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# Early life nutrition, microbiome development: Effect on health and disease

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The developing gut microbiota is shaped by environmental exposures during the neonatal period and early infancy, when the immune and metabolic phenotype are consolidated.[1,2]

The neonate exposed to risk circumstances hampering the step-wise compositional development of the gut microbiota may lack sufficient stimulation of the mucosal immune system to generate a tolerogenic immune milieu and be prone to develop chronic inflammatory non-communicable disease (NCD).[3,4]

The recent research[5] suggests that the gut microbiota of pregnant women has changed over time, in line with the current decline in environmental biodiversity. It furthermore appears that the gut microbiota of pregnant women has changed over time to a composition typical for overweight individuals. Epidemiological studies in children suggest an age-dependent association between frequent antibiotic use and the development of overweight or obesity.[6]

Preliminary evidence indicates that microbiota modulation may be granted a position in the fight against NCD in childhood.[7] These incorporate specific probiotics, prebiotics, symbiotic and postbiotics whose supplementation may benefit our children in the future.[8]

Any proof of causality, for recommendations, requires clinical intervention studies in humans in at-risk populations.[8]

## Declaration of competing interest

Author declare no conflict of interest

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