

Study identifies women at risk of gaining excessive weight with injectable birth control

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Researchers at the University of Texas Medical Branch at Galveston have identified women who are likely to gain weight while using depot medroxyprogesterone acetate, more commonly known as Depo-Provera or the birth control shot. These findings dispel the myth that all women who use DMPA will gain weight and will help physicians to counsel patients appropriately.

DMPA users whose weight increased by 5 percent within the first six months of use, called "early gainers," are at risk of continued, excessive weight gain. While 75 percent of users gained little or no weight, the early gainers averaged weight gain of 24 pounds over three years.

"DMPA-related weight gain is linked to increased abdominal fat, a known component of [metabolic syndrome](#), which raises the risk of obesity-related conditions such as cardiovascular disease, stroke and diabetes," said corresponding author Dr. Abbey Berenson, professor in UTMB's department of obstetrics and gynecology.

The researchers recommend that physicians tailor counseling based on women's risk factors, closely monitor weight at each three-month follow-up visit and suggest a different contraception method to patients who gain significant weight within the first six months of use.

Researchers found that early gainers exhibited three major risk factors: A [body mass index](#) under 30, having children before starting DMPA and a self-reported increase in appetite after six months of DMPA use.

The study, which appears in the August issue of *Obstetrics and Gynecology*, followed 240 women ages 16-33 who used DMPA for up to three years. Researchers looked at several potential predictors of weight gain, including age, race, baseline obesity prior to DMPA use, lifestyle variables such as smoking and exercise level, and weight gain at six months. They found that those who had gained more than 5 percent of their body weight within six months, or after just two injections of DMPA, continued to gain significant weight during the next 30 months.

While previous studies have associated birth control-related weight gain with a higher BMI, Berenson's study suggests that a lower BMI — under 30 — is more predictive. "The amount of DMPA administered to a woman does not change based on weight, as occurs with some medications," Berenson said. "The drug may be more concentrated in the tissue of a woman with a BMI under 30 and may contribute to excessive weight gain, but more research is needed."

The biological mechanism of DMPA-related weight gain is still unknown, but researchers note that possible mechanisms include glucocorticoid-like activity, how the body breaks down simple carbohydrates such as glucose, and DMPA-associated interference with insulin action. Previous findings seem to argue against the theory that [weight gain](#) could be due to the drug's perceived effects on increased caloric intake and decreased energy expenditure, but ongoing research is needed to confirm or discount varying possible explanations.

DMPA is an injected contraceptive administered to patients every three months. According to the American College of Obstetricians and Gynecologists, more than 2 million American women use DMPA, including approximately 400,000 teens. DMPA is relatively inexpensive compared with some other forms of birth control, has a low failure rate and doesn't need to be administered daily, which contributes to the contraceptive's popularity.

This study builds upon UTMB research released earlier this year that found DMPA users gain significant weight not seen among women using oral or nonhormonal contraception. The study was supported by the National Institute of Child Health and Human Development. Yen-Chi L. Le, of UTMB's department of obstetrics and gynecology, and Mahbubur Rahman, of UTMB's Center for Interdisciplinary Research in Women's Health, contributed to this research.

Source: University of Texas Medical Branch at Galveston ([news](#) : [web](#))

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