

# Do obesity, birth control pills raise risk of multiple sclerosis?

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The role of the so-called "obesity hormone" leptin and hormones used for birth control in the development of multiple sclerosis (MS) is examined in two new studies released today that will be presented at the American Academy of Neurology's 66th Annual Meeting in Philadelphia, April 26 to May 3, 2014.

For the obesity study, BMI was calculated for 210 people with MS and 210 people of the same age and sex who did not have MS at ages 15 and 20 and at the time of the study. The study found that people who are obese at age 20 are twice as likely to later develop MS as people who are not obese. The study found that people with higher BMI levels also had higher levels of leptin, a hormone made by fat tissue that regulates weight, appetite and immune response.

"Leptin promotes inflammatory responses in the body, which could potentially explain the link between obesity and MS," said study author Jorge Correale, MD, of the Raúl Carrera Institute for Neurological Research in Buenos Aires, Argentina.

For the birth control hormone study, researchers identified 305 women who had been diagnosed with MS or its precursor, clinically isolated syndrome, during a three-year period from the membership of Kaiser Permanente Southern California and who had been members for at least three years before the MS symptoms began. Then they compared them to 3,050 women who did not have MS.

A total of 29 percent of the women with MS and 24 percent of those without MS had used [hormonal contraceptives](#) for at least three months in the three years before symptoms began. The majority used estrogen/progestin combinations.

Women who had used hormonal contraceptives were 35 percent more likely to develop MS than those who did not use them. Those who had used the contraceptives but had stopped at least one month before symptoms started were 50 percent more likely to develop MS.

"These findings suggest that using hormonal contraceptives may be contributing at least in part to the rise in the rate of MS among women," said study lead author Kerstin Hellwig, MD, from Bochum Germany, post-doctoral research fellow, Kaiser Permanente Southern California.

Provided by American Academy of Neurology

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