fish, charred meats, non-organic foods, and artificial food dyes.*
3. *Limit your exposure to toxins from hobbies, occupations, polluted indoor and outdoor environments.*
4. *Consider using filtration methods such as home air filters, vehicle air filters, and water filters.*
5. *Utilize indoor air purifying plant species that help filter toxins from the air including the Peace Lily, Heart Leaf Philodendron, Spider plant, Aloe Vera, English Ivy and Boston Fern.*

Foods that may contain PAHs:

- charbroiled, chargrilled meats
- smoked meats and fish
- non-organic tea and coffee
- refined vegetable oils
- cereals
- non-organic spinach
- wheat and rye