Nutrition News You Can Use: Amino Acid and Vitamins as Found in Peanuts Can Reduce Pregnancy Risks

Dr. Andrew Craig, APC Health Consultant, London

Researchers in Mexico City working with American co-investigators reported in the British Medical Journal recently that high doses of arginine – the most abundant amino acid in peanuts – together with antioxidant vitamins such as vitamin E, niacin and folate was an effective intervention to reduce the risks of pre-eclampsia in pregnant women. This condition is characterised by rapid rise in blood pressure, high protein albumin levels in urine, and swelling of face, hands and feet. It can be life-threatening for both mother and unborn child.

The Mexican study demonstrated that the women consuming the arginine plus vitamins combination had a significantly reduced risk (12.7%) of developing pre-eclampsia compared to the vitamin-only group (22.5%) and the placebo group (30.1%).

About 1 in 20 first time pregnancies experience pre-eclampsia and some women do so with every pregnancy. It is reportedly more common in women with diabetes. Before this study, the only real treatment for pre-eclampsia was bed rest and early delivery, often by C-section. But now something safe, cheap and effective may be available that can be delivered by foods. Arginine is well-tolerated, even around the 6g per day level used in this intervention. The Mexico City investigators used cereal bars fortified with arginine and vitamin E, niacin and folate. These vitamins are also found in peanuts. Adequate amounts of arginine are essential for the body to make nitric oxide which is involved in the dilation of blood vessels and maintenance of normal blood pressure. Women at risk of pre-eclampsia are thought to have a defect in this function and may be deficient in arginine.

A modest handful, 30g or 1oz, of roasted peanuts contains almost 1g of arginine - good nutrient density for only 174 calories per serving. Just eating a serving of peanuts or peanut butter per day would therefore provide about 15% of the arginine dose used in this study. It could help to reduce arginine deficiency in at risk women and so help to guard against pre-eclampsia as a low cost preventative strategy. No one is claiming that peanuts could do it all because the arginine dose in this study was much higher than the amount available from daily consumption. But it could contribute to better overall nutritional quality in the diet of pregnant women and help to reduce pre-eclampsia risks in the Mexican population.

More work remains to be done to clarify the results, but initial outcomes of this Mexican study are promising. If further research confirms the effectiveness of this dietary intervention, it would be very good news because it is low tech, safe and cheap. Pre-eclampsia is more common in women with diabetes. As type 2 diabetes is a rising health problem in Mexico, this finding could have particular applicability in that setting and throughout Latin America and the Caribbean. It is good to know that the same beneficial amino acid and vitamins used in this study helping reduce the risks of a serious pregnancy complication are also plentiful in everyday foods like peanuts and peanut butter.

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Ref: Felipe Vadillo-Ortega F et al. "Effect of supplementation during pregnancy with L-arginine and antioxidant vitamins in medical food on pre-eclampsia in high risk population: randomised controlled trial", British Medical Journal 2011; 342:d2901 doi: 10.1136/bmj.d2901 (Published online ahead of print 19 May 2011)