WHAT IS IT?
- Hypothermia occurs when body temperature drops below 35°C (oral).
- Hypothermia can result in an increased risk of stroke or heart attack due to the formation of blood clots.
- Older people are at particular risk due to reduced levels of activity.

CAUSES
- If exposure to cold is prolonged, a series of defence mechanisms are activated to prevent further heat loss. These include the release of heat-generating hormones, involuntary shivering to keep major organs at normal temperature and restricting the blood flow to the skin.
- Unfortunately these responses are usually not enough to generate sufficient heat and they drain energy reserves, making hypothermia a life-threatening condition.

SYMPTOMS
- Although hypothermia usually develops as a result of exposure to prolonged cold, it can develop as a secondary result of burns, exposure to toxins, infection, and dysfunction of the central nervous and endocrine systems.
- Hypothermia is induced in some kinds of surgery.

TREATMENT
- Initially the emphasis is on preventing further heat loss, rewarming as soon as is safely possible and rewarming the core before the periphery. This is to avoid dangerous side-effects such as cold blood returning to the core and lowering the overall body temperature.
- Passive external rewarming is used for mild hypothermia. The person is placed in a warm environment and insulated. Core temperature increases by a few degrees per hour.
- Active external rewarming, where heat is applied to the skin, has complications. Increased temperature can dilate peripheral vessels, returning cold blood to the core and lowering core temperature. Rewarming acidosis can occur as lactic acid, cooled in the periphery, returns. Active external rewarming should be used directly over the trunk.
- Active core rewarming quickly increases core temperature without the side-effects of external rewarming. Methods include:
  - Diathermy – ultrasound and low-frequency microwave radiation warms deeper tissues;
  - Peritoneal dialysis – warmed fluid is placed in the abdomen through an incision. This allows the liver to be quickly rewarmed, expediting the removal of toxins;
  - Extracorporeal – blood is circulated via a warmer and back into the bloodstream;
  - Airway – warmed air is given via an oxygen mask.

REFERENCES