

Article: 0224

Topic: FC06 - Free Communications 06: Epidemiology and Social Psychiatry, TeleMental Health, Classification, Education and Quality Management

Maternal Use of Prenatal Nutritional Supplements and Risk of Autism in the Stockholm Youth Cohort

B. Lee¹, E.A. DeVilbiss¹, C. Magnusson²

¹Epidemiology and Biostatistics, Drexel University School of Public Health, Philadelphia, USA ; ²Public Health Sciences, Karolinska Institutet, Stockholm, Sweden

Introduction: Studies suggest that prenatal use of folic acid (FA) or iron may reduce risk of autism spectrum disorders (ASD). These findings require verification.

Objectives: To examine prenatal use of FA, iron, and multivitamins and risk of ASD with and without intellectual disability (ID).

Methods: Data on 254,405 mother/child pairs born 1996-2007 (1,074 ASD with ID; 3,700 ASD without ID) were drawn from the Stockholm Youth Cohort, a register-based cohort in Stockholm County, Sweden. Supplement use was assessed at first antenatal visit. The sample was categorized as: users of multivitamin or multiple supplements (N=43,634); FA use only (8,494); iron use only (53,575); and non-use (148,702). Covariates included maternal (age, obesity, national origin, family income, medications, medical and psychiatric history) and child factors (sex, birthyear).

Results: Supplement users were different from non-users across multiple medical and social characteristics. In adjusted models, compared to risk of ASD with ID in non-users, odds ratios (95% CI) were: multivitamin use: 0.79 (0.65-0.95); iron use: 1.10 (0.95, 1.27); FA use: 1.40 (1.04, 1.88). Supplement use was not associated with ASD without ID.

Conclusions: The apparent increased risk of ASD with ID for FA may be because FA is prescribed for women with neurological disorders that increase risk of child ASD. Although results suggest multivitamin use is associated with lower risk of ASD with ID, confounding is likely since users were very different from non-users. Even if associations were causal, whether a particular nutrient is protective cannot be identified since formulations include multiple nutrients.