

IV fluids used by NHS responsible for unnecessary deaths

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Starch-based intravenous (IV) fluids used by the NHS to treat seriously ill patients are causing unnecessary deaths, according to a new *Cochrane* systematic review by researchers at the London School of Hygiene & Tropical Medicine.

Based on data from 25 randomised control trials, the researchers concluded that starch-based colloid fluids, used to stabilise patients with low blood pressure, are not only more expensive than saline-based crystalloid fluids, but may also be causing around 250 unnecessary deaths in the UK every year.

The study included 9,147 seriously ill patients after trauma, burns and surgery or those with severe infections who were randomly allocated to receive either colloid fluids or saline fluids in their resuscitation. Those receiving colloids were 10% more likely to die. The researchers are now calling on the NHS to stop using colloid fluids.

Lead author Dr Ian Roberts, director of the clinical trials unit at the London School of Hygiene & Tropical Medicine, said: "Starch solutions are widely used in the NHS and the evidence from our study shows that they kill patients. They are more expensive than saline and they increase the risk of death. British hospitals use far more starch solutions than most other countries. The ongoing use of colloids is unjustified."

The safety of using colloids containing hydroxyethyl starch has been debated for years. They are widely used to treat shock following severe

blood loss by increasing blood volume but recent large high quality studies have linked starch use to renal failure. The trials also found more adverse reactions with starch. Crystalloids work in the same way but do not contain starch.

The European Medicines Agency is conducting a review into the safety of hydroxyethyl starch in critically ill patients but Dr Roberts believes that the NHS should take action now and has written to the Department of Health. He said: "We don't need to wait for starch solutions to be banned in order to take action in the NHS. We have a safer, less expensive alternative that is widely used around the world. The [NHS](#) should take action now."

More information: Perel P, Roberts I, Ker K. Colloids versus crystalloids for fluid resuscitation in critically ill patients. Cochrane Database of Systematic Reviews 2013, Issue 2. Art. No.: CD000567. [DOI: 10.1002/14651858.CD000567.pub6](https://doi.org/10.1002/14651858.CD000567.pub6)

Provided by London School of Hygiene & Tropical Medicine

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