

Incineration and Links to Cancer-A Quick Overview

Introduction

Even though burning garbage is known to be a significant source of exposure to carcinogens and other pollutants, increasingly there are plans by municipalities to expand this type of waste disposal across Canada. Incineration does not eliminate or reduce the waste. Rather, it destroys resources and converts waste into different chemical compounds, some of which are the harmful components described in **our detailed fact sheet**.

Incinerators are a toxic technology. Studies in the United Kingdom found an increased risk of childhood cancer, childhood leukemia and solid tumours of all kinds among children living near incinerators. Studies from France, Japan, Italy, the United Kingdom and Sweden found that people living near incinerators had a cluster of soft-tissue sarcoma and non-Hodgkin's lymphoma; a two-fold cancer-risk; increases in laryngeal cancer; increases in lung cancer or lung cancer mortality and generally higher risks of all cancers but specifically of stomach, colorectal, liver and lung cancer. Incinerator workers in Italy, U.S. and Sweden had significantly higher gastric cancer mortality; a high prevalence of hypertension and excessive deaths from lung cancer and heart disease.¹

Toxic Air Emissions

Approximately 70% of garbage burned is emitted to air. Incinerator emissions are a major source of fine and ultrafine particles, toxic metals and more than 200 organic chemicals, including those known to cause cancer, genetic mutations and disruption to normal hormone function.²

Ash and Slag

Both the bottom and fly ashes can contain high concentrations of heavy metals. Improved pollution control technology in modern incinerators can transfer the toxic load of dioxins and some heavy metals from airborne emissions to the fly ash.³ The ash residues are generally put into landfill sites, which raise concerns about these contaminants leaching into soil and groundwater.

Liquid wastes

Wastewater from wet exhaust gas cleaning contains heavy metals, which could contaminate soil and groundwater. The most significant in terms of toxicity and quantity are lead, cadmium, copper, mercury, zinc and antimony. Published scientific data on these is very limited.⁴

Regulation, Monitoring and Enforcement

Only a small fraction of the hundreds of incinerator pollutants are controlled. In addition, real-time and continuous monitoring technology is not available for all pollutants including some of the most dangerous, such as dioxins.⁵

Conclusion

All incinerators generate toxic emissions and are a leading source of dioxins globally.⁶ Since there are safer, more economical and flexible options, we should adopt the precautionary principle and move away from waste management options like incineration that pose a serious risk to human health and further degrade our environment.

Furthermore, the burning of waste destroys resources and locks communities into very expensive operating contracts, which require large and predictable volumes of garbage over long periods of time to recoup the large capital costs.

Far more energy would be saved and fewer health and environmental impacts - including cancer - would result from reducing the amount of waste we generate, and by reusing, recycling and composting materials. Any risk to our health that is avoidable, is unacceptable.

References:

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