

Australia vitamin 'breakthrough' to cut miscarriages, birth defects

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Taking the dietary supplement vitamin B3, also known as niacin, could significantly reduce the number of miscarriages and birth defects around the world, Australian scientists said

Taking a common vitamin supplement could significantly reduce the number of miscarriages and birth defects worldwide, Australian scientists said Thursday, in what they described as a major breakthrough in pregnancy research.

The study, published in the *New England Journal of Medicine*, found that

deficiency in a key molecule among pregnant women stopped embryos and babies' organs from developing correctly in the womb, but could be treated by taking the dietary supplement [vitamin B3](#), also known as niacin.

"Now, after 12 years of research, our team has also discovered that this deficiency can be cured and [miscarriages](#) and birth defects prevented by taking a common vitamin," said Sally Dunwoodie, a biomedical researcher at the Victor Chang Cardiac Research Institute.

"The ramifications are likely to be huge. This has the potential to significantly reduce the number of miscarriages and birth defects around the world, and I do not use those words lightly."

Health Minister Greg Hunt hailed the study as a "historic medical breakthrough".

"Today's announcement provides new hope to the one in four pregnant women who suffer a miscarriage," Hunt said Thursday, citing Australian data.

"And with 7.9 million babies around the world currently being born with birth defects every year, this breakthrough is incredible news."

The scientists used genetic sequencing on families suffering from miscarriages and birth defects and found gene mutations that affected production of the molecule, NAD (nicotinamide adenine dinucleotide).

With Vitamin B3—found in meat and vegetables—needed to make NAD, they tested the effect of taking the supplement on developing mice embryos that had similar NAD deficiencies as human ones, and found a significant change.

"Before vitamin B3 was introduced into the (mice) mother's diet, embryos were either lost through miscarriage or the offspring were born with a range of severe birth defects," the Victor Chang Institute said in a statement.

"After the dietary change, both the miscarriages and [birth defects](#) were completely prevented, with all the offspring born perfectly healthy."

The researchers said the next step was to develop a test to measure NAD levels to identify which women were most at risk from having a baby with a [birth defect](#), and to then ensure they had sufficient Vitamin B3.

They added that current vitamin supplements for [pregnant women](#) might not contain sufficient levels of Vitamin B3.

The study was funded by the Australian government as well as private donations.

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