

Multivitamins improve health of mother and baby

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Research on pregnant women has found that taking vitamin and mineral supplements may reduce the risk of underweight babies.

A clinical trial conducted on 400 newly pregnant women from a disadvantaged area of London is a first of its kind and was led by a lecturer in the University's Institute of Food, Nutrition and Human Health, Dr Louise Brough.

The findings, recently published in the [British Journal of Nutrition](#), are that a multiple micronutrient supplement during pregnancy improves the nutritional status of mothers and may reduce the risk of small-for gestational-age babies.

Dr Louise Brough says the study, which was double-blind, randomised and placebo-controlled, initially found significant levels of [vitamin](#) and [mineral](#) deficiency amongst the mothers during early pregnancy, which was of concern to the researchers. “It is especially important to have good nutrient levels during [early pregnancy](#) as this is a critical time for development of the fetus,” Dr Brough says. At the commencement of the study, 72 per cent had low levels of vitamin D in their blood, 13 per cent were anaemic and 12 per cent were thiamin deficient.

“This research highlights the concerning fact that a number of women, even in the developed world, are lacking in important nutrients during pregnancy,” Dr Brough says. “Of course, a good diet during pregnancy is important for a healthy pregnancy, but for those who do not have a good

diet, multivitamin and mineral supplements will help to reduce the risk of deficiency.”

Women who took the multiple micronutrient supplements during the trial rather than the placebo benefited in two ways: a reduction in small-for-gestational-age infants relative to the placebo, and an improvement in the mothers’ nutrient status relative to the placebo.

Markers of iron, folate, thiamin and vitamin D status were all higher during the third trimester in the vitamin group. Dr Brough says this shows that “nutrient deficiencies are correctable and they may influence birth outcomes”.

Of particular note was the effect of the supplement on iron deficiency. Iron levels fell as the pregnancies progressed, but the decrease was less in those receiving the supplement. In late pregnancy, 55 per cent of women taking the placebo were anaemic compared to only 36 per cent of women taking the supplement. This suggests that even women with good initial iron status may benefit later in [pregnancy](#) from low level iron supplementation.

“A baby’s health can be adversely affected if it is too small at birth, both in early and later life,” Dr Brough says. “Being small for gestational age implies intra-uterine growth restriction and a degree of poor fetal nutrition. This study shows that supplementing with a specific multivitamin supplement may help to reduce this. Although the numbers are small, the data is statistically significant and consistent with what is known about maternal-fetal nutrition and justifies a larger study.”

Provided by Massey University

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