

# THERMAL AND CHEMICAL BURNS

## What can cause a burn?

Most burns are caused by :

- a hot substance like fire (thermal burn);
- a chemical product (chemical burn);
- cold;
- electrical current; or
- radiation.

## What can cause burns in the workplace?

- machines, equipment and heating or cooling devices
- water, water vapour and other liquids
- food products
- chemicals

## Most frequent kinds of burns in the workplace

- burns to the body or skin (89%)
- burns to the eyes (11%)

## Protection and prevention

Quick reference guide

Before an accident occurs:

- Follow safe work practices.
- Wear the appropriate personal protective equipment.

When an accident occurs:

- Act quickly and effectively.
- Rinse immediately and continuously with warm water for at least 20 minutes in the case of a thermal burn, and 30 minutes for a chemical burn (please take note of the rinsing times – they are important).
- Evaluate as best you can how serious the burn is: depth, extent and region of the burn and the product involved.

Evaluating the seriousness of a burn

Criteria	Effects
Depth	Destruction of the skin's protective layers
Extent	Possible loss of water
Région	Severe burn to the face, hands, genitals, joints (risk of complications)
Product involved	Nature of the product, concentration and length of exposure: sometimes specific first aid measures (rinsing time, antidote, ...)
Other	Age and health status of the injured person, possible other lesions associated with the accident (fractures, poisoning ...)

This information will enable you to :

- Jdecide whether or not you need to call an ambulance or the fire department; and
- provide this information to the Urgence-Santé staff.

Contact the Poison Control Centre, if necessary, in the event of a chemical burn. Give the fact sheet (or the name of the product or of its manufacturer) to the ambulance workers or consult a doctor.

After the accident:

- See a doctor to have the burn treated.

### **Skin burns: What to do first**

- Evaluate the situation and secure the location.
- Save life first (monitor the state of consciousness, circulation and breathing: resuscitate if necessary).
- Prevent the burns from getting worse
- Act quickly.
- Identify the type of causal agent.
- Evaluate the seriousness of the burn.
- Cover the burn with a dry, non-adhesive bandage.
- Cover the burn with a clean, sterile sheet (if necessary).
- Comfort the injured worker.
- Turn the situation over to health professionals (ambulance workers, a doctor...)
- Thermal burns:
  - Remove the person's clothing (don't pull) and any jewellery he or she may be wearing.
  - Flush immediately with warm water, for 20 minutes.
- Chemical burns
  - Remove the person's clothing (don't pull) and any jewellery he or she may be wearing.
  - If the product is in powder form, wipe it off.
  - Quickly flush with warm water, for 30 minutes.
  - Contact the Poison Control Centre.
  - Give the fact sheet (or the name of the product or its manufacturer) to the ambulance workers or consult a doctor.

### **Eye burns: What to do first**

- Evaluate the situation and secure the location.
- Save life first.
- Prevent the burns from getting worse
- Act quickly.
- Ask the injured worker to keep his or her eyelids apart and roll his or her eyes.
- Flush with warm water (20 minutes for thermal burns, 30 minutes for chemical burns).
- Contact the Poison Control Centre before you stop rinsing.
- Give the fact sheet, or the name of the product or of its manufacturer, to the ambulance workers, or consult a doctor.
- Cover the affected eye(s) with dry, non-adhesive sterile compresses.
- Hold the compresses in place with gauze strips.
- Comfort the injured worker.
- Turn the situation over to the ambulance workers as quickly as possible.

### **Other precautions and things to remember**

- Prevent the person from rubbing or touching his or her eyes. If there has been contact with a powdered product, keep the injured worker's eyelids open.

- Check to see if lumps of powder are stuck to the edges of the eyelids. If so, use a sterile compress to remove them.
- Do not try to remove pieces of metal, plastic or tar that might be sticking to the eye.
- Remove contact lenses (if worn) and continue to rinse.
- Do not use ice, ointments, swab sticks ...

#### **What can you do to prevent a burn from getting worse?**

- Rinse immediately and continuously with warm water.
- Wear gloves.
- Cover the burn with a clean, non-adhesive bandage.
- Remove clothing gently.
- Do not burst blisters.
- Do not apply ointments, fatty substances, disinfectants, ice ...

Rinsing is very important, because the rinsing water :

- dilutes the product or washes it off;
- slows the corrosive action of the product by reducing the depth of the burn;
- absorbs heat and cools the skin; and
- has a calming action and reduces pain

*Always rinse for 20 to 30 minutes.*

## **Help and Resources**

- [Info-santé au 811](#)
- En cas d'urgence, [composez le 911](#)
- [Centre antipoison](#)