

# Extremes of Temperature

## Hypothermia

Core of body

Normal ca. 36.8 C

Hypothermia is < 35 C

32-35 = mild

30-32 = moderate

<30 = severe

Causes: cold environment, inadequate clothing, wind chill, water, emaciation, illness, lack of food

Don't forget D for danger: one person with hypothermia means others in danger

Recognition features: Reduced level of consciousness/abnormal behaviour, appearance of physical tiredness, feeling cold, shivering, stopping feeling cold/shivering, appear pale/cyanosed, unconsciousness, death (make sure they've thawed properly before giving up)

Treatment: prevent it! Warm the person. Voluntary muscle activity (exercise). Put on more clothes/layers/blankets. Extra food. Chocolate. Kendal mint cake. More extreme treatment: get in sleeping bag with person (share body heat)

999/112 – for warmed O<sub>2</sub>, IV fluids, etc.

NB extreme hypothermia + movement is a risk factor for cardiac arrest

## Frostbite

Tissue cooled down; damaged/killed. Local irreversible damage.

Do we warm part? Good for preventing further damage. Repeated freezing is much worse than leaving frozen, however.

## Heatstroke

Core temperature > ca. 40.6 C

Two divisions: exertional (e.g. lots of exercise in the heat); non-exertional (geriatric French people: bad thermoregulation)

Brain at risk: homeostatic mechanism gives way to positive feedback loop (preterminal) -> convulsions, death. Time critical at this stage.

Treatment: cool the person e.g. use water. Remove clothing and add wet sheet. Remove patient from sunlight/heat. Monitor + record. Seek HCP assistance where appropriate.

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## **Sunburn**

Recognition: hot weather, water, light reflecting surfaces (water, sand, snow, concrete), UV on cloudy day, bad use of sunscreen

Treatment: aim to prevent, moisturiser, awareness of infection possibility, fluid loss,

Long term skin cancer risk

## **Heat Exhaustion**

Core temperature too high, associated with dehydration/electrolyte imbalance from sweating/lack of fluid replacement/lack of electrolyte replacement

Recognition features: thirst, perspiration (reduces later), pale, tiredness, abnormal behaviour, confusion, reduced level of consciousness, convulsions, death

Treatment: water/rehydration salts/energy drinks (Lucozade sport)/flat coke (not diet version if possible)/add salt and sugar to water (1tsp salt + 1tbsp sugar to 1-2L water). Remove from source of exhaustion. Avoid excess exercise.

## **Nasty animals**

Beware of interesting animals – areas with extremes of temperature can have other hazards not typical to the UK.

## **Exacerbation of existing medical conditions**

Relatively minor injuries can lead to conditions above as a result of reduced mobility

Asthma (often aggravated by cold weather/drops in temperature)

Eczema

Reynaud's syndrome

Arthritis

Psychiatric