Early growth after preterm birth is linked to cognitive functioning in adulthood

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The results encourage further research into how we could best support the optimal growth and development of preterm neonates. Credit: 123RF

Preterm born children are more likely to have problems in cognitive functioning and mental health. Then again, most preterm infants grow up to be just as happy, healthy and smart as their peers. Among the preterm infants, who are at risk?

M.Psych., B.Med. Sara Sammallahti from University of Helsinki showed in her doctoral study that early growth during the first months of life after preterm birth predicts adult cognitive functioning.

Those preterm participants in the study who grew well during early infancy performed better in neuropsychological tests in adulthood, received higher grades in school and were less likely to have been given special education.

After taking into account many potential confounders, it seemed that this association was not explained merely by prenatal factors.

Higher intakes of energy, human milk, and macronutrients were also associated with better performance in adulthood. However, the associations between these nutritional intakes and long-term cognitive outcomes seemed largely driven by early morbidity: early illnesses can interfere with nutrition, and those infants who were severely ill as neonates were also more likely to experience neurodevelopmental problems later on.

Interestingly, mental health outcomes were not associated with early growth. This could suggest that the mechanisms that underlie the increased risk of mental health problems among preterm individuals are different from the mechanisms that explain why preterm individuals have, on average, more cognitive problems than term-born peers do.

"Taken together, the results encourage further research into how we could best support the optimal growth and development of preterm neonates – what we do during those precious early weeks and months may have life-long consequences," Sammallahti says.

More information: Growth after preterm birth and cognitive functioning and mental health in adulthood,