# Confined Spaces: Recognition, Permit Requirements, and Rescue Planning Stats and Facts

## FACTS

1. **Atmospheric Hazards:** Oxygen-deficient or oxygen-enriched air, toxic gases, or flammable vapors can accumulate quickly, causing collapse or explosion without warning.
2. **Hidden Configuration Risks:** Limited openings, inward-sloping walls, or internal obstructions can trap workers and complicate escape during an emergency.
3. **Energy Isolation Failures:** Uncontrolled mechanical, electrical, hydraulic, or chemical energy can activate equipment or release substances while workers are inside.
4. **Engulfment Potential:** Loose materials, liquids, or slurries can flow or shift, burying or suffocating entrants in seconds.
5. **Permit Breakdown:** Missing or incomplete permits lead to skipped testing, poor ventilation, and unverified isolation—removing critical safeguards.
6. **Inadequate Ventilation:** Poor air movement allows contaminants to build up even after initial testing, turning a “safe” entry into a deadly one.

## STATS

- Confined spaces account for dozens of worker deaths each year in the United States, with atmospheric hazards cited as the leading cause, per the Bureau of Labor Statistics.
- NIOSH investigations show that more than 60% of confined-space fatalities involve would-be rescuers who entered without proper rescue plans or equipment.
- Approximately 60% of confined space fatalities in North America involve would-be rescuers entering without proper

planning or equipment, highlighting rescue-related dangers (ongoing 2020-2025 data).

- In Canada, confined-space incidents remain a top cause of multiple-fatality events in industrial settings, according to summaries by the Canadian Centre for Occupational Health and Safety.
- Provincial workers’ compensation boards report thousands of confined-space entries annually, with serious injuries concentrated in maintenance, utilities, agriculture, and manufacturing.