
Prolactinemia

Last updated October 2023

Characteristics: Elevated prolactin levels (>29 ng/mL in nonpregnant, nonlactating women, >18 ng/mL in men) that can cause the following symptoms:

- Women: Menstrual irregularity or amenorrhea, infertility, lowered libido, galactorrhea, decreased bone density, increase or thickening of hair in unexpected areas such as face.
- Men: Breast enlargement (gynecomastia), erectile dysfunction, low libido, infertility, galactorrhea.

Meds That Cause It: Antipsychotics, especially risperidone, paliperidone, and haloperidol. Other potential medications that cause it include estrogen, metoclopramide, and verapamil. Other causes: Hypothyroidism, pregnancy, kidney disease, polycystic ovarian syndrome, pituitary adenoma.

Mechanism: D2 blockade.

General Management:

- Reduce dose or discontinue offending medication. Prolactin levels normalize within two to four days after discontinuation.
- Switch to a different agent (eg, aripiprazole, quetiapine).

First-Line Medications (if stopping the causative drug is not feasible):

Add aripiprazole 5–20 mg daily.

Second-Line Medications:

- Add a dopamine agonist, such as cabergoline (Dostinex) 0.25 mg twice a week (*not* twice a day) or bromocriptine (Parlodel) 1.25–2.5 mg daily.
- Add an oral contraceptive agent to prevent bone loss in women and treat testosterone deficiency in men (it does not treat hyperprolactinemia).

Clinical Pearls:

- Risperidone is the drug that causes the highest elevation, up to 300–400 ng/mL, whereas other drugs rarely cause elevations higher than 100 ng/mL.
- If your patient has a mild elevation (such as up to 40 ng/mL), get another level, but this time make sure it's a fasting level. Mild elevation can be caused by stress.
- While galactorrhea is often mentioned in discussions of high prolactin, this is a pretty rare symptom, much less common than amenorrhea, low libido, and infertility.
- Patients with levels >100 ng/mL are generally referred for an MRI to rule out a pituitary adenoma, even if they are taking a drug known to increase prolactin.
- Use lowest effective dose of dopaminergic agent as higher doses may worsen psychosis.

Fun Fact:

While prolactin's main function is to promote breast milk during lactation, it has other functions, such as promoting weight gain and modulating anxiety. Some research shows that men have increased prolactin when they become fathers.