

Dietary and Microbial Predictors of Childhood Obesity Risk

Overview

The Dietary and Microbial Predictors of Childhood Obesity Risk project will investigate the relationship between infants fed a combination of breast milk and formula and their risk for obesity.

The research team will be utilizing the STRONG Kids 2 prospective birth cohort that is studying the unique insights into how individual biology interacts with the family environment to promote healthy eating habits in young children. The goal of the project is to determine how the differences in dietary prebiotics influence mutualistic host-microbe interactions in a longitudinal prospective birth cohort of 451 children and relate those to infant growth trajectory and weight and body composition at age 3.

The research team will work to determine the impact of early nutrition on microbiota composition and short chain fatty acid composition and relate those findings to growth trajectories in the first 3 years-of-life and BMI and body composition at age 3. This project is significant because molecular biomarkers that define the relationship between dietary intake, microbiota composition, host gene expression and child health outcomes will be identified.

Ultimately, this innovative research project will enable interventions to optimize infant growth and reduce childhood obesity risk.

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