Intake of selected minerals and risk of premenstrual syndrome

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Abstrak

Iron, potassium, zinc, and other minerals might impact the development of premenstrual syndrome (PMS) through multiple mechanisms, but few studies have evaluated these relations. We conducted a case-control study nested within the prospective Nurses' Health Study II (1991-2001). Participants were free from PMS at baseline. After 10 years, 1,057 women were confirmed as PMS cases and 1,968 as controls. Mineral intake was assessed using food frequency questionnaires completed in 1991, 1995, and 1999. After adjustment for calcium intake and other factors, women in the highest quintile of nonheme iron intake had a relative risk of PMS of 0.64 (95% confidence interval (CI): 0.44, 0.92; P for trend = 0.04) compared with women in the lowest quintile. Women in the highest quintile of potassium intake had a relative risk of 1.46 (95% CI: 0.99, 2.15; P for trend = 0.04) compared with women in the lowest quintile. High intake of zinc from supplements was marginally associated with PMS (for intake of ≥25 mg/day vs. none, relative risk = 0.69, 95% CI: 0.46, 1.02; P for trend = 0.05). Intakes of sodium, magnesium, and manganese were unrelated to PMS risk. These findings suggest that dietary minerals may be useful in preventing PMS. Additional studies are needed to confirm these relations.