Temperature control to improve neurological outcomes after cardiac arrest

Information for the public
Published: 23 January 2024

www.nice.org.uk

A cardiac arrest is when the heart suddenly stops pumping blood around the body, leading to a loss of consciousness and death unless emergency resuscitation is given, and the heart restarted. A person whose heart is restarted after a cardiac arrest can have problems with their nervous system. This is because their brain has not had enough oxygen during the cardiac arrest, which can cause brain injury.

In this procedure, after a person's heart is restarted and while they are still unconscious, their body temperature is controlled. Either their body is kept at a normal temperature of between 36.5°C and 37.5°C to prevent fever, or it is cooled to between 32.0°C and 36.0°C (therapeutic hypothermia). Both are done for 1 to 3 days. The aim is to improve survival and improve neurological outcomes by reducing brain injury.

When the procedure is being used to prevent fever

This procedure can be used to prevent fever and improve neurological outcomes after a cardiac arrest because it works well and there are no serious concerns about its safety.

When the procedure is being used to induce therapeutic hypothermia

This procedure can only be done as part of a research study when used to induce therapeutic hypothermia (to less than 36°C) to improve neurological outcomes after a cardiac arrest. This is because there is not enough evidence to be sure how well the procedure works, and some evidence suggests that the procedure is potentially harmful. People who have the procedure are also more likely to have an abnormal heart rhythm.

Information and support

- NICE's information on HealthTech guidance explains what HealthTech is and how we assess it.
- NICE's information on HealthTech recommendations explains what standard arrangements and only in research means.

You can also get support from your local Healthwatch.

ISBN: 978-1-4731-8962-1