



MEMORANDUM

TEDDY results suggest association between early probiotic exposure and decreased risk of islet autoimmunity in high-risk children - November 16, 2015

New results from the TEDDY study [published](#) in *JAMA Pediatrics* last week suggest that exposure to probiotics in the first 27 days of life may be associated with a reduced risk of developing islet autoantibodies in high-risk children. The ongoing prospective cohort study (n=7,473) collected blood samples from children at high genetic risk for type 1 diabetes every three months between age 3-48 months and every six months thereafter. Children ranged from age 4-10 at the end of the study period. Information on probiotic supplementation was collected through questionnaires and diaries from birth. Results showed that early probiotic supplementation (age 0-27 days) was associated with a 34% reduced risk of developing islet autoimmunity (HR = 0.66; 95% CI: 0.45-0.96) compared to those who received probiotics later or not at all. The reduced risk was found primarily in children with the highest-risk HLA genotype DR3/4 (HR = 0.40; 95% CI: 0.21-0.74). The reduction was not significant in children with moderately high-risk genotypes (HR = 0.97; 95% CI: 0.62-1.54). The authors note that the study could not draw any conclusions about the specific species of bacteria involved. They also stress that randomized controlled trials are needed to confirm the link and identify additional variables like infections or antibiotic use that could influence the relationship. While this field is in its infancy, so to speak, this study provides further intriguing evidence suggesting that the gut microbiome plays an important role in the pathogenesis of type 1 diabetes and that it may be possible to modify the relevant pathways.