

# Therapeutic hypothermia to reduce intracranial pressure after traumatic brain injury: the Eurotherm3235 RCT

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## Plain English summary

### Hypothermia to reduce intracranial pressure after brain injury

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## Plain English summary

Following a blow to the head [traumatic brain injury (TBI)], the brain can swell like a bruise, but is enclosed within the skull. If the brain swells, it can lead to a build-up of pressure that can cause damage to parts of the brain. Many patients who have suffered a traumatic brain injury are admitted to an intensive care unit. This is usually because they have become unconscious as a result of the brain injury. These patients require specialised care and often cannot breathe well enough for themselves. They are therefore sedated and attached to a breathing machine, called a ventilator.

This study included 387 participants and looked at whether or not cooling the body down to between 32 and 35 °C within 10 days of injury to try to reduce any brain swelling affected longer-term recovery from TBI. Each participant was randomly allocated to receive either the usual care given or the usual care with the additional treatment of cooling the body to between 32 and 35 °C for at least 48 hours.

The study was stopped early because of concerns about safety raised by the independent Data and Safety Monitoring Committee and agreed by the Trial Steering Committee. The results of this study showed that more patients died after receiving hypothermia than standard care alone and that the survivors who had received hypothermia made a less good recovery than those receiving standard care alone.

It was concluded that hypothermia should not be used to reduce pressure after a TBI.

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