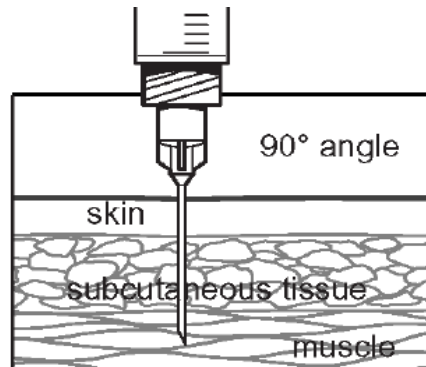


# Vancouver Neuropituitary Program



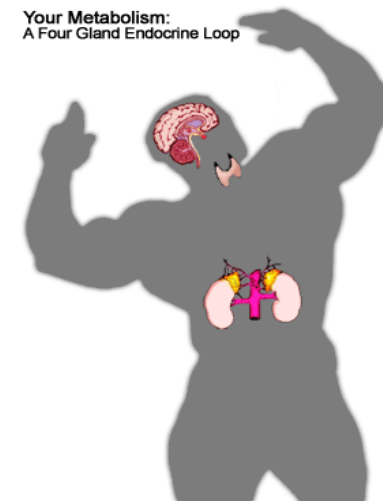
## *Step 4: Give the Injection*

- 1. Clean the injection site skin with an alcohol swab; let it air dry.*
- 2. Hold the skin around the injection site in the manner described above.*
- 3. Insert the IM needle into the muscle at a 90 degree angle with one quick and firm motion.*



*After you inserting the needle into the muscle take your hand off the skin.*

- 5. Gently pull back on the plunger of the syringe to check for blood.  
If you see blood in the needle,  
do not inject the medicine and remove the*



## *Male Hypogonadism*

## *Patient/Family Guide*

*Name:*

*Also ask us for these materials:*

- *Endocrine links & support groups*
- *Hypopituitarism brochure*

*If found please return to:*

***Neuropituitary Clinics:***

*Room 467, Comox Bldg, St. Paul's Hospital,  
Vancouver, BC*

*PH: (604) 806-9156*

*Fax: (604) 806-8594*

*Vancouver General Hospital (VGH)  
Gordon and Leslie Diamond Health Care  
Centre*

*2775 Laurel Street, Vancouver, B.C*

*PH: 604.875.5929*

*Fax: 604.875.5925*

***Pituitary Nurse: Crystal Gagnon***

*Ph: 604-682-2344 ext. 62413*

*crystal.gagnon@vch.ca*



*9. After air bubbles are gone, pull the plunger back to the number (ml or cc) marking on the syringe that matches your dose. Remove the 18 G needle and replace it with the IM needle.*



*10. Check to make sure that you have the correct dose in the syringe. It is VERY important that you use the exact dose prescribed by your doctor.*

*11. Remove the syringe from the vial but Do not lay it down or let the needle touch anything.*



7. Keeping the vial upside down, slowly pull back on the plunger to fill the syringe with the medication to the number (mL or cc) that matches the dose your doctor ordered.



8. Keeping the needle in the vial, check for air bubbles in the syringe. If there are air bubbles, gently tap the syringe with your fingers until the air bubbles rise to the top of the syringe. Then slowly push the plunger up to force the air bubbles out of the syringe without removing the needle from the bottle.

### *My Contacts:*

*Doctors:* \_\_\_\_\_ *Endocrinologist*

\_\_\_\_\_ *Endocrinologist*

\_\_\_\_\_ *Neurosurgeon*

\_\_\_\_\_ *Radiation Oncologist*

\_\_\_\_\_ *Family Doctor*

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*Nurse(s): Crystal Gagnon*

*Ph: 604-682-2344 ext. 62413*

*Pager: 604-252-4832*

*cgagnon2@providencehealth.bc.ca*

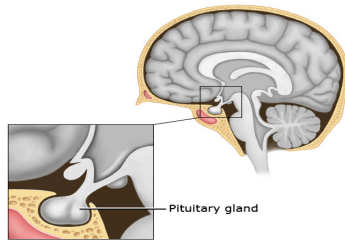
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\_\_\_\_\_

*Clinic Coordinator:* \_\_\_\_\_

## *Hypopituitarism*

*Hypopituitarism* is a disorder in which the hormones produced by the pituitary gland—**growth hormone, sex hormones (LH and FSH), cortisol, thyroid, and anti-diuretic hormone**, are not functioning properly. This can cause an imbalance or deficiency in important hormones in our bodies.



### *What causes hypopituitarism?*

#### *Pituitary Adenoma*

A **non-cancerous** tumour in the pituitary gland is called a pituitary adenoma.

Hypopituitarism is often encountered as a result of surgical treatment to remove this non-cancerous tumour. Other causes can be

*amount (mL or cc) as the dose that your doctor prescribed. Do not let the needle touch any surfaces.*

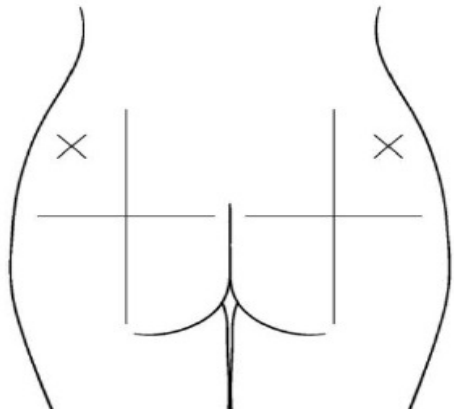
*4. Keep the vial on your flat working surface and insert the needle straight down through the center of the rubber stopper. Do not put the needle through the rubber stopper more than once.*

*5. Push the plunger of the syringe down and push the air from the syringe into the vial.*



*6. Keeping the needle in the vial, turn the vial upside down. Position the needle so the liquid is covering the tip of the needle.*

*injection into the upper quarter of the buttock (X on the diagram), towards the hip bone portion.*



### ***Step 3: Preparing the Injection***

#### *Dose*

- 1. Take the cap off the vial. Clean the rubber stopper with one alcohol swab. Allow to dry.*
- 2. Check the package containing the syringe, if the package has been opened or damaged, do not use that syringe.*
- 3. Pull the 18 G needle cover straight off the syringe. Then, pull back the plunger and draw air into the syringe. The amount of air drawn into the syringe should be the same*

*the result of an injury to the pituitary gland from head trauma or from cranial radiation therapy.*

### ***What is Male Hypogonadism?***

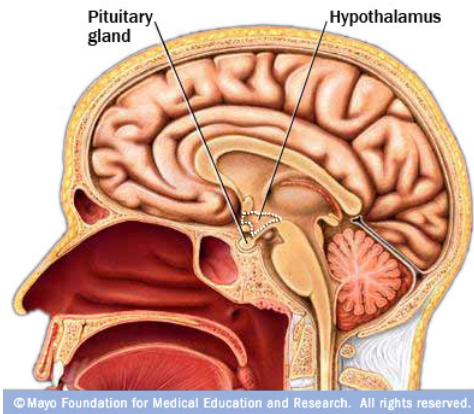
*Male hypogonadism occurs when the testes, the male sex glands, produce little or no hormone called testosterone. Testosterone plays a key role in masculine growth and development during puberty.*



## *What are the causes of hypogonadism?*

**Primary.** This type of hypogonadism — also known as primary testicular failure — originates from a problem in the testicles.

**Secondary.** This type of hypogonadism indicates a problem in the hypothalamus or the pituitary gland — parts of the brain that signal the testicles to produce testosterone. The hypothalamus produces gonadotropin-releasing hormone, which signals the pituitary gland to make follicle-stimulating hormone (FSH) and luteinizing hormone. Luteinizing hormone then signals the testes to produce testosterone.



Form a V with your fingers by separating your first finger from the other 3 fingers. Place the heel of your hand on the bone (femur) that ends before the knee bends and aim the injection right above the V in the center of the thigh



**Option #4** *Gluteus Maximus* muscle in the buttocks:  
To find the correct location for injecting into the *Gluteus maximus* muscle, expose the buttocks and divide (in your mind) each buttock into four parts. Aim the



*first finger from the other 3 fingers. You will feel the edge of a bone along the tips of your little and ring fingers. The place to give the injection is in the middle of the V.*

*This will be easiest if person is lying flat and on one side.*



**Option #3** *Vastus muscle in the thigh:*

*This large muscle located on the top portion of your leg. The injection needs to enter in the center of the muscle. Imagine the thigh with four sides (inside of leg, outside of leg, groin and the knee) then aim for the muscle the middle of all four sides.*

*Either type of hypogonadism may be caused by an inherited (congenital) trait or something that happens later in life (acquired), such as an injury or an infection.*

### ***What are the symptoms of Male Hypogonadism?***

#### ***Adulthood***

*In adult males, hypogonadism may alter certain masculine physical characteristics and impair normal reproductive function.*

*Signs and symptoms may include:*

- *Erectile dysfunction*
- *Infertility*
- *Decrease in beard and body hair growth*
- *Decrease in muscle mass*
- *Development of breast tissue (gynecomastia)*
- *Loss of bone mass (osteoporosis)*

*Hypogonadism can also cause mental and emotional changes. As testosterone decreases, some men may experience symptoms similar to those of menopause in women. These may include:*

- *Fatigue*
- *Decreased sex drive*
- *Difficulty concentrating*
- *Hot flashes*

#### Signs and symptoms of low testosterone<sup>3</sup>

- Decreased sexual desire (libido)
- Regression of secondary sexual characteristics
- Erectile dysfunction (ED)
- Low bone mineral density
- Fatigue or loss of energy
- Increased body fat
- Depressed mood
- Reduced muscle bulk and strength

*Feel for the bone that goes across the top of the upper arm. This bone is called the acromion process. Give the injection into the center of an upside down V, into the muscle, 1 to 2 inches below the acromion process.*



#### **Options #2** *Ventrogluteal Muscle in the hip:*

*To find the correct location, place the heel of your hand on the upper, outer part of the thigh where thigh meets the buttocks. Point your thumb at the groin and your fingers toward the person's head. Form a V with your fingers by separating your*



3. Make sure it is the medication your doctor prescribed. Check the expiration date on the vial. Do not use a medication with particles, medication that is discolored or is expired. Wash your hands.

#### ***Assemble supplies:***

1. Medication in a vial
2. Disposable syringe and needles, one 18 G needle to draw up medication then switch to injection needle (22-23G; 1-1.5 inch)
3. Alcohol swabs
4. Puncture proof disposal container



#### ***Step 2: Selecting and Preparing the Injection Site***

***Option #1*** Deltoid muscle in the upper arm

Completely expose the upper arm.  
Form a V with your fingers by separating your first finger from the other 3 fingers.

## ***How is Male Hypogonadism Diagnosed?***

Doctors base a diagnosis of hypogonadism on symptoms and results of blood tests that measure testosterone levels. Because testosterone levels vary and are generally highest in the morning, blood testing is usually done early in the day.

## ***How is Male Hypogonadism Treated?***

If a pituitary problem is the cause, pituitary hormones may stimulate sperm production and restore fertility. **Testosterone replacement therapy** can be used if fertility isn't an issue. A pituitary tumor may require surgical removal, medication, radiation or the replacement of other hormones.

**Types of testosterone replacement therapy**  
Several testosterone delivery methods exist. Choosing a specific therapy depends on your preference of a particular delivery system,

*the side effects and the cost. Methods include:*

- ***Injection.*** *Testosterone injections are safe and effective. Injections are given in a **muscle about every two weeks.** Your symptoms may come and go between doses. You or a family member can learn to give TRT injections at home. If you're uncomfortable giving yourself injections, a nurse or doctor can give the injections.*
- ***Patch*** *A patch containing testosterone (Androderm) is applied each night to your back, abdomen, upper arm or thigh. The site of the application is rotated to maintain seven-day intervals between applications to the same site, to lessen skin reactions.*
- ***Gel.*** *You rub testosterone gel (AndroGel, Testim) into your skin on your lower abdomen, upper arm or shoulder. As the gel dries, your body*

*absorbs testosterone through your skin. Don't shower or bathe for several hours after a gel application, to be sure it gets absorbed. A potential side effect of the gel is the possibility of transferring the medication to your partner. You can avoid this by avoiding skin-to-skin contact until the gel is completely dry or by covering the area after an application.*

- ***Oral.*** *Taking testosterone orally isn't recommended for long-term hormone replacement, because it may cause liver problems, raise your cholesterol and increase your risk of heart disease.*

### ***How to give a testosterone injection***

#### ***Step 1: Setting Up for the Injection***

*Find a comfortable, well lit working place and inject at the same time each day.*

- 1. Clean your work area.*
- 2. Remove medication from the refrigerator and let it reach room temperature.*

*needle immediately. If you do not see any blood in the needle, you can complete the injection by pushing the medication slowly into the muscle. You may feel some burning or pressure as the medicine enters your muscle.*

*6. When you finish injecting the full dose of the medication into the muscle, remove the needle.*

*7. Gently press an alcohol swab on the injection site. Hold pressure on site until there is no bleeding. You can place a band aid on injection site if needed.*

*8. Dispose of the needles and syringes in a sharps container or a hard metal container such as a coffee tin.*

### ***Tips for Reducing Injection Pain***

- Inject medicine that is at room temperature.*
- Remove all air bubbles from the syringe before injection.*
- Let the skin dry after using alcohol wipes before injecting.*

- *Keep the muscles in the injection area relaxed.*
- *Break through the skin quickly with the needle.*
- *Don't change the direction of the needle as it goes in or comes out.*
- *Do not reuse disposable needles*



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**EMD Serono**

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