

# Prolactin

## General:

Prolactin is a peptide hormone with a molecular weight of 23,000 Dalton and is produced episodically in the pre-hypophysis. Physiology: prolactin stimulates galactopoiesis and lactogenesis and milk secretion after birth. High prolactin concentrations result in postpartal anovulation. Prolactin concentrations are also regulated by PIH, prolactin inhibiting hormone, which corresponds to the biogenic amine dopamine. Dopamine antagonists – therefore - result in prolactin increase. Prolactin concentrations show a significant day and night rhythm (high morning basal, decreasing during the day).

## Causes of pathological prolactin secretion:

Functional: Disturbances in neurotransmitter metabolism, hyperplasia of lactotrophic cells, emotional and physical stress, chronic kidney disorders, hypo- and hyperthyreosis, breast irritation, medicaments (stimulators: phenothiazin, thioxanthen, dibenzooxazepin, dibenzothiazepin, butyrophenone, butylpiperidine, sulpiride, tetrabenazin, reserpine, amethyldopa, metoclopramide, imipra-mine, amitryptilin, meclozine, triptelenamin, TRH, estrogen, 5-HTP; inhibitors: L-dopa, piribedil, bromocriptine, lergotril, apomorphine).

Organic: prolactin secreting hypophyseal adenomas, trauma of the hypophyseal peduncle, suprasellar tumors, inflammatory disorders of the brain (meningitis, encephalitis), ectopic secretion of prolactin (extracerebral tumors).

During pregnancy: prolactin levels increase continuously during the gestational period up to 15–20 times of the basal range.

Hyperprolactinemic-anovulatory syndrome: clinical symptoms: corpus luteum insufficiency, anovulation, amenorrhea, optional galactorrhea, gestagen induced bleeding, clomiphene resistance, restricted stimulation after intake of gonadotropine and LH-RH.

Endocrine disturbances: intermittent and manifest hyperprolactinemia, normal FSH and estradiol serum concentration, normal or reduced LH serum levels, lack of episodic LH secretion, normal or restricted LH-response to LHRH, disturbed luteal progesterone secretion.

Indication: Women: amenorrhea, oligomenorrhea, anovulatory cycles, corpus luteum insufficiency, galactorrhea, slight virilism, clarification of infertility, suspicion of prolactinoma, hyperprolactinemia in pregnancy;

Men: Libido and virility disturbances, hypogonadism, galactorrhea; radiological results (prolactinoma)

Preanalytics: Perform blood collection on the 3rd, 13th or 22nd cycle days to exclude cycle

dependent fluctuations.

Material: 1 ml serum

Stability: 14 days at 2 to 8°C

TAT: same day, FML

Method: ECLIA

Units: ng/ml

Ref.- range: see report

Note: If the patient is taking multivitamins or dietary supplements containing high dose of Biotin (> 5 mg), the patient should stop taking it for at least 24 hours , before having the blood collection.

For complete list of laboratory test offered at Freiburg Medical Laboratory, please visit <http://www.fml-dubai.com/parameter-listings/>