

# Health and Safety for Motion Picture and Television Production in B.C.



## About WorkSafeBC

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At WorkSafeBC, we're dedicated to promoting safe and healthy workplaces across B.C. We partner with workers and employers to save lives and prevent injury, disease, and disability. When work-related injuries or diseases occur, we provide compensation and support injured workers in their recovery, rehabilitation, and safe return to work. We also provide no-fault insurance and work diligently to sustain our workers' compensation system for today and future generations. We're honoured to serve the workers and employers in our province.

## Prevention Information Line

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We provide information and assistance with health and safety issues in the workplace.

Call the information line 24 hours a day, 7 days a week to report unsafe working conditions, a serious incident, or a major chemical release. Your call can be made anonymously. We can provide assistance in almost any language.

If you have questions about workplace health and safety or the Occupational Health and Safety Regulation, call during our office hours (8:05 a.m. to 4:30 p.m.) to speak to a WorkSafeBC officer.

If you're in the Lower Mainland, call 604.276.3100. Elsewhere in Canada, call toll-free at 1.888.621.7233 (621.SAFE).

# **Health and Safety for Motion Picture and Television Production in B.C.**

## Acknowledgments

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WorkSafeBC thanks Actsafe Safety Association and the members of its Motion Picture Standing Committee for their help in the preparation and review of *Health and Safety for Motion Picture and Television Production in B.C.* This publication is loosely based on an earlier book called *Focus on Safety*, which was developed by WorkSafeBC with the help of Actsafe, formerly called Safety and Health in Arts Production and Entertainment (SHAPE).

## Health and safety resources

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All employers — no matter how big or small — are responsible for the health and safety of their workers. To help support your health and safety needs, a wide range of information and resources is available on [worksafebc.com](https://www.worksafebc.com).

Many of our resources are available to order in hard copy from the WorkSafeBC Store at [worksafebcstore.com](https://www.worksafebcstore.com). If you have any questions about placing an order online, please contact a customer service representative at 604.232.9704, or toll-free at 1.866.319.9704.

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ISSN 1499-3937

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# Introduction

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A commitment to health and safety is one of the best ways for a motion picture or television production to protect its greatest resource — its people. Such a commitment can help:

- Create a better work environment
- Boost morale
- Retain good workers
- Increase worker participation in decision making
- Improve productivity

Workplace incidents can have a tremendous impact on injured workers, co-workers, and families. Incidents can result in pain and suffering, disability, stress, and loss or change of employment. Direct costs may include claims costs, unpaid insurance premiums, and fines. Indirect costs to a production may include damage to property, the cost of finding and training temporary workers, and production or service interruptions that lead to loss of reputation and release delays.

Incidents can be financially devastating for production companies or other employers that haven't registered with WorkSafeBC when required. Unregistered employers may be charged the full cost of claims from injured workers, unpaid insurance premiums, and fines.

## **This guide doesn't replace the Occupational Health and Safety Regulation**

This guide is meant to give you a basic understanding of your health and safety requirements. However, you should also refer to the Occupational Health and Safety Regulation to be sure you're meeting your legal responsibilities for workplace health and safety. You can find searchable versions of the *Workers Compensation Act*, the Regulation, and accompanying guidelines and policies at [worksafebc.com/searchable-regulation](https://www.worksafebc.com/searchable-regulation).

# About this guide

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## Motion picture and television industry

In this guide, the term *motion picture and television industry* includes motion picture, commercial, and television productions.

This guide is for employers (production companies) and workers in British Columbia's motion picture, commercial, and television production industry. You'll find this guide useful if you're a producer, production safety representative, manager, director, department head, supervisor, cast or crew member, or member of a joint health and safety committee.

## Purpose of this guide

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This guide contains health and safety information for the motion picture and television industry. It will help you prevent injuries and occupational diseases by describing the following:

- Specific hazards faced by workers in the motion picture and television industry
- How to eliminate these hazards or control their impact
- How to develop specific procedures for doing tasks safely
- How to deal with workplace incidents

**Note:** This guide is meant as a general resource only. Not all workplace hazards are covered in these pages.

## Must and should

In this guide, the word *must* indicates a requirement that's specified in the *Workers Compensation Act* or the *Occupational Health and Safety Regulation*. The word *should* indicates a recommended action that will improve workplace safety even though it's not required by the *Regulation*.

## How this guide is organized

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This guide describes the components that will form the backbone of your occupational health and safety program. Throughout this guide you'll find references that you can consult for more information. For a list of other useful resources available from WorkSafeBC, see page 93.



Reference	What does it refer to?	Where do I look for more information?
Publication	Health and safety manual, guide, or poster	Go to <a href="https://www.worksafebc.com/forms-resources">worksafebc.com/forms-resources</a> and search for the publication name.
OHS Regulation (or <i>Workers Compensation Act</i> )	Occupational Health and Safety Regulation (or <i>Workers Compensation Act</i> )	Go to <a href="https://www.worksafebc.com/searchable-regulation">worksafebc.com/searchable-regulation</a> .
Website	Online information or tool	Go to the website or webpage listed.
Form	Official WorkSafeBC forms	Go to <a href="https://www.worksafebc.com/forms-resources">worksafebc.com/forms-resources</a> .
Tip	Suggestion to help improve health and safety in your workplace	—



# Part 1: Responsibilities

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# Everyone has a role to play

## **Workers Compensation Act**

Sections 21 to 26,  
General duties of  
employers, workers  
and others

Everyone involved in a motion picture or television production — including the producer, cast, and crew — plays a role in workplace health and safety. However, the ultimate responsibility for health and safety is with the employer.

Initially, it's up to the production company to establish procedures to control hazards and prioritize health and safety, along with editorial or dramatic considerations. There should be good planning, communication, co-operation, and coordination between everyone involved. This includes contractors who may be present where the production company's work is being carried out.

On a day-to-day basis, the employer (i.e., the production company) has overall responsibility for ensuring the health and safety of cast and crew during the production process.



Everyone on a motion picture or television production set plays a role in workplace health and safety.

# Employers

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According to the *Workers Compensation Act*, an employer “includes every person having in their service under a contract of hiring or apprenticeship, whether the contract is written or oral, express or implied, a person engaged in work in or about an industry.”

Examples of employers include, but are not limited to, the following:

- Production companies
- Studios

## Identifying workers and employers

Workers, employers, suppliers, and others involved with a production all have different rights and responsibilities. There is a unique registration process for the motion picture and television industry that allows production companies to apply for extended coverage for individuals working on the production.

When a production company registers with WorkSafeBC, it can apply to have individuals working on the production declared workers of that production company. Many production companies get this extended coverage. When WorkSafeBC grants extended coverage, it means every individual working on the production who is not otherwise considered a worker is a worker of the production company.

For more information, go to [Motion picture & television industry](#) in the Insurance section of [worksafebc.com](https://www.worksafebc.com), or call the Employer Service Centre at 604.244.6181 in the Lower Mainland or 1.888.922.2768 toll-free in Canada.

## Responsibilities

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Responsibilities may be delegated to other individuals, but ultimately the employer remains responsible for completion of the following:

- Ensure the health and safety of your workers and other workers at your workplace. This includes contractors and subcontractors.
- Establish an occupational health and safety program that includes risk assessments and first aid for each workplace and production phase.
- Provide your workers with information, instruction, training, and supervision specific to your workplace and work duties.

- Make sure orientations and safety meetings are provided to everyone working on a production.
- Make sure workplaces (including land and buildings), equipment, and work processes are inspected regularly. Correct unsafe or harmful conditions or acts in a timely manner.
- Inform your workers about all known or reasonably foreseeable hazards.
- Make copies of the Act, the Occupational Health and Safety Regulation, and your occupational health and safety program available to workers. You can purchase a printed copy of the Regulation from [Crown Publications](#). There's also a searchable online version at [worksafebc.com/searchable-regulation](https://www.worksafebc.com/searchable-regulation).
- Make sure your workers know their rights and responsibilities and that they comply with the requirements of the Act, the Regulation, and your occupational health and safety program.
- Provide and maintain protective equipment, devices, and clothing. Make sure workers use them.
- Hire qualified, competent workers and contractors. Make sure they have appropriate certifications and qualifications.
- Make sure a joint health and safety committee is formed for each workplace, when required. This includes each individual production.
- Consult and co-operate with your joint committee (or worker health and safety representative).
- Co-operate with WorkSafeBC and its officers.
- Make sure occupational injuries, diseases, and incidents are reported to WorkSafeBC and investigated, as required.
- Make sure there are arrangements to safeguard the health and safety of audiences and visitors.
- Plan production activities with health and safety as key considerations.

#### What does *qualified* mean?

According to the Regulation, *qualified* “means being knowledgeable of the work, the hazards involved and the means to control the hazards, by reason of education, training, experience or a combination thereof.”

## Due diligence

*Due diligence* means taking all reasonable care to protect the well-being of workers and others at the workplace. To meet the standard of due diligence, you must take all reasonable precautions in the circumstances to carry out your work and your health and safety responsibilities.

One way that employers can demonstrate due diligence is by implementing a health and safety program. Workers can demonstrate due diligence by following the requirements of that program — for example, by following safe work procedures and wearing personal protective equipment (PPE). Demonstrating due diligence will help ensure your safety and the safety of those around you.

# Supervisors

## Supervisors are considered workers

When you see the term *worker* in this guide, it includes supervisors as well as other types of workers.

If you're instructing, directing, or controlling other workers in the performance of their duties, you're a supervisor. Supervisors are responsible for ensuring the health and safety of workers under their supervision.

Examples of supervisors include the following:

- Department heads
- Directors
- Assistant directors
- Production managers
- Coordinators (e.g., stunt, background, special effects, transport, and construction coordinators)



Directors and other supervisors are responsible for ensuring the health and safety of workers under their supervision.



## Responsibilities

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- Ensure the health and safety of workers under your direct supervision.
- Control the work environment and ensure safe working conditions within the scope of your authority (e.g., the camera department, grips, props, lighting, and special effects).
- Know the requirements of the *Workers Compensation Act* and the Occupational Health and Safety Regulation that apply to the work you're supervising.
- Make sure workers under your direct supervision are informed about all hazards in the workplace.
- Make sure workers comply with the Act, the Regulation, and the employer's occupational health and safety program.
- Consult and co-operate with the joint health and safety committee (or worker health and safety representative).
- Co-operate with WorkSafeBC and its officers.

# Workers

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Workers — including contractors, subcontractors, and supervisors — have a responsibility to comply with health and safety measures at the workplace. The term *workers* includes all cast and crew members across a range of departments and all production phases, including the following:

- Development and pre-production
- Production (principal photography)
- Post-production (editing)



The term *worker* includes contractors, subcontractors, and supervisors.

## Responsibilities

- Take reasonable care to protect your health and safety and that of others who may be affected by your actions.
- Comply with the *Workers Compensation Act*, the Occupational Health and Safety Regulation, and other legal requirements.
- Follow the employer's occupational health and safety program and established safe work procedures.
- Use any protective clothing, devices, and equipment provided.
- Refrain from horseplay or similar conduct that may endanger others.
- Don't work if your ability to do so safely is impaired (e.g., by drugs, alcohol, or fatigue).
- Report injuries and illnesses to first aid and inform your supervisor.
- Report workplace hazards to your supervisor or employer, including any violations of the Regulation or other legal requirements.
- Co-operate with your joint health and safety committee (or worker health and safety representative), WorkSafeBC officers, and anyone else who has health and safety duties.

### Reporting unsafe work

Workers have the right to refuse unsafe work. In fact, you must not carry out (or cause to be carried out) any task you have reasonable cause to believe would create an undue hazard to the health and safety of any person.

If you discover an unsafe condition or believe you're expected to perform an unsafe act, you must immediately report it to a supervisor or your employer. A supervisor or employer who receives such a report must investigate the matter immediately. If there is an unsafe condition, it must be corrected without delay.

Sometimes a supervisor or the producer or director may not agree that a task is dangerous. In this case, [sections 3.12 and 3.13](#) of the Regulation describe the steps to be followed.

Workers must not be disciplined for refusing to perform tasks they have reasonable cause to believe are dangerous. They must also not be disciplined for reporting health and safety concerns to the employer, another worker, a union representative, or WorkSafeBC. You may be assigned other work at no loss in pay while the reported unsafe condition is being investigated.

# Contractors

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## WorkSafeBC coverage

You may need WorkSafeBC insurance coverage if you're a contractor. For more information, go to [worksafebc.com](https://www.worksafebc.com) and search for "motion picture television coverage", or call the Employer Service Centre at 604.244.6181 in the Lower Mainland or 1.888.922.2768 toll-free in Canada.

With respect to occupational health and safety, contractors may be considered workers of the principal employer on the production. This may include dependent and independent contractors, subcontractors, and workers hired through a loan-out company.

As workers, contractors must carry out worker and, when applicable, supervisor responsibilities, such as attending orientations and safety meetings.

## Responsibilities

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- Adhere to the employer's occupational health and safety program.
- Help plan health and safety within your designated role.
- Make sure you have appropriate certifications and qualifications.

# Unions

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According to the *Workers Compensation Act*, a union is “a trade union recognized under the Labour Relations Code.” Unions allow workers to bargain collectively and seek to improve working conditions in part by advocating for worker health and safety. There are several unions that represent workers in a number of trades and professions in the B.C. motion picture and television industry.

## Responsibilities

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- Establish procedures for selecting worker representatives on the joint health and safety committee.
- If some workers are represented by one or more unions and some are not, agree on procedures for selecting worker representatives in equitable proportion to their relative numbers and relative risks to health and safety.
- Don't take any prohibited action against workers who are exercising their rights or carrying out duties in accordance with the Act, the Occupational Health and Safety Regulation, or an applicable order.
- Represent workers in health and safety matters, as required.

# Joint health and safety committees (or worker health and safety representatives)

## **Workers Compensation Act**

Sections 31 to 46, Joint  
committees and worker  
representatives

Employers are required to establish a joint health and safety committee in any workplace that regularly employs 20 or more workers, or in any other workplace deemed necessary by WorkSafeBC. (Regularly employed means employed at the workplace for at least one month, whether full-time or part-time.)

Any workplace that regularly employs more than 9 but fewer than 20 workers requires a worker health and safety representative. Where practicable, worker health and safety representatives have the same duties and functions as a joint committee.

The joint health and safety committee supports the employer's duty to ensure a healthy and safe workplace. The joint committee brings together representatives of the employer and the workers to identify and help resolve health and safety issues in the workplace.



Joint health and safety committees are required in any workplace that regularly employs 20 or more workers.

## Responsibilities

- Identify situations that may be unhealthy or unsafe. Advise on effective systems to respond to those situations.
- Recommend ways to eliminate or control hazards.
- Consider and promptly respond to health and safety complaints or recommendations from cast and crew.
- Consult with workers and the employer on issues related to health and safety.
- Make recommendations to the employer and workers to improve worker health and safety.
- Make recommendations to the employer on educational programs that promote worker health and safety. Monitor the effectiveness of programs.
- Advise the employer on health and safety programs and policies. Monitor their effectiveness.
- Advise the employer on proposed changes to the workplace. This includes significant changes to equipment and machinery or work processes that may affect worker health and safety.
- Make sure investigations and regular inspections are carried out as required. Participate in these activities.

### Tip

Joint committee members are well-positioned to be safety champions. Effective committee members are intentional and purposeful in promoting health and safety.

## Committee membership requirements

- At least four members
- Both worker and employer representatives — at least half of the members must be worker representatives
- Two co-chairs, one selected by the worker representatives and the other by the employer representatives

### Worker representatives

Worker representatives must be selected from workers who do not exercise managerial functions. If workers are represented by a union, select the worker representatives according to the procedures established by the union.

Where there is more than one union, the worker representatives must be selected according to the procedures established or agreed on by the unions.

Where some workers are represented by a union and some workers are not, select the worker representatives in proportion to their numbers and relative health and safety risks.

## **Employer representatives**

The employer must select employer representatives from people who exercise managerial functions. Managerial functions generally relate to the overall direction in the workplace and may include representing management in labour relations matters.

Committees are most effective when the employer representatives have the authority to speak on behalf of the employer and make decisions about health and safety matters.



# Part 2: Occupational health and safety programs

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# Formal and less formal programs

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## Resources

### OHS Regulation

Sections 3.1 to 3.3,  
Occupational health  
and safety programs

### Publication

*How to Implement a  
Formal Occupational  
Health and Safety  
Program* (manual)

All businesses, including motion picture and television productions, must have an occupational health and safety program that's designed to prevent workplace injury and disease. Health and safety programs must include certain key elements. The program can be less formal for small operations.

As an employer, the type of program you need depends on the number of workers you have and the risks associated with their work. There are two general types of programs: formal and less formal (or informal).

Formal programs are required for productions with 50 or more workers, or productions with 20 or more workers where the risk of injury is moderate or high. Less formal programs are required for productions with fewer than 20 workers. This publication focuses on the requirements of a formal program.

**Note:** The term *worker* includes contractors, which are commonly employed for many productions. Contractors include dependent and independent contractors, subcontractors, and workers hired through a loan-out company.

A health and safety program is meant to ensure that workers are protected, risks are minimized, and a healthy and safe workplace is maintained. The scope of your program depends on the hazards for your particular workplace. Locations, hazards, and personnel change for every production, so your health and safety program should be unique for each production. This includes associated requirements, such as risk assessments (see pages 52–57) and safe work procedures (see pages 24–26).

# Components of a health and safety program

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## Tip

An effective health and safety program should:

- Have the support of the producer, production manager, and director
- Designate specific individuals as responsible for functions within the program
- Define activities to be carried out to reduce injuries and illnesses

A health and safety program consists of the following components, which help identify and control hazards and prevent injuries and disease:

- **Health and safety policy** — A statement of commitment to your health and safety program and workers. This policy statement of principles serves as a guide for action. It also includes responsibilities for the producer, directors, and cast and crew.
- **Written safe work procedures** — Written instructions that identify hazards and describe how to carry out specific tasks safely.
- **Orientation, education, training, and supervision** — On-site instruction and training before workers start work, followed by ongoing instruction and supervision.
- **Workplace inspections** — Requirements for regular inspections of premises, equipment, and work practices. Inspections help identify hazardous conditions so they can be corrected.
- **Incident investigations** — Requirements for the prompt investigation of incidents to determine what occurred so steps can be taken to prevent recurrence.
- **Regular health and safety meetings** — Provisions for ongoing communication between the producer, director, production manager, and cast and crew regarding health and safety.
- **Records and statistics** — Requirements to document and maintain all program-related records and statistics. Written documentation is essential for demonstrating due diligence. You must make documentation available to the joint committee or worker health and safety representative, as applicable. If requested, you must also provide documentation to WorkSafeBC officers and the union representing the workers. If there is no union, provide documentation to the workers themselves.

## Annual program review

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Once the production has developed processes for worker health and safety, it's important to review them at least once a year, if applicable (not all productions will continue for multiple years). Revise the processes as necessary to make sure they continue to address hazards effectively. The employer must also review and revise processes whenever a new production is started or an existing one is modified. Productions that are returning for a new season or starting up again after a break should also review and revise health and safety processes.

# Health and safety policy

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## Website

### Developing a health & safety program

Health and safety start at the top. Employers must demonstrate that they and their productions take health and safety seriously. Strong leadership and a firm commitment to continuously improving health and safety, backed by action, are the foundations of a strong health and safety culture.

Show that you're committed to ensuring cast and crew stay safe on the job by embedding health and safety in every aspect of your workplace. You can demonstrate health and safety leadership in many different ways, such as the following:

- Drive health and safety plans forward with your department heads.
- Focus on health and safety throughout the production.
- Make health and safety a topic of everyday conversation.
- Visit your locations regularly to champion your safety agenda.
- Set clear expectations and encourage accountability.
- Schedule enough time for rest breaks and to manage the risk of fatigue in the production schedule.

## Health and safety policy statement

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A written policy statement helps promote an effective occupational health and safety program. Such a policy should reflect the specific needs of your workplace and should be regularly reviewed and updated for new productions. This policy communicates a commitment to health and safety. It should be signed by the production company or studio to demonstrate the commitment to health and safety.

## How to develop a policy statement

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Your policy statement should be brief and clearly indicate your health and safety objectives and responsibilities. Include the following:

- Senior management's commitment to establishing a healthy and safe workplace
- A commitment to comply with applicable legal requirements and to protect the health and safety of workers
- Responsibilities of everyone in maintaining a healthy and safe workplace
- A commitment to document the policy and communicate it to workers

# Written safe work procedures

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A safe work procedure is a step-by-step written instruction that describes how to do a task with minimum risk to people, equipment, materials, and the environment. Certain regulations require employers to have written procedures for specific activities or conditions. Required procedures will depend on the work activities performed.

In general, written safe work procedures are recommended for:

- Medium-risk and high-risk tasks
- Complicated tasks
- Frequently performed tasks
- Less routine tasks where workers may need to be reminded how to perform their work safely

Written procedures must specify any required engineering or administrative controls. They must also specify required PPE, including when to use it and where to find it. Safe work procedures must be available to all relevant workers at the locations where they work. Supervisors should use them for training workers and assessing competency. Workers are then responsible for following the procedures.

## What kinds of tasks require safe work procedures?

The Regulation requires written procedures for certain situations, including the following:

- How to summon first aid at a production location or in the studio
- Emergency plan and evacuation procedures
- Working alone or in isolation
- Violence in the workplace, including bullying and harassment
- Use of chemicals and a Workplace Hazardous Materials Information System (WHMIS) program
- Where exposure control plans (ECPs) are required
- Where specific programs, policies, or work procedures are required by the Regulation

Here are some examples of industry tasks that require written safe work procedures:

- Rigging and scaffolding, including loading and unloading, operation, maintenance, and repair

- Using power and distribution systems, including electrical, wiring, tie-ins, and lighting
- High-risk activities, such as working at heights, stunts where there is a risk of injury, operating cameras in hazardous locations, and special effects (including explosions, pyrotechnics, fire, and firearms)
- When using artificial smoke and fog, and other special effects
- Working around mobile cameras, camera cranes, insert-camera cars, and rolling equipment
- Working in hazardous locations (e.g., aerial, wilderness, or marine work)

## Exposure control plans

An employer may be required to have an ECP in place if exposure-monitoring results show either of the following:

- A worker is or could be exposed to an air contaminant at levels greater than 50% of its exposure limit.
- It's not possible to measure an air contaminant at 50% of its applicable exposure limit.

Examples of when an ECP is required include working in the following conditions:

- Where there is a risk of heat or cold stress
- With or near asbestos, silica, isocyanates, mould, or lead (e.g., in scene and prop construction)
- With chemicals or other inhalation hazards (e.g., artificial smoke and fog; welding fumes; some paints, solvents, and varnishes)
- With or near biological agents (e.g., animal feces), blood-borne pathogens, or communicable diseases
- With or near ionizing or non-ionizing radiation (e.g., when using lasers, or in cinematography or film processing)

## How to develop a written safe work procedure

Developing a written safe work procedure involves the following five steps:

1. Determine the overall task for which the procedure is needed.
2. Break the task down into its basic steps.
3. Identify the hazards associated with each step.

4. Identify the actions that will minimize the risks to workers from these hazards.
5. Prepare a list of the actions that workers must do when performing the task.

For a sample safe work procedure, see Appendix 1, pages 96–97.

## Emergency response plans

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Your production must be prepared to respond to emergencies, such as fires, explosions, chemical spills, or natural disasters, such as earthquakes. If an emergency occurs, you'll need quick decisions to minimize injuries and damage. Such decisions are easier if you've already developed an emergency response plan.

## How to develop and implement an emergency response plan

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Follow these guidelines:

1. Determine the conditions under which an evacuation would be necessary (e.g., serious injuries, fires, explosions, and natural disasters, such as landslides and earthquakes).
2. Identify the major consequences associated with each event (e.g., casualties, equipment damage, or facility damage).
3. Determine the necessary measures to deal with and recover from those consequences (e.g., first aid, notification of medical authorities, rescue, firefighting, critical incident response, or management of workers).
4. Determine what resources will be required (e.g., first aid facilities and supplies, fire suppression, or rescue equipment).
5. Store emergency equipment where it will be accessible in an emergency.
6. Make sure workers are trained in emergency procedures and shown where equipment is stored.
7. Establish an evacuation assembly area. Make sure all workers know the location of the assembly area and what to do after evacuating. If a production has multiple sites, there should be an assembly area for each one.
8. Hold periodic drills to ensure that workers will be ready to act if an emergency occurs. Evaluate each drill's effectiveness, and identify areas for improvement.
9. Communicate the plan to everyone involved.



# Orientation, education, training, and supervision

## Resources

### OHS Regulation

Sections 3.22 to 3.25,  
Young or new workers

### Publications

- *Support for Employers: Training and Orientation for Young and New Workers*
- *3 Steps to Effective Worker Education and Training*

Your workers, including contractors, may have special certifications or other external training. However, as the employer you are ultimately responsible for providing your cast and crew with thorough, site-specific training and continued instruction in your production's programs and procedures. Your occupational health and safety program should describe the type of education and training you'll provide to workers and when you'll provide it.

Your training program should be developed in conjunction with written safe work procedures. Your safe work procedures may not cover every element addressed in safety training, but it's important to make sure training is consistent with and complementary to your safe work procedures.

As an employer, you're required to document the training and instruction you provide to your workers. Your workers must be able to demonstrate competency in doing their work according to the work procedures. Provisions should be in place for evaluating worker competency following training and periodically afterward — for example, during inspections of work practices.

## Orientations and ongoing education

Orientations are important because they provide an opportunity to establish health and safety guidelines and requirements before workers start at a new job or location. Health and safety education should also be an ongoing process. Provide instruction to workers whenever there are major changes in the script or changes in the workplace — for example, changes to a stunt, changes to special effects sequences, new work processes, or new pieces of equipment.

Always maintain records of orientations.

### When to do an orientation

Orientations must occur before work begins. Workers must not perform any tasks until the orientation is complete. Tell workers they must not perform tasks they're not trained in. Encourage them to ask questions if they're unsure of anything.

## What to include in an orientation

Orientations must include general health and safety information and site-specific instructions. You may be able to provide general information to more than one production. Site-specific instructions will only apply to that specific workplace.

You may want to provide general information and site-specific instructions separately, depending on the circumstance. For example, you may want to provide general information to cast and crew before they're on set. When they arrive on set, provide the site-specific instructions before work starts.

General information may include the following:

- The basic contents of the employer's occupational health and safety program
- Rights and responsibilities, including:
  - General duties of employers, workers, and supervisors
  - Worker's right to refuse unsafe work and procedure for doing so
  - Worker's responsibility to report hazards and procedure for doing so
- Safe work procedures for carrying out work tasks and work processes

Site-specific information may include the following:

- Health and safety rules
- Supervisor name and contact information, plus backup supervisor contact information, where necessary
- Contact information for the joint health and safety committee or the worker health and safety representative
- Known hazards and how to deal with them
- Personal protective equipment (PPE) — what to use, when to use it, and where to find it
- First aid, including:
  - First aid attendant contact information
  - Location of first aid facilities and supplies (rooms or trailers)
  - How to summon first aid
  - Procedure to report an illness or injury to WorkSafeBC
- Emergency procedures, including:
  - Locations of emergency exits and meeting points
  - Locations of fire extinguishers and fire alarms
  - What to do in an emergency situation

## Tips

- Use existing safe work procedures for training.
- If a written safe work procedure is available, the employer must provide it to workers, and workers must follow that procedure. Explain how your safe work procedures relate to the worker's job duties. Don't just describe the steps or tell the worker to read the procedure.
- Verify that the worker understands how to do the task safely.
- Tell the worker where to get help in your absence.

## Training

All workers need supervised, hands-on training in how to safely perform their tasks before starting a job. The following three steps describe a general procedure that supervisors can follow when training new workers.

### 1. Prepare the worker

- Explain the job in detail, including any safety precautions or required PPE.
- Encourage the worker to ask questions. Take the time to answer them fully.

### 2. Train the worker

- Demonstrate and describe specific procedures, including all safety precautions.
- Go through procedures at normal speed, then at slow speed while the worker asks questions.
- Have the worker perform procedures until the worker can do them exactly as required.
- Answer any questions or repeat any key points that the worker may have missed.
- Keep written records of training. Document who was trained, when they were trained, and what the training included.

### 3. Check progress and observe the worker on the job

- Monitor new workers to make sure they're maintaining safety standards.
- Make unscheduled checkup visits. As the worker progresses, make visits shorter and less frequent.
- Correct unsafe work habits.
- Reinforce and recognize good work habits.

Due diligence requires the employer to document and maintain all training, including any craft-specific training.

## Resources

### Publication

*Communication Skills for Supervisors* (web book)

### Website

[Supervising for Safety](#)  
(online course)

## Supervision

Supervisors play an important role in promoting and maintaining workplace safety. Their words and actions demonstrate how they view and value health and safety. Some routine safety-related actions supervisors may take include the following:

- Provide workers with education or training before they start new tasks.
- Verify that workers' performance meets safety expectations.
- Correct unsafe work activities and conditions.
- Identify new workplace hazards and take steps to make sure everyone stays safe.
- Reinforce safe work performance.
- Record daily entries in a supervisor logbook or in the daily production report.
- Make sure all documentation is clear, appropriate, and frequently updated, showing a systematic approach to safety.

## Tips

Supervisors are well-positioned to be safety champions. Effective supervisors are intentional and purposeful in promoting health and safety. They should participate in regular safety activities, such as risk assessments, inspections, observations, investigations, and safety talks.

Employers should ensure that supervisors have received supervisor-specific training before they start working on a production.

# Workplace inspections

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## Resources

### OHS Regulation

[Section 3.5, General requirement](#) (for workplace inspections)

### Publication

*Safety Inspections Workbook*

One of the best ways to ensure the health and safety of your workers is to conduct regular workplace inspections that include all sets and locations. In addition to correcting any hazards that you observe from day to day, set aside time for regular safety inspections. Control any hazards you find during inspections. It's far better, and less costly, to prevent incidents than to deal with their consequences.

## When to inspect

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Employers must ensure that the workplace is inspected at regular intervals to prevent unsafe working conditions from developing. In motion picture and television production, inspections should be frequent because conditions are constantly changing. Also inspect your workplace when you've added a new process or new location, or if there's been an incident.

## Who should inspect

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Whenever possible, inspections must include the joint health and safety committee (or worker representative). Department heads or supervisors and members of the joint committee (or the representative) should conduct workplace inspections together. For example, the construction coordinator should inspect the construction area with committee members. The location manager should inspect locations with committee members.

Department heads or supervisors should conduct daily inspections of their departments. They should also coordinate with department heads in adjacent work areas, where necessary.

## How to inspect

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During an inspection, identify unsafe conditions and acts that could result in incidents so you can implement risk controls. Follow these guidelines:

- Use a checklist to make sure your inspection is thorough and consistent with previous inspections.
- Ask yourself what hazards are associated with the job you're observing or that would be performed in the work area. Consider issues such as physical and mental impairment — for example, from drugs, alcohol, or fatigue.

- Observe how workers perform tasks. Do they follow safe work procedures and use PPE as required?
- Ask workers how they perform their tasks.
- Talk to workers about what they're doing. Ask about safety concerns.
- Record any unsafe or harmful conditions or acts that you observe.
- Refer to previous inspection records to make sure reported hazards have been corrected.

While your first inspections may seem slow and difficult, over time inspections will become easier and will help make your health and safety program more effective.

## What to inspect

There are different ways of approaching safety inspections, depending on the objectives of your health and safety program. For example, you might focus on one or more of the following:

- The most common or hazardous tasks your workers perform, such as carpentry, rigging, stunts, or special effects
- A specific workplace, such as a studio, production facility, workshop, dressing-room unit, or on location
- A specific piece of equipment or vehicle, such as a prop, stunt vehicle, camera car, woodworking tool, or rigging

Check whether workers are following your safe work procedures and look for any potential hazards. For example, consider the following:

- Are props, equipment, or sets blocking entrances and exits?
- Is there enough room for fire lanes between the set and wall?
- Are high-voltage gas-discharge lamps properly grounded and inspected for lens cracks that could leak ultraviolet radiation?
- Is rigging equipment checked before use, after alterations, and at regular intervals?
- Is equipment such as air bags, generators, and decelerators tested and inspected immediately before use?
- Is generator exhaust directed away from cast and crew?
- Are safety talks being conducted?
- Are working areas supplied with secured fire extinguishers that are up to date?
- Are work trucks levelled and situated for safe access?
- Are artificial smoke and fog being properly monitored and ventilated?

- Are the cast and crew showing signs of physical or mental impairment, including fatigue?

The following table lists inspection topics that may be applicable at the studio, at production facilities, or on location.

### Inspection topics

Topic	Things to consider
Environment	Dust, chemicals, noise, temperature, ventilation, lighting, heat and cold stress, traffic, bystanders, animals, plants, insects
Floors	Slipping and tripping hazards, blocked entrances and exits
Buildings	Structural integrity, hazardous building materials (e.g., asbestos or lead), fire exits, pit and floor openings, waste, tents, elevators
Containers	Scrap bins, disposal receptacles, barrels, carboys, gas cylinders, solvent cans
Electrical	Switches, cables, outlets, grounding, extension cables, ground fault circuit interrupters, lamps, dimmers and dimmer room
Fire protection	Fire extinguishers, hoses, hydrants, sprinkler systems, exit routes
Hand and power tools	Wrenches, screwdrivers, saws, powder-actuated tools
Hazardous materials	Flammable, combustible, explosive, corrosive, toxic, oxidizing
Support equipment	Ladders, scaffolds, platforms, catwalks, staging, aerial lifts
Powered equipment	Engines, electrical motors, compressor equipment, generators, dressing-room units, work trucks
Storage facilities	Racks, bins, shelves, cabinets, closets, yards, floors, lockers, store rooms, mechanical rooms, flammable-substance cabinets
Walkways, stairs, and roads	Aisles, ramps, docks, vehicle ways, catwalks, tunnels, work stairs, location stairs
Personal protective equipment	Hard hats, safety glasses, respirators, gloves, earplugs, fall protection devices, face shields

Topic	Things to consider
Hygiene and first aid	Drinking fountains, honey wagons, emergency showers, eyewash facilities, first aid supplies, automated external defibrillators (AEDs), handwashing stations
Work processes	Stunt work, pyrotechnics, firearms, special effects, hazardous camera locations, helicopters, fixed-wing aircraft, working on water, building sets and props
Props, hair, makeup, wardrobe, and special effects	Clothing, makeup, costumes, polystyrene foam, polyurethane and polyester resins, ventilation, firearms, fog machines, nitrogen tanks, pyrotechnics, Ritter fans
Mobile equipment	Insert-camera cars, cranes, lift trucks, elevating work platforms, refuellers, work trucks, portable washrooms

## After the inspection

Follow these guidelines:

- If you are qualified and able to do so, remedy serious hazards and unsafe acts or conditions immediately. For example, if you find a ladder has a loose or damaged rung, immediately remove the ladder from service and repair or replace it.
- Prioritize other, less serious hazards. Assign someone to remedy each one.
- Follow up on any actions that will take time to complete (e.g., purchasing new equipment).
- Communicate your findings and plans to department heads, workers, and your joint health and safety committee.

Maintain copies of all inspection records.



# Reporting incidents to WorkSafeBC

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As an employer, you're responsible for immediately notifying WorkSafeBC when certain incidents occur, such as when a worker is seriously injured or killed on the job, a building collapses, or there is a major release of a hazardous substance.

To report an incident, call the Prevention Information Line at 604.276.3100 in the Lower Mainland or 1.888.621.SAFE (7233) toll-free in Canada.

## Tips

- Don't confuse reporting an incident to WorkSafeBC with reporting a work-related injury or illness for compensation. Notifying WorkSafeBC's Prevention Information Line or submitting an employer incident investigation report (EIIR) won't initiate a claim for compensation.
- Review collective agreements to determine union requirements for reporting injuries, illnesses, and other incidents.
- Not reporting an injury is an offence under the *Workers Compensation Act* and can result in fines. Coercing a worker not to report an injury is also an offence.

## Incidents requiring immediate notification

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Employers are responsible for immediately notifying WorkSafeBC of the following incidents:

- A worker is seriously injured or killed on the job.
- There is a major structural failure or collapse of a building, bridge, tower, crane, hoist, temporary construction support system, or excavation.
- There is a major release of a hazardous substance.
- There is a diving incident as defined by [section 24.34](#) of the Regulation.
- There is a dangerous incident involving a fire or explosion that had potential for causing serious injury to a worker.
- There is a blasting incident that results in personal injury.

Serious injuries are those that are life-threatening or could cause permanent injury. Serious injuries include traumatic injuries, such as major fractures, amputations, and serious burns. Serious injuries also include incidents such as exposure to chemicals, heat and cold stress, and incidents that result in a loss of consciousness — these could result in life-threatening conditions or cause permanent impairment.

When any of these incidents happen in the workplace, employers are also required to conduct an investigation into the incident.

For more information on what is considered a serious injury, see [Guideline G-P2-68-1](#).

## When there is an incident

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Before notifying WorkSafeBC about a serious workplace incident, employers must first:

- Address any workplace conditions that could be hazardous to other workers
- Ensure any injured workers receive prompt first aid and medical treatment

Once the workplace has been secured and any injured workers have been attended to, immediately contact WorkSafeBC.

Unless instructed otherwise by one of our officers, be sure the scene of the incident is not disturbed except to:

- Attend to someone who has been injured or killed
- Prevent further injuries
- Protect property that is in danger because of the incident

# Incident investigations

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After any incident that requires medical treatment for a worker, and any potentially serious near miss, you need to conduct an investigation into why the incident happened.

Employers are responsible for conducting investigations and submitting employer incident investigation reports (EIIRs) to WorkSafeBC. Incident investigations help employers and WorkSafeBC determine why an incident happened and what can be done to prevent similar situations in the future. Include members of your joint committee in the investigation, if they're reasonably available.

Employers are responsible for completing reports to represent the four stages of an investigation: preliminary investigation, interim corrective actions, full investigation, and full corrective actions.

Depending on the incident and how serious it is, you may also need to immediately report the incident to WorkSafeBC (see page 41).

## Terms

### Incidents

An *incident* is an accident or other occurrence that resulted in or had the potential for causing a death, injury, occupational disease, or damage to equipment or property. Incidents include:

- Accidents in which a worker is injured or killed
- Accidents in which no one is hurt but equipment or property is damaged
- Near misses

The terms *incident* and *accident* are often used interchangeably, but the preferred term is *incident* because it includes near misses as well as accidents.

### Near misses

A *near miss* is an incident in which there is no injury or damage but that could have resulted in an injury or death, or damage to equipment or property. Near misses may indicate hazardous conditions or acts that need to be corrected.

### Motor vehicle incidents

Employers are not required to investigate motor vehicle incidents that occur on public streets or highways (i.e., roads not being used for filming). However, employers are encouraged to investigate these types of incidents to determine if there are any issues related to procedures, maintenance, or safe work practices.

If a section of a public roadway is blocked off for filming, it is considered part of the workplace. During that period of time, any motor vehicle incidents that occur will require an incident investigation.

## Incidents requiring an investigation

Employers are responsible for immediately conducting an investigation into any incident that involves the following:

- Serious injury to a worker or a worker's death
- Injury requiring medical treatment beyond first aid
- Minor injury, or no injury, but had the potential for causing serious injury
- Major structural failure or collapse
- Major release of hazardous substances
- Diving incident, as defined by the Regulation
- Dangerous incident involving explosive materials
- Blasting incident causing personal injury

[Section 69](#) of the Act provides more details about what incidents employers must investigate.

### Bullying and harassment

Employers must have a policy statement indicating that workplace bullying and harassment are not acceptable. They must also have procedures for workers to report incidents and for the employer to investigate reports and address complaints. Workers must be informed of the policy and procedures, and be trained on how to recognize and respond to incidents of bullying and harassment.

## Diving

If a performer or stunt performer uses a compressed breathing gas, such as air when working underwater, for any reason, they are considered to be a diver and must follow the diving requirements specified in Part 24 of the Regulation. Performers or stunt performers who are only holding their breath underwater are not considered to be divers, so Part 24 doesn't apply in those cases. If there is a requirement to have a safety diver on set, whether or not the safety diver is in the water, you need to consider Part 24.

When an incident involves underwater work that is considered to be diving, the incident must be reported to WorkSafeBC if there is:

- Injury or death
- Convulsions or serious impairment of consciousness during or after the dive
- Decompression illness
- Lung over-pressurization
- Any serious mishap, even if the diver escapes injury
- A series of events that renders equipment or procedures suspect — before, during, or after the diving operation

## Examples of incidents requiring investigation

The following are examples of cases you would need to investigate:

- A grip was asked to secure a ladder for a lighting person. The lighting person dropped a light lens onto the grip's head from 6 m (20 ft.). The grip was not wearing a hard hat and received a cut that required stitches.
- A lighting crew member seriously injured his back when he fell through a skylight hole. The hole had been covered with black cotton for lighting purposes. There were no barriers in place to prevent the incident.
- While preparing an interior set, a group of painters encountered noxious vapours. They later discovered that the set-decoration department had hired a contractor to resurface an old bathtub with ultra-quick-drying materials. The set-decoration department had not communicated their work plans to the painting department.
- A worker tried to secure a camera crane loaded beyond the manufacturer's specified load limit by putting sandbags over the tail of the crane. The crane tipped over, missing the key grip who was standing in the area.
- An actor strained her back during a small fight sequence and attended a medical clinic a day after the injury occurred.

### Tip

Depending on the complexity of the incident, if a full investigation can be conducted within 48 hours of the incident, you can combine the preliminary and full reports.

## The four stages of an investigation

Conducting an investigation into an incident that occurred in your workplace includes four stages. Those conducting the investigation must be knowledgeable about the type of work involved at the time of the incident. An employer and a worker representative must participate, if or as they are available. Investigation participants should be trained on how to conduct an incident investigation.

### 1. Preliminary investigation

A preliminary investigation is an opportunity for employers to identify any unsafe conditions, acts, or procedures that must be addressed so work can resume safely until a full investigation has been completed. Employers must complete a preliminary investigation and accompanying report within 48 hours of an incident.

### 2. Interim corrective actions

During the period between the incident and the conclusion of the full investigation, an employer is responsible for taking all actions reasonably necessary to prevent the incident from happening again. If you can identify only some of the unsafe conditions, acts, or procedures that significantly contributed to the incident, interim corrective actions may include a full or partial shutdown of the worksite, removal of equipment, or reassignment of workers to other duties.

### 3. Full investigation

A full investigation is about determining an incident's cause or causes. This involves carefully analyzing the facts and circumstances to identify the underlying factors that led to the incident. Key questions to ask include:

- What factors made the unsafe conditions, acts, or procedures possible?
- Are there any health and safety deficiencies in management system or processes?

A full investigation and report must be completed within 30 days of the incident.

### 4. Final corrective actions

Once a full investigation has been completed, as an employer you must prepare a corrective action report that describes the unsafe conditions that led to the incident, what corrective action is necessary, and the steps you and your organization will take to implement those actions.

## Submitting investigation reports to WorkSafeBC

Depending on the incident, employers are responsible for completing up to four separate reports but, generally, WorkSafeBC only requires you to submit a full [employer incident investigation report form](#). You would then share all the other reports as necessary in the workplace and retain the originals on site for reference. Make sure you distribute copies to the joint health and safety committee (or worker health and safety representative). If requested, you must provide a copy of the EIRR to the union representing the workers at the workplace.

You can submit full investigation reports in the following ways:

- Online at the [EIIR upload portal](#)
- By fax to 604.276.3247 in the Lower Mainland or toll-free 1.866.240.1434
- By mail to WorkSafeBC, PO Box 5350 Stn Terminal, Vancouver, BC V6B 5L5

### Resources

#### **Workers Compensation Act**

[Sections 68 to 73, Employer accident reporting and investigation Form](#)

[Employer Incident Investigation Report \(EIIR\) \(form 52E40\)](#)

#### **Publications**

- *Reference Guide for Employer Incident Investigations*
- *Guide to Completing an Employer Incident Investigation Report (EIIR)*

#### **Website**

[Incident investigations](#)

# Regular health and safety meetings

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Good communication about health and safety issues among the producer, directors, department heads, supervisors, and cast and crew is vital for the success of a health and safety program. Hold regular meetings (for example, safety meetings and safety talks) with workers to discuss health and safety matters. Employers must hold periodic management meetings to review health and safety activities.

At your meetings, focus on identifying and correcting unsafe conditions and acts and making health and safety a priority in your workplace. Keep a record of each meeting that includes what was discussed and who attended (for example, on the daily production report). Post meeting minutes for everyone to read.



Informal safety talks are a good way to review health and safety issues with cast and crew.



Health and safety meetings or safety talks should be conducted regularly and in each of the following circumstances:

- On the first day of production
- At crew call or the start of each day's filming
- When filming at a new location
- When filming at potentially hazardous locations or when using potentially hazardous equipment (e.g., special rigging or hazardous camera placements)
- Immediately before performing a stunt or special effect
- When there are significant changes to planned, rehearsed, or scheduled activities

### ***Safety talks versus safety meetings***

*Safety talks* are brief, informal meetings with the cast and crew held at the start of a day's filming, when filming at a new location, and immediately before filming under potentially hazardous or special circumstances (for example, before filming near a cliff or performing a stunt).

*Safety meetings* are more formal, scheduled meetings in which safety issues — including special effects and stunts — are discussed with department heads and documented further in advance of the filming of a scene. These safety meetings are separate from joint health and safety committee meetings.

### **Safety meeting topics**

Sample safety meeting topics include the following:

- The production's health and safety program
- Site-specific information (e.g., emergency procedures, hazardous substances, and how to summon first aid)
- That day's activities (e.g., stunts, special effects, location hazards, and weather)
- Procedures to address hazards specific to the production (e.g., physical or mental impairment, fatigue, working at heights, working around vehicles, or other workplace-specific hazards)
- Precautions for specialized equipment (e.g., insert-camera cars, cranes, process trailers, aerial lifts, paints, chemicals, pyrotechnics, and specialized rigs)
- Personal protective equipment (PPE) to be used, including how to use, maintain, store, and inspect it (e.g., respirators, hearing protection, high-visibility clothing, and fall protection)

Encourage hazard reporting during safety meetings. Follow up on reported issues promptly.

## Joint health and safety committee meetings

Regular meetings provide opportunity for committee members to focus on health and safety issues. As a committee member, you are entitled to time away from your regular job duties to attend and prepare for meetings, without loss of pay.

Minutes from each meeting must be recorded and posted in the workplace. If requested, you must also provide a copy of the joint committee meeting minutes to the union representing the workers at the workplace.

At the end of a production, committee meeting minutes should be archived and sent to the employer or production company.

### Rules of procedure

Each joint committee must establish rules for how it will perform its duties and functions. Rules of procedure, also known as terms of reference, help define the scope and mandate of the committee. The rules of procedure can be referred to in case of disputes.

Rules of procedure should describe how the committee meetings will be conducted. They should include information such as when the committee will meet, for how long, and how many committee members are required for quorum.

### Resources

#### Publications

- *Joint Health and Safety Committee Fundamentals: Participant Workbook*
- *Handbook for Joint Health and Safety Committees*

#### Websites

- [Joint Health and Safety Committee Fundamentals: Online Learning Component](#) (online course)
- [Worker Health and Safety Representative Fundamentals](#) (online course)

# Records and statistics

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## Tip

If requested, you must make safety program documentation available to the union representing the workers at the workplace. If there is no union, make it available to the workers themselves. This includes inspection reports, incident investigation reports, and joint committee meeting minutes. If worker privacy may be an issue, you will need to redact parts of the documentation.

Employers are required to keep health and safety records and statistics on file. Written records and statistics can help:

- Identify trends for unsafe conditions or work practices so you can take steps to correct these potential hazards
- Provide material for education and training
- Provide documentation in case a WorkSafeBC officer requests it
- Demonstrate due diligence

## Documentation

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Maintain records and statistics for the following (this is not a comprehensive list):

- Worker orientation, education, and training records (see pages 27–30), to make sure workers are getting the education and training they need
- Inspection reports (see pages 31–34), to provide historical information about hazards your company has encountered and how you’ve dealt with them
- Safety meeting records, including joint health and safety committee meeting records (see page 44), to monitor how promptly and how well “action items” have been carried out
- Incident investigation reports (see pages 40–41), to identify which hazards have caused incidents and how they were controlled
- First aid assessments and first aid records (see page 47), to make sure productions have the necessary facilities and supplies, including first aid trailers, and to provide statistics that will help prioritize health and safety efforts
- Equipment maintenance records, inspection logbooks, and manufacturer instructions
- Risk assessments
- Safe work procedures, including supplementary documentation used when following safe work procedures (e.g., location assessment checklists, safety data sheets (SDSs), and fit-test records)

### Tip

You can access free WorkSafeBC statistics and interactive tools at [worksafebc.com/shared-data](https://worksafebc.com/shared-data) to help understand the patterns of work-related injuries, diseases, and deaths.

## Statistics

Statistics that may be of value include the following:

- Number and types of incidents and injuries each production or year
- Number of workdays lost each production or year
- Cost to your company from workplace injuries each production or year

At the end of each production, make sure all records and statistics are archived and sent to the employer or production company.

# First aid

## Resources

### OHS Regulation

Sections 3.14 to 3.21,  
Occupational first aid

### Forms

- [Employer's Report of Injury or Occupational Disease](#) (form 7)
- [Physician's Report](#) (form 8/11)
- [First Aid Record](#) (form 55B23)

All B.C. workplaces — including motion picture and television production sites — must provide appropriate first aid. Effective first aid treatment can minimize injury and future disability.

Workers are required to immediately report all injuries and illnesses to first aid and a supervisor.

Employers are responsible for the cost of transporting injured workers to the nearest source of medical treatment. Employers must also keep first aid records for at least three years, documenting all injuries or illnesses that occur.

## First aid assessment

The type of first aid equipment, supplies, facilities, and services your production needs depends on the following:

- Nature and extent of the risks and hazards
- Travel time to the nearest hospital
- Number of workers on location at any given time

Conduct a first aid assessment for each production and location to determine your requirements. Because cast and crew numbers may vary daily, the maximum number of workers on shift must be used to determine first aid requirements.

## Assigned hazard rating is moderate

WorkSafeBC uses an assigned hazard rating system to describe the risk levels of workplaces in B.C. The classification unit (CU) for movies and television is “Motion Picture, Commercial, or Television Production.” Based on the nature and extent of the hazards and risks in this CU, employers are assigned a moderate hazard rating for defining first aid requirements. In some cases, production activities may be assessed as high risk (for example, special effects such as fire and explosions, or work in construction shops).

### Tip

When the risk of injury is high or the surface travel time to a hospital is greater than 20 minutes, the requirements for equipment, transportation, and first aid certification increase. When working at remote locations that are more than 20 minutes' surface travel time from a hospital, provide appropriate first aid facilities and a communication system (for example, two-way radios). As in any location, plan for emergency transportation to the nearest hospital.

## First aid attendants, supplies, and facilities

Depending on your production's first aid assessment, you may require some or all of the following:

- First aid attendants with appropriate training
- Facilities such as first aid trailers
- First aid kits with appropriate types and quantities of supplies
- A record-keeping system to log incidents
- Appropriate transportation to get injured workers to medical aid (e.g., a production driver or taxi for less-urgent care or an ambulance for more serious incidents)
- A way for first aid attendants to communicate with workers and for first aid assistants to call for help

Follow these requirements:

- Make sure every cast and crew member knows where first aid facilities and equipment are located and how to call the first aid attendant.
- Post signs in your workplace that indicate where first aid equipment and facilities are.
- If a first aid attendant is required, the attendant must hold an appropriate first aid certificate for your workplace.
- Train backup first aid attendants. Make sure enough workers are trained for this responsibility to cover breaks and other absences.

# Compensation claims

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## Employers — How to initiate a worker claim

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Contact WorkSafeBC as soon as possible if a worker:

- Is taken from or leaves the jobsite for treatment at a medical facility
- Misses time from work after the day of the injury
- Loses consciousness
- Is diagnosed with a work-related disease
- Develops symptoms of a mental health disorder related to work or the work environment
- Suffers broken eyeglasses, dentures, hearing aid, or artificial limb in a work-related incident

Employers must report a work-related injury or illness to WorkSafeBC by submitting an [Employer's Report of Injury or Occupational Disease](#) (form 7) within three days of an incident. You can submit a report even if you don't have all the details of the incident yet.

### Some incidents require immediate reporting and an incident investigation

You're required to report certain incidents to WorkSafeBC immediately. For more information, see "Incidents requiring immediate notification," pages 35–36.

## Workers — What to do if you're injured at work

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If you're injured at work, follow these steps:

1. Report the injury immediately to your supervisor and first aid. Your employer is responsible for getting you first aid, as necessary, and for transporting you to a medical facility.
2. See your health care provider. Inform them you were injured at work. Your doctor will recommend treatment and may refer you to other health care practitioners. Be sure to ask about modified work duties and activities at home that may help your recovery.
3. Report your injuries to WorkSafeBC to start a compensation claim.
4. Keep copies of reports and other documentation from your employer, doctors, and health care facilities.

## How to start a compensation claim

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To start a compensation claim, the injured worker, employer, or physician must provide a report of a work-related injury or illness to WorkSafeBC:

- Workers — Call Teleclaim at 1.888.WORKERS (1.888.967.5377) or report online.
- Health care providers — Submit a [Physician's Report](#) (form 8/11).
- Employers — Submit an [Employer's Report of Injury or Occupational Disease](#) (form 7).



# **Part 3: Risk assessments — Identifying hazards and controlling risks**

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# Risk management

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You can prevent most workplace injuries, illnesses, and other incidents if you identify workplace hazards and take steps to control them. To do this you need to think about what might harm workers and decide whether you're taking reasonable steps to prevent that harm.

This section describes how to identify hazards in your workplace and how to reduce the risks associated with these hazards.

A risk assessment is a safety planning tool in which you identify and assess hazards so you can develop risk controls to prevent injuries, illnesses, and other incidents. During your risk assessment, consider every aspect of your production, including pre-production and post-production. Consider all the work practices in your work environment, including each scene, shooting set-up or location, stunt, and hazardous camera position.

Planning for proposed high-risk activities (for example, stunts, night filming, special effects, hazardous camera placement, and remote locations) is essential to prevent incidents. Where a hazard exists, document the hazard, the risks, and the control measures.

## Tip

It's a good idea to consider health and safety issues for the cast and crew when scouting locations and during the technical survey. Choosing an appropriate filming environment can reduce production costs considerably. Your initial survey of possible locations should include a risk assessment that could influence site selection or necessary risk controls.

# Four steps of a risk assessment

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Risk assessments consist of the following four steps:

1. Identify hazards and unsafe work practices that are reasonably foreseeable.
2. Assess the risks associated with the hazards and unsafe work practices.
3. Choose control measures to eliminate the hazard or reduce the risks.
4. Monitor and review the control measures regularly.

## 1. Identify the hazards

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It's important to identify potential hazards accurately. Consider the following:

- Use observation — for example, walk around the set and look for any activities, processes, or substances that could injure workers or endanger their health.
- Complete a location hazard checklist.
- Consider known issues or hazards from past experience.
- Communicate and consult with the cast and crew.
- Review injury statistics, workplace inspection records, and incident investigations.
- Review manufacturers' instructions and safety data sheets for hazardous products.
- Visit industry association websites, such as [actsafe.ca](https://actsafe.ca).

## 2. Assess the risks

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Think of how workers, contractors, and the public could be harmed by the hazard, how serious the harm could be, and the likelihood of it happening. Consider the following:

- Frequency (number of times) of a work activity when working near a hazard
- Severity (degree of impact) of an undesirable event, such as an injury or damaged equipment
- Probability (likelihood) of an incident occurring
- Number of people exposed and the duration of exposure
- Training, skills, and experience of workers performing the task
- Presence or absence of qualified supervision

### Tip

If you organize a number of productions with similar activities, you can develop a model risk assessment that reflects the common hazards and risks associated with your production activities. Reassess the hazards and risks at each new location and whenever you introduce new substances, procedures, or equipment to the workplace.

- Worker characteristics, such as age, vision, and hearing
- Proximity of workers to the hazard
- Potential for physical or mental impairment, such as fatigue
- Quantity of a chemical being used
- Size of equipment, forces, and energy level

## 3. Choose control measures

Look at what you're already doing and the control measures you already have in place. Can you eliminate the hazard? If not, how can you control the risks so harm is unlikely? Refer to the hierarchy of risk controls on page 55.

Possible practical steps include the following:

- Try a less-risky option.
- Prevent access to the hazard.
- Provide engineering controls, such as appropriate equipment.
- Organize work to reduce exposure to the hazard.
- Provide first aid and washing facilities.
- Create or revise safe work procedures.
- Provide appropriate education, training, and supervision.
- Supply workers with personal protective equipment (PPE).

Involve your workers to make sure your proposed risk controls will work in practice and will not introduce any new hazards.

## 4. Monitor and review the control measures

Determine whether your controls have been implemented as planned:

- Are controls in place?
- Are workers using them correctly?

Determine whether your controls are working:

- Have changes had the expected result?
- Has exposure to the identified hazards been eliminated or adequately reduced?

Determine whether there are any new hazards. Your controls shouldn't introduce new hazards or worsen existing ones.

Make a record of your significant findings: the hazards, how people might be harmed by them, and what you have in place to control the risks.

# Hierarchy of risk controls

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Some risk controls are more effective than others. You may not always be able to use the more effective solution, but whenever possible you must implement controls in the following order.

## 1. Elimination or substitution

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Whenever possible, eliminate the hazard entirely so there's no risk to workers. If that's not practicable, substitute less-hazardous materials or processes. For example, rather than using artificial smoke or fog, use computer-generated imagery.

## 2. Engineering controls

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Consider physical changes to the work environment, equipment, or materials that will help minimize worker exposure to hazards. For example, when purchasing or replacing equipment, select appropriate safety features.

## 3. Administrative controls

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Consider changes to the way people work, such as task rotation or scheduling regular breaks. Administrative controls may include training, supervision, and safe work procedures. For example, make sure stunt work is set up and executed according to established safety practices and procedures.

## 4. Personal protective equipment (PPE)

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PPE is considered the least effective option because it doesn't keep workers away from the hazard and is only effective if used properly. However, sometimes it's the only available option. Workers may need to use PPE to protect against a hazard even when other controls are already in place. For example, wearing hearing protection when filming explosions.

# Personal protective equipment

## OHS Regulation

### Part 8: Personal protective clothing and equipment

PPE should be used as the last line of defence or with other appropriate controls. Before considering PPE, first try to eliminate or minimize the risks using other means. For example, use less-hazardous chemicals or modify work processes or equipment.

If PPE is required, make sure it's available to all workers who need it. As an employer, you must also make sure workers are trained in the use of any relevant PPE, and that they use it according to their training and the manufacturer's instructions.

If you require an evaluation of workplace conditions to determine appropriate PPE, where practicable the evaluation must be done in consultation with the joint committee and with the worker who will use the equipment.



For certain tasks and work environments, workers must wear certified safety footwear to help prevent injuries.

The following table lists various types of PPE and their uses in motion picture and television production; however, this isn't a comprehensive list of all types of PPE.

### Typical PPE used in motion picture and television productions

Body part	Type of PPE	Examples
Eyes	Safety glasses	General eye protection, set and prop construction
	Safety goggles and face shields	Working with chemicals that may splash or with firearms or explosives
Ears	Earmuffs and earplugs	Working around impact noise, such as firearms or explosions (140 dBC peak sound level), or loud, continuous noise over a long period (85 dBA over eight hours)
Hands	Gloves, such as work gloves, chemical-resistant gloves, and cut-resistant gloves	Working with an object or substance that could puncture, abrade, or adversely affect the skin or absorb through it
Feet	Non-slip footwear	Working in craft services or catering
	Certified safety footwear	Operating mobile equipment and camera cranes, working in storage and warehouse areas, constructing sets and props
	Footwear appropriate to the work environment, based on a risk assessment	Working where ankle protection and foot support are needed or where there are risks associated with slipping, uneven terrain, abrasions, crushing, temperature extremes, corrosive substances, punctures, or electric shock
Body	Seat belts, harnesses	In vehicles, including lift trucks, camera-crane chairs, and process trailers
	High-visibility vests	Working near mobile equipment, including traffic control
	Buoyancy equipment	Working near water
	Fall protection	Working at heights, including work platforms
Lungs	Respirators (air purifying and air supplying)	Working with or around substances that are inhalation hazards — e.g., chemicals, paints, varnishes, insulation, Plexiglas (when cutting), welding, spray paint, wood dust, silica dust, asbestos-containing materials, isocyanates, glycerin, and glycol products
Head	Hard hat	Working near falling objects, constructing sets and props
	Helmets	Working where there's a potential for head injuries, such as stunts, and specifically when using equipment such as: <ul style="list-style-type: none"> <li>• All-terrain vehicles</li> <li>• Snowmobiles</li> <li>• Motorcycles</li> <li>• Bicycles, skateboards, or inline skates</li> <li>• Skis or snowboards</li> </ul>





# Part 4: General hazards and industry-specific hazards

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# The importance of planning

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Almost everyone involved in a motion picture or television production will encounter potential hazards on the job. The hazards will vary during each phase of a production.

Most of a production's planning happens in pre-production. The overall vision of a project is decided before the camera rolls. Pre-production includes location scouting, casting, and set and prop construction. Location scouting and technical surveys provide an opportunity to identify and evaluate potential hazards. Script read-throughs are also a good time to assess hazards and think of ways to eliminate or minimize risks.

During production, it's important to plan ahead of each day's shoot. In addition to helping improve health and safety, it can help the production stay on budget and on schedule. The planning that happens during pre-production also helps keep things on track.

Make sure all the appropriate workers are present — for example, department heads, stunt coordinators, or drone operators. Schedule additional safety discussions if there are changes in the shooting schedule, location, or script. Changes should be communicated to all affected cast and crew members.

# General hazards

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Potential day-to-day hazards can affect any cast or crew member, whether the filming is on location or at a studio. Employers are responsible for making sure their workers know about any potential hazards and know how to avoid or protect against them. Employers must also take steps to control hazardous workplace conditions and practices.

This section focuses on general hazards, but hazards will vary for different departments. The remaining sections of part 4 describe potential hazards for specific production activities. Please note that not all productions will have the same elements, and the hazards described in this guide are not a complete list.



When lifting and carrying loads, keep the load close to your body, between knee and chest height.

## General hazards and controls

Hazards	Examples of controls	WorkSafeBC resources
<b>Slips, trips, and falls</b>		
<ul style="list-style-type: none"> <li>Falls, slips, trips, and collisions when following action or moving around the set or location</li> <li>Trips over cables, equipment, or props</li> <li>Falls down stairs or through floor openings</li> <li>Inadequate lighting</li> <li>Truck tailgates</li> </ul>	<ul style="list-style-type: none"> <li>Conduct surveys to familiarize yourself with the work area.</li> <li>Manage electrical cords. Use cable ramps and mats. Tie or tape down cord lines.</li> <li>Conduct workplace inspections and maintain good housekeeping.</li> <li>Film from static postures, where possible.</li> <li>When following action, use a second person as a guide.</li> <li>Position work trucks safely on location.</li> <li>Wear footwear appropriate for the existing hazards.</li> </ul>	<a href="#">Slips, trips &amp; falls</a>
<b>Musculoskeletal injury (MSI) risk factors</b>		
<ul style="list-style-type: none"> <li>Sprains, strains, and other injuries to muscles, tendons, and joints</li> <li>Overexertion from lifting</li> <li>Awkward work postures, repetitive motions, force, workplace design, and local contact stress</li> </ul>	<ul style="list-style-type: none"> <li>Use mechanical lifting and pushing aids instead of handling materials manually.</li> <li>Use carts with wheels that are appropriate for the terrain.</li> <li>Use carts with adjustable or vertical handles so workers can find a handle height that works for them.</li> <li>Place items on stands above knee height instead of on the ground to minimize awkward back postures and the force required to lift.</li> <li>Arrange storage spaces so heavier or frequently accessed items are between knee and waist height.</li> <li>Take a moment to rest and recover when lifting or handling heavy loads.</li> <li>Rotate between tasks that use different muscles.</li> </ul>	<a href="#">Sprains &amp; strains</a> <a href="#">Lifting &amp; handling</a> <a href="#">Ergonomics</a>
<b>Violence</b>		
<ul style="list-style-type: none"> <li>May involve assault (attempted or actual), threatening statements or behaviour, and bullying and harassment</li> <li>May occur away from the production site — e.g., walking to or from a bus stop or parking lot, attending a wrap party</li> <li>May involve people not associated with the production</li> <li>May be a higher risk in areas where there's crime, prostitution, high population density, poverty, transience, or dilapidation</li> </ul>	<ul style="list-style-type: none"> <li>Conduct a risk assessment for violence.</li> <li>Survey the area to check local conditions and identify risks.</li> <li>Plan transport, including parking and routes in and out of a location.</li> <li>Make sure entrances and exits are well lit.</li> <li>Consider where security might be required.</li> <li>Control access to the shooting location. Deny access if there might be a security threat.</li> <li>Investigate all violent incidents, including reports of bullying or harassment.</li> </ul>	<a href="#">Violence</a>

Hazards	Examples of controls	WorkSafeBC resources
<b>Working alone or in isolation</b>		
<ul style="list-style-type: none"> <li>Access to first aid not readily available</li> </ul>	<ul style="list-style-type: none"> <li>Avoid having workers on their own, whenever possible, especially for jobs with a recognized risk.</li> <li>Schedule higher-risk tasks when there's another worker nearby who could help in an emergency.</li> <li>Establish a check-in procedure.</li> </ul>	Working alone or in isolation
<b>Fire</b>		
<ul style="list-style-type: none"> <li>Differing hazards from commercial buildings because filming and other activities take place in temporary and varying locations</li> <li>Inadequate fire suppression capabilities and lack of direct, prompt access to the location for firefighters and equipment in remote areas</li> <li>Electrical and lighting hazards</li> <li>Blocked exits and emergency routes</li> <li>Accumulation of combustible materials</li> <li>Smoking, welding and cutting operations, hot surfaces</li> <li>Combustible tents</li> <li>Portable generators</li> <li>Special effects, including pyrotechnics and explosions</li> </ul>	<ul style="list-style-type: none"> <li>Conduct inspections to make sure props, camera equipment, and sets don't block access routes.</li> <li>Don't block corridors, stairways, and other exits.</li> <li>Provide exit signs and lighting.</li> <li>Maintain housekeeping to control combustibles, such as wood scraps, wood dust, paper, and rags.</li> <li>Store flammables, combustibles, and waste materials in appropriate containers.</li> <li>Designate smoking areas.</li> <li>Provide fire extinguishers or water trucks, when necessary.</li> <li>Make sure there's a site-specific fire safety plan that includes evacuation procedures and provisions for drills. Tell your local fire department about your plan, when necessary.</li> <li>Provide water trucks on location if fire trucks might not be able to access the area in an emergency.</li> <li>Develop safe work procedures for construction, electrical, and lighting activities, as well as for pyrotechnics and explosions.</li> <li>Get municipal and federal permits, where required.</li> <li>Get special permits for specific activities, such as pyrotechnic special effects.</li> </ul>	Electricity

Hazards	Examples of controls	WorkSafeBC resources
<b>Artificial smoke and fog</b>		
<ul style="list-style-type: none"> <li>• Irritation of the eyes and respiratory system from long-term exposure to glycol or glycerin in smokes and fogs</li> <li>• Slips, trips, or falls resulting from reduced visibility</li> <li>• Unsafe exposure levels from fog-machine malfunctions</li> <li>• Carbon monoxide exposure from propane used for outdoor fog generators or fireplaces</li> </ul>	<ul style="list-style-type: none"> <li>• Eliminate the effect or substitute a less-hazardous product.</li> <li>• Ensure that a qualified person conducts risk assessments and air monitoring to make sure workers aren't overexposed.</li> <li>• Have an exposure control plan (ECP), if required.</li> <li>• Use respirators, if necessary.</li> <li>• Communicate risks and train workers in the ECP and related safe work procedures.</li> </ul>	<a href="#">Respiratory protection</a> <a href="#">WHMIS</a>
<b>Static and mobile equipment</b>		
<ul style="list-style-type: none"> <li>• Being caught in or struck by equipment</li> <li>• Working near traffic</li> <li>• Lack of barriers, warning signs, or other safeguards</li> <li>• Working on platforms</li> </ul>	<ul style="list-style-type: none"> <li>• Follow manufacturers' instructions.</li> <li>• Use wheel chocks, tailgates, ramps, and stair railings.</li> <li>• Hold a safety talk or a safety meeting to remind the crew about the hazards when working around static and mobile equipment.</li> <li>• Make sure equipment is maintained regularly.</li> <li>• Set up and use C-stands properly.</li> <li>• Wear appropriate work clothing. Avoid clothing that's baggy, long, or loose.</li> <li>• Wear high-visibility vests, when necessary.</li> </ul>	<a href="#">Tools, machinery &amp; equipment</a>
<b>Physical and mental impairment (e.g., from drugs, alcohol, or fatigue) or distractions from devices</b>		
<ul style="list-style-type: none"> <li>• Reduced ability to respond to changes in surroundings or information provided as a result of weariness, sleepiness, reduced alertness, and lack of concentration and memory</li> <li>• Motor vehicle incidents while commuting to or from work</li> <li>• Distractions such as radio, earbuds, or phones</li> </ul>	<ul style="list-style-type: none"> <li>• Don't work while impaired. Workers should report to their supervisors or the employer if they feel fatigued or impaired and believe they can't perform their work.</li> <li>• Don't let impaired workers remain at the workplace.</li> <li>• Don't assign impaired workers to activities where impairment may create an undue risk.</li> <li>• Plan for rest breaks in the production schedule to reduce fatigue.</li> <li>• Provide amenities such as prepared meals and facilities for breaks.</li> <li>• Provide transportation so workers don't have to drive.</li> <li>• Develop policies and procedures to address impairment in the workplace.</li> </ul>	<a href="#">Fatigue impairment</a> <a href="#">Substance use &amp; impairment in the workplace</a>

# Locations

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Shooting on location presents different challenges than does filming in a studio setting. The cast and crew may encounter a range of potential hazards when filming in remote locations, wilderness areas, or abandoned or old buildings.

For example, abandoned or old buildings may be structurally unstable. They may have broken staircases, falling ceilings, or other hazards. They may also contain hazardous materials, such as lead paint, asbestos, or rodent or bird droppings.

Wilderness locations may have severe weather, dangerous terrain, or wildlife. Working around rivers, lakes, oceans, or swamps can expose workers to underwater hazards, such as undertows or hidden rocks. Working outdoors can also lead to heat and cold stress.

You may need to take special precautions to protect against biological agents, such as vaccination for hepatitis A or protection against deer ticks, which can cause Lyme disease.

Geographic factors or civil unrest can increase the risk of violence — for example, when filming in high-crime areas or politically unstable regions.

## Tips

- A location hazard checklist can be a useful tool to help identify potential hazards in the surrounding environment.
- Keep safety in mind when scouting and surveying locations. This will help protect the cast and crew, and contribute to your due diligence.

## Scouting and surveying locations

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The location manager searches for, surveys, and secures locations. Then the employer reviews the possibilities with the director and approves the suitable locations. During the initial survey of a potential location, the location manager or their delegate must check for environmental concerns and other unsafe conditions. These can affect the location selection or help determine necessary control measures for mitigating risks.

### Issues to consider

Health and safety issues can generally be addressed during the shoot, but it's often helpful to consider these issues beforehand, when scouting locations. The following are some examples:

- Working alone or in isolation
- Proximity of location to production office and accommodations or base camp
- Condition of buildings (e.g., structural stability, missing stairs or handrails, unguarded openings in floors, allowable weight on roofs)

## Tips

- When approaching building and land owners, be upfront with them about the work activities that could take place on their sites.
  - Building and land owners are responsible for informing occupants about hazards on their properties. Ask if there are any hazards, and document them on contracts. Get other pertinent information, such as engineering reports, floor plans, weight loads, and structural issues.
  - If you're renting space, ask for the emergency procedures for that location.
- Confined spaces, hazardous substances, and contaminants that affect air quality (e.g., mould, asbestos, rodent or bird feces, and drug paraphernalia)
  - Building access and firefighting capabilities (e.g., stairs and elevators)
  - Geography, climate, and terrain, including feasibility of transportation
  - Road conditions and traffic, including parking, site access, and railway lines
  - Nearby industries, businesses, and private residences
  - Nearby facilities and amenities, including access to shelter, power, water, and sewage
  - Access to support facilities, such as banks, shops, fuel stations, and pharmacies
  - Distances and routes to hospitals and treatment facilities, including obstacles that may affect travel time, such as train tracks or rough terrain
  - Pests, fauna, flora, or dangerous wildlife
  - Security requirements, including restricted-access areas
  - Potential for violence (e.g., high-crime or drug areas)
  - Communications, including availability of cellular or satellite signals
  - Events that may affect the production but aren't obvious during location scouting (e.g., construction, rallies, and other events)
  - Potential for natural disasters, such as wildfires, avalanches, flooding, thunderstorms, earthquakes, tsunamis, landslides, or weather extremes



## Hazards and controls — Warehouses and other buildings

Hazards	Examples of controls	WorkSafeBC resources
<b>Structural stability</b>		
<ul style="list-style-type: none"> <li>Warehouses and other building structures may have unstable ceilings, walls, floors, roofs, or stairways.</li> </ul>	<ul style="list-style-type: none"> <li>Hire a professional engineer to check the structure.</li> <li>File certificates of occupancy with the appropriate jurisdiction, where required.</li> <li>Ask authorities, building and land owners, or other experts about potential hazards at the location.</li> <li>Keep documentation, such as building inspections or consultant reports.</li> </ul>	—
<b>Asbestos</b>		
<ul style="list-style-type: none"> <li>Asbestos may be found in pre-1990 buildings and building materials.</li> <li><i>Friable asbestos</i> is asbestos-containing material that is crumbled or powdered.</li> <li>If friable asbestos is disturbed, it can be breathed in and can eventually lead to serious lung diseases, such as asbestosis or mesothelioma.</li> </ul>	<ul style="list-style-type: none"> <li>Hire a qualified person to assess the risks of any asbestos-containing materials.</li> <li>It may be necessary to hire someone to take asbestos samples or to conduct air monitoring.</li> <li>If there's a risk of exposure, hire a qualified asbestos contractor to remove or encapsulate the asbestos.</li> <li>If there's a low risk of exposure (e.g., working near non-friable asbestos), restrict access and post warning signs.</li> <li>Tell the cast and crew not to disturb asbestos-containing materials.</li> <li>Develop and implement an exposure control plan (ECP) for asbestos.</li> </ul>	Asbestos
<b>Lead</b>		
<ul style="list-style-type: none"> <li>Peeling paint may be lead based.</li> <li>Lead dust can result when lead-based paint is dry scraped, sanded, or heated.</li> <li>If it becomes airborne, lead can be inhaled or ingested.</li> </ul>	<ul style="list-style-type: none"> <li>Hire a qualified person to assess the risks of any lead-containing materials.</li> <li>It may be necessary to hire someone to take samples or to conduct air monitoring.</li> <li>Tell the cast and crew not to disturb lead-containing materials.</li> <li>Don't set up craft services where there's a risk of lead dust settling on food.</li> <li>Post warning signs.</li> <li>Develop and implement an ECP for lead.</li> </ul>	Lead
<b>Biological agents</b>		
<ul style="list-style-type: none"> <li>Toxic moulds and fungi can be found in damp locations.</li> <li>Viruses and bacteria can come from contaminated human, animal, or bird feces.</li> <li>Used syringes in abandoned buildings, alleys, and parks can cause puncture wounds and potential hepatitis B infection.</li> </ul>	<ul style="list-style-type: none"> <li>Clean and disinfect filming areas.</li> <li>Offer vaccinations, if available.</li> <li>Contact the local health department for help.</li> <li>Develop and implement an ECP for biological agents.</li> </ul>	Mould Infectious diseases Personal protective equipment (PPE)

Hazards	Examples of controls	WorkSafeBC resources
<b>Chemicals</b>		
<ul style="list-style-type: none"> <li>Many industrial buildings, especially warehouses, may contain waste chemicals that can present health and fire hazards.</li> </ul>	<ul style="list-style-type: none"> <li>Hire an environmental service to remove the hazardous materials.</li> <li>Implement chemical-specific safe work procedures. Include instructions for storage and removal.</li> <li>Follow WHMIS requirements.</li> </ul>	WHMIS

## Hazards and controls — Geography, climate, and terrain

Hazards	Examples of controls	WorkSafeBC resources
<b>Mountains, hills, and cliffs</b>		
<ul style="list-style-type: none"> <li>Rugged terrain, poor roads, and weather extremes can make access difficult and dangerous.</li> <li>Helicopter access may be hazardous if there are uncertain or violent air currents.</li> <li>Natural disasters can include avalanches, mudslides, rock slides, and forest fires.</li> </ul>	<ul style="list-style-type: none"> <li>Consult local experts and plan carefully for local conditions.</li> <li>Hire an experienced guide or consultant who knows the area.</li> <li>Provide survival gear and appropriate first aid.</li> <li>Conduct an avalanche risk assessment, and make sure safety plans are in place.</li> <li>Develop and implement procedures for working in isolation.</li> <li>Develop and implement an emergency response plan.</li> </ul>	—
<b>Water, including rivers, ponds, lakes, oceans, swamps, and tanks</b>		
<ul style="list-style-type: none"> <li>There's a risk of drowning when working in or near water.</li> <li>Underwater hazards, such as undertow or hidden rocks, may be present.</li> <li>Grounding hazards are present when working around water and equipment.</li> </ul>	<ul style="list-style-type: none"> <li>Hire an experienced guide or consultant who knows the area.</li> <li>Make sure cast and crew wear appropriate clothing, footwear, and PPE.</li> <li>Develop and implement a cold-stress ECP if conditions could cause cold stress or injury.</li> <li>Develop and implement an emergency response plan.</li> <li>Test water for voltage before entering a pool or tank.</li> </ul>	—

Hazards	Examples of controls	WorkSafeBC resources
<b>Climate</b>		
<ul style="list-style-type: none"> <li>Some locations may have extreme temperatures, wind, and bad weather.</li> <li>Heat can cause disorders ranging from heat rash to heat stroke.</li> <li>Cold can cause disorders ranging from frostbite to hypothermia.</li> </ul>	<ul style="list-style-type: none"> <li>Check local weather conditions, and plan work accordingly.</li> <li>Minimize time spent in extreme weather conditions (e.g., provide shade cover or heating tents or mobile rooms).</li> <li>Educate cast and crew on signs and symptoms of heat and cold disorders.</li> <li>Make sure appropriate first aid supplies and equipment are available, such as air conditioners, fans, and heaters.</li> <li>Develop and implement an ECP for heat stress.</li> <li>Develop and implement an ECP for cold stress.</li> </ul>	<a href="#">Cold stress</a> <a href="#">Heat stress</a> <a href="#">Sun &amp; UV radiation</a>

## Hazards and controls — Wilderness flora and fauna

Hazards	Examples of controls	WorkSafeBC resources
<b>Animals</b>		
<ul style="list-style-type: none"> <li>In addition to immediate physical risks, some wild animals can carry infectious diseases (e.g., rabies from bats).</li> </ul>	<ul style="list-style-type: none"> <li>Prevent wild animals from wandering onto sets.</li> <li>Watch for signs of animals in the area.</li> <li>Plan location of catering and craft services accordingly.</li> </ul>	<a href="#">Animal handling</a> <a href="#">Wildlife &amp; insects</a>
<b>Insects</b>		
<ul style="list-style-type: none"> <li>Insect bites can vary from nuisance to life-threatening (e.g., bees, wasps, and European fire ants).</li> <li>Insects can also carry contagious diseases (e.g., Lyme disease from ticks).</li> </ul>	<ul style="list-style-type: none"> <li>Use repellents, mosquito nets, and protective clothing.</li> <li>Make sure there are adequate first aid supplies.</li> </ul>	<a href="#">Wildlife &amp; insects</a>
<b>Toxic plants</b>		
<ul style="list-style-type: none"> <li>Wilderness areas may have toxic plants, such as devil's club, poison ivy, or giant hogweed.</li> </ul>	<ul style="list-style-type: none"> <li>Use protective clothing, including long sleeves, shoes, and long pants.</li> <li>Post warning signs or have plants removed.</li> <li>Make sure there are adequate first aid supplies.</li> </ul>	<a href="#">Toxic plants</a>

# Working with children and infants

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## Tip

If you employ children under the age of 15, there are permission requirements and special employment conditions. The B.C. Employment Standards Branch administers the *Employment Standards Act*, which outlines conditions for hiring children and infants. For more information on child and infant performers, see the act and its associated regulation.

Children and infants working as performers is common in motion picture and television production. When employing child performers, you must ensure they are not exposed to unsafe or harmful acts or conditions. Child performers need particular care and protection.

Some aspects of the workplace or work activities present potentially higher risks for children than they would for adults. For example, children may fatigue more easily than adults. Children are physically smaller and may have a lower tolerance for chemical hazards and temperature extremes. They may have shorter attention spans. In addition, child performers may not consider their own health and safety and behave responsibly at all times.

The main guiding principle is to consider the best interests of the child or infant performer at all times. Parents or guardians must be included in discussions about their roles and responsibilities, as well as those of the child performer and others in the workplace.

# Set and prop construction

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Building and painting sets and props — whether in a studio or on location — can present a wide variety of potential hazards. Construction materials may include wood, metal, plastic, and glass. Construction activities may involve the use of scaffolding, ladders, machinery, hand and power tools, vehicles, welding equipment, and electrical equipment.

Paints and other coatings can present fire hazards if they include flammable solvents and other combustible materials, such as expanded polystyrene (EPS) foam. Scenic painting can present many health hazards because of exposure to hazardous products, such as solvents, paints, stains, dyes, fire retardants, polyurethane foams, and a wide variety of other chemicals, including isocyanates. Some of these hazards can be minimized by using local exhaust ventilation in a scenic shop. However, when fabricating sets and props on location, it can be difficult to provide adequate ventilation. In these cases, appropriate controls must be selected.

The life cycle of sets and props is often complex. It can include design, construction, storage, transportation, rigging, use, and de-rigging. Sets and props can be large and heavy. This can present manual handling risks and even a risk of collapse. Storage and accumulation of set and prop waste products (for example, waste paint and other products) can clutter work areas and block emergency access.

## Hazards and controls — Carpentry, construction, and painting

Hazards	Examples of controls	WorkSafeBC resources
<b>Machinery and tools</b>		
<ul style="list-style-type: none"> <li>Parts of the body can be caught between or drawn into machine nip points and crushed, mangled, or severed.</li> <li>Excessive or prolonged noise exposure can damage hearing.</li> </ul>	<ul style="list-style-type: none"> <li>Make sure guards are effective and in working order.</li> <li>Follow manufacturers' instructions. Use and maintain machinery and tools correctly.</li> <li>Be trained and authorized to use equipment.</li> <li>Follow de-energization and lockout procedures specific to the tool or machinery.</li> <li>Develop and implement a hearing conservation program.</li> <li>Wear footwear appropriate for the existing hazards.</li> </ul>	<a href="#">Lockout &amp; de-energization</a> <a href="#">Safeguarding</a> <a href="#">Noise</a>
<b>Welding, cutting, and brazing</b>		
<ul style="list-style-type: none"> <li>Electric shock can occur when two metal objects touch and there's a voltage between them, or from an arc-welding circuit.</li> <li>Ultraviolet radiation and flying objects can cause eye damage.</li> <li>Fire and explosions can result from the heat and sparks of a welding arc, or from using compressed gases.</li> <li>Lack of ventilation can lead to inhalation of fumes and gases.</li> <li>Burns can result from insufficient PPE.</li> </ul>	<ul style="list-style-type: none"> <li>Follow manufacturers' instructions.</li> <li>Make sure fire extinguishers are immediately available.</li> <li>Only weld in areas where there are no flammable materials, such as paper, wood, gasoline, or oil.</li> <li>Make sure there's adequate ventilation and local exhaust.</li> <li>Use appropriate clothing and PPE, including hand, eye, and face protection.</li> <li>Insulate operators from the work and the ground.</li> <li>Develop and implement a PPE and respirator protection program.</li> <li>Follow WHMIS requirements.</li> </ul>	<a href="#">Welding equipment</a> <a href="#">WHMIS</a>

## Hazards and controls — Props and models

Hazards	Examples of controls	WorkSafeBC resources
<ul style="list-style-type: none"> <li>Fires and explosions can occur when working with chemicals and when generating wood dust.</li> <li>Fabricating plastics or using adhesives, resins, glues, and fillers can result in exposure to hazardous materials.</li> <li>Some materials are highly toxic, such as monomers, isocyanates, and styrene.</li> <li>Fires and explosions can result when storing expanded polystyrene (EPS) foam that hasn't been properly off-gassed. EPS can release pentane, a highly flammable gas.</li> </ul>	<ul style="list-style-type: none"> <li>Follow the instructions for safe use of each product. Refer to the product's safety data sheet (SDS), if there is one.</li> <li>Post warning signs where workers are handling or using hazardous materials.</li> <li>Make sure there's adequate ventilation and local exhaust.</li> <li>Develop and implement a fire safety plan.</li> <li>Treat sets and props with flame retardant.</li> <li>Develop and implement a PPE and respirator protection program.</li> <li>Follow WHMIS requirements.</li> <li>Develop and implement an exposure control plan (ECP), depending on which products are being used. For example, using isocyanates requires an ECP.</li> <li>Wear footwear appropriate for the existing hazards.</li> </ul>	<p>WHMIS</p> <p>Personal protective equipment (PPE)</p>

## Hazards and controls — Paint, powdered dyes, pigments, solvents, thinners, and other coatings

Hazards	Examples of controls	WorkSafeBC resources
<ul style="list-style-type: none"> <li>Chemicals in hazardous products can result in serious health effects, such as sensitization to the product or cancer.</li> <li>There's a high potential risk of fire.</li> <li>There are various ways to be exposed: <ul style="list-style-type: none"> <li>Breathing in vapours or powders</li> <li>Ingestion from trace materials on workers' hands or eating in the area</li> <li>Absorption through skin</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Follow the instructions for safe use of each product. Refer to the product's SDS, if there is one.</li> <li>Make sure there's adequate ventilation and local exhaust.</li> <li>Clean the filming area and equipment.</li> <li>Post warning signs where workers are handling or using hazardous materials.</li> <li>Store and dispose of waste products properly.</li> <li>Develop and implement a fire safety plan.</li> <li>Develop and implement a PPE and respirator protection program.</li> <li>Follow WHMIS requirements.</li> <li>Develop and implement an ECP, depending on which products are being used. For example, using isocyanates requires an ECP.</li> </ul>	<p>WHMIS</p> <p>Personal protective equipment (PPE)</p>

# Costume design and performance

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## Tip

Address costume issues during the design stage. Design costumes to be safe for the maker, wearer, and workers who will be maintaining them. Costumes should be non-irritant, comfortable, and ventilated. They should be easy to get into and out of, manoeuvre in, and communicate through. They should also be easy to sew and should address manual handling issues.

Costumes, including footwear, can present hazards to the cast members wearing them and the wardrobe attendants responsible for cleaning and maintaining them. Making some costumes, such as armour or masks, can be hazardous because of the materials (for example, plastic resins and foams).

## Design with safety in mind

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Ordinary textiles generally aren't hazardous under normal conditions. However, for a cast member in a fire scene, synthetic materials may not be appropriate because they can melt and may be flammable. When working with fire, you can treat clothing with an approved fire retardant. For the cast members in the scene, you may need to use special protective gels and other precautions for clothing, hair, and wigs. When planning for a fire scene, consult with the appropriate people in the stunt and special effects (SFX) departments.

Heat and cold can be a problem if a cast member has to wear a costume not suited to the environment. In these cases, you may need to use work breaks and other protective measures. If possible, consider using visual effects instead so cast members don't have to wear costumes that aren't appropriate for the environment.

Costumes that have metal or wood frameworks can be heavy and hot for the person wearing them. Try to use materials that are as light as possible, and support structural frameworks to minimize discomfort and strains. Schedule filming to minimize the amount of time the person has to wear the costume. In some cases, you may need to ventilate the costume with cool air. You should design the costume for easy escape in case of fire or entanglement.

Costumes can also create tripping hazards (e.g., long skirts or high heels), restrict breathing (e.g., corsets and some harnesses), or restrict movement (e.g., tight clothing or fabrics that don't stretch). Costumes with loose fabric or props can catch on surrounding objects, which can be a significant hazard when executing a stunt.



## Assessing risks

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Employers should ensure there's a risk assessment to check the hazards specific to costume design and performance. This includes assessing footwear to ensure it's appropriate for the action and surfaces involved. Potential changes should be considered as part of the assessment. Any changes in the script, location, environment, wearer, or performance may affect the hazards. When a change occurs, reassess the situation.

See Appendix 2 (pages 98–99) for sample risk assessments for cast members wearing costumes and for designer and wardrobe attendants.

# Makeup and hair

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Among cast members, there's widespread use of theatrical makeup (such as face creams and powders), lipsticks, mascaras, and hair products. The chemical ingredients in these products can be hazardous. Also, the application process itself can put cast members at risk of exposure to bacterial infections and communicable diseases.

## Makeup ingredients

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Makeup includes a wide range of products with a variety of ingredients. These may include solvents, dyes, pigments, preservatives, oils, and waxes. Some of these ingredients can cause adverse health effects, such as skin or eye irritation, or allergic reactions.

Some ingredients are known or probable human carcinogens. For example, a colour additive in hair dye — lead acetate — is a prohibited ingredient listed on Health Canada's [Cosmetic Ingredient Hotlist](#). Cosmetic products sold in Canada should not contain lead acetate. Read the ingredients on labels and safety data sheets, if applicable, to identify potential hazards.



Set the chair height so you can work in an upright position while applying makeup.

## Spray products

Inhaling solvents from hairsprays and other spray products can be hazardous. For example, aerosol spray products may contain methylene chloride. It can cause heart arrhythmias and is a probable human carcinogen. Aerosol products sold in Canada should not contain methylene chloride. When working with spray products, you may require ventilation and PPE. If you're using spray products around propane heaters or other ignition sources, you must assess them to make sure there's not a fire or explosion hazard.

## Sharing makeup

Sharing makeup among cast members is potentially hazardous. A single makeup artist may work on multiple people, which could lead to the spread of bacterial infections and communicable diseases. For example, bacterial infections such as staphylococcus, streptococcus, and impetigo can be passed from one person to another.

It's important to prevent the spread of bacteria and viruses. Safe industry practices include the following:

- Use individual makeup.
- Clean containers and brushes, or use disposable ones.
- Wash your hands between applications.

### Assess and control the risks

For all makeup, appliance, and hair processes, assess the chemicals being used and potential hazards that could affect workers applying the product and those wearing the product. The employer is responsible for ensuring all reasonable precautions and safeguards are taken and documented. Make sure there are risk assessments and safe work procedures specific to the work processes and products being used.

## Special effects makeup

Makeup artists use a variety of products for special effects makeup. These include adhesives, sealers, removers, and paints. Facial and body appliances, such as dentures and contact lenses, change the appearance of cast members. They're made to blend seamlessly onto the wearer for a realistic look. When making prosthetic appliances, special effects artists use products such as liquid latex, gelatin, foam latex, silicone-rubber moulding compounds, polyurethane rubber, and foams.

## Special effects makeup ingredients

As with cosmetic makeup, the ingredients in special effects products and the application process can be hazardous. Moulds and casts for prosthetic appliances may contain toxic chemicals. Employers must ensure that controls such as ventilation are used to protect the workers making the products, the artists applying them, and the performers wearing them.

### Examples of hazardous products and chemicals

Product or chemical	Health hazards
Latex rubber	A skin irritant and possible allergen
Ammonia	A skin, eye, and respiratory irritant
Organic peroxides	Severe eye irritants and possible fire hazards
Polyurethane products and isocyanates	Can cause severe and life-threatening asthma at extremely low concentrations

## Applying and removing special effects makeup

When a product is applied to the skin or mucous membranes of a cast member, the employer must take precautions to make sure the person won't be injured. Each person is different, so you should do patch tests to avoid allergic reactions and other adverse health effects. If a product will contact mucous membranes (for example, contact lenses or prosthetic teeth), the risks for contamination or infection are higher and the duty of care is greater.

Removing special effects makeup also presents hazards. The makeup artist may use products such as solvents, acetone, mineral spirits, or isopropyl myristate to make removal easier. Inhaling solvent vapours when applying or removing adhesives can result in acute health effects. Measures must be taken to minimize inhalation. Ensure adequate ventilation, and use a less-hazardous product whenever possible.

Skin contact with certain products can cause drying of the skin, irritation, and allergic reactions. You may need to use a solvent-resistant barrier cream or protective skin coating, although this can result in adhesion problems. Take care when removing special effects makeup. Careless, rough, or improper removal procedures can tear off the top layer of skin and may cause skin irritations or infections.

# Filming

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Potential hazards during production apply whether you're filming on location or in a studio. Examples include the following:

- Falls
- Electric shock or electrocution
- Equipment failure
- Falling sets
- Motor vehicle incidents not related to stunts
- Smoke and chemical inhalation
- Unsafe camera placement
- Stunt work, such as tumbles, fight sequences, wire work, and vehicle crashes
- Special effects, such as explosions, firearms, weapons, and artificial smoke and fog

Access to immediate first aid can help prevent an injury or illness from becoming worse before emergency responders arrive. It's important to have planning in place for first aid, security, emergency evacuations, and high-risk activities (for example, stunts, special effects, and hazardous camera placements). It's also a good idea to keep non-essential personnel off the set or location during high-risk activities.

Regardless of the work being performed, you must follow established safe work practices when planning, setting up, and executing shots. This includes doing a risk assessment, as necessary.

When considering ways to control risks, always follow the hierarchy of risk controls (see page 55), starting with elimination or substitution. For example, try to eliminate the hazard by filming the scene another way, or by editing or creating it in post-production.

## Stunts

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A stunt can be broadly defined as any physical feat or act that involves specific knowledge, training, or skill sets, without which the performance of the sequence would be considered dangerous (i.e., if performed by someone other than a stunt performer). Examples of stunt work are falls, fight sequences, wire work, vehicle chases, and crashes.

If a stunt doesn't go as planned, others close to the action may also be at risk (for example, camera operators or cast members). The potential hazards depend on the nature of the proposed stunt.

### **Assessing risks**

Before a stunt is performed, the employer must ensure that a qualified person conducts an assessment of potential hazards. If you identify hazards, then you must perform a risk assessment that covers all aspects of safety, such as the following:

- Competence requirements of performers
- Resources and scheduling
- Rehearsal requirements
- PPE requirements
- Cueing and timing
- Specific conditions or equipment required
- Interaction with other department heads (e.g., special effects, costume, and animal wrangling)
- First aid

### **General guidelines**

- Stunt work should be limited to individuals who have the necessary competence, knowledge, experience, and training. Complex stunts may call for higher levels of competence and supervision.
- The stunt coordinator is generally responsible for the safety aspects of the stunt. The employer must make sure everything is in place, including first aid, before the stunt is executed. Any changes must be reviewed, assessed, communicated to those involved, and rehearsed to ensure no new hazards have been created.
- Performers must be physically and psychologically ready and able to carry out the required action or task, as instructed.
- Provide enough time and resources for the stunt. Take into account rehearsals and unforeseen issues or changes in your planning and scheduling. The production should not pressure performers who are executing stunts.
- Before starting the stunt, hold a safety talk with the cast and crew who are potentially at risk.
- The person responsible for the stunt must cue the action (i.e., the stunt coordinator or the coordinator's delegate). Cue stunts only after all the necessary risk controls are in place.
- Cueing signals must be unambiguous and agreed on by everyone involved. The person responsible remains in control of the scene until the action is complete and the area is declared safe.

### Notices of project for diving

If actors or stunt performers will be diving, you should submit a Notice of Project — Diving (NOP-D). In areas of potential entrapment, such as tanks with overhead equipment, you must complete an NOP-D.

For more information on the requirements for filing an NOP-D, see sections 24.9(1)(a) to (f) of the Regulation. The NOP-D must be completed 24 hours before starting the work.

### Special effects

Special effects and visual effects include fire, explosives, pyrotechnics, firearms, smoke and fog, rain and snow, lightning, lasers, wind, and sandstorms, as well as computer and model simulations. Many of these effects will involve the stunt department, if performers are involved.

#### Examples of SFX hazards

- Fire, flash, or radiated heat
- Blast effects (can be worsened in water or confined spaces)
- Hazardous noise and pressure waves that can affect people, stages, sets, and nearby structures
- Projectiles, shrapnel, squibs, and flying debris
- Unstable equipment or substances resulting from improper transportation, storage, or handling
- Smoke, haze, fog, mists, dust, or chemical releases that can cause respiratory irritation
- Electric flashover and shock

Effects using explosives or pyrotechnics will vary in size, complexity, and hazard level. If an effect doesn't go as planned, others close to the activity may also be at risk.

#### Responsibilities

The employer is responsible for ensuring communication, coordination, and control of the overall effect. This includes taking into account any risk assessments from others, including SFX and other specialist contractors. The employer must make sure the people planning and executing the effects are qualified.

People working with pyrotechnics and explosives must continually assess the effectiveness of risk controls and monitor the surroundings to make sure any changes won't affect safety.

These workers should consult with the employer and appropriate supervisors (for example, directors and department heads) to make necessary changes to ensure their own and others' safety.

### **Assessing risks**

Before a special effects shoot, the employer must ensure that a qualified person conducts an assessment of potential hazards. If you identify hazards, then you must perform a risk assessment that covers all aspects of safety, such as the following:

- Safe distances and exclusion zones
- Controls for flash, radiated heat, noise, blast range, fragmentation particles and other debris, misfires, unplanned spread of fire, and toxic effects
- PPE requirements

### **General guidelines**

- Provide enough time and resources for effects. Take into account rehearsals and unforeseen issues (e.g., misfires) or changes in plans.
- Appropriate arrangements must be made for communication and emergencies (e.g., firefighting and first aid).
- Make sure there are appropriate facilities for assembling, storing, and fusing effects before use.
- The person responsible for safety (e.g., the SFX coordinator) must cue the action.
- Cueing signals must be unambiguous and agreed on by everyone involved. The person responsible remains in control of the scene until the action is complete and the area is declared safe.

## **Camera operators**

Filming sometimes involves putting the worker and equipment in potentially hazardous situations. For example, cameras may be positioned on moving vehicles, fixed-wing aircraft, helicopters, scaffolding, overhead cranes, ladders, mobile elevating devices, drones, or boats. This can result in hazards, such as equipment failure, falls, or collisions. The worker may be at high risk during a stunt if they are close to the action.

Depending on the production, hazards can include the following:

- Worker or equipment falling from elevation
- Being struck by a moving vehicle, camera equipment, work platform, or materials from an explosion



- Collision of a vehicle, equipment, drone, or worker with a fixed structure, other mobile equipment, or another crew or cast member
- Improperly mounted cameras, recording devices, radio frequency equipment, or ancillary equipment
- Exposure to hazardous substances, such as exhaust fumes, fuels, or carbon monoxide
- Prolonged exposure to artificial smoke and fog

### Assessing risks

The risks to camera operators and other workers from camera use and placement must be assessed and controlled the same as any other risks during production. If there's new information or the situation changes, review the risk assessment, revise it as necessary, and communicate the changes to everyone involved.



Assess musculoskeletal injury risk factors, such as awkward, static postures when holding camera equipment. Where possible, use engineering controls, such as camera dollies or camera-stabilizer mounts.

Possible ways to reduce risks include the following:

- When possible, use remote cameras, long lenses, or safe vantage points.
- During stunt risk assessments, identify the locations of the camera operator and other workers.
- Before filming, hold a safety talk with cast and crew who may be at risk.
- Make sure mobile equipment and work platforms have been maintained and inspected.
- Designate pedestrian-free zones around mobile equipment and work platforms.
- Position equipment so it doesn't compromise the safety aspects of mobile equipment and work platforms.
- Position and secure in-car filming equipment so it doesn't put occupants at risk.
- If there's a risk of overturning, consider rollover protection and restraints — for example, when filming from an open-back vehicle on uneven ground.
- Make sure side-mounted cameras and through-window camera work don't put bystanders and other vehicles at risk.

# Grips and lighting department

## Tip

Department heads should establish a system to identify and control hazards related to or affected by the grip and lighting departments. There should be a systematic method for checking and maintaining infrastructure and equipment.

Directors of photography are usually associated with the camera department. These cinematographers may also oversee grips and the lighting department.

## Grips

Key grips are typically responsible for the safety of sets, scaffolding, rigging, camera dollies, cranes, and vehicles. Grips are responsible for building and maintaining the equipment that supports cameras. This includes tripods, dollies, tracks, jibs, cranes, and static rigs. Such equipment is made of delicate yet heavy-duty parts that require experience to operate.

This equipment may be assembled in setups as simple as a basic stand on the studio floor, or as complex as a camera crane or helicopter rig. The grip department designs all these systems to meet safety standards and manufacturers' specifications.



Grips must follow manufacturers' specifications when setting up and using equipment.

## Lighting department

The lighting department typically consists of gaffers, rigging gaffers, best boys, generator operators, and lamp operators. These workers are responsible for executing the production's lighting and electrical plans. They have the authority to cancel any activity under their control. Only qualified technicians should work on or tie in to electrical systems.

### Tip

Your production should have at least one certified electrician for every two uncertified workers.

## Certification and training

Make sure any person working with electricity has the appropriate certification and training required by the jurisdictional authority (for example, Technical Safety BC). Workers in the lighting department should have an electrical field safety representative (FSR) certificate — for example, Class FE (Full Entertainment) FSR, Class A FSR, or Class B FSR.

## Hazards and controls — Electricity

Hazards	Examples of controls	WorkSafeBC resources
<b>Batteries, switchboards, and low- or high-voltage electrical equipment</b>		
<ul style="list-style-type: none"><li>Workers who are not qualified or have limited knowledge, training, or supervision</li><li>Faulty wiring</li><li>Old or ungrounded electrical outlets</li><li>Energized overhead power lines</li><li>Energized power cables and cords</li><li>Heat from lamps and electrical currents</li></ul>	<ul style="list-style-type: none"><li>Make sure workers have electrical certification and training specified by the jurisdictional authority.</li><li>Inspect and maintain all equipment.</li><li>Position power cords so heat doesn't build up and to prevent tripping hazards.</li><li>Use cable mats to protect power cables and cords.</li><li>Follow de-energization and lockout procedures specific to the energy source.</li><li>Use covers, tents, or enclosures for equipment in inclement weather.</li><li>Have fire extinguishers available when electrical systems are energized.</li></ul>	<a href="#">Lockout &amp; de-energization Electricity</a>

Hazards	Examples of controls	WorkSafeBC resources
<b>Portable generators</b>		
<ul style="list-style-type: none"> <li>Carbon monoxide from exhaust</li> <li>Shock and electrocution when using power, especially in wet conditions</li> <li>Noise and vibration</li> <li>Fires when refuelling generators or storing fuel</li> </ul>	<ul style="list-style-type: none"> <li>Position generators where the noise and exhaust won't affect others.</li> <li>Consider the effect of exhaust gases downwind or in adjacent, occupied buildings.</li> <li>Don't use generators indoors or in enclosed spaces.</li> <li>To prevent carbon monoxide from entering buildings, don't position generators near doors, windows, or vents.</li> <li>Follow manufacturer's instructions.</li> <li>Where required, use ground fault circuit interrupters (GFCIs). Make sure they are tested regularly.</li> <li>Make sure generators are properly grounded.</li> <li>Store and transport fuel appropriately.</li> <li>Have fire extinguishers available when using generators.</li> </ul>	<a href="#">Electricity</a> <a href="#">Noise</a>

## Working at heights

You may require fall protection:

- During set construction
- When erecting or dismantling scaffolds
- When working on elevated platforms
- During stunts and other filming activities

Use permanent or temporary guardrails as a barrier around openings or edges to prevent falls to a lower level.

Use fall protection when working at heights of 3 m (10 ft.) or more, or where a fall of less than 3 m involves a risk of injury greater than the risk of injury from the impact on a flat surface.

A written site-specific fall protection plan is required when there are no permanent guardrails and a fall of 7.5 m (25 ft.) may occur.

For more information, see the following on [worksafebc.com](https://www.worksafebc.com):

- [Guideline 11.2-6, Fall protection during stunt work](#)
- [An Introduction to Personal Fall Protection Equipment](#)
- [Written Site-Specific Fall Protection Plan](#)



## Hazards and controls — Working at heights

Hazards	Examples of controls	WorkSafeBC resources
<b>Ladders</b>		
<ul style="list-style-type: none"> <li>• Using ladders that aren't properly set up, held, tied off, or otherwise secured</li> <li>• Not following the three-point rule when climbing</li> <li>• Using ladders that haven't been inspected or maintained</li> <li>• Using defective ladders</li> <li>• Using ladders in high winds</li> </ul>	<ul style="list-style-type: none"> <li>• Use a work platform when a ladder is not appropriate or would cause a greater risk of injury (e.g., for longer work tasks).</li> <li>• Use only CSA- or ANSI-approved ladders.</li> <li>• Follow the 4-to-1 rule: For every 4 ft. (120 cm) of height, place the ladder 1 ft. (30 cm) out from the base of the structure.</li> <li>• Maintain three points of contact at all times when climbing or descending.</li> <li>• Don't carry heavy, bulky, or hazardous materials on the ladder. Use suitable hoisting equipment.</li> <li>• Inspect ladders before use.</li> <li>• Follow the manufacturer's instructions.</li> </ul>	Ladders
<b>Scaffolds, work platforms, and sound-stage floor openings</b>		
<ul style="list-style-type: none"> <li>• Working near overhead power lines</li> <li>• Collapsing or overturning scaffolds or platforms</li> <li>• On exterior sets, draping on scaffolds catching wind and causing the structure to tip over</li> <li>• Mounted lights throwing off weight or balance and making a scaffold unstable</li> <li>• Working near unguarded floor hatches and other openings</li> <li>• Artificial smoke or fog drifting up to workers on an elevated platform</li> <li>• Working at heights in stormy weather and high winds</li> <li>• Overhead hazards (e.g., supply cables)</li> </ul>	<ul style="list-style-type: none"> <li>• Have a qualified worker supervise erection and dismantling.</li> <li>• When working near overhead power lines, maintain the limits of approach specified in <a href="#">section 19.24.1</a> of the Regulation.</li> <li>• Make sure equipment operators are trained and competent.</li> <li>• Inspect equipment before each use.</li> <li>• If a scaffold is draped or covered, bracing must be installed according to the instructions of the manufacturer or an engineer.</li> <li>• Use counterweights or bracing, if necessary. Don't overload the scaffold or work platform.</li> <li>• Illuminate floor hatches that provide access beneath a stage, where possible. Make sure they have handrails or barricades.</li> <li>• Use fall protection, when required.</li> <li>• Restrict access when weather could affect the structure's stability.</li> <li>• Install lightning detectors and anemometers (for measuring wind speed).</li> <li>• Make sure there's enough clearance from power lines and other overhead hazards.</li> </ul>	Scaffolds

# Part 5: Resources

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# Employers' Advisers

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The Employers' Advisers Office is a branch of the B.C. Ministry of Labour, independent of WorkSafeBC. Employers' advisers are funded by the WorkSafeBC premiums collected from employers. At no additional cost, advisers provide impartial advice, assistance, representation, and training to employers about workers' compensation legislation, decisions, appeals, and policies.

Employers' advisers have a right to access WorkSafeBC information on your behalf, but they cannot file reports for you. Employers' advisers also conduct educational seminars for employers on topics such as occupational health and safety requirements, claims management, disability management, and assessments.

You can visit the [Employers' Advisers Office](#) website or contact a regional office for help. You can reach all Employers' Advisers regional offices using the following numbers:

- Phone: 604.713.0303 in the Lower Mainland
- Toll-free: 1.800.925.2233 in Canada



# Workers' Advisers

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The Workers' Advisers Office is a branch of the B.C. Ministry of Labour, independent of WorkSafeBC. Workers' advisers provide workers with advice and assistance about WorkSafeBC benefits, policies, and the interpretation of the *Workers Compensation Act*. They can help workers and their dependants with disagreements they may have about WorkSafeBC decisions. Advisers meet with senior WorkSafeBC officials to resolve claims issues and avoid unnecessary appeals. They also make recommendations to the Senior Executive Committee and Board of Directors on policy and practice issues. You can visit the [Workers' Advisers Office](#) website or contact a regional office for help.

## **Vancouver/Lower Mainland**

Phone: 604.713.0360

Toll-free: 1.800.663.4261

## **Victoria**

Phone: 250.952.4393

Toll-free: 1.800.661.4066

## **Nanaimo**

Phone: 250.741.5504

Toll-free: 1.800.661.4066

## **Campbell River**

Phone: 250.830.6526

Toll-free: 1.800.661.4066

## **Kamloops**

Phone: 250.371.3860

Toll-free: 1.800.663.6695

## **Kelowna**

Phone: 250.717.2096

Toll-free: 1.800.663.6695

## **Prince George**

Phone: 250.645.4021

Toll-free: 1.800.663.6695

# Actsafesafety Association

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Actsafesafety is a health and safety organization that collaborates with the motion picture, television, and performing arts industries in British Columbia to provide innovative, accessible health and safety training and resources. Actsafesafety offers resources specific to the arts production and entertainment industries. For more information on publications and training they offer, visit [actsafesafety.ca](https://actsafesafety.ca) or contact Actsafesafety:

Phone: 604.733.4682

Toll-free: 1.888.229.1455

Email: [info@actsafesafety.ca](mailto:info@actsafesafety.ca)

# WorkSafeBC resources

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WorkSafeBC provides a number of services and materials that will help you meet your health and safety requirements:

- Go to [worksafebc.com/health-safety](https://www.worksafebc.com/health-safety) for health and safety information on a wide range of topics.
- Go to [worksafebc.com/forms-resources](https://www.worksafebc.com/forms-resources) for publications, videos, interactive tools, and other resources.
- Go to [worksafebc.com/searchable-regulation](https://www.worksafebc.com/searchable-regulation) for a searchable version of the Regulation and its accompanying guidelines and policies.
- Go to [worksafebc.com/shared-data](https://www.worksafebc.com/shared-data) for statistics and interactive tools to better understand the patterns of work-related injuries, disease, and deaths.

## WorkSafeBC Prevention Information Line

The Prevention Information Line can answer your questions about health and safety, including responsibilities, first aid, reporting incidents, and finding an officer in your area. Anonymous calls are accepted.

Call 604.276.3100 in the Lower Mainland or 1.888.621.SAFE (7233) toll-free in Canada.

## Other webpages on [worksafebc.com](https://www.worksafebc.com)

- [Registration requirements](#)
- [Conducting an employer incident investigation](#)
- [Assessing risks](#)



# Part 6: Appendixes

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# Appendix 1: Sample safe work procedure

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The following sample describes potential hazards associated with scene lighting, followed by safe work procedures for setting up scene lighting.

## What are the hazards?

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- Contact with electricity can cause electric shock or burns.
- Fires can occur if electrical equipment (including wiring) develops a fault.
- Faults with main electrical systems can develop a high amount of energy in a short time and cause an explosion.
- Electrical protection devices can be rendered useless by long cables or the wrong equipment.
- Using electrical equipment in higher-risk environments (e.g., wet, damp, humid, or dusty conditions) increases the hazards significantly.
- Fires and burns can come from contact with hot surfaces.
- Batteries can start and sustain fires if the terminals are shorted together.

## Safe work procedures

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### Setting up lighting

- All electrical equipment must be inspected and tested by a certified person before use.
- Use appropriate fall protection equipment when working at heights.
- Support lighting fixtures so they won't fall. Suspend lamps with an independent wire safety chain so they won't fall if a clamp, suspension rope, or wire fails.
- Weight all lighting stands with sandbags so they won't tip over.
- Cover arc-type lamps, such as HMIs, in wet weather to prevent rain from entering the unit and ballast.
- Use ground fault circuit interrupters when working around water and in stormy weather.

- When using open-faced lighting units, provide protection from shrapnel in case the bulb explodes. This is particularly important when people are working nearby.
- Make sure scaffolds or other metal grids used to support lighting are grounded.
- Before using any grounded equipment, test for continuity between the ground pin and the plug and the metal parts of the lighting equipment.
- Do visual checks for equipment, cables, sockets, and location before connecting to any power source.
- Use cable ramps to route cables across access routes. Rubber mats don't provide mechanical protection for cables. They only reduce the tripping hazard.
- Don't leave excess electrical cable coiled. This can lead to overheating in the cable.

### **During lamp use**

- Before striking an HMI or similar light source, make sure no one is in contact with the unit, the supports, or the ballast.
- Keep workers away from the lamp head of an HMI or similar light source in damp or humid conditions. Rain and humidity increase the conductivity of the air and increase the likelihood of arcing.
- Protect workers against skin and eye damage. Arc-type lamps such as HMIs emit greater amounts of ultraviolet light than tungsten lamps.

### **Maintenance and repair**

Before relamping or repairing a light, turn it off and disconnect it from the power source.

# Appendix 2: Risk assessment questions

The following are questions to consider when conducting risk assessments for cast members wearing costumes and for designers and wardrobe attendants.

## Risk assessment for cast members wearing costumes

Questions to consider	Suggested controls
<ul style="list-style-type: none"> <li>What are the costume wearer's physical capabilities (e.g., age and fitness)?</li> </ul>	<ul style="list-style-type: none"> <li>Supply adequate food and fluids.</li> <li>Consider accessibility for washroom breaks.</li> </ul>
<ul style="list-style-type: none"> <li>Will the wearer have to sit or stand in the costume for a long time?</li> </ul>	<ul style="list-style-type: none"> <li>Specify time limits for shooting with the costume. Schedule breaks, if necessary.</li> </ul>
<ul style="list-style-type: none"> <li>How easy is it to move in the costume? What is the wearer expected to move over, on, and around?</li> <li>Will the wearer be able to manoeuvre safely around the set or location?</li> <li>Are there nearby hazards (e.g., is there a swimming pool that the wearer could fall in)?</li> </ul>	<ul style="list-style-type: none"> <li>Have a procedure in place to get the wearer out of the costume in an emergency (e.g., if they're unconscious or there is a fire).</li> <li>Have someone ready to help the wearer get into and out of the costume.</li> <li>Use barriers or a guide person to protect against nearby hazards.</li> </ul>
<ul style="list-style-type: none"> <li>Does any part of the costume put undue stress on a body part?</li> <li>Are there any circulation constraints (e.g., spending time in a suspending harness or wearing a corset)?</li> </ul>	<ul style="list-style-type: none"> <li>Design the costume to eliminate stresses on the body.</li> <li>Schedule rest breaks.</li> </ul>
<ul style="list-style-type: none"> <li>Is the material light, long, flowing, or otherwise loose? Is it likely to catch on objects and become a tripping hazard?</li> </ul>	<ul style="list-style-type: none"> <li>Use barriers or a guide person to help the wearer navigate the area.</li> <li>Consult with the stunt coordinator about any potential clothing hazards.</li> </ul>
<ul style="list-style-type: none"> <li>Is the material flammable or a fire hazard?</li> </ul>	<ul style="list-style-type: none"> <li>Use a fire retardant on the costume. Consider whether this adds to the costume's heat load.</li> <li>When making the costume, use flame-retardant materials, such as wool.</li> </ul>
<ul style="list-style-type: none"> <li>Is communication impaired — e.g., the wearer's ability to see, hear, be heard, or make non-verbal signals?</li> <li>Does the costume impose any restrictions?</li> </ul>	<ul style="list-style-type: none"> <li>When assessing hazards, consider the costume's restrictions.</li> <li>Use a guide person to help sensory-deprived performers.</li> <li>Make the filming area safe for the costume wearer.</li> </ul>
<ul style="list-style-type: none"> <li>Does the costume impede the wearer's ability to breathe?</li> </ul>	<ul style="list-style-type: none"> <li>Consider how you'll monitor the wearer's physical condition.</li> <li>Have a first aid attendant readily available.</li> </ul>
<ul style="list-style-type: none"> <li>Can carbon dioxide build up in the costume?</li> </ul>	<ul style="list-style-type: none"> <li>Modify the costume to improve airflow. Consider ways to monitor the airflow and wearer's condition.</li> </ul>



Questions to consider	Suggested controls
<ul style="list-style-type: none"> <li>Is the costume heavy?</li> </ul>	<ul style="list-style-type: none"> <li>If necessary, have extra workers or equipment to help the wearer get dressed and undressed.</li> <li>Provide a stool or other support device for rest breaks.</li> </ul>
<ul style="list-style-type: none"> <li>What environment will the wearer be working in?</li> <li>Will the wearer be exposed to extreme temperatures or bad weather?</li> <li>Will the costume contribute to possible heat or cold stress? Some costumes, prosthetics, and makeup can prevent a body from shedding heat or not protect against cold.</li> </ul>	<ul style="list-style-type: none"> <li>Make sure the wearer stays warm and dry (or cool, if it's a hot environment).</li> <li>Have a change of clothing available.</li> <li>Schedule breaks.</li> <li>Make water available for fluid replacement.</li> <li>Provide shade or a way to cool down quickly.</li> <li>Develop and implement a heat or cold stress exposure control plan.</li> </ul>

## Risk assessment for designers and wardrobe attendants

Questions to consider	Suggested controls
<ul style="list-style-type: none"> <li>Are there enough workers, lifting devices, and other equipment to work safely with the costume?</li> </ul>	<ul style="list-style-type: none"> <li>Provide lifting devices and appropriate equipment.</li> </ul>
<ul style="list-style-type: none"> <li>Will a fabric or textile require special sewing machines, needles, or other equipment?</li> <li>Are people properly trained in the use of such equipment?</li> </ul>	<ul style="list-style-type: none"> <li>Provide specialized equipment and training.</li> <li>If necessary, outsource some of the costume design or maintenance to specialists who are knowledgeable and properly equipped.</li> </ul>
<ul style="list-style-type: none"> <li>How will you protect workers against contact with the costume wearer's body fluids (e.g., sweat)?</li> </ul>	<ul style="list-style-type: none"> <li>Develop and implement safe work procedures for working with body fluids (e.g., sweat).</li> <li>Train workers in routine practices, such as handwashing and wearing disposable gloves.</li> </ul>
<ul style="list-style-type: none"> <li>Will you need solvents, aerosol sprays, dyes, or cleaning solutions to care for the costume?</li> <li>How will you prevent mildew and unsanitary conditions?</li> </ul>	<ul style="list-style-type: none"> <li>Develop and implement safe work procedures for working with chemicals.</li> <li>Make sure there's adequate ventilation when using these products.</li> <li>Follow WHMIS requirements.</li> </ul>

## Notes

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