

Study questions hypothermia treatment for cardiac arrest

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Therapeutic hypothermia – cooling the body and brain down to 33°C – is the method used worldwide to treat cardiac arrest, even though a lower body temperature may raise the risk of side-effects. However, keeping the temperature steady at 36°C is just as effective, a study led by Lund University researchers has found.

"Our results show that it is just as effective – both for survival and recovery of [neurological function](#) – to focus on avoiding the fever that accompanies [cardiac arrest](#). We don't need to cool down the body and brain to 33°C. This is of course important because cooling to lower temperatures brings a higher risk of infection, bleeding and other side-effects", said Niklas Nielsen, researcher at Lund University and first author of the study.

Patients who come into hospital in cardiac arrest receive intensive care with cooling and ventilator treatment. Around half of them survive. Daily life goes quite well for those who survive, but around 30 per cent of cardiac arrest [patients](#) suffer impaired cognitive function, for example poorer memory.

"Until now, there has not been a clear place in the health service for the rehabilitation of these patients and one of our most important tasks is to identify them and tailor rehabilitation treatment to them. The median age for cardiac arrest is just over 60, and there are quite a lot of younger people who are affected. Rehabilitation can mean the difference between being able to go back to work and remaining on sick leave",

said Niklas Nielsen.

The researchers are planning to analyse the patient data in more detail to see if there may be groups of patients for whom cooling could be beneficial and whether it has an impact at a more detailed cognitive level.

About the study:

The new research results are based on 10 years of data collection that has culminated in the study presented today – the largest international clinical study on patients ever. It has been carried out at 36 hospitals in 10 countries in Europe and in Australia, and includes 950 patients between 2010 and 2013. The main objective of the study was to investigate the optimal temperature for hypothermia treatment of patients in cardiac arrest, and to investigate the neurological function and quality of life of survivors after discharge from hospital.

The study was led by researchers from Lund University, Helsingborg Hospital and Skåne University Hospital – Niklas Nielsen, Hans Friberg, Tobias Cronberg and David Erlinge – together with an international steering group.

More information: 'Targeted Temperature Management Cardiac Arrest', *New England Journal of Medicine*, 2013.

Provided by Lund University

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