

Supplements and cow's milk play biggest roles in determining vitamin D levels in children

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Taking a vitamin D supplement and drinking cow's milk are the two most important factors that determine how much vitamin D is in a child's body, new research has found.

Those factors play a bigger role than even skin colour and exposure to the sun, according to Dr. Jonathon Maguire, a researcher and pediatrician at St. Michael's Hospital.

"Early childhood is a critical stage in human development, so achieving and maintaining optimal vitamin D levels in early childhood may be important to [health outcomes](#) in later childhood and adulthood," Dr. Maguire said.

His research was published today in the [Archives of Pediatrics and Adolescent Medicine](#).

[Vitamin D deficiency](#) is a risk factor for a number of illnesses, including asthma and allergies in children. Severe deficiency can cause rickets, a softening of bones.

Yet dietary records of Canadian infants show that at 12 months they are receiving only 11 per cent of their recommended daily allowance of vitamin D through food such as [oily fish](#), fortified dairy products and cereals. The rest needs to be obtained through other means, such as supplements or when the skin is exposed to the sun's ultraviolet rays. Lighter skin produces more vitamin D than darker skin colours.

Dr. Maguire studied vitamin D blood tests of 1,896 healthy children under 6 years of age. The children were part of TARGeT Kids! (The Applied Research Group for Kids!), a unique collaboration between children's doctors and researchers from St. Michael's Hospital and The Hospital for Sick Children. The program follows children from birth

with the aim of preventing common [nutrition problems](#) in the early years and understanding their impact on health and disease later in life.

Researchers found the two factors most strongly associated with higher vitamin D stores in children under 6 years of age were taking a daily vitamin D supplement and drinking two cups of [cows milk](#) a day. Both of those factors were better at predicting a child's vitamin D stores than [skin colour](#) or measures of exposure to the sun.

"When it comes to maintaining sufficient vitamin D stores in young children, the story is about dietary intake of vitamin D through vitamin D supplementation and cow's milk" said Dr. Maguire who was surprised to find that 57 per cent of the children were taking a regular vitamin D supplement. He said this could be a result of parents hearing evidence about the benefits of such supplements through the media.

Provided by St. Michael's Hospital

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