



HORMONE TESTING

Follicle-Stimulating Hormone (FSH) Information Sheet

What is Follicle Stimulating Hormone (FSH)?

Follicle-stimulating hormone (FSH) is a hormone produced in the pituitary gland in both males and females. It works with luteinizing hormone (LH) to regulate development, growth, pubertal maturation, and reproductive processes (1). In males, FSH activates Sertoli cells for spermatogenesis and inhibin B secretion. In females, FSH initiates follicular growth, particularly for the development of the female gamete in the ovaries (2).

What are normal FSH levels?

FSH levels fluctuate during each menstrual cycle in women of reproductive age, and basal levels also differ by age. FSH levels are typically 2 - 12 IU/L during the follicular phase, with a peak of 4 - 36 IU/L at mid cycle, and then lowering to 1 - 9 IU/L during the luteal phase (3).

FSH levels typically remain high in menopause, and may contribute to postmenopausal osteoporosis and cardiovascular disease (4).

Males generally have FSH levels between 0.95 and 11.95 IU/L (5). Normally children have low FSH levels until they reach puberty (6).

What do high FSH levels mean?

Elevated FSH levels are an indication of subfertility and/or infertility. Abnormally high FSH levels in females of reproductive age can occur due to premature menopause, poor ovarian reserve, gonadal dysgenesis, Turner syndrome, and lupus (2). High FSH levels in males can occur in Klinefelter syndrome, castration, and gonadal dysgenesis (5).

What do low FSH levels mean?

Low FSH levels can also be an indication of infertility. This can result in low sperm production in males, and cessation of menstruation in females. There are various conditions that result in low FSH, including polycystic ovarian syndrome, Kallmann syndrome, hypothalamic suppression, hypopituitarism, and hyperprolactinemia (2).

Follicle-Stimulating Hormone (FSH) Information Sheet

Where can I find more info?

Visit www.genetrackdiagnostics.com for full test information, including specimen collection requirements

CONTACT US:

Email: support@genetrackdiagnostics.com

Phone: 1-888-802-0703

NOTE:

This brochure is provided for general information purposes only. It is not intended to replace medical advice from a health professional.

References:

- (1) Ulloa-Aguirre A, Reiter E, & Crépieux P. (2018). FSH Receptor Signaling: Complexity of Interactions and Signal Diversity. *Endocrinol*, 159 (8), 3020-3035.
- (2) Knudtson J. (2019) *Female Reproductive Endocrinology*. Merck Manual Professional Version. [online]
- (3) Endocrine Society. Laboratory Reference Ranges.
- (4) Zhu D, et al. (2018). Extragonadal Effects of Follicle-Stimulating Hormone on Osteoporosis and Cardiovascular Disease in Women during Menopausal Transition. *Trends Endocrinol Metab*, 29 (8), 571-580.
- (5) Alinity i FSH Reagent Kit [Package Insert] Abbott Laboratories.
- (6) Soldin OP, et al. (2005) Pediatric reference intervals for FSH, LH, estradiol, T3, free T3, cortisol, and growth hormone on the DPC IMMULITE 1000. *Clin Chim Acta*, 355 (0), 205-210.