

New nutritional strategy gives a boost to tiny premature babies

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Credit: Anna Langova/public domain

The tiniest premature babies – weighing less than 1 kg at birth – often fail to gain weight during their long stay in hospital, which impacts upon their subsequent growth. Now, however, a retrospective data analysis conducted at MedUni Vienna's Department of Pediatrics and Adolescent Medicine has shown that more aggressive nutrition, especially including more protein, brings about a significant improvement in nutritional

status, development and growth of these tiny infants.

"Previously, we have been extremely careful with the feeding of these tiny premature babies, for fear of causing enteritis," explains Andreas Repa of the Department of Pediatrics and Adolescent Medicine at MedUni Vienna/Vienna General Hospital. "However, our [data analysis](#) shows that a new strategy, based on recent international studies, is much more successful."

In the new protocol, the babies are primarily given more protein, as well as vitamins, electrolytes, calcium and sugar, via a tube and by intravenous drip. This compensates for the nutritional deficit that these premature babies exhibit when delivered before the 28th week of gestation and at a [low birth weight](#) of around 1 kg. Babies carried to term receive these nutrients via their mother's placenta.

The outcome of the data analysis shows infants fed in this way weighed more at the time of their subsequent discharge from hospital (around 2.5 kg as opposed to the average 2 kg with conventional nutrition) and gained a centimetre more in head circumference and height than premature babies who had been conventionally fed. Says Repa: "This shows that the change in best practice is proving to be very successful. These tiny, premature babies leave hospital in a more robust state and end up being not much smaller than other children."

This new strategy is yet another building block in the highly successful premature baby care offered at MedUni Vienna and in Vienna General Hospital. Every year, these facilities care for around 200 infants born before the 32nd week of gestation – 100 of these being born as much as 17 weeks prematurely.

Comparative figures show that the survival rates for these very premature babies born on the neonatology wards of MedUni

Vienna/Vienna General Hospital are the best in the world. At Vienna hospital, 70 percent of [premature babies](#) born in the 23rd or 24th week of pregnancy, currently regarded as the limit for viability, survive, in contrast to about 50 percent in international comparison.

More information: Andreas Repa et al. Aggressive nutrition in extremely low birth weight infants: impact on parenteral nutrition associated cholestasis and growth, *PeerJ* (2016). [DOI: 10.7717/peerj.2483](#)

Provided by Medical University of Vienna

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