

First Aid Basics for Veld Fires

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1. Basic First Aid Kit

Every vehicle and home should contain a basic first aid kit. The full list of legal requirements for first aid kits in the workplace can be found in the Level I First Aid course. Most pharmacies will stock simple kits.

Some vital basics, especially in the veld fire setting, include:

- A large box of gauze
- A large bottle of saline or sterile water
- Crepe bandages
- Nitrile gloves
- Plasters
- A CPR mouthpiece
- An eyewash bottle
- Burnshield spray
- Burnshield pads, of all sizes
- Cling wrap

2. Introduction to Emergency Scene Management

The emergency scene as a whole has to be managed before we can attend to a patient. Internationally, first responders follow the simple outline of the four Hs to ensure that a scene is managed safely and effectively.

The Hs also apply to fire scenes, not only to medical scenes.

H – History

H – Hazards

H – Hello

H – Help

History: Briefly assess what happened. Ask bystanders or witnesses for more information. If the patient is alert, ask them what happened.

Hazards: Hazards are informed by history. In the case of a veld fire, ensure that you (first) and others (second) are safe from the fire by your positioning, alertness, understanding of fire behaviour, and PPE (personal protective equipment).

On any emergency scene, nothing is a higher priority than your own safety—especially not your ego. Any professional first responder will always prioritise their safety above anything else, including the safety of their patient. Getting yourself into trouble doesn't make you a hero, it makes you another patient. It compounds a bad situation.

Other hazards could include electricity, panicked animals, and traffic. Finally, all bodily fluids are a hazard. Apply PPE—i.e. gloves—before touching any patient/engaging with any fire.

Hello: Assess the patient's level of consciousness. If the patient is alert, introduce yourself and ask permission to help them. If they are not alert, tap the shoulders and speak loudly.

Help: In any form of emergency situation, ensure that you have the necessary assistance. If you are actively assisting a patient, nominate a specific bystander to call for help.

Call your neighbours AND post on well-managed emergency groups for assistance with fires. Do not rely on WhatsApp alone.

For medical assistance, use the Namola Safety App or dial the Heidelberg Volunteer Medics and First Responders on 076 132 3067. Use the Farms Medical Emergencies group as a last resort in an area of poor signal.

When calling for help, remain calm. Listen to the dispatcher's questions. Refrain from repeatedly stating the urgency of your emergency—we are emergency services and we will help you as quickly as possible, but we need relevant information to handle your call. You will need to know the following:

1. Your exact location
2. The history (what happened)
3. The patient's level of consciousness (established in "Hello" above)
4. The patient's medical aid or workman's compensation status

Help is always available, whether you have medical aid or not. The Heidelberg Volunteer Medics and First Responders respond to emergencies whether there is medical aid or not, and for non-medical aid patients, government services are available. However, we need to know your medical aid status to know whether we can send you a private ambulance (or air ambulance) or not. Private services will not respond without confirmation of medical aid.

3. The ABCs

Once the four Hs have been dealt with on a medical scene, your next priority is the ABCs:

1. Airway
2. Breathing

3. Circulation

Any patient who is alert and talking has an open airway and is breathing. Unless there is major bleeding, they also have adequate circulation. However, if a patient is unconscious, the ABCs must first be addressed.

Airway: A patient cannot breathe unless their airway is open. Unconscious patients are often unable to breathe when lying on their backs. Perform a head tilt-chin lift to open the airway.

Breathing: If the airway is open, listen, look and feel for breathing. If the breathing sounds unusual (bubbling/wheezing/snoring), ensure the airway is open and tell emergency services what is happening.

Circulation: Look for major bleeding. If there is significant bleeding, attempt to stop it with direct, hard, continuous pressure. Next, check for a pulse. If there is a pulse, roll the patient onto their side. If there is no pulse, begin compressions.

4. Fire-Specific Medical Emergencies

Burns: Burns are among the most dangerous wounds to deal with. Major burns come with a high risk of physiological shock (hypoperfusion) and even small burns come with a very high risk of infection.

There are three degrees of severity of burns:

1. Superficial — damage to only the first layer of the skin (the epidermis). Superficial burns are red and painful, and may be dangerous when they cover a large portion of the body. (Sunburn is one example).
2. Partial thickness — damage to the second layer of the skin (the dermis). These are the burns that blister. Partial thickness burns are extremely painful and very dangerous, even potentially fatal, when they cover a large surface area.
3. Full thickness — damage to the subcutaneous tissues (under the skin). Full thickness burns are often not painful, but they are extremely dangerous. They may have a black, charred appearance and will reveal flesh.

All burns should be taken seriously. Even superficial burns can cause physiological shock when they cover a large percentage of the body.

In treating burns, first responders have three major goals.

- Stop the damage caused by still-burning skin. Burns will continue to cause damage and retain heat even long after the source of the burn is removed.

- Manage shock and body temperature. Damage to a large area of skin will cause a loss of ability to maintain body temperature. Pain and homeostasis compromise will cause physiological shock.
- Prevent infection.

In order to do this, it is absolutely vital that **one does not apply anything to a burn except Burnshield or water**. Cold, running water is the best possible treatment for almost all burns. It cools the area, preventing further damage, and also flushes dirt from the wounds, which prevents infection.

Do not attempt to remove clothing that has melted into a burn wound. Cool the entire area.

Some ways to apply cold running water to a burn include:

- For small burns, holding the affected area under a cold running tap or hose
- For larger burns, use a hose or firefighter hose (bear in mind that some firefighter tanks may contain harmful chemicals) on a gentle setting to hose down the entire area, even if that means hosing down the entire patient.
- If the patient is alert and can walk, have them stand in a cold shower under low pressure.

Continue to apply cold running water to the burn for a minimum of 30 minutes. If it is a small burn, it may then be covered with Burnshield and a bandage. For large burns, continue to apply cold running water until medical help arrives.

Full thickness burns, large areas of superficial burns, and all but the smallest partial thickness burns should be attended to by a doctor at casualty.

Cooling burns may result in the patient feeling cold and shivering. If only part of the body is burned, cover the rest of the body with a blanket to warm the patient. If the patient begins to feel or look less alert, and/or becomes pale and clammy, they are showing signs of physiological shock (their body is failing to circulate blood efficiently). Lie them down on a clean surface with the feet elevated, avoiding pressure on the burns.

Smoke inhalation: Little can be done in the field for a patient suffering from smoke inhalation. Signs of inhalation injury include the following:

- Shortness of breath
- Cough
- Very red skin (carbon monoxide poisoning)
- Signs of hypoxia (blue extremities or lips, dizziness, combative behaviour, changes in mental status)
- Sooty airways

Immediately move the patient to fresh air. On a farm, do not wait for an ambulance. Load the patient and meet the ambulance en route or take them directly to hospital.