

Disease Information Sheets

Heat Illness



Introduction

Exposure to hot environments, or intense exercise in moderate environments or with inappropriate clothing, can cause several different illnesses that range from uncomfortable to life-threatening in severity. As a group, these illnesses are called *heat-related illnesses* or *heat illness*.

What illnesses are heat-related?

| ILLNESS | DESCRIPTION | MANAGEMENT |
|-----------------------------------|---|--|
| HEAT CRAMPS | Muscle cramps caused by dehydration and electrolyte imbalance, usually during exercise in a hot environment. | Rest; oral fluids (balanced salt solution); gentle stretching. |
| HEAT SYNCOPE (FAINTING) | Seen immediately after periods of work in hot environments. | Lie patient down in cool area; splash water and fan to hasten cooling; oral fluids once fully alert. |
| HEAT RASH (PRICKLY HEAT) | Inflammation of the skin seen in humid regions following prolonged sweating and blockage of sweat gland ducts; may become infected. | Keep affected skin clean and limit exercise and heat exposure. |
| HEAT EXHAUSTION | Weakness, lethargy, headache, nausea, faintness, anorexia, rapid pulse due to dehydration in a hot environment | Rest in cool area; oral fluids (balanced salt solution); cooling of the skin by wetting and fanning; recovery may take up to 24 hours. |
| HYPERTHERMIA (HEAT STROKE) | Life-threatening medical emergency through exercise in a hot environment. Characterised by confusion, disorientation, strange behaviour, inability to walk or balance, elevated heart rate, elevated breathing rate, hot, red skin (may be dry or wet). | Urgent treatment required: Shade from direct sun and remove clothes; wet with tepid or cool water and fan aggressively; place ice packs at neck, groin and armpits; cold water immersion if possible and safe; fluid therapy if possible; oral fluids once alert; urgent evacuation; monitor for rebound temperature increase. |

Are travellers and/or expat workers at risk?

Yes. All travellers and expat workers are at risk. People at *increased* risk include anyone who is obese, unfit, unacclimatised, elderly, unwell, dehydrated from vomiting or diarrhoea, has underlying medical conditions such as heart disease or over-active thyroid, and those taking certain medications such as beta-blockers or diuretics.

How is it prevented?

ACCLIMATISATION

The body adapts to heat exposure over a period of one to two weeks. The process is aided by 60 to 90 minutes of exercise per day in the heat. During acclimatisation the body adapts to produce more sweat at a lower temperature, which aids heat loss.

HYDRATION

An acclimatised person can lose more than one litre of sweat per hour during exercise. Sweat contains both water and salts, so a balanced salt solution must be consumed in order to replenish those losses. Drink at least 500 ml of fluids at each break, plus 300-500 ml per hour. Signs of dehydration include thirst, production of small volumes of concentrated urine (or no urine produced), and in severe cases skin tenting (a pinch of skin does not spring back into place when released).

CLOTHING

Wear loose-fitting, light coloured clothing. Consider periodically dipping it in water.

REST

Rest is important, especially during acclimatisation, and particularly during the hottest part of the day.

FITNESS

A good level of physical fitness will improve the quality and rate of acclimatisation. Body fat is a good insulator - a leaner person loses heat more easily than a fatter person.

NEED MEDICAL ADVICE FOR YOUR WORK OR TRAVEL IN REMOTE AREAS?

Sentinel Consulting provides support services for people travelling and working in remote or resource-poor locations. Services include:

- Pre-travel medical screening and advice
- Risk management including risk assessment, emergency response planning and medical facility inspections
- 24-hour medical support from wilderness specialist doctors
- Operational support including call-ins, incident support and liaison
- Medical bags (prescription and non-prescription drugs) and first aid kits

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