

# HAZARD ALERT

CPWR [O]  
THE CENTER FOR CONSTRUCTION  
RESEARCH AND TRAINING

# CONFINED SPACES



## What is a confined space?

It is a work space that has:

- **Limited or restricted ways** to get in and get out and
- Is **not designed for people** to work in it

Examples of confined spaces are:

- Tanks
- Boilers
- Vessels
- Vaults
- Pipes
- Manholes
- Crawl spaces
- Equipment rooms
- Some HVAC equipment
- And even trenches and excavations



## How can a confined space kill me?

Every year, hundreds of workers die in confined spaces.

Some of the more common hazards are:

- Lack of oxygen
- Explosive or flammable vapors
- Toxic fumes
- Uncontrolled fluids can enter and drown you
- Flowable solids like grain or sand

**More than a third of the confined space deaths happen to untrained co-workers or friends** who try to rescue a worker who has collapsed in a confined space.

## Find out more about construction hazards.

Get more of these Hazard Alert cards – and cards on other topics.

**Call 301-578-8500**

## Know the basics ...



IOWA CASE REPORT: 05IA042 – COURTESY NIOSH

### 1 Ask questions

It is **the employer's responsibility** to provide a safe workplace. If you think you may be entering a confined space, ask the competent person on your worksite. **Do not enter without proper training.** Never enter alone.

*A self-employed handyman died in this water service manhole. He had been called to fix a water leak in an adjacent rental house and was working alone.*



### 2 Get training

Your employer must train you for confined space work (an online course is not adequate). **Know possible hazards before entering** and be sure they are addressed in the entry plan. Make sure there is an emergency plan in place. Don't assume nothing will go wrong; confined spaces are unforgiving.

*75% of workers killed in confined spaces had no training or only on-the-job training. These students are getting hands-on training from a qualified instructor.*



### 3 Test air before entering

**Never enter a confined space before air is tested.** The employer must have the air checked **first** for proper oxygen levels, **then** for flammable or explosive gases or vapors, and **finally** for toxic gases or vapors. If there is a problem with the air, don't go in.

*Master instructor shows students how to test air quality inside a confined space.*

## Control the hazards your work may create

Remember that the work you are doing in a confined space may create hazards.

- Painting can create flammable or explosive hazards with solvents.
- Welding introduces toxins.
- Shielding gases can push all of the oxygen out of a confined space.

**Control these hazards with adequate ventilation.**

**If you think you are in danger:**

Contact your supervisor.  
Contact your union.

Call OSHA  
**1-800-321-OSHA**