

論文の要約

報告番号	① 乙	医 第 1198 号	氏名	秦 明子
学位論文題目	Magnesium intake decreases Type 2 diabetes risk through the improvement of insulin resistance and inflammation: the Hisayama Study			
<p>Early studies have shown that magnesium intake decreases the risk of Type 2 diabetes, but the results are still inconsistent. We prospectively examined the association between magnesium intake and incidence of Type 2 diabetes in a general Japanese population.</p> <p>A total of 1999 subjects without diabetes aged 40-79 years who underwent a 75-g oral glucose tolerance test were followed up prospectively for a mean of 15.6 years.</p> <p>During the follow-up, 417 subjects developed Type 2 diabetes. The age- and sex-adjusted incidence of Type 2 diabetes significantly decreased with increasing magnesium intake quartile levels (≤ 148.5, 148.6-171.5, 171.6-195.5 and ≥ 195.6 mg/day, P for trend = 0.01). In multivariate analyses, after adjusting for comprehensive risk factors and other dietary factors, the hazard ratio of Type 2 diabetes was 0.67 (95% CI 0.49-0.92; P = 0.01) in the third quartile and 0.63 (95% CI 0.44-0.90; P = 0.01) in the highest quartile compared with the first quartile. In addition, the risk of Type 2 diabetes was 14% lower (P = 0.04) for a 1-SD increment of log-transformed magnesium intake in the multivariate-adjusted model. In stratified analysis, there were statistically significant interactions between magnesium intake and levels of homeostasis model assessment of insulin resistance, high-sensitivity C-reactive protein or alcohol intake on the risk of Type 2 diabetes (all P < 0.05).</p> <p>Our findings suggest that increased magnesium intake was a significant protective factor for the incidence of Type 2 diabetes in the general Japanese population, especially among subjects with insulin resistance, low-grade inflammation and a drinking habit.</p>				