

AAN 66th ANNUAL MEETING ABSTRACT

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Abstract Title: Hormonal Contraceptives and Multiple Sclerosis Susceptibility

Press Release Title: Do Obesity, Birth Control Pills Raise Risk of Multiple Sclerosis?

Objective: To determine whether contemporary hormonal contraceptives (HC) use increases the risk of MS.

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Background: Whether use of contemporary HCs contributes to the rising incidence of multiple sclerosis (MS) in women is unclear.

Design/Method: We conducted a population-based nested case-control study from the membership of Kaiser Permanente Southern California (KPSC). We identified females ages 14-48 years with incident MS or its precursor-clinically isolated syndrome (CIS) between 2008 and 2011, who had at least 3 years of continuous membership prior to symptom onset. Ten controls per case were matched on age, race/ethnicity and membership characteristics. Data were obtained from the complete electronic health record and analyzed using conditional logistic regression, adjusted for smoking and live births 3 years prior to symptom onset.

Results: We identified 305 incident female cases with MS/CIS and 3050 matched-controls. 29.2% of cases and 23.5% of controls had used a HC for at least 3 months within the 3 years prior to symptom onset. The majority used estrogen/progestin combination preparations. Women that used any hormonal contraceptive in the 3 years prior to symptoms onset, and particularly those that had stopped at least 1 month prior to symptom onset, had a slightly increased risk of MS/CIS (ever-users adjusted OR=1.35, 95% CI=1.01-1.80, p=0.04; not current users adjusted OR=1.50, 95% CI=1.05-2.14, p=0.026).

Conclusions: Our findings suggest that use of modern hormonal contraceptives may be contributing at least in part to the rise in incidence of MS in women. Additional analyses will be presented at the meeting.

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