

# Module 4

## Environmental Emergencies



# Online Module Overview

This document has been provided for participants completing a Revive2Survive First Aid Training course.

Please use this material to complete the Course Pack and answer the online multiple-choice theory assessment.

There are no assessments in these module packs, please use the link and attachment provided in your course confirmation email.

This information is to be used as a learning tool and while information contained in this online learning is frequently updated, medical advice should be sought from a practitioner in an emergency.

Module 1- CPR Resuscitation & the Airway

Module 2- Medical Emergencies

Module 3- Bleeds, Burns & Wounds

Module 4- Environmental Emergencies

Module 5- Anaphylaxis

Module 6- Asthma

Module 7- Assessment of a Casualty

Please note-

\*\*HLTAID009 Provide CPR is recommended to be renewed every 12 months

\*\*HLTAID011 Provide First Aid is recommended to be renewed every 3 years



# Module 4 Overview

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Managing an Emergency

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Hyperthermia

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Heat Exhaustion

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Heat Stroke

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Hypothermia

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Eye Injuries

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Swimmers Ear

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Venomous Bites

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Poisons

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# Managing an Emergency

## General Principles of Emergency Management

After ensuring safety of yourself & those around, management of the casualty involves:

- Quickly assess the situation following DRSABCD
- Ensure the safety of the rescuer, bystanders and the casualty (you may have to move the casualty, if safe to do so)
- Check for responses of the casualty
- Send for help – call triple zero (000)
- Manage & care for airway & breathing
- Be prepared to commence CPR if needed
- Prevent further harm or injury
- Control of bleeding
- Provide reassurance
- Continue to observe and assess



# Managing an Emergency

## **A casualty may need to be moved to:**

- Ensure the safety of the rescuer and casualty
- Protect from extreme weather conditions
- Enable evacuation for difficult terrain
- Enable the care of the airway and breathing (e.g., turning an unconscious breathing person into the recovery position)
- Control severe bleeding

## **When moving a casualty:**

- Avoid bending or twisting the casualty's neck and back
- Try to have 3 or more people to assist in supporting the neck and back if possible
- A single rescuer may need to drag the casualty out of danger



# Managing an Emergency

## Road Accidents

- Do not touch vehicle or attempt to rescue the casualty if power lines are down, wait until the area is declared safe. Call triple zero (000).
- Use hazard lights/torches/bystanders to warn oncoming traffic.
- Approach with caution and make the scene as safe as possible.
- Turn off ignition of a crashed vehicle and put the hand brake on.
- Only remove motorbike helmet from a casualty if necessary to assess and manage breathing or control bleeding.
- If an unconscious breathing casualty can be managed from the vehicle do not remove them unless there is a threat to life.
- If the casualty is unconscious and not breathing normally remove from the vehicle as soon as possible and commence CPR.



# Managing an Emergency

## Electric Shock

- Do not touch someone who has been shocked if they are still in contact with the source of electricity.
- Turn off electricity supply and if possible/safe to do so by unplugging the appliance from the power outlet. If you cannot unplug the power source, move the source of electricity away from the person using a non-conducting object (eg. Rubber or wood, be sure it is not wet or metal based).
- Until the power is off avoid direct skin contact with the casualty or any conducting material.
- If unresponsive and not breathing normally follow Basic Life Support flow chart DRSABCD.
- Other injuries may require treatment. Burns are common and should be managed (refer to burns module 3).
- Promptly refer all who have suffered an electric shock for medical assessment.

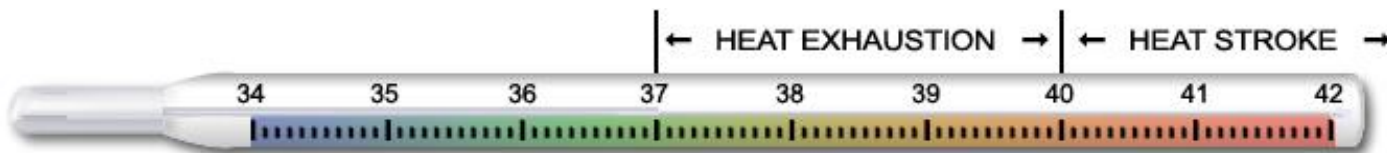


# Hyperthermia

Hyperthermia is when the body's temperature elevates and the body's heat regulating mechanisms do not work to bring the temperature within an acceptable range.

The two most common forms of hyperthermia are ***heat exhaustion*** and ***heat stroke***.

- **Heat Exhaustion** - is a warning that the body is getting too hot.
- **Heat Stroke** - can be **LIFE-THREATENING!** A person with heat stroke has a body temperature above 40° C.





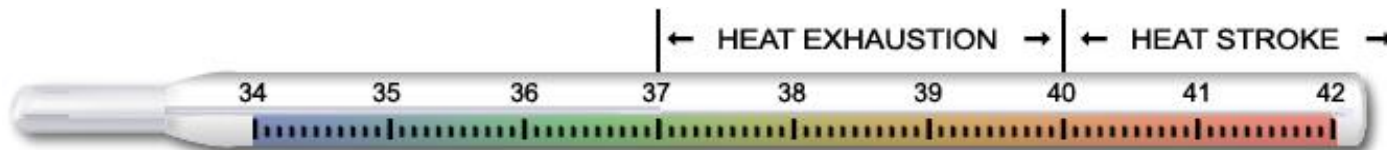
# Heat Exhaustion

## Signs / Symptoms

- Profuse sweating
- Weak, rapid pulse
- Nausea, vomiting
- Headache, dizziness
- Unsteady on feet
- Muscle cramps
- Fatigue
- Cool, pale, clammy skin
- Thirsty

## Management

- Lay casualty in the shade
- Sips of cool water
- Sips of available sports drink
- Cool casualty's body
- Place hands and feet in cold water
- Remove excess clothing
- Loosen any tight clothing
- Fan the casualty & moisten skin
- Seek medical advice



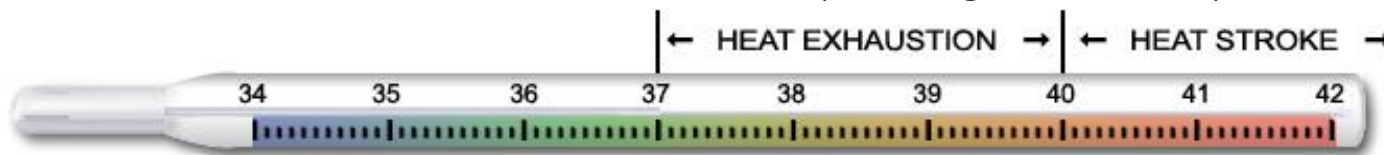
# Heat Stroke

## Signs / Symptoms

- Reduced sweating
- Temperature above 40 degrees
- Weak, rapid pulse
- Nausea, vomiting
- Seizures
- Headache, dizziness
- Muscle spasms/pain
- Hot, dry, flushed red skin
- Confusion/unusual behaviour
- Loss of consciousness

## Management

- Call 000
- Rest casualty in the shade
- If possible, give the casualty a cold shower (with them sitting on the floor of shower)
- Sips of cool water
- Sips of available sports drink
- Cool casualty's body with wet towels, fans or icepacks near neck, groin & armpits
- Remove excess clothing
- Place in Recovery Position if unresponsive and breathing
- Prepare to give CPR if required



# Hypothermia

Hypothermia is when the body experiences a significant and potentially dangerous drop in temperature. The most common cause is prolonged exposure to cold.

## Signs / Symptoms:

### Mild Hypothermia - 35° to 32°

- Pale and cool to touch
- Drowsy or lethargic
- Poor coordination
- Increased heart rate and breathing
- Numbness in extremities
- Uncontrolled shivering
- Slurred speech
- Shivering

### Moderate Hypothermia - 32° to 28°

- Decreasing conscious state
- Muscle stiffness
- Low blood pressure
- Shivering may stop
- Slow heart rate and breathing
- Incontinent of urine

### Severe Hypothermia - Below 28°

- Unconscious and no longer responding
- Slow breathing
- Slow and potentially irregular heart rate, or no heart rate at all
- Rigid muscles
- Pupils fixed and dilated
- No response to light in the pupil of the eye



# Management of Hypothermia

The risk of death increases if the core body temperature drops below 32°C. The key in treating hypothermia is to prevent further heat loss.

If moderate or severe hypothermia – call 000. Commence CPR if needed

The body has four ways of losing heat:

## **Conduction –**

- Remove the person from a cold surface if possible.
- If possible, place the casualty onto a warm or dry surface, this will minimise further heat loss.

## **Convection –**

- Remove the person from a windy or wet environment
- Cover with blankets and shelter from conditions

## **Radiation –**

- Cover casualty to avoid heat loss
- Particularly cover the head of a younger child.

## **Evaporation –**

- Wet & sweaty people will suffer evaporative heat loss
- Replace wet clothing with dry
- Dry the skin where possible and remove wet clothing as soon as practicable.

**Do not expose to excessive heat**



# Eye Injuries

## **Embedded object in the eye**

- Do not try to remove it
- Create donut bandage to support the item
- Place covering over both eyes
- Seek medical aid
- Stay with the casualty and reassure



## **Foreign body in the eye**

- Reassure the casualty
- If small, gently remove with damp tissue
- If unsuccessful, flush eye with clean water
- Place patch on the eye/eyes effected
- Seek medical aid



# Otitis Externa (Swimmers Ear)

Otitis Externa, commonly known as swimmer's ear is inflammation or infection of the outer ear canal.

## To prevent Swimmers Ear:

- Use earplugs while swimming
- Do not swim in dirty or polluted water
- Tilt head after swimming, removing as much water as possible from your ear canals
- Do not insert cotton buds, other objects or fingers into your ears
- Do not remove earwax — since it can protect against infection
- Dry the ears well after swimming

## Symptoms can include:

- Pain in the ear worse when chewing
- Itchiness
- Popping sensation
- Pressure or full feeling in the ear
- Odour from ear
- Reduced hearing

## Management:

Monitor for pain, if pain persists seek medical help as antibiotics may be required

- Take pain relief and administer ear drops as prescribed
- Keep ear dry using earplugs or shower cap when showering



# Venomous Bites & Stings

The treatment of various bites and stings is dependent on what the source of the bite or sting was. The Poisons Information Line can be contacted on 13 11 26.

## Bite & Sting Treatments:

Land/Sea Animal	First Aid
Snakes	Pressure Immobilisation Technique (PIT)
Funnel Web Spider	
Blue Ringed Octopus	
Cone Shell (Tropics)	
Red Back Spider/other	COLD COMPRESS (PIT if allergic to bite/sting)
Bees, wasps, ants	
Irukandji & Box Jelly Fish	VINEGAR – minimum of 30 seconds salt water if vinegar is not available
Blue Bottles	HOT WATER – use cold compress if no pain relief with hot water
Fish stings	



# Snake Prevention

## **Ways to help prevent snake bites include;**

- Leave snakes alone & do not attempt to catch or handle them
- Wear enclosed shoes & long pants, in areas where snakes may be. Do not wear sandals or thongs
- Do not put hands in hollow logs, thick grass, under corrugated iron or in woodpiles without prior inspection
- When stepping over logs, carefully inspect the ground on the other side
- Keep barns and sheds free of mice and rats as they may attract snakes
- Keep grass maintained and not long
- Take care around houses, barns & outdoors on warm nights, snakes may be active at this time. Use a torch & wear adequate footwear
- Educate children about precautions





# Pressure Immobilisation Technique

## Treatment of a snakebite

1. Check for dangers including snakes being present
2. If safe, ask the person to lie down and remain still & prevent walking or moving around, to reduce blood flow.
3. Keep injured person calm, talk to them to distract
4. Remove any jewellery from effected limb
5. Aim is to slow circulation of the venom around body via the lymphatic system
6. Leave long sleeves on as excessive limb movement increases blood flow
7. **Apply Pressure immobilisation technique (PIT) bandage & then call 000**
8. The bitten limb should be immobilised using a splint
9. No attempt should be made to pursue the snake as this will risk further bites
10. Should be transported as quickly & as passively as possible via emergency services
11. Bitten limb & remainder of body must not be exercised as muscular contraction will promote absorption of venom and increased blood flow



# Poisons

## Poisons can be:

- Ingested
- Inhaled
- Injected
- Absorbed

## Signs and Symptoms:

- Pale, clammy skin
- Vomiting, Nausea
- Headache or confusion
- Burns to the mouth
- Seizures
- Puncture marks
- Stomach pain

## Management:

Poisons Information Line (13 11 26) should be called if someone has:

- Been poisoned
- Overdosed
- Made a mistake with medication
- Been bitten or stung by something venomous (for example snake, spider, bee or wasp)

Treatment for poisons varies and assistance should be sort via Poisons Information Line or by calling 000. Follow the basic life support flow chart (DRS ABCD) if the condition worsens.



# Module 4 Complete

Please continue to Module 5



For first aid supplies visit

[www.firstaidgearaustralia.com.au](http://www.firstaidgearaustralia.com.au)

