

A new study published online shows that vitamin D supplementation improves metabolic health in pregnant women with gestational diabetes.

## Vitamin D supplementation improves glucose metabolism and lipid concentrations in women with gestational diabetes

It is estimated that gestational diabetes, a metabolic disorder that can affect the health of both the mother and infant, affects approximately 18% of pregnancies. In a new study published online in the *American Journal of Clinical Nutrition* researchers analyzed the potential benefits of vitamin D supplementation on metabolic health in pregnant women with gestational diabetes.

The randomized, double-blind placebo-controlled study included 54 women with gestational diabetes. The women were randomly assigned to receive either a Vitamin D supplement containing 50,000 IU of vitamin D3 or a placebo twice during the study, once at baseline and again at day 21. Fasting blood samples were taken at the beginning and after 6 weeks. Blood samples were used to measure glucose and insulin levels, insulin sensitivity and to assess markers of inflammation and oxidative stress.

Vitamin D supplementation resulted in a significant increase in serum vitamin D levels compared to placebo. When compared to the placebo group, supplementation also resulted in significant reductions in fasting glucose and insulin, and a significant improvement in measurements of insulin sensitivity. The supplemented group also experienced a reduction in total and LDL cholesterol levels compared to the placebo group. There was no significant difference between the groups when analyzing markers of oxidation and inflammation.

The results of this study indicate that vitamin D supplementation has a beneficial effect on measures of glucose and insulin health, as well as blood lipid profiles in pregnant women with the gestational diabetes.

Zatollah Asemi et al. Effects of vitamin D supplementation on glucose metabolism, lipid concentrations, inflammation, and oxidative stress in gestational diabetes: a double-blind randomized controlled clinical trial. First published October 16, 2013, doi: 10.3945/ajcn.113.072785.