GMOScience
educate to regenerate

Michelle Perro, MD, DHom
www.GMOScience.org
info@gmoscience.org

How Pesticides Can Promote Obesity in Children

Pesticides are not just harmful to pests! They also interfere with our children's hormones and metabolism. Some pesticides act as 'obesogens', chemicals that disrupt how the body manages weight, fat storage, and appetite.

This handout explains how certain pesticides can increase the risk of obesity and related health problems, even when children are exposed at low levels.

Pesticides That Act as Obesogens:

Organophosphates (e.g., chlorpyrifos)

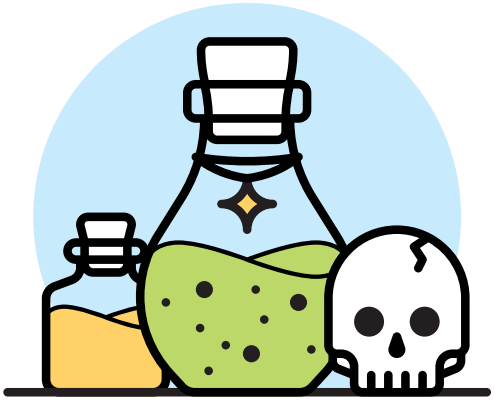
- Disrupts thyroid hormones and hormone signaling, contributing to weight gain and metabolic disorders.
- Sprayed on many fruits, veggies and grains.
- Target the nervous system of pests and cause neurodevelopmental issues (ADHD, lower IQ) in children.

Organochlorines (e.g., DDT, DDE)

- Mimics estrogen and disrupts androgen receptors; linked to obesity and insulin resistance.
- Banned in the 1970s, but still persist in the environment.
- Lindane is no longer used on crops, but is occasionally used to treat lice and scabies in children.

Carbamates (e.g., carbaryl)

- Affects adrenal and thyroid hormone production, altering metabolism and appetite control.
- Similar class as organophosphates (nerve poisons).
- Many have been phased out, but some are still being sprayed on fruits, veggies, and nuts.



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Pyrethroids (e.g., permethrin)

- Interferes with sex hormones and neurotransmitters that regulate food intake and energy balance.
- Synthetic insecticides modeled after natural pyrethrums (chrysanthemum flowers).
- Sprayed on fruits, veggies, and nuts.
- Toxic to beneficial pollinators like bees.

Atrazine (a triazine herbicide)

- Increases aromatase enzyme activity, raising estrogen levels and promoting fat storage.
- Potent endocrine disruptor and the 2nd most detected pesticide in US drinking water after glyphosate.
- Widely used in the US for weeds and can persist in the environment.
- Commonly used on corn, sorghum, sugarcane and some fruits and nuts.

Glyphosate (a synthetic amino acid, e.g., Roundup)

- Disrupts the gut microbiome, affects hormone balance, impairs detoxification, and alters fat cell regulation.
- Most widely used herbicide globally; used extensively on crops designed to withstand it (GMOs).
- Used as a crop desiccant on grains, legumes, fruits, and on lawns/golf courses

What Parents Can Do:

- Choose organic produce when possible, especially for kids.
- Wash fruits and vegetables thoroughly.
- Avoid using chemical pesticides in home gardens and lawns.
- Support policies that reduce pesticide exposure in schools and communities.
- Avoid APEEL (a plant-derived coating applied to fruits and vegetables designed with toxicants to slow spoilage by reducing moisture loss and oxidation, effectively extending shelf life).