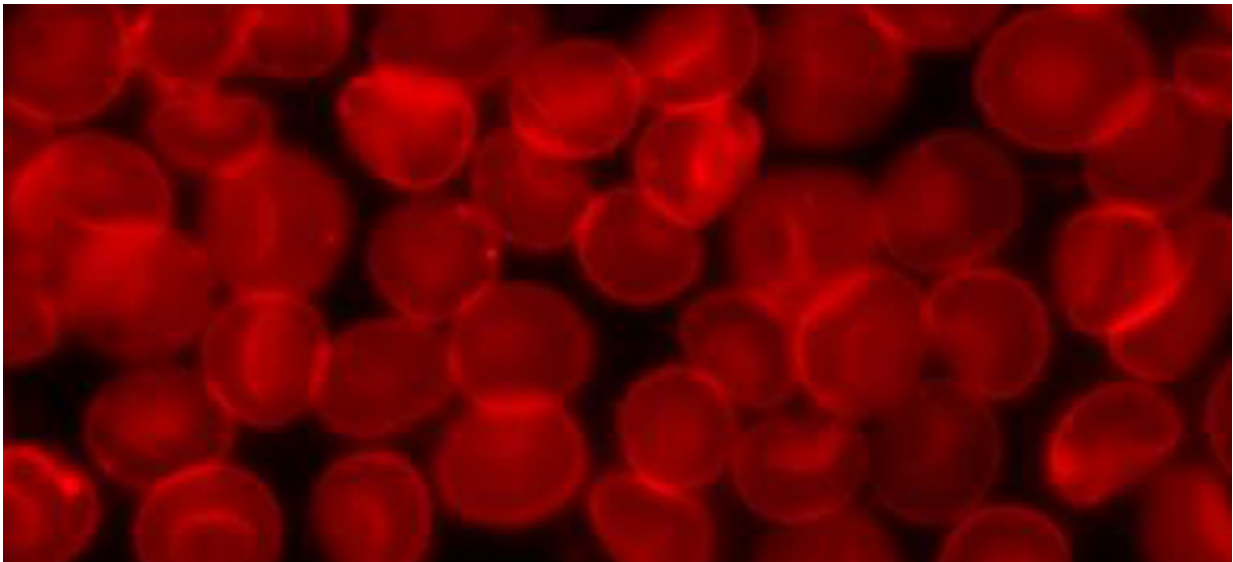


International study proves old blood is as good as new

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Credit: Wikimedia Commons

It's been long thought that when blood transfusions are needed, it may be best to use the freshest blood, but McMaster University researchers have led a large international study proving that it is not so.

The study of almost 31,500 patients at six hospitals in four countries showed that having a transfusion with the freshest blood did not reduce the proportion of patients who died in hospital. The McMaster study was published in the *New England Journal of Medicine* today.

"It's been a contentious issue, but our study finally puts an end to the question about whether stored blood could be harmful and fresher blood would be better," said Nancy Heddle, lead author and a professor emeritus of medicine for McMaster's Michael G. DeGroote School of Medicine. She is also the research director of the McMaster Centre for Transfusion Research.

"Our study provides strong evidence that transfusion of fresh blood does not improve patient outcomes, and this should reassure clinicians that fresher is not better."

She added that the results are also good news for blood suppliers worldwide as having a supply of stored blood helps to ensure that blood is available when a patient needs it.

The 31,497 adult patients studied were at hospitals in Australia, Canada, Israel and the U.S. The mortality rate was 9.1 per cent with people receiving the freshest blood, and 8.7 per cent among those receiving the oldest blood. There was no significant difference when looking at the patients' [blood type](#), diagnosis, hospital or country.

John Eikelboom, a co-principal investigator of the study and professor of medicine of the Michael G. DeGroote School of Medicine, said more than 40 studies published earlier have failed to adequately answer the question about whether the freshest blood was best.

"Blood transfusions are a common medical intervention," he said.

"Advances in blood storage now allow blood to be stored up to 42 days before transfusion and the usual practice is to use up the blood that has been in storage the longest. But, because there are biochemical, structural and functional changes in the blood during storage, there had been concerns about the use of 'older' blood.

"This study reassures us that aging is not bad - even for blood."

Provided by McMaster University

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