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A prospective cohort study of meat and fish consumption and endometriosis risk.

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Abstract

BACKGROUND: Only two case-control studies have examined the associations between consumption of meat products and endometriosis risk with inconsistent results. Consumption of animal products has the potential to influence endometriosis risk through effects on steroid hormones levels.

OBJECTIVES: To determine whether higher intake of red meat, poultry, fish, and seafood are associated with risk of laparoscopically-confirmed endometriosis **STUDY DESIGN:** 81,908 participants of the prospective Nurses' Health Study II were followed from 1991-2013. Diet was assessed via food frequency questionnaire every 4 years. Cox proportional hazards models were used to calculate rate ratios (RR) and 95% confidence intervals (CIs).

RESULTS: During 1,019,294 person-years of follow-up, 3,800 cases of incident laparoscopically-confirmed endometriosis were reported. Women consuming >2 servings/day of red meat/day had a 56% higher risk in endometriosis (95% CI=1.22-1.99; Ptrend<0.0001) compared to those consuming ≤1 serving/week. This association was strongest for non-processed red meats (RR=1.57; 95% CI=1.35-1.83 for ≥2 servings/day versus ≤1 servings/week; Ptrend<0.0001), particularly among women had not reported infertility (pinteraction=0.0004). Women in the highest category of processed red meat intake also had a higher risk of endometriosis (RR=1.20; 95% CI=1.06-1.37 for ≥5 servings/week versus <1 serving/month; Ptrend=0.02). Intakes of poultry, fish, shellfish, and eggs were unrelated to endometriosis risk.

CONCLUSIONS:Our prospective analysis among premenopausal US nurses suggests that red meat consumption may be an important modifiable risk factor for endometriosis, particularly among women with endometriosis who had not reported infertility and thus were more likely to present with pain symptoms. Well-designed dietary intervention studies among women with endometriosis could help confirm this observation.