

Early, late first exposure to solid food appears associated with development of Type 1 diabetes

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Both an early and late first exposure to solid food for infants appears to be associated with the development of type 1 diabetes mellitus (T1DM), according to a study published by *JAMA Pediatrics*.

T1DM is increasing around the world with some of the most rapid increase among children younger than 5 years of age. The infant diet has been of particular interest in the origin of the disease, according to the study background.

Brittni Frederiksen, M.P.H., Colorado School of Public Health, University of Colorado, Aurora, and colleagues examined the associations between perinatal and infant exposures, especially early infant diet, and the development of T1DM. Newborn screening of umbilical cord blood for diabetes susceptibility in the [human leukocyte antigen](#) (HLA) region was performed at St. Joseph's Hospital in Denver and first-degree relatives of individuals with T1DM were recruited from the Denver area.

Both early (less than 4 months of age) and late (greater than or equal to 6 months of age) first exposure to any solid food was associated with development of T1DM (hazard ratio [HR] 1.91, and HR, 3.02, respectively), according to the study results. Early exposure to fruit and late exposure to rice/oat was associated with an increased risk of T1DM (HR, 2.23 and HR, 2.88, respectively), whereas breastfeeding

when wheat /barley (HR, 0.47) were introduced appeared to be associated with a decreased risk, the results also indicate.

"Our data suggest multiple foods/antigens play a role and that there is a complex relationship between the timing and type of infant food exposures and T1DM risk. In summary, there appears to be a safe window in which to introduce solid foods between 4 and 5 months of age; solid foods should be introduced while continuing to breastfeed to minimize T1DM risk in genetically susceptible children. These findings should be replicated in a larger cohort for confirmation," the authors conclude.

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