

# Hyperprolactinemia

## What is Hyperprolactinemia?

Hyperprolactinemia is a condition where your child's body produces higher-than-normal levels of **prolactin**, a hormone made in the pituitary gland in the brain. Prolactin naturally increases after giving birth in females and plays a role in stimulating breast milk production. However, it can also be high due to the following reasons:

1. **Prolactinomas:** Benign growth involving cells in the pituitary gland that results in prolactin overproduction.
2. **Other brain tumors:** Prolactin levels can be elevated with other brain tumors, even if the tumor is not a prolactinoma. This happens due to pressure on the pituitary gland or interference with the signals that tell the pituitary gland to make prolactin.
3. **Medications:** Medications used to treat depression, mood disorders, hypertension, and nausea can increase prolactin levels. Estrogen and birth control pills can also increase prolactin levels.
4. **Hypothyroidism:** Low thyroid hormone levels can lead to increased prolactin levels.
5. **Kidney or liver disease:** Decreased function of the kidneys or liver may elevate prolactin levels.
6. **Intense exercise, emotional stress such as blood draws, or lack of sleep:** These situations can temporarily raise prolactin levels above the normal ranges. These typically result in only a mild increase in prolactin levels.
7. **Genetic disorders:** Rare genetic disorders such as multiple endocrine neoplasia type 1, multiple endocrine neoplasia type 4, and genetic variants in the prolactin receptor gene can cause hyperprolactinemia.

## What are the symptoms of Hyperprolactinemia in Children?

High levels of prolactin can affect children and adolescents. Common symptoms can include:

- Headaches
- Vision issues such as double vision
- White milky discharge from the breasts called galactorrhea
- Delayed puberty in females and males
- Absence of menstrual periods (amenorrhea) in females
- Decreased growth
- Fatigue
- Mood changes

## How is Hyperprolactinemia diagnosed?

Your doctor may order the following evaluation to diagnose hyperprolactinemia:

- Prolactin levels in the blood

- Thyroid function, kidney, and liver tests to rule out other causes of hyperprolactinemia
- If prolactin levels are significantly elevated your doctor may obtain imaging of the brain to look for tumors

### **How is Hyperprolactinemia treated?**

The specific treatment depends on the cause of hyperprolactinemia.

- If prolactin levels are mildly elevated and other lab evaluation is reassuring, your doctor may monitor your child's prolactin levels closely. Reducing stress and ensuring proper sleep may also help manage slightly high prolactin levels.

- **Hyperprolactinemia related to medications:** Your doctor can work with your healthcare team to find alternatives to the medication(s) causing high prolactin levels.

- **Pituitary tumors (Prolactinomas)** can be treated with:

**1. Medications:** Medications that stimulate dopamine production, such as bromocriptine or cabergoline, are often used to reduce prolactin levels and shrink the tumor. These medications are usually well tolerated. Sometimes these medications may cause dizziness, lightheadedness, nausea, depression, and headaches. To prevent these side effects, it is important to drink enough water to stay hydrated. If your child is having issues with the medicine, please reach out to your doctor.

**2. Surgery:** Rarely needed, only if the tumor fails to respond to medication.

-**Hypothyroidism related:** Treated with thyroid hormone replacement. Prolactin levels usually normalize once the thyroid hormone levels improve.



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