

Use of hypothermia does not improve outcomes for adults with severe meningitis, may be harmful

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Bruno Mourvillier, M.D., of the Université Paris Diderot, Sorbonne Paris Cité, Paris, and colleagues conducted a study to examine whether treatment with hypothermia would improve the functional outcome of comatose patients with bacterial meningitis compared with standard care.

Among adults with bacterial meningitis, the death rate and frequency of neurologic complications are high, indicating the need for new therapeutic approaches. Clinical trials of [patients](#) with trauma who were treated with hypothermia have shown a decrease of intracranial pressure, suggesting a potential benefit of this technique in bacterial meningitis, according to background information in the article.

The randomized trial conducted in 49 intensive care units in France between February 2009 and November 2011 assessed 130 patients for eligibility and randomized 98 comatose adults with community acquired bacterial meningitis to the hypothermia group, where patients received a loading dose of 39°F cold saline and were cooled to 90°F to 93°F for 48 hours, or standard care.

The trial was stopped early because of concerns over excess mortality in the hypothermia group (25 of 49 patients [51 percent]) compared with the control group (15 of 49 patients [31 percent]). At 3 months, 86 percent in the hypothermia group compared with 74 percent in the [control group](#) had an unfavorable outcome (as gauged via the Glasgow Outcome Scale [a functional assessment inventory]).

"In conclusion, our trial does not support the use of hypothermia in adults with severe meningitis. Moderate hypothermia did not improve outcome in patients with severe [bacterial meningitis](#) and may even be harmful. Our results may have important

implications for future trials on [hypothermia](#) in patients presenting with septic shock or stroke. Careful evaluation of safety issues in these future and ongoing trials are needed," the authors write.

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