

Carbon dioxide exposure in craft brewing

What is the potential risk?

The beer fermentation process produces carbon dioxide gas, which may leak out of hoppers or tanks and into the working environment. Workers may be exposed to this carbon dioxide, putting them at risk for adverse health effects.

Craft brewing is a growing industry in B.C. Craft breweries are typically small independent businesses that produce specialty beer. Workers in these facilities may be exposed to consistently low levels of carbon dioxide throughout their work shift, or the levels of carbon dioxide may fluctuate over time, depending on which processes are being used.

Exposure to low levels of carbon dioxide may cause workers to experience respiratory distress, headache, or dizziness. Exposure to high levels of carbon dioxide may result in unconsciousness or death. Carbon dioxide has an exposure limit under the OHS Regulation.

Workers in craft brewing facilities who are involved in beer production processes may be at risk of being exposed to levels of carbon dioxide that are hazardous to human health.

What industries may be at risk?

- Beer making shop (retail)
- Beer manufacture (mass production — non-retail)
- Alcoholic beverage manufacture
- Brewery (mass production — non-retail)

How can I reduce the risk in my workplace?

As an employer, you need to know if there is the potential for the risk identified in this advisory to be present in your workplace. It's your responsibility to regularly inspect your workplace, and to ensure that your safety procedures and practices control the risk. The following information highlights some of the sections of the Occupational Health and Safety (OHS) Regulation and Guidelines that are most relevant to this risk.

Section 5.54 of the OHS Regulation requires that the employer implement an exposure control plan (ECP) when:

- (a) exposure monitoring under section 5.53(3) indicates that a worker is or may be exposed to an air contaminant in excess of 50% of its exposure limit,
- (b) measurement is not possible at 50% of the applicable exposure limit, or
- (c) otherwise required by this Regulation.

Other regulations in Part 5 describe additional duties the employer must perform to ensure the safety of workers.

For more information on how we identified this risk, visit worksafebc.com/riskawareness.