Invisible Threats: Exposure to Harmful Substances & Workplace Environments Stats and Facts



FACTS

1. **Airborne Contaminants:** Dusts, fumes, vapors, and fibers enter the lungs unnoticed; repeated exposure leads to respiratory disease, irritation, or long-term organ damage.
2. **Toxic Gas Accumulation:** Colorless gases like carbon monoxide or hydrogen sulfide can build up quickly in confined or poorly ventilated spaces, causing rapid unconsciousness or death.
3. **Noise Overexposure:** Loud environments gradually damage hearing without pain or warning, leading to permanent hearing loss over time.
4. **Biological Hazards:** Mold, bacteria, bloodborne pathogens, and animal waste can contaminate surfaces or air, creating infection risks during routine tasks.
5. **Poor Indoor Air Quality:** Inadequate ventilation allows pollutants, chemicals, and particulates to concentrate, causing headaches, fatigue, and chronic respiratory issues.
6. **Long-Term Exposure Risk:** Harmful substances often cause delayed health effects—workers may feel fine today while chronic illness develops over months or years.

STATS

- In the US, exposure to harmful substances or environments ranked as the sixth most common cause of workplace injuries in 2019, contributing to approximately 424,000 nonfatal injuries annually through 2020-2025.
- In 2023, US private industry reported 200,100 total illness cases, with systemic illnesses from harmful exposures (e.g., chemicals, toxins) accounting for 47,500 cases, down 56.6% from 2022 due to improved controls.
- In Canada, exposure to caustic, noxious, or allergenic substances was the leading injury event for Schedule 1 workplaces in 2020, comprising about 15% of all allowed lost-time claims.
- For Canadian Schedule 2 workplaces (e.g., healthcare), exposure to harmful substances ranked second in 2020, making up 14% of lost-time claims, often

from biological or chemical hazards.
- In Ontario, Canada, over 2 million workers received WSIB compensation for occupational diseases linked to harmful exposures from 2020-2024, with chemicals and carcinogens as primary causes.
- US workplaces saw overexertion and bodily reactions (including substance exposures) lead to 976,090 days-away cases in 2021-2022, with chemical contact contributing to 10-15% of these.