

Prolactin Information Sheet

What is prolactin?

Prolactin is a hormone produced in the pituitary gland and various other sites elsewhere in the body, including the brain, placenta, uterus, mammary gland, and lymphocytes of the immune system. Prolactin was named based on its function of promoting milk production (lactation), but it is now known to also have over 300 other functions in the body (1).

What are the roles of prolactin?

- Stimulate growth and development of the mammary gland (mammogenesis)
- Important for synthesis of milk (lactogenesis)
- Maintenance of milk secretion (galactopoiesis)
- Influences luteal function
- Normal production of estradiol and progesterone
- Promotion of hair growth
- Normal bone growth
- Stress response
- Regulation of the immune system
- Osmotic balance
- Metabolic homeostasis (including body weight control)
- Maternal behaviour

What is hyperprolactinemia?

Hyperprolactinemia is the term to describe when circulating prolactin levels are chronically increased to levels higher than the reference population. Physiological hyperprolactinemia is usually mild or moderate, with the most common causes being pregnancy (prolactin rises to ~200-500 ng/mL) and lactation (2). Various medications can also increase prolactin levels, including antipsychotics, antidepressants and opiates. Common causes of pathological hyperprolactinemia include prolactinomas (benign pituitary tumours), reduced thyroid activity, and renal failure (3).

Hyperprolactinaemia is a common cause of amenorrhoea (absence of menstruation) and is one of the most prevalent endocrine causes of female infertility. It can also lead to galactorrhea (milky nipple discharge), decreased libido, and decreased bone mass (2).

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What is hypoprolactinemia?

Low level of prolactin (hypoprolactinemia) is very rare. It can be caused by genetic changes that lead to abnormal lactotroph cell development, destruction of pituitary tissue (through tumour, surgery, infection, or inflammation), or specific medications (3). Most reported cases have been in women with an absence of lactation (breast milk production) after delivery.

Where can I find more info?

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

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References

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- (2) Majundar A & Mangal NS. (2013). Hyperprolactinemia. *J Hum Reprod Sci*, 6(3), 168-175.
- (3) Bernard V, Young J & Binart N. (2019). Prolactin — a pleiotropic factor in health and disease. *Nat Rev Endocrinol*, 15, 356-365.

NOTE:

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