Research suggests that obese individuals who use a multivitamin/mineral supplement may experience both a decrease in body weight and improved serum lipid profiles.

Multivitamin/mineral supplementation in obese adults may result in positive effects on body weight and blood lipids

Essentials of Health

Obese individuals are more likely to have lower blood concentrations of most vitamins and minerals. Unfortunately, there is currently limited information on the effects of nutritional supplementation on weight control and energy metabolism in obese adults.

In research published in the *International Journal of Obesity*, scientists evaluated the effects of multivitamin/mineral supplementation on body fat, energy expenditure, and lipid profiles in obese Chinese women. Ninety-six obese Chinese women between the ages of 18 and 55 participated in a 26-week randomized, double-blind, placebo-controlled intervention study. Subjects were divided into three groups, receiving either a multivitamin/mineral supplement (MMS), 162mg of calcium, or placebo daily. Body weight, BMI, waist circumference, fat mass, lean tissue, resting energy expenditure, blood pressure, fasting plasma glucose and serum insulin, total cholesterol, LDL and HDL cholesterol, and triglycerides were measured at the beginning and end of the study period.

After 26 weeks, the multivitamin/mineral group had significantly lower body weight, BMI, fat mass, total and LDL cholesterol, and significantly higher resting energy expenditure and HDL cholesterol than individuals in the placebo group. They were also more likely to have a reduced waist circumference. The calcium group also had significantly higher HDL cholesterol and lower LDL cholesterol levels compared with the placebo group.

The results suggest that multivitamin/mineral supplementation could help reduce body weight and obesity and improve serum lipid profiles in obese women, possibly through increased energy expenditure and fat oxidation.

The correlation between inadequate nutrient status and obesity was further strengthened in a new study involving mice. For 12 weeks, mice were given either a standard diet or one that was restricted to 50% of their micronutrient requirements. At the end of the study, the body weight of the mice with a nutrient restricted diet was 6% higher than the controls, and their body fat more than doubled.

Amara NB et al. Multivitamin restriction increases adiposity and disrupts glucose homeostasis in mice. Genes Nutr. 2014 Jul;9(4):410.