

## Results of Contamination:

- **Damage to central/peripheral nervous systems**
- **Thyroid disorders**
- **Diabetes**
- **Developmental abnormalities in the enamel of children's teeth**

## Avoiding Dioxins:

**Avoiding dioxins is difficult due to how insoluble and persistent it is in the environment. To help limit your exposure to dioxins:**

- **Wash fruits and vegetables to remove pesticides**
- **Use organic products**
- **Avoid products packaged in PVC**
- **Avoid full fat dairy products**
- **Choose lean meats**

## Works cited:

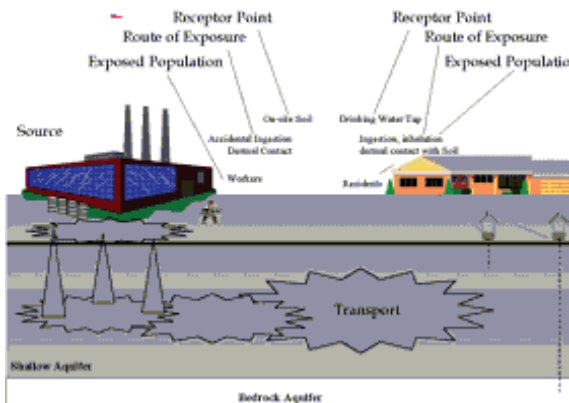
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# Dioxin

## Profile of a Hazardous Chemical

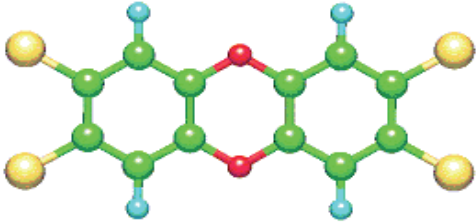


**"The Love Canal Tragedy"**  
**A housing community where 82 toxic chemicals were found in the air, water, and soil, including poly-chlorinated dioxins.**



The Love Canal

# What are Dioxins?



"Dioxins" are toxic chemicals that break down extremely slowly in the environment. They are among the most toxic compounds made by man and some are targeted for elimination. Dioxins bioaccumulate, they collect in fatty tissue and become concentrated in animals higher up the food chain. They have caused miscarriages, birth defects, and nervous system toxicity in human beings. When fatty tissues are used for energy the dioxin is released causing acute poisoning.

In North America the population gets 93% of their dioxin exposure from fish, meat and dairy products. Dioxin levels were found to be 200% more than the US government standards allow.

# Sources and Contamination

## Sources of Dioxins:

- Industrial burning of waste
- Burning of various fuels
- Paper mills

During burning, dioxin is released into the air and the burning generates ash that is left over and placed in landfills.

## Contamination Pathways:

Dioxin gets into lakes, rivers, and soil by rain. Dioxins do not dissolve in water. In the Love Canal, the dioxins were bound to the soil where it got carried by oil-like chemical leachate. From there, it moved from the canal into sewer systems and a nearby creek where it was found in high concentrations.

As dioxin travels through the air or settles on top of the soil it can slowly degrade by sunlight.

If it does not break down it persists in the environment or enters aquatic life and stays in the fat tissue of fish or ani-

mals. Whenever another animal eats the contaminated animal, dioxin moves up the food chain.

The half life for dioxin in humans ranges from 7.8 to 132 years.

## Results of Contamination:

As little as a few ppt in body fat can have serious long term side effects resulting in:

- Cancer
- Damage to immune system

