

## Who is conducting the study?

The research is being conducted by a multidisciplinary team of researchers from the University of Michigan – one of the largest and most respected academic research organizations in the world. The team is made up of experts in environmental issues, chemical exposure and social research.

The work of the study team will be overseen by two groups. The Scientific Advisory Board is a group of internationally recognized research scientists who review and monitor the way the study is conducted. A Community Advisory Panel of local residents will act as liaisons between the study team and the residents of the study areas.

## Who funds the study?

Financial support for the study comes from The Dow Chemical Company through a grant to the University of Michigan. The Dow Chemical Company has given the University of Michigan complete independence to design, carry out and report the results of the study. The University of Michigan controls all aspects of the study. Results will be publicly released, whether they are favorable or unfavorable to the funder. They will be posted to the study's Web site ([www.umdioxin.org](http://www.umdioxin.org)), presented in community forums, published in academic journals and reported in the news media.

## Does living in these areas put my family and me at risk of having high levels of dioxins in our bodies?

Researchers don't know if living in areas with high levels of dioxins is related to having dioxins in the body. The main purpose of this study is to find out whether or not this is the case.

## What are the health effects of dioxins?

Humans who have been exposed to extremely high levels of dioxins have developed chloracne, a skin disease like severe acne. One dioxin, called TCDD, is known to cause cancer in humans. There are also concerns about possible liver damage, diabetes and effects on the nervous system. Animal studies suggest that dioxins may cause reproductive or developmental effects.

It's important to remember, however, that UMDES is not a health effects study. It is strictly an assessment of factors that can lead to higher levels of dioxins in the body.

## Where can I get more information?

We will hold public meetings to discuss the study and the study findings with the involved communities. If you would like more information on dioxins, the UMDES or our updated schedule, please visit our Web site at [www.umdioxin.org](http://www.umdioxin.org).

If you have high levels of dioxins in your blood, you may also wish to talk with a health professional, your personal physician or health officials at your local County Health Department:

|                              |              |
|------------------------------|--------------|
| Bay County Health Dept.:     | 989-895-4001 |
| Calhoun County Health Dept.: | 269-966-1210 |
| Jackson County Health Dept.: | 517-788-4420 |
| Midland County Health Dept.: | 989-832-6380 |
| Saginaw County Health Dept.: | 989-758-3800 |

We hope that you will consider participating in this important and valuable study. If you would like more information, please call our toll-free number: **1-888-689-0006**.

### University of Michigan Investigators

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### Scientific Advisory Board

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The University  
of Michigan

# Dioxin Exposure Study

## STUDY FACTS



## The University of Michigan

School of Public Health

College of Engineering

Center for Statistical Consultation  
and Research

Institute for Social Research

1-888-689-0006

UMDES Web site: <http://www.umdioxin.org>

## What is the study about?

The University of Michigan Dioxin Exposure Study (UMDES) is the first step in helping address the concerns of people in Midland, Saginaw and Bay counties over levels of dioxins in the Tittabawassee River flood plain. The study is designed to see if there is a relationship between levels of dioxins in soil and household dust and levels of dioxins in people's bodies. It will also examine other factors – where people have lived, what they eat, their jobs and their hobbies – that may be associated with levels of dioxins in their bodies.

Dioxins are a family of 210 chemicals that can be produced by combustion and industrial processes – nearly always as an unwanted byproduct. Currently, dioxins are most often dispersed in airborne particles after burning. In the past, dioxins were often released in the air, on the ground and in water as an industrial byproduct.

Elevated levels of dioxins have been found in the soil of the Tittabawassee River flood plain and other nearby areas. Residents of Midland, Saginaw and Bay counties are very concerned about this potential exposure to dioxins, most of which are considered toxic.

## Isn't this just an issue for people in the Tittabawassee River flood plain?

The Tittabawassee River flood plain has been identified as an area with a high level of dioxins. But the issue is much broader. It could have far-reaching environmental and economic effects throughout the Saginaw Valley – and the state of Michigan. For this study to be successful we need the cooperation of all community residents, regardless of whether they live within the Tittabawassee River flood plain.

## Why am I being asked to participate?

Your role in the study is important, no matter where you live.

If you live in the Tittabawassee River flood plain, the relationships between levels of dioxins in your body, levels of dioxins in your house dust and soil, and your diet, job or recreational activities is the core of the study.

If you live in Saginaw, Bay and Midland counties outside the Tittabawassee River flood plain, your participation is important to give us a standard for comparison. This helps us determine the blood, soil and dust dioxin levels of people living in the area, but not within the flood plain.

We will also be sampling soil, dust and blood of people in two other Michigan counties with similar industrial and demographic characteristics. This is also for the sake of comparison.

Only by comparing people who live in several areas can we find if people living in areas of high levels of dioxins in soil also have excess dioxins in their bodies.

## What will I be asked to do as part of the study?

Over the course of the next 18 months, a team of researchers will collect data from Michigan households in five counties to try to answer these very important questions about dioxins. More than 1,900 Michigan residents will be invited to answer a questionnaire. They will be asked to provide blood samples. Some will also be asked to allow sampling of their house dust and soil from their property.

By collecting data across a five-county area, the research team will be able to determine whether living in areas of higher environmental levels of dioxins leads to a higher level of dioxins in the blood. Knowing that is an important step in making Michigan safer.

## Who is eligible for the study?

To be eligible for this study, you must be 18 years of age or older and live in the study area. Interviewers from the University of Michigan will ask you several questions to determine if you or anyone else in your household is eligible to participate in the UMDES.

## How will the interviews be completed?

A professional interviewer will determine if your household is eligible and if so, will invite one person to participate in the study. The selected person may choose to be interviewed right away or set up an appointment for a more convenient time.

Certified healthcare professionals will be scheduled to draw blood. Specially trained research associates will conduct house dust and soil sampling. In each case, sample collection will be done by appointment at your convenience.

For security reasons, University of Michigan research staff will wear picture identification badges when making visits to homes. Our employees will be glad to comply with your request to check their badges. If you are at all uncertain about the validity of a person who contacts you, please feel free to call our toll-free number at: 1-888-689-0006.

## What happens to the answers?

We highly value the information you give us. We also value your privacy and will keep your identity strictly confidential. Your answers to the questions will be stripped of all information that might link them back to you or your property. We will only release summaries of the data; no individual will ever be identified.

## Do I have to participate?

Participation is completely voluntary. You need only to respond to a few questions to see if anyone in your household is eligible to participate. If you are eligible and agree to be interviewed, you may refuse to answer any question you are asked during the study. Once you are selected and agree to participate, you will have the opportunity to help legislators, government agencies and public health officials better respond to an important environmental concern.