

Mother's vitamin D status during pregnancy will affect her baby's dental health

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Low maternal vitamin D levels during pregnancy may affect primary tooth calcification, leading to enamel defects, which are a risk factor for early-childhood tooth decay.

Today, during the 86th General Session of the International Association for Dental Research, investigators from the University of Manitoba (Winnipeg and Victoria) present the results of a study they conducted to determine the vitamin D status of pregnant women, the incidence of enamel defects and early-childhood tooth decay among their infants, and the relationship with pre-natal vitamin D levels.

Two hundred six pregnant women in their second trimester participated in the study. Only 21 women (10.5%) were found to have adequate vitamin D levels. Vitamin D concentrations were related to the frequency of milk consumption and pre-natal vitamin use.

The investigators examined 135 infants (55.6% male) at 16.1 ± 7.4 months of age, and found that 21.6% of them had enamel defects, while 33.6% had early-childhood tooth decay. Mothers of children with enamel defects had lower, but not significantly different, mean vitamin D concentrations during pregnancy than those of children without defects.

However, mothers of children with early-childhood tooth decay had significantly lower vitamin D levels than those whose children were cavity-free. Infants with enamel defects were significantly more likely to have early-childhood tooth decay.

This is the first study to show that maternal vitamin D levels may have an influence on primary teeth and the development of early-childhood tooth decay.

Source: International & American Association for Dental Research

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