

Umbilical cord can save lives

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Pediatrician Ola Andersson has demonstrated the importance of the umbilical cord. Credit: Fröken Fokus

(Medical Xpress) -- The umbilical cord is of great importance to the health of newborns, even after they've left the womb. If it is left in place for a while after birth, the risk of iron deficiency drops radically, which can save thousands of lives.

In many parts of the world a newborn's [umbilical cord](#) is cut right after birth, which deprives the infant of a valuable blood supplement. If the cord is left in place for three minutes, blood continues to flow into the child's circulation.

"For a 3.5-kilo baby that's a deciliter of extra blood. It doesn't sound like much but if you scale it up to a 70-kilo adult, it's the equivalent of two litres of blood," says Ola Andersson, chief physician at Halland Hospital and a doctoral candidate at Uppsala University.

He has worked as a pediatrician in Halmstad for many years. One day his wife, who is a midwife, said her hospital was going to start removing umbilical cords early, which prompted Ola Andersson to react.

"I thought that sounded crazy and felt there was a need for more knowledge about this, so I contacted various researchers in the field."

One of them was Lena Hellström-Westas, and with her as his supervisor, he signed up for the doctoral programme at the Department of Women's and Children's Health in Uppsala.

Together with Magnus Domelöf, a reader at Umeå University, Ola Andersson performed a clinical study of 400 [newborns](#) whose umbilical cords were cut at different times. The results showed that children whose cords were cut three minutes after birth evinced fewer cases of [iron deficiency](#) at the age of four months than those whose cord was cut immediately.

These research findings attracted worldwide attention. Ola Andersson was interviewed in both *The New York Times* and *The Economist*. Hans Rosling, professor of international health at Karolinska Institutet, estimated that 35 000 lives could be saved each year. The Swedish daily Dagens Nyheter named the study one of the greatest scientific discoveries of 2011.

In the third world, early severance is the standard practice in many places, even though iron is key in raising survival rates.

In the Western world it is also most common to cut the cord immediately, e.g. in the U.K., U.S., and France. Here iron deficiency doesn't have as great an impact on children, but we need to know more about the effects, says Ola Andersson.

"Our hypothesis is that iron deficiency can affect the child's development, by altering the chemical preconditions in the brain. For instance, a recent study showed a link between iron deficiency and ADHD."

The children in Ola Andersson's study will all turn four in May, and he will continue to follow them in his research, to see if the iron supplement at the beginning of life also has effects in a longer term.

Provided by Uppsala University

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