

Extra vitamin D benefits infants

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Credit: Anna Langova/public domain

Infants whose mothers take vitamin D supplements during pregnancy and infancy are less likely to get respiratory infections, according to research from the University of Auckland.

Researchers conducted a trial of vitamin D supplementation during pregnancy and infancy with pregnant women attending a maternity care clinic in South Auckland.

The study showed that, in comparison to a placebo group, vitamin D supplementation during pregnancy and infancy resulted in a smaller proportion of infants making primary care visits for respiratory infections.

The findings were recently published on line in the journal *Acta Paediatrica*.

The main aim of this clinical trial, (funded by the Health Research Council of New Zealand, the University of Auckland and Cure Kids), was to determine the vitamin D dose during pregnancy and infancy necessary to prevent vitamin D insufficiency during infancy.

The research team led by paediatric specialist, Associate Professor Cameron Grant from the University of Auckland and Starship Children's Hospital, completed this latest study as a secondary analysis.

Consent from participating mothers was gained for review of the primary care records of the enrolled children. The reason for each primary care visit up to age 18 months was also determined in the study.

"This careful and thorough review of the primary care records enabled us to determine that daily vitamin D supplementation given to the mothers during the latter half of pregnancy, and then their infants to age 6 months, resulted in a smaller proportion of infants making any primary care visits for respiratory infections up to age 18 months," says Dr Grant. "Interestingly the effect appeared to persist after the vitamin D supplementation was discontinued."

"By starting vitamin D during [pregnancy](#) and giving it as a daily dose, rather than a larger dose less frequently, we were able to safely and effectively improve the vitamin D status of the infants from birth," he says.

Dr Grant says the research team are now concentrating on determining how vitamin D supplementation may have caused this beneficial effect.

"That the effect of vitamin D persisted after the supplementation was discontinued suggests that vitamin D may have caused some adaptation of the children's immune system that resulted in them either being less susceptible to infection with a respiratory virus or less prone to becoming unwell once infected," he says.

"Respiratory infections are a leading cause of [primary care](#) visits and hospital admissions both in New Zealand and internationally during early childhood, so these findings are of high public health relevance."

"The findings highlight the importance of conducting such trials in populations that have the greatest potential to benefit, namely those in whom [vitamin](#) D insufficiency is more common and for whom respiratory infections in early childhood are a particular issue," he says.

Provided by University of Auckland

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