Wait a minute—clamping the umbilical cord later saves preterm babies' lives

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Thousands of preterm babies could be saved by waiting 60 seconds before clamping the umbilical cord after birth instead of clamping it immediately - according to two international studies coordinated by the University of Sydney's National Health and Medical Research Council Clinical Trials Centre.

Approved for publishing in the *American Journal of Obstetrics and Gynecology*, the review led by University of Sydney researchers, assessed morbidity and mortality outcomes from 18 trials comparing delayed versus immediate cord clamping in nearly 3,000 babies born before 37 weeks' gestation. It found clear evidence that delayed clamping reduced hospital mortality by a third and is safe for mothers and pre-term infants.

The review also reported that delayed clamping reduced subsequent blood transfusions and increased neonatal hematocrit, confirming that placental transfusion occurred.

"The review shows for the first time that simply clamping the cord 60 seconds after birth improves survival," said the University of Sydney's Professor William Tarnow-Mordi, senior author.

"It confirms international guidelines recommending delayed clamping in all preterm babies who do not need immediate resuscitation."

"We estimate that for every thousand very preterm babies born more than ten weeks early, delayed clamping will save up to 100 additional lives compared with immediate clamping," said the University of Sydney's Associate Professor David Osborn, the review's lead author and a neonatal specialist at Royal Prince Alfred Hospital.

"This means that, worldwide, using delayed clamping instead of immediate clamping can be expected to save between 11,000 and 100,000 additional lives every year."

The systematic review confirms new findings from the Australian Placental Transfusion Study, published this week in the *New England Journal of Medicine*, reporting that delayed clamping might reduce mortality before 36 weeks - tentative evidence that required confirmation by an updated review of all relevant trials.

The Australian Placental Transfusion Study enrolled 1,566 babies born over ten weeks early in 25 hospitals in seven countries. The authors reported a 6.4 percent mortality rate in the delayed clamping group compared to 9 percent mortality rate in the immediate clamping group (p=0.03 in unadjusted analyses; p=0.39 after post-hoc adjustment for multiple secondary outcomes).

The University of Sydney's Professor Jonathan Morris, co-author of the Australian Placental Transfusion Study said: "This is so significant as it is such a simple technique, suitable for almost all preterm babies that helps saves lives".

Co-author of the Australian Placental Transfusion Study, Professor Roger Soll of the University of

Vermont College of Medicine, added "About 15 million babies are born before 37 weeks gestation annually and one million die. This procedure costs nothing and will make a difference to families worldwide."

Chancellor of the University of Sydney, Belinda Hutchinson AM said the research is a breakthrough for families like hers who have experienced the emotional and physical impact of preterm birth.

"This is a cause which is very important to me, with my own granddaughter born at 28 weeks. She is now a vibrant three year old but I know many others don't have such a great outcom which is why research in this area is so vital."

More information: Information for parents: Parents who want to know more are encouraged to visit the NHMRC Clinical Trials Centre website at www.ctc.usyd.edu.au or Miracle Babies Foundation at www.miraclebabies.org.au/ for frequently asked questions about the Australian Placental Transfusion Study.

Provided by University of Sydney