

## **Follicle-stimulating Hormone (FSH)**

FSH is a hormone made by the anterior pituitary gland. In women, during the first half of the menstrual cycle, FSH stimulates the growth and maturation of follicles in the ovaries and also, production of estradiol. In men, FSH stimulates production of sperm and promotes the production of androgen binding proteins. FSH production is stimulated by Gonadotropin-releasing hormone (produced in hypothalamus) and is also controlled by feedback from androgens and estrogens (produced by the gonads).

### **Why the FSH Test is Performed?**

The FSH test is ordered if a patient has symptoms or signs of certain reproductive or pituitary disorders. The test is used to help diagnose or evaluate:

- Pituitary disorders
- Hypothalamic disorders
- Menopause
- Women who have ovarian cysts
- Irregular menstrual periods
- Infertility (in both men and women)
- Men who do not have testicles or whose testicles are underdeveloped

In children, the FSH test is ordered when delayed or earlier than expected sexual maturation is suspected.

### **How the Test is Performed and How to Prepare for the Test?**

A blood sample is drawn from a vein. No test preparation is required, but a woman's sample should be collected on certain days of her menstrual cycle.

### **What Do the Abnormal Results Mean?**

In women, higher-than-normal FSH levels are often caused by primary ovarian failure and may be due to:

- Ovarian agenesis

- Defect in the steroid production by the ovaries, such as 17 alpha hydroxylase deficiency
- Turner's syndrome
- Polycystic ovary syndrome (PCOS)
- Ovarian tumor
- Menopause
- Thyroid disease

In men, high FSH levels may be due to:

- Primary testicular failure
- Klinefelters syndrome

In children high FSH levels may be an indication of precocious puberty.

In both men and women, lower-than-normal FSH levels are consistent with pituitary or hypothalamic disorders. Also, FSH levels may be low in delayed puberty.

### **Alternative Names**

No Alternative Names

### **Useful Information**

FSH results can be increased with use of cimetidine, clomiphene, digitalis and levodopa. FSH results can be decreased with oral contraceptives, phenothiazines and hormone treatments.