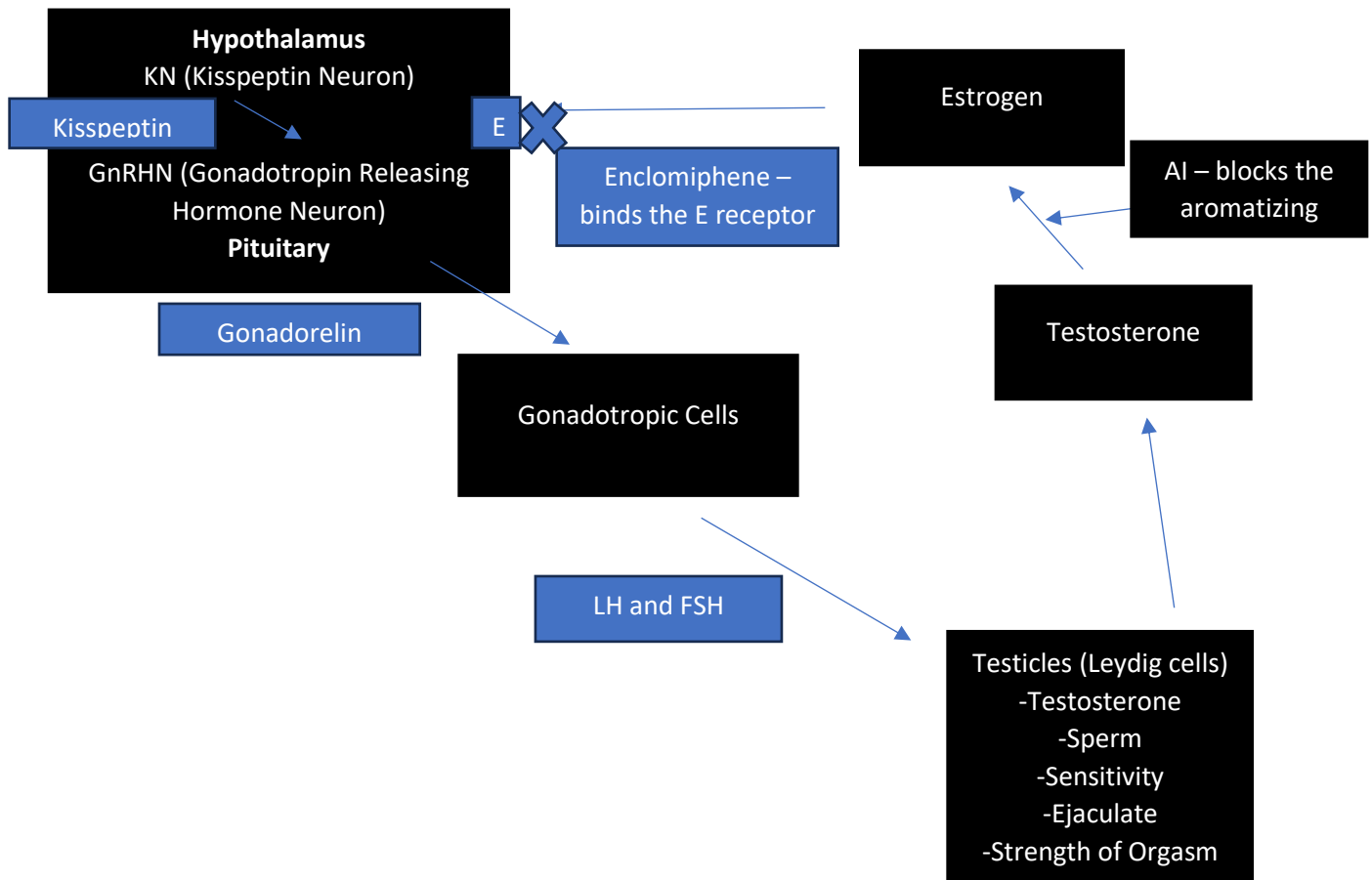


## Enclomiphene Monotherapy

### What is Enclomiphene Citrate?

It is a nonsteroidal estrogen antagonist and is an alternative treatment to HCG/Kisspeptin for hypogonadism. It can be used in conjunction with TRT or as a monotherapy. Though in the past HCG was viewed as the gold standard for treating hypogonadism, Enclomiphene Citrate (EC) has been found to be equally as effective (or better) in most cases.

Enclomiphene citrate is an updated version of clomiphene citrate. Clomiphene Citrate is made up of a combination of isomers, whereas Enclomiphene citrate is characterized by one isomer which has a focus on estrogen antagonism. In the feedback loop to the brain, Enclomiphene citrate acts on estrogen receptors to prevent binding, signaling the brain to produce more testosterone. When estrogen gets high that signals the brain to stop producing so much testosterone. The diagram below helps illustrate the feedback loop used for signaling and producing testosterone (this is only meant to be a simplistic overview of the process).





## **Why use Enclomiphene Citrate as a monotherapy?**

Infertility and hypogonadism in males can greatly affect their reproductive health and overall well-being. Since exogenous testosterone administration for hypogonadism management may disrupt the normal hormonal cascade necessary for spermatogenesis, Enclomiphene Citrate is a medication often used to manage hypogonadism and male infertility.

Enclomiphene Citrate optimizes endogenous testosterone production pathways and promotes normal testosterone levels, while maintaining fertility. For those men still wanting to have a family, Enclomiphene Citrate monotherapy is the best solution for increasing testosterone levels without having a negative impact on sperm count. Studies have shown that Enclomiphene Citrate stimulates the hypothalamic-pituitary-gonadal axis.

Some of the advantages of using Enclomiphene Citrate are: no refrigeration required, it is taken orally, seminal fluid is increased, and helps with fertility. Enclomiphene Citrate has shown a significant increase in testosterone levels in as little as 4 weeks.

## **Research on Enclomiphene Citrate**

The results from a study in 2023 had statistically significant increases in Total Testosterone, Follicle Stimulating Hormone, Luteinizing Hormone, and Estradiol by using Enclomiphene compared to Clomid<sup>1</sup>.

A study conducted in 2016 evaluated total testosterone, LH, FSH, and sperm counts<sup>2</sup>. The results were that men on Enclomiphene Citrate had increased levels of total testosterone, LH and FSH compared to the other treatments. It also maintained sperm concentrations in the normal range.

In 2013 a study concluded that Enclomiphene Citrate increased testosterone and sperm counts<sup>3</sup>. Changes in LH and FSH suggested normalization of endogenous testosterone production and restoration of sperm counts through the hypothalamic-pituitary-testicular axis.

In addition, a 2023 study showed on average, the testosterone level increased by 48.9% from baseline using Enclomiphene as a monotherapy<sup>4</sup>. (Baseline was 390 ng/dl) Also, LH and FSH levels both significantly increased (77.4% and 68.2% respectively) helping improve fertility. The concentration, motility, and total sperm count also all increased.

## **Benefits of Enclomiphene Citrate**

1. Increases GnRH, LH and FSH
2. Peaks LH 2-3 hours after dosing
3. Keeps testosterone elevated for up to 7 days
4. Helps prevent testicular shrinkage compared to TRT
5. Has fewer side effects than clomid
6. Can be taken orally vs injection



**How to use:**

Enclomiphene Citrate monotherapy is taken orally every other day or daily depending on the need. Dosing can range from 12.5, 25, or 50mg.

<sup>1</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10404117/>

<sup>2</sup> <https://pubmed.ncbi.nlm.nih.gov/26496621/>

<sup>3</sup> <https://www.sciencedirect.com/science/article/abs/pii/S1743609515303829>

<sup>4</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10404117/>