

# EPA reviews Univ. of Michigan dioxin study

October 1 2009

---

U.S. Environmental Protection Agency's Office of Research and Development has completed its review of a dioxin exposure study conducted by the University of Michigan in the Midland-Saginaw, Michigan area. EPA found the study was conducted well and provided useful, scientifically credible information. However, the study is of limited value to help EPA fully evaluate human exposure to levels of dioxin in the Tittabawassee River and Saginaw River and Bay.

EPA's review was conducted under the [dioxin](#) science plan announced by Administrator Lisa P. Jackson this past May. The University of Michigan Dioxin Exposure Study (UMDES) was conducted in response to community concerns that dioxin compounds from the Midland-based Dow Chemical Co. had contaminated the city and surrounding areas. The University received financial support for the UMDES from Dow through an unrestricted grant. Primary data collection was completed in 2004-2005 and the analysis of study results continues.

EPA's review identified several significant issues that limit the utility of the UMDES results:

- The study did not include children, who tend to have higher exposures to contaminants because they have more contact with, and ingestion, of soils and dusts.
- It is unclear if the study included a sufficient number of properties with highly-contaminated soils. Such properties can be found in the Midland-Saginaw area.

- It is uncertain how well the study represented people who participate in activities that could lead to elevated dioxin exposures, such as eating local fish and game with elevated dioxin levels.

Additionally, the UMDES included no health status information on the people surveyed. Thus, the UMDES data do not support analysis of the association between dioxin blood levels and possible health effects. Understanding these issues is critical when evaluating associations between exposure and blood dioxin levels in sensitive populations, including children. Also, the site specific data collected by the study will not be relevant as EPA revises its national interim preliminary remediation goals for dioxin in soil.

The study included more than 900 participants and provided estimates of the distributions of dioxin concentrations in blood, soil and dust in the Midland-Saginaw area as well as a reference area for comparison 100 miles to the south. EPA's review found that the UMDES was well-suited to identify patterns of serum dioxin, furan and PCB levels among adults. Among the study's other findings: people living the Midland-Saginaw area have higher blood dioxin levels than those in the reference area and national averages, and that properties in Midland-Saginaw tend to have higher soil dioxin levels than in the reference area. As has been found in other studies, it also found that higher blood dioxin levels were associated with demographic factors such as increased age, dietary choices and being overweight.

Representatives from EPA's Office of Research and Development and Office of Solid Waste and Emergency Response will hold a public meeting in the Midland-Saginaw area in late October to discuss the UMDES review. More information will be announced soon.

More information: See information on the UMDES and journal articles at [www.sph.umich.edu/dioxin/index.html](http://www.sph.umich.edu/dioxin/index.html) . See the EPA review's

findings and the dioxin science plan at [www.epa.gov/dioxin](http://www.epa.gov/dioxin) .

Source: U.S. Environmental Protection Agency

Citation: EPA reviews Univ. of Michigan dioxin study (2009, October 1) retrieved 27 April 2024 from <https://medicalxpress.com/news/2009-10-epa-univ-michigan-dioxin.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.