

# Ways contaminants enter your body

## Key takeaways:

- A substance can enter the body through several pathways (exposure routes).
- Identifying the hazards in the workplace is half the picture. Identifying how the hazard can get into or on the body is the other half. Remember this: Risk = Exposure x Hazard
- To reduce risk, reduce either or both the hazard and the exposure.

An exposure route describes the pathway a substance, like a chemical or bacteria, takes to get into your body. There are several ways a substance can enter the body in the workplace. Here are the major pathways and some examples of each:



### Inhalation (breathing in a substance)

Someone inhaling dangerous welding fumes that can cause cancer or other health effects



### Through the skin (like a puncture)

A needle stick for a staff member using a syringe to draw blood



### Direct contact (getting a chemical in your eyes or on your skin)

A person getting a glue directly on their skin that causes an allergic reaction



### Ingestion (like eating or drinking something contaminated)

An employee working with lead can carry that lead on their hands to the breakroom and ingest it when eating.

Depending on what types of tasks and activities are performed at work, one or more of these routes of exposure could occur. For example:

Many workplaces must use chemicals or perform tasks that cause exposure to hazardous substances. Identifying the possible exposure routes is one of the first steps in protecting our health while at work. Safety data sheets should be on hand for all potentially hazardous substances and have exposure protection instructions. Have we completed any job hazard analysis or personal protective equipment (PPE) evaluations for the tasks we do? Have we identified the exposure routes in our workplace?

## Take action (Complete one or more activities as a team)

- Group discussion** | What exposure routes are in our workplace? How can we protect ourselves from being exposed to some of the hazards on the job?
- Field trip** | Observe a task being performed in our workplace. What is the chemical or other exposure hazard? What are the possible exposure routes for this task? What is in place to protect the exposure route? What does the safety data sheet say about exposure controls?
- Exposure controls review** | Are there exposure controls in our workplace other than PPE? Is there ventilation to reduce exposures? What other types of exposure controls exist in our workplace? What types, if installed, could help reduce the amount of PPE we have to use?

