



Iowa Department of Public Health

Hazardous Waste Site Health Assessment Program

Chemical Exposures

Highlights: The Iowa Department of Public Health (IDPH), Hazardous Waste Site Health Assessment Program gives people information about harmful chemicals in their environment. IDPH staff can tell people how to protect themselves from being “**exposed**” or coming into contact with chemicals. This fact Sheet answers questions about **chemical exposures**.

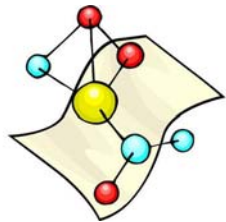
What is exposure?

“**Exposure**” means that you have come into contact with a chemical, and it has gotten into your body.

How can exposures happen?

For a chemical exposure happen, there has to be a place where the chemical comes from. This place is called a **source**. A source could be a landfill, pond, creek, incinerator, tank, drum, or factory. There are many different sources of chemicals.

You could come into contact with a chemical at its source. Or, the chemical could move from its source to a place where you could come into contact with it.



Chemicals can move through the air, water, and soil. They can also be on plants or animals, and get into the foods you eat. The chemical has to get into your body to make you sick, or to have an effect on your health.

If you are **not exposed** to a chemical, **it won't make you sick**.

How does a chemical get into your body?

If you are exposed, there are three ways a chemical could get into your body.

These are:

Breathing air that has the chemical in it, (sometimes called *inhalation*)



Eating or drinking something with the chemical in or on it, (sometimes called *ingestion*)



Getting it on your skin or **touching** something that has the chemical in or on it (sometimes called *dermal contact*).



If I am exposed to a chemical, will I get sick?

Not necessarily. It depends on a lot of factors about the exposure. It depends on the way the chemical got into your body.

It also depends on how much of the chemical got into your body. Sometimes a small amount of a chemical could make you sick. Other times, you would have to be exposed to a large amount of the chemical to get sick.

What factors will determine if I get sick?

Factors that play a part in whether you will get sick from a chemical exposure are:

- The **type** of chemical
- The **amount** (how much of a chemical you were exposed to)
- The **duration** (how long the exposure was)
- The **frequency** (how many times you were exposed).

Does everyone respond to chemical exposures in the same way?

No. People respond to chemicals in different ways. Some people may be exposed to a chemical and not get sick. Other people may be more sensitive to a chemical and can get sick from an exposure. (For example, children can be more sensitive to some chemicals and may get sick more easily than adults.) Some sicknesses would be caused only if you were exposed to a chemical for a long, long time.

If you are *not exposed* to a chemical, *it won't make you sick.*



How can I stop or reduce exposures to chemicals?

Once chemical exposures are identified, several strategies can be used to reduce or stop exposures from occurring. For example, if chemicals are found in private well water, an alternate water supply (bottled water) or water treatment can be used. Frequent hand washing can reduce exposures to chemicals in soils. Site-specific recommendations will be made by IDPH and environmental agencies to help people stop or reduce exposures.

Hazardous Waste Site Health Assessment Program Staff

The following staff are available to answer your questions or provide more information.

Stuart Schmitz, P.E.
Health Assessor
Phone: (515) 281-8707
Email: sschmitz@idph.state.ia.us

Sara Colboth
Health Educator
Phone: (515) 281-5894
Email: scolboth@idph.state.ia.us



Written requests should be made to:

Charles Barton, Ph.D., DABT
State Toxicologist
Hazardous Waste Site Health
Assessment Program
Iowa Department of Public Health
321 E. 12th Street
Des Moines, IA 50319-0075