

Abstract

Am Heart J. 2010 Sep;160(3):464-70.

Serum magnesium and risk of sudden cardiac death in the Atherosclerosis Risk in Communities (ARIC) Study.

Peacock JM, Ohira T, Post W, Sotoodehnia N, Rosamond W, Folsom AR.

Division of Epidemiology and Community Health, School of Public Health, University of Minnesota, Minneapolis, MN.

BACKGROUND: We hypothesized that serum magnesium (Mg) is associated with increased risk of sudden cardiac death (SCD).

METHODS: The Atherosclerosis Risk in Communities Study assessed risk factors and levels of serum Mg in a cohort of 45- to 64-year-old subjects in 1987-1989 (n = 14,232). After an average of 12 years of follow-up, we observed 264 cases of SCD, as determined by physician review of all suspected cases. We used proportional hazards regression to evaluate the association of serum Mg with risk of SCD.

RESULTS: Individuals in the highest quartile of serum Mg were at significantly lower risk of SCD in all models. This association persisted after adjustment for potential confounding variables, with an almost 40% reduced risk of SCD (hazard ratio 0.62, 95% CI 0.42-0.93) in quartile 4 versus 1 of serum Mg observed in the fully adjusted model.

CONCLUSIONS: This study suggests that low levels of serum Mg may be an important predictor of SCD. Further research into the effectiveness of Mg supplementation for those considered to be at high risk for SCD is warranted.

PMID: 20826254

