

What is an exposure investigation?

An exposure investigation is one way the Environmental Epidemiology Program can try to understand past, current, and future human exposure to a hazardous substance in the environment. The Tennessee Department of Health's Environmental Epidemiology Program may perform an exposure investigation if people are actually exposed to a hazardous substance.

There are three main ways information is gathered during an exposure investigation:

Bio-medical tests, such as lab tests of blood or urine, are important sources of information gathered and evaluated during an exposure investigation. Bio-medical tests can show current (and sometimes past) exposure to a hazardous substance.



Environmental samples of soil, water, or air are also important sources of information gathered and evaluated during an exposure investigation. Measurements of the amount of a hazardous substance at a site can be used to estimate risk to health. Environmental samples are often collected from where people live, work, play or otherwise might contact the hazardous substance under investigation. Evaluation of environmental samples is the most common way to evaluate potential health effects from exposure.



Exposure-dose reconstruction analyses use environmental sampling data and computer models to estimate the amount of a hazardous substance that people may have been exposed to in the past or may be exposed to in the future. These complex models can sometimes be used to estimate how a person's health might be affected.



This fact sheet explains how an exposure investigation is done by the Tennessee Department of Health's Environmental Epidemiology Program (EEP). It will help you understand what an exposure investigation is, and how one may help your community. If you have questions this fact sheet does not answer and would like more information, please contact our office.

Who does exposure investigations?

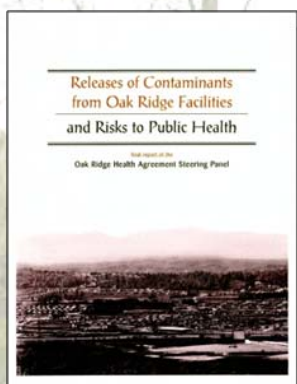
A team of experts with knowledge in environmental sampling, toxicology, environmental sciences, risk, epidemiology, computer analyses, geographic information systems, medicine, and community involvement is often assembled to work on an exposure investigation. The team uses information gathered during the exposure investigation to make public health decisions, prepare reports, involve the community, and recommend appropriate actions to protect the public's health.



How do we decide to do an exposure investigation?

Before doing an exposure investigation, we consider:

1. If it is likely that people have been, are being, or might become exposed to a hazardous substance;
2. If more information about how people are being exposed is needed;
3. If an exposure investigation will provide new, useful information; and
4. If an exposure investigation will help in making public health decisions.



How is the community involved?

The community is a very important part of an exposure investigation. So much so, that an exposure investigation cannot be done without community involvement. For an exposure investigation to be successful it needs to have:

- ✓ community interest;
- ✓ community input;
- ✓ community members' consent for testing; and
- ✓ reasonable expectations from the community.

While an exposure investigation tries to answer whether a community has been exposed to a hazardous substance, it *cannot measure harm*. It is important for a community to understand what the results of an exposure investigation may or may not tell them.

Reasons for not conducting an exposure investigation

There are some situations when an exposure investigation will not provide useful information about whether people have been exposed to a hazardous substance in the environment. For example, an exposure investigation would not be done when there is no exposure pathway to a hazardous substance. Another is when the exposure happened so long ago that the hazardous substance would be gone from the body. These situations may still be investigated using a different approach for responding to environmental public health concerns.



If you have any questions or need more information please contact:

Environmental Epidemiology Program
Tennessee Department of Health
Communicable and Environmental
Disease Services
1st Floor Cordell Hull Building
425 5th Avenue North
Nashville TN 37243

615-741-7247

or toll-free

1-800-404-3006

during normal business hours

On the Internet at:

<http://health.state.tn.us>



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