

Heatstroke and dehydration amongst the elderly

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Australia is experiencing increasing average temperatures due to climate change, most evident in the last decade. Direct and indirect exposure to the resultant heat has caused increased rates of hospital presentations for dehydration, especially amongst the elderly, who are far more prone to heat related illness and death. Temperatures above 37C are particularly dangerous.

Recognising the early signs of dehydration and heat stress can save lives.

1. Age related factors that increase the risk of dehydration include

- A reduction in the body's salt and fluid reserves and reduction of awareness of the need to drink can lead to dehydration. The lower a person's body weight and total body water, the sooner the loss of even a small amount of body water will cause signs and symptoms of dehydration.

- Medications that many seniors take (such as diuretics) may increase the risk of dehydration. Drugs such as selective serotonin reuptake inhibitors, angiotensin converting enzyme inhibitors, and anti-Parkinson drugs suppress thirst. Antipsychotics, beta blockers and drugs with anticholinergic properties can disturb thermoregulation.
- Exacerbation of chronic conditions- such as diabetes, being very over or underweight, heart lung or kidney disease, poor blood circulation, inefficient sweat glands, dementia or alcoholism, mental illness can result in heat related illnesses.

2. Lifestyle factors

Hot living quarters, overdressing, being in overcrowded spaces, not responding appropriately to weather conditions, and living alone are all predispositions for heat related illnesses.

3. Heat Stroke is a Medical Emergency

People who die from hyperthermia are most often over 50 years of age.

4. Signs of Heat Stroke

- Fainting or becoming unconscious
- Behavioural change – agitation, confusion, staggering, unexpected anger, acting strangely
- Body temperature over 40c
- Dry, flushed skin and a strong, rapid pulse or a slow, weak pulse
- No sweating, even in hot weather

- Muscle cramps
- Nausea and vomiting
- Delirium

5. Actions to address Heat Stroke

- Call for an ambulance: 000
- Get the patient to a cool place – shade or air conditioned
- Offer fluids such as water or fruit/vegetable juices (not caffeine or alcohol as these are diuretics).
- Apply a cold wet cloth to the wrists, neck, armpits and groins.
- Encourage the person to shower, bathe, or sponge with cool water when safe to do so.
- Use of a fan and/or air conditioner where possible will cool down
- Encourage rest.
- Give prescribed intravenous fluids when available in a suitable environment as needed.
- Take blood samples as required to check for electrolyte and other discrepancies.
- Give antiemetic & electrolyte replacement therapy if possible.
- Vital observations and supported care (i.e., ECG, ongoing monitoring and intervention) when available.
- Document events and interventions using ISBAR guidelines.

Quiz

1. How would you know if a person you were out on a bushwalk with, was suffering from heatstroke?

Answer: Signs of heatstroke: fainting or becoming unconscious; behavioural changes including agitation, confusion, staggering, unexpected anger, acting strangely; body temp over 40c; dry flushed skin and a strong, rapid pulse or a slow, weak pulse; no sweating even in hot weather; muscle cramps; nausea and vomiting; delirium.

2. What are the immediate steps you would take to alleviate the signs and symptoms of heatstroke?

Answers:

- Call for an ambulance: 000
- Get the patient to a cool place – shade or air conditioned
- Offer fluids such as water or fruit/vegetable juices (not caffeine or alcohol as these are diuretics).
- Apply a cold wet cloth to the wrists, neck, armpits and groins.
- Encourage the person to shower, bathe, or sponge with cool water when safe to do so.
- Use of a fan and/or air conditioner where possible will cool patient down
- Encourage rest.

3. Why is rest important for people with heatstroke?

Answers:

Movement increases body heat. The aim of treatment of heatstroke is to reduce body heat.

Excessive movement can also lead to heat cramps or painful tightening of the muscles of the stomach, arms or legs.

4. Why is the application of a cold wet cloth to the wrists, neck, armpits and groins helpful in controlling hyperthermia?

Answers: The blood vessels at the wrists, neck, armpits and groins come closest to the body surface so they are most easily cooled when cold compresses are applied to them.

5. What do the letters in ISBAR stand for?

Answers:

Identify self and patient

Describe situation and reason for contact

Background: allergies; relevant past history of patient, problems and treatments, medications

Assessment of situation and background

Recommendations and specific advice and interventions.

6. If you were working in Accident and Emergency in a hospital setting and a patient presented with heatstroke, what would be your first 12 priorities for intervention?

Answers:

- Check for immediate dangers
- Check to respond i.e.: ring for further assistance as needed
- Check airways for obstruction
- Check breathing for difficulty and intervene with airway adjuncts as required.
- Check circulation. Undertake ECG and ongoing cardiac monitoring and interventions as required. Commence IV infusions to maintain adequate circulation as needed. Commence FBC and charting of all observations. Take blood samples for further analysis as needed. Note colour and amount of urinary output to confirm diagnosis of hyperthermia.
- Check blood glucose level and undertake GCS scoring, neurological observations.
- Offer prescribed anti emetic medications and electrolyte & oral fluid replacements as tolerated.
- Take ongoing vital signs and report & record appropriately.
- Engage with family and friends and ensure moral support of patient.
- Take relevant past history of patient
- Commence further investigations as needed and refer as necessary

- Ensure accurate documentation is initiated and maintained.