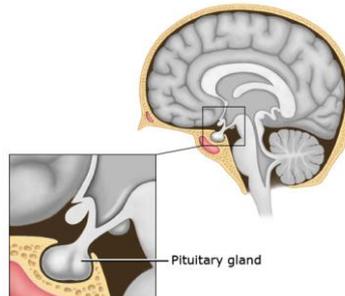


## **HIGH PROLACTIN LEVELS & PROLACTINOMAS**

Prolactin is a hormone usually produced by cells in the pituitary gland. Its normal function is to control lactation (breast milk production).



### **Causes of High Prolactin levels**

Prolactin levels normally rise during breastfeeding. Abnormal high prolactin levels can occur for a number of reasons:

- Abnormal overgrowth of the cells in the pituitary that produce prolactin causing benign tumours which produce prolactin (Prolactinomas) – this is the most common cause
- Drugs (prescription drugs, such as some psychiatric medications, and use of illicit drugs such as marijuana)
- Occasionally prolactin can read high on pathology tests but this is due to an unusual structure of the prolactin molecule, called macroprolactin. This is more common in chronic conditions, such as kidney disease. The prolactin level is actually normal in this case.

### **Symptoms and Signs**

#### **Women**

- Headaches
- Breast milk discharge
- Sore breasts
- Irregular periods/ absence of periods
- Infertility
- Menopausal symptoms – vaginal dryness, hot flashes
- Osteoporosis (if present for several years)

#### **Men**

- Headaches
- Sore breasts and sometimes breast enlargement
- Fatigue/ poor energy levels
- Decreased muscle mass/ strength
- Low libido (sex drive)
- Difficulty getting an erection

Disclaimer: This advice is intended for general information purposes only. It should not be used as a substitute for medical advice, diagnosis or treatment and may not be applicable to individual patients. Always seek the advice and treatment of your own doctor.

- Low sperm count/ infertility
- Low bone mass (osteoporosis) may occur if present several years

### **Prolactinomas**

Prolactinomas are caused by abnormal overgrowth of the cells in the pituitary that produce prolactin. This results in overproduction of prolactin.

Depending on size, these are classified as MICROprolactinomas (<1cm) or MACROprolactinomas (>1cm). Microprolactinomas are most common. Occasionally, very large macroprolactinomas (several centimetres) can cause visual problems (loss of the peripheral field of vision in both eyes), due to a pressure effect on the base of the optic nerve, the main nerve involved in vision.

Occasionally prolactinomas will overproduce other hormones, such as growth hormone.

### **Investigation**

Blood levels of prolactin and other pituitary hormones, such as growth hormone, will be checked in a blood test.

MRI of the pituitary gland will likely be required to investigate if a prolactinoma is present.

### **Treatment**

Not all prolactinomas require treatment. Treatment is aimed at reducing the size of the prolactinoma and/or prolactin levels.

The hormone dopamine acts to reduce production of prolactin. Drugs used to treat high prolactin levels act to increase dopamine levels, thereby reducing levels of prolactin. These are called dopamine agonists. They often reduce size of prolactinomas (sometimes to normal) as well as reducing prolactin levels. There are 2 main dopamine agonists:

- 1) Cabergoline. This medication is generally taken once or twice a week. It is better tolerated than other dopamine agonists.
- 2) Bromocriptine. This has been used for decades to treat prolactinomas. It is taken twice a day. While it is usually very effective in lowering blood prolactin levels, it can cause side effects, including dizziness, nausea, and nasal stuffiness.

Surgery may occasionally be required in the case of very large macroadenomas which are causing visual problems.