

A recent study has shown that higher dietary intakes of vitamin B12, folate, thiamin and riboflavin are associated with lower risks of obesity during childhood.

## Higher intake of select B vitamins is associated with lower risk of childhood obesity

Several B vitamins play roles in the metabolism of carbohydrates, proteins, fats, and the health of mitochondria, which are involved in energy metabolism. Previous research has indicated that insufficient micronutrient intake can be a contributing factor in childhood obesity, but the results of research have been somewhat inconsistent.

In a new study published online in the *Journal of Nutrition*, researchers examined the associations between serum vitamin B12 and folate concentrations, and intakes of select B vitamins with body fat.

Subjects included 1,131 Mexican American children 8-15 yrs. of age who participated in the National Health and Nutrition Examination Survey (NHANES) 2001-2004. Blood samples were analyzed for serum vitamin B12 and folate levels, and dietary questionnaire responses provided information concerning B vitamin intake. Dexa scans of fat mass and total body fat mass were used along with BMI as measures of body fat.

Body mass index, trunk fat mass and total body fat mass increased with age, but children with higher serum levels of B12 and folate had lower measures of BMI, trunk fat and total body fat. Normal weight children had higher serum B12 levels compared overweight or obese children. Analysis of B vitamin intake showed that children with higher intakes of thiamin (B1) and riboflavin (B2) were more likely to have a healthy BMI and lower body trunk fat mass.

The results of this study showing the inverse relationship between the status of B12, folate, riboflavin and thiamin suggest that these micronutrients may play a role in the risk and development of childhood obesity.

Inong R Gunanti et al. Low Serum Vitamin B-12 and Folate Concentrations and Low Thiamin and Riboflavin Intakes Are Inversely Associated with Greater Adiposity in Mexican American Children. October 8, 2014, doi: 10.3945/jn.114.201202