In the Brains of Birth Control Pill Users, the Hypothalamus Is Smaller

As a result, researchers want to learn more about how oral contraceptives affect brain structure and function.

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About 13% of the 47 million women who reported using contraceptives are on the pill, says the Centers for Disease Control and Prevention. Now, new findings presented at the annual Radiological Society of North America (RSNA) meeting have revealed that these birth control pill users are more likely to have a smaller hypothalamus volume, according to an RSNA press release.

The hypothalamus is a small region of the brain that produces hormones and helps control sleep cycles, sex drive and body temperature, among other key biological activities.

For the study, researchers recruited 50 women in good health; 21 of them were taking oral contraceptives. Next, scientists used an MRI scan to observe and measure the hypothalamic volume of each woman's brain.

Findings showed a significantly lower hypothalamus volume among women taking birth control pills compared with those who weren't using oral contraceptives. In addition, researchers noted that a smaller hypothalamic volume was associated with greater anger and depressive symptoms. (The investigation didn't find any meaningful correlation between hypothalamic volume and cognitive function.)

"This initial study shows a strong association and should motivate further investigation into the effects of oral contraceptives on brain structure and their potential impact on brain function," said Michael Lipton, MD, PhD, a radiology professor at the Albert Einstein College of Medicine and medical director of MRI services at the Montefiore Medical Center in New York City.

Although oral contraceptives are a popular method of birth control, not all women use the pill to prevent pregnancy. Some use these drugs to treat conditions such as irregular menstruation, cramps, acne, endometriosis and polycystic ovary syndrome.

For more on birth control options, read "Birth Control Basics."

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