

## Excess female to male births in Canada linked to chronic dioxin exposure

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Almost 90 Canadian communities have experienced a shift in the normal 51:49 ratio of male to female births, so that more girls than boys are being born, according to two studies in the Oct. 1 issue of ACS' *Environmental Science & Technology*. James Argo, who headed the research, attributes this so-called "inverted sex ratio" of the residents in those communities to dioxin air pollutants from oil refineries, paper mills, metal smelters and other sources.

The studies analyzed information in the Environmental Quality Database (EQDB), an inventory of pollution sources, cancer data, and other factors developed for Canadian government research on how early exposure to environmental contaminants affects the health of Canadians. Argo points out that the EQDB enables researchers to pinpoint the location of 126,000 homes relative to any of about 65 air pollution sources-types and the occurrence of cancer among residents of those homes.

Argo focused on air pollutants from those sources and the corresponding incidence of cancer among more than 20,000 residents and 5,000 controls. He identified inverted male sex ratios, sometimes as profound as 46:54 in almost all of the communities. The ratio indicated that more females than males were born, a situation that Argo attributed to chronic exposure of parents to dioxin, based on previous studies. The study "may represent one of only a few studies explicitly designed to identify the impact of carcinogens from industrial sources on residents at home," Argo stated.

Source: ACS

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