



الإسعاف الأولي First Aid

المركز الوطني للإسعاف الأولي و الحد من المخاطر

The National Centre for First Aid and Risk Reduction

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Environmental health problems

- The environment can have a dramatic impact on health and life, especially the young, elderly and people with chronic illness.
- Health problems caused by heat.
- Health problems caused by cold.



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Health problems caused by cold

- **Frostbite:**

local damage is caused to skin and other tissues due to extreme cold.

Frostbite is most likely to happen in body parts farthest from the heart and those with large exposed areas.





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Health problems caused by cold

- **First Aid for Frostbite:**

- re-warming of frozen body parts should be done only if there is no risk of refreezing.
- Re-warming should be achieved by immersing the affected part in water between 37°C (i.e., body temperature) and 40°C for 20-30 minutes.
- Chemical warmers should not be placed directly on frostbitten tissue, because they can reach temperatures that can cause burns and exceed the targeted temperatures.
- After re-warming, efforts can be made to protect frostbitten parts from refreezing and to quickly transport the victim for further care.
- Affected body parts may be dressed with sterile gauze or gauze placed between digits until the victim can reach medical care.



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Health problems caused by cold

- Hypothermia:

Hypothermia can occur if the whole body is exposed to cold and is defined as a condition in which core temperature drops below that required for normal metabolism and body functions, i.e., 35°C.





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Health problems caused by cold

- **First Aid for Hypothermia:**

- Victims of hypothermia who are responsive and shivering vigorously should be re-warmed passively with a polyester-filled blanket.
- For victims of hypothermia who are not shivering, active warming should be started, with a heating blanket if available.
- For passive re-warming, if a polyester-filled blanket is not available and the victim is responsive and shivering, other options can be used, including any dry blanket, warm dry clothing or reflective/metallic foil.



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Health problems caused by cold

- For active re-warming, if a heating blanket is not available and the victim is not shivering, other options can be used, including a hot water bottle, heating pads or warm stones. Do not apply directly to the skin to prevent burning the person.
- In all cases, victims should be treated gently, removed from the cold stress and have their wet clothes removed; if the patient is moderately to severely hypothermic, clothes should be cut off to minimize movement.
- Care should then be taken to insulate the victim and provide a vapor barrier if possible to minimize conductive/convection and evaporative heat loss, respectively.



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Health problems caused by heat

- If the body is exposed to heat or heat is generated without the ability to release it, several health-related problems can develop, including changes in mentation, loss of electrolytes caused by intense sweating.
- Heat stroke.
- Heat exhaustion and heat syncope.
- Heat cramps.
- Dehydration.



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Health problems caused by heat

- **Heat stroke:**

- A form of hyperthermia, an abnormally high body temperature and loss of ability to regulate temperature with accompanying physical and neurological symptoms.
- The body may not be able to dissipate the heat, and body temperature rises, sometimes up to 41.1°C or even higher.





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Health problems caused by heat

- **Signs and symptoms of heat stroke:**
 - Strange behavior, headache, dizziness, hallucinations, confusion, agitation, disorientation, coma.
 - High body temperature.
 - The absence of sweating, with hot red or flushed dry skin.
 - Rapid pulse, difficulty breathing.
 - Nausea, vomiting, fatigue, weakness.



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Health problems caused by heat

First Aid for Heat Stroke:

- Heat stroke victims must be immediately cooled by any means possible.
- First aid providers should immerse the victim in water as cold as possible up to the chin.
- Circulating water should be used over static water.
- For a victim of heat stroke, if water immersion is not possible or delayed, the victim should be doused with copious amounts of cold water, sprayed with water, fanned, covered with ice towels or have ice bags placed over the body.



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Health problems caused by heat

- **Heat exhaustion and heat syncope:**

A milder form of heat-related illness that can develop after exposure to high temperatures and inadequate or unbalanced replacement of fluids.



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Health problems caused by heat

- **Signs and symptoms of heat exhaustion and heat syncope:**
 - Heavy sweating.
 - Paleness.
 - Muscle cramps.
 - Tiredness, Weakness.
 - Dizziness.
 - Headache.
 - Nausea or vomiting.
 - Fainting.
 - Cool, moist skin.
 - Fast, weak pulse rate.



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Health problems caused by heat

- **First Aid for heat exhaustion and heat syncope:**

- Heat exhaustion should be treated by oral rehydration with a salt-containing beverage.
- Victims of heat exhaustion should be removed from the hot environment if possible and/or cooled with a fan, ice bags, or water spray.

If heat exhaustion is untreated, it may progress to heat stroke.



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Health problems caused by heat

- **Heat cramps:**

Painful involuntary muscle cramps that can occur during and after exercise or work in a hot environment.





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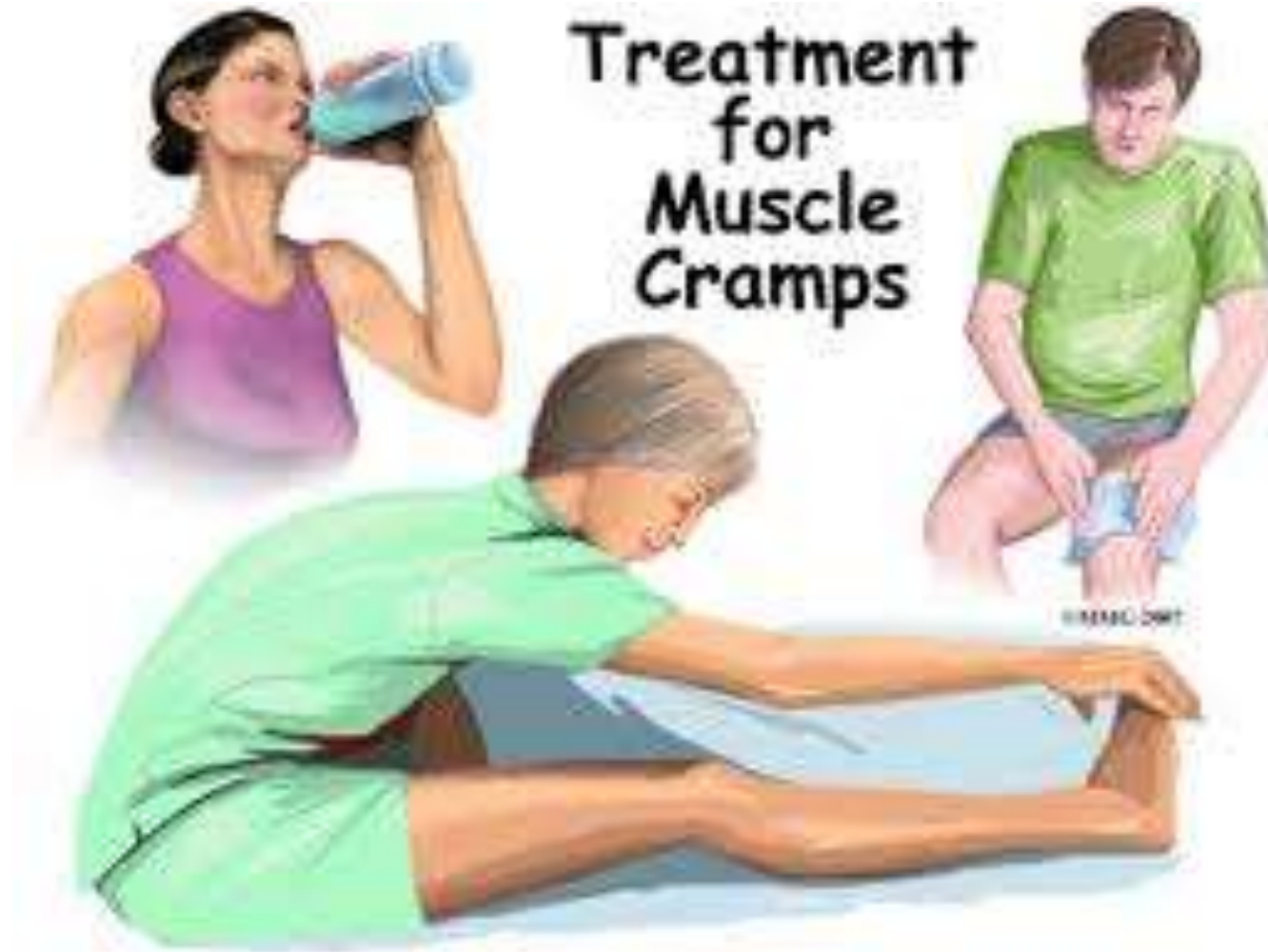
Health problems caused by heat

- **First aid for heat cramps:**

- Victims experiencing heat cramps should be encouraged to drink a salt-containing beverage.
- While victims of heat cramps are drinking, the affected muscle may be stretched. Cooling and massaging of the muscle during the stretch might also be useful.



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Health problems caused by heat

- **Dehydration:**

Dehydration may be caused by heat and/or exercise.

- **First Aid for Dehydration:**

- Rehydration after exercise-induced dehydration is best treated with oral fluids.
- The best fluid for rehydration is a carbohydrate electrolyte beverage, but if one is not readily available, water should be used.



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