

Drop in male births raises serious fears

John Miner, Health Reporter
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There were calls yesterday for a major probe after researchers revealed twice as many girls as boys are being born in a Sarnia native community, raising fears environmental contamination has disrupted human reproduction.

"This raises very, very serious concerns for the area," said Jim Brophy, a Sarnia doctor and executive director of the Occupational Health Clinics for Ontario Workers.

The study, paid for by the University of Western Ontario, looked at birth records from 1984 to 2003 for the Chippewas of the Aamjiwnaang First Nation Community, formerly known as the Chippewas of Sarnia.

The study, reported in the Environmental Health Perspectives Journal, was launched after members of the native community raised concerns over a decline in the number of male births.

The study found the sex ratio was normal from 1984 to 1993. But starting in 1994, the percentage of male births began to fall sharply and the drop continued through 2003.

In the five years from 1999 through 2003, only 34.8 per cent of the births were males.

The normal birth ratio in Canada and worldwide is slightly more males than females -- 51.2 per cent in Canada.

Studies in wildlife have linked a rise in the proportion of female births to chemical contamination that disrupts natural animal hormones.

Scientists have found changes in sex ratios of fish, birds and turtles in the St. Clair River area, a region that's home to Sarnia's Chemical Valley industries and borders the native community.

The study's authors, Constanze MacKenzie of the University of Ottawa and Ada Lockridge and Margaret Keith of Sarnia, checked the results from the Aamjiwnaang First Nation against another Chippewas community to see if there might be a link to the native population.

But the other native community had the same birth ratio as the rest of Canada.

The authors said they cannot say the sudden declining sex ratio in the community is due to environmental exposure, but the possibility needs to be studied because of its location next to large petrochemical, polymer and

chemical plants.

Brophy said there is no reason to believe the problem, if it is due to environmental exposure, is limited to the native community.

The researchers were able to study the native births because the First Nation keeps precise records for legal reasons, he said. Such records are not available for the wider, non-native community.

"There is no way of teasing that out at this point. We don't have a mechanism being able to do it," he said.

If hormone disruption is the reason for the drop in male births, there could be other serious health problems, Brophy said.

Other research has suggested hormone disruption can cause learning problems and increased risk of breast cancer, he said.

THE FIRST NATION

The study looked at 1984-2003 birth records from the Chippewas of the Aamjiwnaang First Nation Community

Location: Southeast of Sarnia on the St. Clair River, next to the Chemical Valley

Population: More than 600

Land base: 1,315 hectares

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<http://www.ourstolenfuture.org/NewScience/reproduction/sexratio/2005/2005-0818mackenzieetal.htm>

Mackenzie, CA, A Lockridge and M Keith. 2005. **Declining Sex Ratio in a First Nation Community**. *Environmental Health Perspectives*, in press.