

4. HOT, HOT, HOT

Please read thoroughly so that you know:

1. How to prevent heat illnesses
2. What symptoms to look for in yourself and your team mates
3. How to treat these symptoms if required!

HEAT-RELATED ILLNESSES

The following information will help you prevent injury, and possible death, from heat illness in trekking and trek training - by assisting you to recognize and manage potentially dangerous heat situations.

The risk of heat illness from vigorous exercise or high intensity interval training is significant. It can range from cramps, through heat exhaustion, to heat stroke, coma and death (Sports Medicine Australia Policy "Preventing Heat Illness in Sport")

The main areas of concern with trekking and trek training are extended endurance treks and high intensity interval training in extreme heat.

Factors which impair the body's ability to dissipate heat are:

1. High ambient temperature
2. Solar radiation
3. Humidity (which compromises the efficacy of sweating) and
4. Dehydration

These factors significantly increase the risk of heat illness occurring.

Potential for heat illness can be reduced by lowering the intensity of trekking, by slowing down and using technical walking on hills and stairs to reduce body temperature.

Sports Medicine Australia recommends postponement or cancellation of any activities in temperatures above 36°. Wild Women on Top follow these protocols and will not conduct interval training or endurance treks in these extreme conditions.

However, temperatures above 36° can occur in the wilderness and heat illnesses can occur in temperatures below 36° so it is important for all Wild Women on Top to be familiar with the prevention and treatment of heat illnesses. (for more information on Heat Illness & sport, go to www.sma.org.au)

The main heat related illnesses include:

- Dehydration
- Heat Exhaustion
- Heat Stroke
- Hyponatraemia
- Heat Cramps
- Heat Rash

DEHYDRATION

What is dehydration?

Dehydration occurs when you lose and use more fluid than you take in, and your body doesn't have enough water and other fluids to carry out its normal functions. Exercise and physical exertion in hot weather, without enough fluids before, during and after exercise is a common cause of dehydration.

How do I prevent dehydration?

If you are planning to trek for more than 2 hours during hot weather you can prevent dehydration by doing the following:

1. Focus on extra hydration in the days leading up to the endurance trek ensuring that you increase your fluid intake. If you normally drink 2 litres of water a day, increase this to 3 - 4 litres just to be sure. Your urine should be almost clear, not yellow.
2. During your trek, drink at least 1 litre of water per hour
3. Use an electrolyte replacement drink such as **Gastrolite** (Not Gatorade, which does not contain sufficient electrolytes) in addition to your water.
4. If the temperatures are over 36degrees, exercise extreme caution and consider postponing your session, walking slower or walking at night.
5. Eat small amounts of salty food often to prevent Hyponatremia (this is a low sodium level caused by high water intake with low salt intake and salt loss in sweat: more info below.)
6. Wear a long sleeved light cotton shirt and wet bandana or gel collar. Throw water on you or jump under a cold shower as often as possible and continue to wet your bandana, hat & shirt.
7. Continue to drink immediately after your trek and increase fluid intake for

the next few days.

8. Listen to your body and if you don't feel 100%, take a day off exercise while you increase your fluids.

What are the symptoms of dehydration?

Mild to moderate dehydration is likely to cause:

- Dry, sticky mouth
- sleepiness or tiredness
- Thirst
- Decrease urine output (eight hours or more without urination)
- Muscle weakness
- Headache
- Dizziness or lightheadedness

If these symptoms occur increase your intake of fluids.

Severe dehydration, a medical emergency, can cause:

- Extreme thirst
- Extreme irritability and confusion
- Very dry mouth, skin and mucous membranes
- Dark yellow or amber coloured urine (if there is any urine at all)
- Shriveled and dry skin that lacks elasticity
- Low blood pressure
- Rapid heart rate
- Fever
- Dilerium and unconsciousness

If sever dehydration occurs seek medical help immediately.

HEAT EXHAUSTION

What is heat exhaustion?

Heat exhaustion is a mild form of hypovolemic shock (low volume of body fluids) resulting from water and electrolyte loss and sweating. Heat Exhaustion can develop quickly as a result of high intensity exercise in hot environments and/or after several days of exposure to high temperatures and inadequate or unbalanced replacements of fluid.

What are the warning signs?

- Elevated Heart Rate and Breathing

Rate (blood pressure may be low).

- Dizziness with fainting possible
- Skin may be pale, cool and clammy or slightly flushed
- Nausea and or vomiting
- Fatigue
- Thirst with decreased urine
- Heat cramps in large muscle groups

What steps can be taken to cool the body during heat exhaustion?

- Rest in cool shady spot.
- Cool patient with wet bandana on neck, remove boots and fan to cool
- Lie patient down with feet slightly elevated
- Give water or diluted sugary drinks or electrolyte drinks
- Monitor for changes in Heart Rate and Breathing rate
- Do not give salt tablets
- Rest until symptoms subside

HEAT STROKE

Heat Stroke is a true life threatening emergency. Patients have an inability to cool themselves due to fluid depletion or extreme heat challenge.

What are the warning signs of a heat stroke?

- Disoriented, irritable, combative and unconscious
- Hallucinations and seizures
- Increased Heart Rate and Breathing Rate
- High body temperature
- Red, hot, and dry skin (no sweating)
- Throbbing headache
- Dizziness and nausea



What should I do if I see someone with

symptoms of Heat Stroke?

If you see these signs call 000 for an ambulance while you do the following:

- Get the person to a shady area, remove boots and hat.
- Cool the person rapidly, using whatever methods you can. For example, immerse the person in cool water, under a cool shower, spray the person with a garden hose, sponge the person down or if the humidity is low wrap the person in a cool wet sheet or piece of clothing and fan him or her.
- Monitor their body temperature and continue to cool them until their body temperature drops to below and seek medical assistance.

HYPONATRAEMIA

This is a heat illness caused by a low sodium level in the blood, caused by high water intake combined with low salt intake and salt loss in sweat. It can occur when you drink heaps and don't eat during endurance events.

* Note: Some of the signs and symptoms of Hyponatraemia are similar to Heat Exhaustion but the treatments are different. You will be able to distinguish the difference by asking the patient what they've eaten and drunk. If you're unsure, give the patient electrolyte replacement drinks AND salty foods and get emergency assistance.

What are the warning signs?

- History of HEAVY water intake with little or no food, especially salty food.
- History of clear and copious urination.
- Headache
- Unusual weakness and fatigue
- Lightheadedness
- Nausea and or vomiting
- Mild anxiety and mild muscle cramping

What should I do if I see somebody with symptoms of Hyponatraemia?

- Rest in shade
- No fluid intake: Avoid electrolyte replacement drinks
- Gradual intake of salty foods

- Rest until symptoms subside
- Call 000 if symptoms worsen

Prevention of Hyponatraemia:

Hyponatraemia can be prevented by staying hydrated, eating salty foods while trekking and not relying on electrolyte replacement drinks alone (many are low in sodium)

What are some other heat-related illnesses?

Constant sweating from strenuous activity in the heat may deplete the body of salts and moisture which may result in **Heat Cramps** in the abdomen, arms or legs. If you feel the onset of painful muscular cramps or spasms stop all activity and sit in a cool place, drink Gastrolyte, and seek medical attention if the cramps do not subside for an hour.

Heat rash is a skin irritation caused by excessive sweating during hot, humid weather. It looks like a red cluster of pimples or small blisters and is likely to occur on the neck and upper chest, in the groin and under the breasts and in elbow creases. Try to stay as cool as possible and keep the affected area dry.

How can we protect our health when temperatures are extremely high?

Remember to keep as cool as possible. Drink plenty of fluid, you must hydrate well in the days leading up to the event. Aim to drink at least 4 litres of water per day in the preceding 3 days.

Ensure you drink at least one litre of water per hour during a hot day and 500ml per hour at night.

Gastrolyte is needed for electrolyte replacement NOT Gatorade! Ensure every team member drinks Gastrolyte throughout the event, especially during the day.

Wear appropriate lightweight clothing, and a wide-brimmed hat to provide shade and keep your head cool. Apply sunscreen, pace yourself and continually monitor and be aware of how you are feeling. Also be sure to take note of how your team members are doing as well. Be sure to constantly remind team members to drink water and wet their clothing, hats and bandanas.