



## Introduction

Under occupational health and safety laws, the employer must do everything reasonable under the circumstances to protect workers from hazards that can cause them harm. These hazards include pathogens (germs) that spread respiratory infectious diseases like COVID-19 or the flu.

A risk assessment helps the employer identify hazards and recommend control measures. The risk of transmission of a respiratory infectious disease in the workplace can be reduced after implementing the control measures recommended in the risk assessment. This tip sheet explains how to conduct a risk assessment to protect workers from respiratory infectious diseases.

## Conducting a risk assessment

Assign responsibility for completion of the risk assessment. Consult with the health and safety committee or representative, workers that perform the tasks being evaluated, the union (if applicable), and other individuals competent in completing risk assessments. Revise the document at regular intervals (usually at least annually) or when conditions change (e.g., a new virus variant that is more transmissible emerges, government authorities mandate certain control measures in workplaces, etc.).

Generally, the risk assessment process follows these steps:

- Identify the hazards
- Assess the risk of the hazards
- Recommend appropriate hazard controls
- Assess the risk of the hazards after controls are recommended
- Implement hazard controls and evaluate for effectiveness

Refer to [Hazard and Risk - Risk Assessment](#) for more information.

## Identify the hazards

Biological hazards in the workplace include viruses and bacteria, which are examples of pathogens that can cause respiratory infectious diseases. The presence of pathogens and their health effects can vary. Identify which pathogens are of concern (e.g., the influenza virus is around all year but is of increased concern during fall and winter months, a new virus is spreading in the local community, etc.). Also identify the sources of the hazards (e.g., sick workers or customers, contaminated objects, etc.). Learn more about the pathogens specific to your workplace including the viruses that cause COVID-19, influenza, and respiratory syncytial virus (RSV).

## Assess the risk of the hazards

After the known or expected hazards have been identified, the hazards are quantified by assigning the severity of the illness and the probability of getting sick. Other parameters can also be included in the risk assessment, such as the frequency and duration of exposures to pathogens.

There are many ways to assess risk, and the method used will depend on factors, including the experience level of the risk assessment team, the scope, the data available, and the level of detail needed. When the calculated risk is high, workplaces need to establish control measures to reduce the negative outcomes of a respiratory infectious disease. If the calculated risk is low or tolerable, it may not be necessary to implement any control measures.

A risk matrix can help rank the risk and identify if it is tolerable or needs to be lowered. Refer to [Hazard and Risk - Risk Assessment](#) to learn more.

## Severity

# Risk Assessments for Respiratory Infectious Diseases (RIDs)



Some respiratory infectious diseases have similar symptoms, but they often vary in how sick they can make people. It is also possible for the severity of a disease to change over time (e.g., a new strain of a virus that results in more serious complications from infection).

Aside from the known severity of a disease some other personal risk factors can affect the degree to which people are impacted such as:

- Individual health factors (e.g., immunocompromised, asthma, obesity)
- Age (e.g., people over 65)
- Pregnancy
- Immunization

Understand the pathogens that workers are exposed to and the severity of the illness by referring to your local public health authority, Health Canada, or the [Public Health Agency of Canada](#).

## Probability

Exposure to a pathogen increases the chance of getting sick (i.e., the probability). Respiratory infectious diseases spread through respiratory particles released when an infected person breathes, speaks, sings, shouts, coughs, or sneezes. The pathogen can spread directly from person to person or when someone touches something contaminated and then touches their mouth, nose, or eyes with unwashed hands.

A pathogen that causes a respiratory infectious disease is more likely to spread:

- In crowded, indoor spaces with poor ventilation
- During long and frequent person-to-person interactions
- During activities that cause heavy breathing (e.g., exercise, strenuous work)
- In congregate housing (e.g., bunkhouses, long-term care homes)
- When sharing tools, equipment, and objects

Identify how, when, and where workers could be exposed to pathogens, and any workplace or job factors that could increase the risk of transmission. Some examples include:

- Work areas: shared workstations, reception areas, production lines, meeting rooms, lunchrooms, washrooms, etc.
- Job positions: receptionist, cashier, medical or care worker, teacher, inspector, etc.
- Job factors: face-to-face conversations, direct contact with vulnerable or sick populations (e.g., care homes, medical settings), use of shared items or equipment, strenuous activity, etc.
- Workplace conditions: ventilation, availability of hand hygiene stations (running water, soap, and hand sanitizer), cleanliness of surfaces and objects, etc.
- Local community: high or rising number of people sick with a respiratory infectious disease in the local population, low vaccination rates (if available for a respiratory infectious disease of concern), etc.

The time between getting infected and experiencing symptoms is called the incubation period, and this varies by disease (usually a few days to weeks). Often times, people can spread the disease before they start feeling sick (pre-symptomatic), making transmission more likely. People sometimes get infected and do not show symptoms (asymptomatic).

## Recommend appropriate hazard controls

It is an employer's responsibility to identify control measures that protect workers from pathogens in the workplace. No single control measure is 100% effective on its own. A [layered approach](#) that combines public health measures and workplace health and safety controls, according to the [hierarchy of controls](#), provides the strongest protection against the transmission of respiratory infectious diseases. With each added layer of control, the risk of transmission is lowered.

Assign responsibilities to specific workers for the implementation and monitoring of control measures. Set deadlines to ensure that risks are controlled as quickly as possible.

Refer to [Protect Yourself and Others: Control Measures for Respiratory Infectious Diseases \(RIDs\)](#) to learn more.



## Assess the risk of the hazards after controls are recommended

After control measures have been recommended, repeat the risk assessment process to determine if the risk will be reduced to a tolerable level when implemented. If the risk is still high, recommend different controls, or layer more appropriate control measures.

## Implement hazard controls and evaluate for effectiveness

Put the recommendations from the risk assessment into action and provide [communication and training](#) to workers on workplace hazards and controls. Evaluate the controls and make sure they are effective and being followed by workers. This can be done through inspections, audits, interviews, and incident reports.

Use the feedback and observations after the implementation of the risk assessment to make improvements to the control measures. If the existing controls are inadequate, make the necessary adjustments. The following are examples of how the risk assessment can be updated according to the effectiveness of the controls:

- Control measures are not effective: layer additional control measures or switch out ineffective control measures for others that may be more effective (e.g., avoiding crowded spaces would be an ineffective control measure if work must be done in a room where several customers gather at the same time – consider improving ventilation)
- Workers are not compliant with the control measures: provide workers with training and education to improve their understanding of why and how to comply with the control measures
- Change in requirements from the local public health authority: adjust workplace control measures to ensure that they meet or exceed what is required by the local public health authority

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