

Taking Vitamin D during pregnancy could lower the risk of eczema in babies

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Taking Vitamin D supplements during pregnancy could substantially reduce the chances of babies up to a year old suffering from atopic eczema, according to a new study by University of Southampton

researchers.

The research, published in the *British Journal of Dermatology*, revealed that babies had a lower risk of developing [atopic eczema](#) in their first year if their mothers took 1000 international units (IU) of Vitamin D a day from when they were 14 weeks pregnant until they delivered. The effect was particularly seen in babies who were later breastfed for more than a month.

Atopic [eczema](#) is a chronic inflammatory condition that can have a large impact on sufferers, their families, and healthcare. It is estimated that one in six children aged one to five has atopic eczema, and there has been a global rise over recent decades.

The study at the University of Southampton Medical Research Council Lifecourse Epidemiology Centre and the NIHR Southampton Biomedical Research Centre is the first randomized, controlled trial to show evidence of reduced risk of atopic eczema in infants of mothers who took Vitamin D supplements during pregnancy. More than 700 [pregnant women](#) took part in the research—with 352 taking the supplements from 14 weeks until they gave birth and 351 taking a placebo.

The eczema research was part of the UK Maternal Vitamin D Osteoporosis Study (MAVIDOS) and was led by Professor Keith Godfrey, working with Dr. Sarah El-Heis, who was first author of the paper.

Dr. El-Heis says that their "aim was to see whether taking 1000IU of Vitamin D (cholecalciferol) as a supplement during pregnancy would decrease the risk of atopic eczema in babies. We also wanted to establish whether breastfeeding had any effect on this."

"Our results showed that babies of mothers who received supplements had a lower chance of having atopic eczema at 12 months, which supports recommendations for Vitamin D supplements to be routine during pregnancy."

"We found no effect at 24 and 48 months suggesting that other postnatal influences might become more important beyond infancy or that the babies themselves might also need to be supplemented during the postnatal period for a sustained effect."

The MAVIDOS study also recently reported that taking the Vitamin D supplement during pregnancy also had lasting benefits for the child's bone density at four-years-old.

Professor Godfrey commented that they "know that Vitamin D can affect the immune system and the proteins that make up our skin. We were interested to know if Vitamin D supplements taken by pregnant women would have an impact on their child's risk of atopic eczema."

"Our findings showed a positive effect, which was more evident in infants that breastfed. This may reflect supplementation during pregnancy increasing the amount of Vitamin D in breast milk."

More information: Sarah El-Heis et al, Maternal antenatal vitamin D supplementation and offspring risk of atopic eczema in the first 4 years of life: evidence from a randomised controlled trial, *British Journal of Dermatology* (2022). [DOI: 10.1111/bjd.21721](https://doi.org/10.1111/bjd.21721)

Provided by University of Southampton

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