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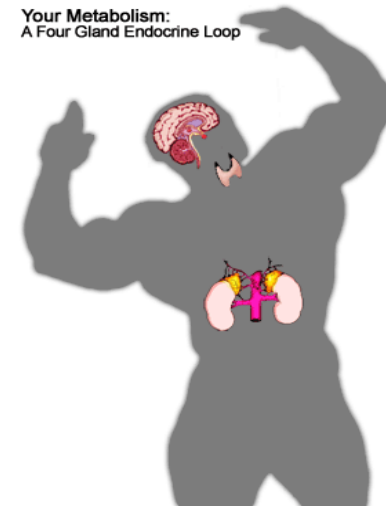
Vancouver Neuropituitary Program



UBC Division of
Endocrinology
& Metabolism



Your Metabolism:
A Four Gland Endocrine Loop



*Diagnostic Lab Tests:
Prolactinoma*

What is Hyperprolactinemia

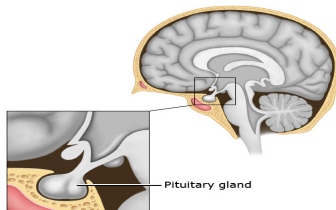
A condition in which a person produces too much of a hormone called prolactin. The main function of prolactin is to stimulate milk production after childbirth. It also affects the level of sex hormones (estrogen and testosterone) in men and women. Prolactin is made by the pituitary gland in the brain. The pituitary gland makes hormones that control the levels of other hormones.

Statistics show that 20-30% of all pituitary adenomas are caused by a prolactinoma. It is more common in women than men.

Prolactinoma

*A **non-cancerous** tumour in the pituitary gland that produces too much prolactin is called a prolactinoma.*

Other causes are surgery or radiation treatment for pituitary tumours on or near the pituitary gland and hypothyroidism (and underactive thyroid).



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Also ask us for these materials:

- *Prolactinoma brochure*
- *Prolactinoma record book*
- *Adrenal insufficiency book*
- *Medication guidelines & coverage*
- *Transsphenoidal Surgery*
- *Endocrine links & support groups*
- *Prolactinoma travel letter*

What to expect:

The nurse will insert an IV into your vein. Baseline samples of blood will be drawn for all hormones. The nurse will inject substances into your vein that will stimulate the pituitary to respond and produce hormones. The nurse will monitor your blood sugar and blood pressure throughout the entire procedure. Several samples of blood will be drawn at 30, 60, 90, and 120 minutes following the injection.

After the test:

Once the test is completed, you should have a good meal.

You should not drive for 2 hours after the test.

Your doctor may order other tests depending on your situation and reaction to treatment.

How is Hyperprolactinemia diagnosed?

A blood test to detect excess prolactin is usually done. If excess prolactin levels are confirmed, more tests are usually done to check the levels of thyroid hormone. Normal thyroid levels rule out hypothyroidism as a cause of hyper-prolactinemia.

Doctors will also ask about other conditions and medication use, and rule out pregnancy as the cause.

If the cause of the excess prolactin is due to a pituitary tumour and you and your health-care provider decide that surgery is the best treatment:

○ Inferior Petrosal Sampling Test:

This test measures the amount of ACTH in the blood and can help locate the ACTH pituitary tumour. This will help the surgeon during surgery to accurately remove the ACTH pituitary tumour.

You may have a light breakfast before coming for the test.

It is normal for patients to be admitted to hospital early on the day of the procedure and to go home later in the day if they are well.

The test involves threading a long, tiny plastic tube or catheter up through the veins of the

body to measure the blood levels of ACTH directly from the veins that come from the pituitary. This is done through a small needle-stick in the groin area and is generally not painful.

X-rays are taken to make sure that the catheters are being guided to the correct place. Once the catheters are in their final position, this is checked by injecting some x-ray contrast.

A series of blood samples are then taken over a period of 10 minutes. During this time you will also be given an injection of a hormone, called CRH, through one of the catheters.

Once the necessary blood samples have been obtained and any bleeding has stopped, you will be asked to remain lying flat for about half an hour before you are returned to the ward and gradually allowed to sit up in bed. Following a period of time, if all is satisfactory you will be allowed to go home.

Follow-up: Other Tests

Sometimes after treatments for a prolactinoma such as surgery and/or radiation treatment, the body becomes deficient in hormones other than

prolactin such as growth hormone, thyroid, cortisol, testosterone or estradiol. When the cause of hyperprolactinemia is hypothyroidism or other pituitary tumours, monitoring and replacement of these hormones is also essential.

These hormones must be monitored regularly using the **combined pituitary function tests**.

Combined Pituitary Function Tests:

Assesses thyroid (TSH, T4), prolactin, cortisol, testosterone, estradiol, FSH, LH, and glucose levels in the blood.

Possible side effects:

Sweating, palpitations, loss of consciousness and rarely convulsions with hypoglycaemia.

With TRH injection (thyroid test) you may experience transient symptoms of: a metallic taste in the mouth, flushing and nausea.

Preparation

You must fast overnight for this test and will be laying down for the entire test.