

Genetic interaction with contraceptives can cause weight gain

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Genetics may explain why some women gain weight when using a

popular method of birth control, researchers say.

"For years, [women](#) have said that [birth](#) control causes them to gain weight but many doctors failed to take them seriously," said lead study author Dr. Aaron Lazorwitz. He's assistant professor of obstetrics/gynecology and family planning at the University of Colorado School of Medicine, in Aurora.

"Now we have looked at the genetics and found that the way genes interact with some hormones in birth control could help explain why some women gain more weight than others," Lazorwitz added in a university news release.

The etonogestrel contraceptive implant is inserted under the skin. It contains etonogestrel, a kind of progestin that inhibits ovulation, and is considered among the most effective types of birth control.

For the study, the researchers reviewed the medical records of 276 women who received the implant. They found these women had a median weight gain of about 7 pounds over an average of 27 months of use. Nearly three-quarters of the women gained weight.

Further investigation led the researchers to conclude that genetic variants in [estrogen receptor 1](#) (ESR1) among some of the women were associated with significant weight gain.

On average, women with two copies of the ESR1 rs9340799 variant gained over 30 pounds more while using the contraceptive implant than other women in the study.

Previous research has found links between ESR1 genetic variants and the workings of other types of medications, the study authors noted.

While this study focused on the etonogestrel contraceptive implant, other birth control drugs could have similar interactions with genes that cause weight gain, the researchers said.

"It is imperative to better understand how individual [genetic variation](#) may influence a woman's risk of adverse weight gain" while using these medications, Lazorwitz said.

Currently, there is no way to identify who will gain weight when using such medications. Health care providers can provide counseling about potential weight gain or suggest nonhormonal forms of [birth control](#) such as copper intrauterine devices (IUDs), the study authors suggested.

"As our understanding of pharmacogenomics in women's health expands, we can develop individualized counseling that may reduce the incidence of hormone-related adverse effects, improve patient satisfaction, and help prevent future health risks associated with [weight gain](#)," Lazorwitz said.

The study was published recently in the journal *Contraception*.

More information: Aaron Lazorwitz et al. An exploratory analysis on the influence of genetic variants on weight gain among etonogestrel contraceptive implant users, *Contraception* (2020). [DOI: 10.1016/j.contraception.2020.05.002](#)

The U.S. Centers for Disease Control and Prevention has more on [contraception](#).

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