

SAFETY MEMO

September 13, 2021 – Thermal and chemical burns



Did you know?

What is a burn?

A burn is the cellular destruction of the skin and the underlying structures.

There are three degrees of burn that range from the least serious to the most serious:

- First degree - redness, painful skin
- Second degree - superficial or deep
 - Superficial second degree - blister, painful skin
 - Deep second degree - burst blister, painless skin because the blood vessels and the nerves are destroyed
- Third degree - skin burned deep down to the muscle, blood vessels and nerves destroyed

Treatment of Burns

Burns can be caused by both thermal and chemical hazards. Because the causes of the burns are different, the treatment goals of thermal and chemical burns are also different despite the similarities in the risks and consequences of the burn. The following is a summary of first aid measures to follow in the event of a thermal or chemical burn.

Thermal Burns

A thermal burn is exposure of the skin to high heat. It is this heat that will cause the cellular destruction of the skin.

The aim of the treatment is to quickly lower the temperature of the area of concern and surrounding skin to prevent the spread of heat.

ACTION: Rinse the area of concern and surrounding skin abundantly with TEMPERED water for at least 15 minutes (under a safety shower for example) and never undress the victim.

Chemical Burns

A chemical burn is corrosion of the skin due to exposure to an agent with an aggressive pH (acid or base). This occurs due to a difference in pH of the skin. Normal skin pH should be near a pH of 6 in adults.

The goal of the treatment is to dilute the corrosive product quickly to make it harmless. Lowering temperature is not

effective because the heat generated is only an effect of the reaction and not the cause of the burn. For chemical burns, reference the Safety Data Sheet for first aid measures. This may or may not involve removing clothing unless stuck to the person's body or flushing with water or oil based on the specific chemical which causes the burn.

3 general cases to be considered for chemical burns:

1. If localized chemical exposure occurs, rinse the affected area with plenty of water for at least 15 minutes after having the victim undress, if applicable to the specific chemical encountered. Be careful of two things: when undressing, take care not to spread the product on healthy areas and, at the start of the rinsing, only concentrate the rinsing on the area concerned, taking care not to run off any product or slightly diluted on a healthy area (not affected).
2. If a significant projection occurs and/or distributed over a large part of the body, take the victim to the safety shower and rinse for at least 15 minutes.
3. If splashed in the eye, rinse thoroughly with water, preferably using an eye wash station, keeping the eye open for at least 15 minutes.

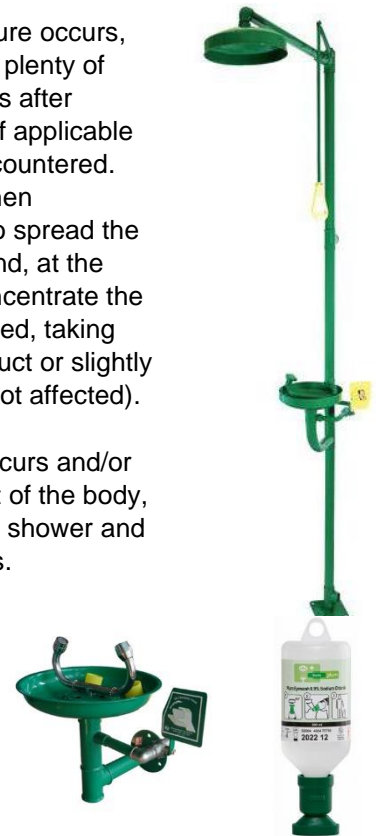


Figure 2 : Example of eye wash

Medical Attention

In all cases for thermal or chemical burns, contact emergency medical services as soon as possible. Medical professionals will need to know the specific location of the accident, the nature of the chemical products and the medical status of the victim(s).

(Source concerning the procedures to be followed for different types of burns: INRS).

