

Letrozole

Ovulation Induction



Fact Sheet

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What is Letrozole?

First proposed in 2001, Letrozole is an orally administered medication commonly prescribed for treating infertility by inducing ovulation (release of eggs) and subsequently increase the likelihood of pregnancy. Letrozole is prescribed when infertility results from an individual ovulating irregularly or when an individual ovulates regularly but experiences difficulties conceiving.

How does Letrozole induce ovulation?

During the follicular phase (day 0 to 14) of a normal menstrual cycle, your pituitary gland releases increased levels of follicle-stimulating hormone which travels through your bloodstream and acts upon the ovaries. Follicle-stimulating hormone stimulates development of a number follicles in the ovaries, each containing a single egg.

Typically, there is a single dominant follicle with its egg that reaches maturity while the other follicles stop developing and their eggs die (called atresia). As the dominant follicle and egg continue to mature, the ovary releases increased levels of estrogen which travel through the bloodstream to the pituitary gland. The increased estrogen levels cause the pituitary gland to release less follicle-stimulating hormone for the menstrual cycle to transition into the luteal phase. (American Society for Reproductive Medicine, 2016).

Administered early in the menstrual cycle, Letrozole reduces the levels of estrogen in your bloodstream and triggers your pituitary gland into release increased levels of follicle-stimulating hormone which induces ovulation. Letrozole is a class of medication known as an aromatase inhibitor. Aromatase is a protein required in the production of estrogen by your blood. Letrozole acts by inhibiting the function of aromatase and thus preventing the production of estrogen by your body. (Rose & Brown, 2020).

Why use Letrozole to induce ovulation?

Letrozole has been established as a successful treatment for infertility by inducing ovulation and increasing the likelihood of pregnancy. Letrozole is more effective than a placebo or no treatment at increasing ovulation and pregnancy rates.

In women who were not ovulating, ovulation was 13.9 times more likely while pregnancy was 5.3 times more likely to occur when treated with Letrozole compared to placebo or no treatment. Compared with commonly used medication for treating infertility by inducing ovulation, Letrozole offers increased rates of ovulation, pregnancy, and live births while reducing the rate of multiple pregnancy. (Costello et al., 2019).

What are some side effects of Letrozole?

Hot flushes and occasional fatigue and dizziness are the most common side effect of Letrozole. Others may include:

- Headaches
- Abdominal pain
- Multiple pregnancy (3.4% risk)
- Ovarian cysts
- Ovarian hyperstimulation
- Blurring of vision (uncommon)

Despite initial reports of increased risk of birth defects (congenital malformations), current data suggests a risk comparable to natural conception. (National Health Service, 2020).

References

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