

Letrozole is a promising new treatment of male infertility, researcher says

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A letrozole pill once a week restored fertility in obese, infertile men and led to their partners giving birth to two full-term, healthy babies, according to a new study from Canada. The results will be presented Thursday at the Endocrine Society's 97th annual meeting in San Diego.

"To our knowledge, this is the first report of successful pregnancies with the use of letrozole at this low dose in [men](#)," said the study's lead investigator, Lena Salgado, MD, an endocrinology fellow at the Centre Hospitalier de l'Université de Montréal (CHUM).

Letrozole is approved by the Food and Drug Administration for [treatment](#) of estrogen receptor positive breast cancer in postmenopausal women and is used "off-label" in infertile women to induce ovulation.

Some recently published studies have suggested that in men with obesity-related low testosterone, a low dose of letrozole can normalize testosterone levels.

Doctors think obesity can cause infertility in men because excess fat results in too much estrogen. The body's aromatase enzyme, which is more prevalent in fat, converts androgens (male hormones, such as testosterone) into estrogen. Letrozole inhibits this action of aromatase.

Salgado's group studied the medical records of 12 [obese men](#) who sought treatment for infertility and received a diagnosis of obesity-related hypogonadotropic hypogonadism. This form of low testosterone occurs

when the pituitary gland, which signals the testicles to produce testosterone, sends signals that are too weak to stimulate the gonads. A [low sperm count](#) also can result.

On average, the men had been infertile for nearly three years. The men received a 2.5-milligram letrozole pill every week. Their follow-up ranged from two to 21 months.

One man did not tolerate the treatment because of headaches and switched to treatment with another aromatase inhibitor drug, anastrozole, but was included in the analysis. A different man did not respond to letrozole treatment. According to Salgado, he had other health problems, including uncontrolled diabetes, which could also affect the level of testosterone and/or quality of sperm.

In the remaining 11 patients, [testosterone](#) levels rose to normal, study data showed. The level of estradiol, a type of estrogen, decreased substantially in most men as well.

Three couples conceived (one of whom used in vitro fertilization), and four pregnancies ensued, Salgado reported. Two pregnancies were successful births. One ended because of an ectopic pregnancy (fetus growing outside the womb), and one was a miscarriage.

Letrozole treatment is less expensive and easier than the usual treatment involving hormonal injections of human chorionic gonadotropin, or hCG, Salgado stated.

"The dose of hormonal injections needed to obtain normal [testosterone levels](#) and sperm production is proportional to weight, so in obese men, the cost becomes excessive," she said. "Letrozole is a very attractive [fertility treatment](#) for men with obesity-related hypogonadism."

Provided by The Endocrine Society

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