

Heat Stroke Treatment Guidelines Handout

What is heat stroke?

Heat stroke is a medical emergency that occurs when the body's internal temperature rises significantly above normal levels. This can be caused by prolonged exposure to high temperatures or intense physical activity in hot conditions.

How is heat stroke treated?

The main goal of treatment for heat stroke is to quickly lower the body's core temperature to prevent damage to vital organs such as the brain, heart, and kidneys. Treatment may include:

Rapid cooling

The first step in treating heat stroke is to rapidly cool the body. This can be done by moving the person into a cool, shaded area and removing any excess clothing. Applying cool water or ice packs to areas with large blood vessels such as the neck, armpits, and groin can also aid in cooling the body.

Intravenous hydration

Heat stroke can cause severe dehydration, so it is important to replace lost fluids and electrolytes through intravenous hydration. This may involve administering IV fluids containing salt and sugar.

External cooling

In addition to rapid cooling and hydration, other external cooling techniques may be used. These include immersing the person in a cool bath or using a fan or misting device to help lower their body temperature.

Monitoring vital signs

During treatment for heat stroke, it is important to closely monitor the person's vital signs such as heart rate, blood pressure, and breathing. If these indicate any complications or worsening of symptoms, further medical intervention may be required.

Medications

In some cases, medications such as muscle relaxants or sedatives may be used to reduce any seizures or agitation caused by heat stroke.

Monitoring vital signs

It is crucial to continuously monitor the person's vital signs, including body temperature, heart rate, blood pressure, and oxygen levels. This helps healthcare professionals track the effectiveness of treatment and make necessary adjustments.

Immersion in ice water

In extreme cases, when the body's temperature cannot be lowered through other methods, immersion in ice water may be necessary. This should only be performed under medical supervision.

Protocols for severe cases

In severe cases of heat stroke, more invasive measures may be necessary. This can include using a machine to lower the body's temperature called an "artificial cooling device" or providing oxygen therapy.

References

Groot, E., Abelson, A., & Moore, K. (2014). Practical strategies for prevention and treatment of heat-induced illness. *Canadian Family Physician*, *60*(8), 729–730. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4131963/>

Sorensen, C., & Hess, J. (2022). Treatment and prevention of heat-related illness. *The New England Journal of Medicine*, *387*(15), 1404–1413. <https://doi.org/10.1056/NEJMcp2210623>