A prospective study of dietary fat consumption and endometriosis risk.

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Abstract

BACKGROUND:
Endometriosis is a prevalent but enigmatic gynecologic disorder for which few modifiable risk factors have been identified. Fish oil consumption has been associated with symptom improvement in studies of women with primary dysmenorrhea and with decreased endometriosis risk in autotransplantation animal studies.

METHODS:
To investigate the relation between dietary fat intake and the risk of endometriosis, we analyzed 12 years of prospective data from the Nurses' Health Study II that began in 1989. Dietary fat was assessed via food frequency questionnaire in 1991, 1995 and 1999. We used Cox proportional hazards models adjusted for total energy intake, parity, race and body mass index at age 18, and assessed cumulatively averaged fat intake across the three diet questionnaires.

RESULTS:
During the 586 153 person-years of follow-up, 1199 cases of laparoscopically confirmed endometriosis were reported. Although total fat consumption was not associated with endometriosis risk, those women in the highest fifth of long-chain omega-3 fatty acid consumption were 22% less likely to be diagnosed with endometriosis compared with those with the lowest fifth of intake [95% confidence interval (CI) = 0.62-0.99; P-value, test for linear trend (Pt) = 0.03]. In addition, those in the highest quintile of trans-unsaturated fat intake were 48% more likely to be diagnosed with endometriosis (95% CI = 1.17-1.88; Pt = 0.001).

CONCLUSION:
These data suggest that specific types of dietary fat are associated with the incidence of laparoscopically confirmed endometriosis, and that these relations may indicate modifiable risk. This evidence additionally provides another disease association that supports efforts to remove trans fat from hydrogenated oils from the food supply.