Calcium–Magnesium–Ratio Intake and Cardiovascular Risk

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CALCIUM-MAGNESIUM-RATIO INTAKE AND CARDIOVASCULAR RISK

Sirs, I find it surprising that in the large study of cardiovascular risk among women, and the relationship to magnesium (Mg.) intake (1), apparently there was no consideration of the importance of the relationship of Mg. to the calcium (Ca.) intake. Mg. is "nature's calcium. blocker," and in addition to a Mg. ion deficiency, ischemia, catecholamine elevations, and insulin resistance for example, may precipitate a Ca. overload of the myocardium, conducive to a myocardial infarction (2). Seelig (3) has stressed the fact that Finland, with the highest Ca./ Mg. ratio intake (well above the ideal 2:1 Ca / Mg ratio), has the world's highest cardiovascular morbidity and mortality. A high Ca./ Mg. ratio intake, interferes with Mg. absorption, increases the potential for clot formation with vasospasm, (4) and oxidative stress with the latter also more likely to occur as a result of the reduced effectiveness of Mg. as an antioxidant, in the presence of catecholamine auto-oxidation (2,5). An adequate total intake of Ca. for adults is 1000-1200 mg. per day (6); therefore maintaining a favorable 2:1 ratio, would require a daily total Mg. intake of 500-600 mg. rather than "the recommended dietary allowance of 320 mg/day for adult women." (1) Finally it is noteworthy, that Mg. in addition to Ca .is necessary for bone structure, thereby reducing the likelihood of osteoporosis; a Ca./Mg. intake which is excessive, will offset the effectiveness of Mg. in providing this function. (2,4)

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