Follicle Stimulating Hormone in Men

FSH is important in men. It plays a critical role in sperm production. There is a hormonal feedback system between the brain and the testicles that enables the testicles to produce sperm and testosterone. The process starts in the brain where the hypothalamus releases a hormone called Gonadotropin-releasing Hormone (GnRH). GnRH flows down to the pituitary gland and stimulates the release of LH and FSH. FSH gets into the blood stream which takes it to the testicle. Once in the testicle, FSH stimulates germ cells to divide, which is the first step in spermatogenesis. Normal sperm production requires a minimum level of FSH, LH and Testosterone.

Normal FSH range for adult men: 2-7 mIU/mL

Reference ranges reported for FSH vary. Some ranges are as large as 1-20mIU/mL. The ranges can be observed in a large population of men. Normal FSH values for fertility are typically reported between 2-7mIU/mL. Studies have shown that FSH levels are closely linked to sperm production. A large study of over 2,000 men showed an average FSH value of 4.2 mIU/mL with a range of 1.8 – 6.8 for men with a normal semen analysis. Other studies comparing fertile and infertile men showed that fertile men typically had FSH levels from 2-5 mIU/mL. Men with low sperm counts often had FSH values that were slightly elevated, ranging from the 5-8.5 uIU/mL. FSH levels above 8 typically correlate with additional reductions in sperm count.

High FSH in Men

If the FSH is high then damage is causing the testicle to not function and the pituitary gland is trying to compensate by providing extra FSH to support spermatogenesis. The hypothalamus or pituitary gland, which are the hormone control centers in the brain, aren't functioning properly, or a tumor is interfering with the brain's ability to control the production of FSH. FSH level above 15 mIU/ml in a man is considered as very high.

Low FSH in Men

Reason for FSH deficiency in men include the use of external androgens (testosterone, anabolic steroids or other performance enhancers). External androgens trick the brain into thinking the body is producing naturally high levels of testosterone which shuts down production of follicle stimulating hormone and consequently sperm production. This is most exaggerated in men who have used steroids for long periods of time. The second most common cause of low FSH levels relates to the pituitary gland. The causes of pituitary malfunction include: Genetic conditions such as Kallman's Syndrome or Prader-Willi Syndrome; Hyperprolactinemia; Pituitary tumors (cancerous and benign); Certain Medications and Auto-immune disorders.

Abnormal FSH levels not only lead to low sperm count and infertility, but they also lead to other illnesses like eating disorders, multiple disorders of gonadotropin hormone, etc.