

RECONSTRUCTIVE UROLOGY

Penile Injection Therapy

This information will help you learn to inject medication into your penis, called penile injection therapy. Penile injections can help you achieve an erection if you have erectile dysfunction (ED).

Erectile Dysfunction

Erectile dysfunction, usually called ED, means not being able to achieve an erection. We used to call it impotence. Common causes of ED are high blood pressure (hypertension), high cholesterol, diabetes, and some cancer treatments.

The erection tissue is a muscle. Going long periods of time without erections is unhealthy for the tissue and may damage it. ED after chemotherapy may be due to damage to the testicles, which can cause a low level of testosterone. ED after surgery or radiation may be due to:

- Nerve injury
- Blood vessel damage
- Penile tissue damage

Although you may have had a "nerve-sparing" surgery, the procedure used to protect your nerves may cause short-term damage. It may take more than a year for them to begin working again, and it often takes 18 to 24 months before full recovery occurs. We believe that having erections again after cancer treatment keeps erectile tissue healthy, which may lead to better erections later. A penile injection helps you have an erection. It is best if it is given about 5 to 15 minutes before you have sex.

Do not take sildenafil (Viagra®), vardenafil (Levitra®), avanafil (Stendra®), or tadalafil (Cialis®) 10 mg or 20 mg the night before or morning of your injection. However, if you were prescribed tadalafil (Cialis) 5 mg you can continue on that daily dose.

Performing the Injection

Dr. Osterberg will review these instructions with you. Generally, the training takes 2 office visits. Please be aware that each visit may take up to 1 hour so you should plan your schedule on the day of your appointment. When you are at home and on your own, use this information to help you the first few times you perform the injection.

Medication

Most men begin injection therapy with a medication called Trimix, which is a mixture of 3 medications: alprostadil, phentolamine, and papaverine. It works by relaxing the smooth muscle in the penis and opening the blood vessels causing an erection. Your doctor or nurse practitioner will decide whether Trimix or a different medication is best for you.

Storing Your Medication

The medication will be delivered directly to your home from the compounding pharmacy after your second training visit. Store the medication in the refrigerator and keep it away from light. This can keep the medication good for up to 90 days. Don't use the medication if it:

- Has particles or is cloudy.
- Has expired according to the date on the label.

Call your provider's office when you need a new prescription.

Preparing the Injection

- 1. Prepare a clean surface on which you can place the supplies you will need.
- 2. Assemble your supplies:
 - o Medication vial
 - o Syringe
 - Alcohol swabs
 - Sharps container. You can use an empty detergent or bleach bottle with a cap. For more information on disposing your medical sharps.
- 3. Take the medication out of the refrigerator.
- 4. Wash your hands well with soap and water.

Drawing up the Medication from the Vial

1. Take the tab off the vial if you are using it for the first time and throw the tab away. Open an alcohol swab and wipe the rubber stopper on the top of the vial. You must always wipe the rubber stopper with alcohol before you insert the needle to remove any bacteria.

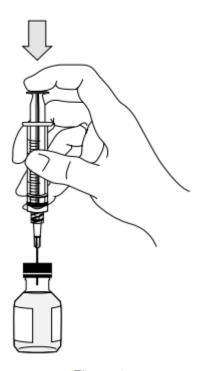


Figure 1: Injecting air into the vial

- 2. Take the syringe out of its package.
- 3. Remove the cap from the needle. Be very careful not to let anything touch the needle. If anything touches the needle, you must throw the needle away in the sharps container and use a new one. This is because it will no longer be sterile.
- 4. First, pull the plunger of the syringe back past the dose you were told to inject. Next, push the plunger back up in the syringe until the top of the black tip is at the dose you were told to inject. Hold the syringe in your hand like you hold a pen or dart. Hold the syringe close to the needle with your thumb, index (first) and middle (second) fingers. This will keep the needle from bending as you insert it into the rubber stopper. Insert the needle through the circle in the center of the rubber stopper on the vial. Push the plunger down and inject the air into the vial (see Figure 1). You do this because the medication is stored in a vial that is pressurized. You must replace the amount of medication you remove from the vial with air.
- 5. Turn the vial and syringe upside down (see Figure 2). Hold the syringe with the hand you use to write with and the vial with your other hand. Be careful not to let go of the vial or the needle will bend. Make sure the tip of the needle is in the medication. Rotate the syringe so you are looking at the numbers and lines on the syringe.

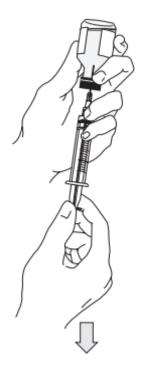


Figure 2: Withdrawing the medication

- 6. Pull the plunger down past the dose we have prescribed. This will help remove any air bubbles. Slowly push the plunger up to the dose prescribed. Check the amount of medication in the syringe to make sure it is the correct dose.
- 7. Once again, check for air bubbles. If air bubbles are present, pull more medication into the syringe. They will go to the top. Slowly push the air bubbles and the extra medication back into the vial. Look at the syringe again to make sure that you have the right amount of medication.
- 8. When you have the correct amount, pull the needle out of the vial. Then place the cap back on the syringe without touching or bending the needle. If you touch or bend the needle, you will need to discard the syringe and start at step 2. When you place the cap back on the needle, make sure you don't push the plunger by accident. This will push the medication into the cap and result in the wrong amount when it's time to inject yourself.

Choosing an Injection Site

You must inject into a specific area of your penis. This is so you do not injure nerves, arteries, or veins. Do not inject straight down on the top or the bottom of the penis. Imagine that the penis is divided in 2 parts. The first part is from the area closest to the body to the middle of the penis. The second part is from the middle of the penis to the head of the penis. You will give the injection right behind the middle line at the 10 o'clock (left side) or the 2 o'clock (right side) position (see Figure 3). To prevent trauma to your penile tissue, always change sides of the penis each time you inject the medication (right side then the left side). Keep a record each time so you do not forget. Do not inject into any vein you can see or feel because it could cause a large bruise on your penis.

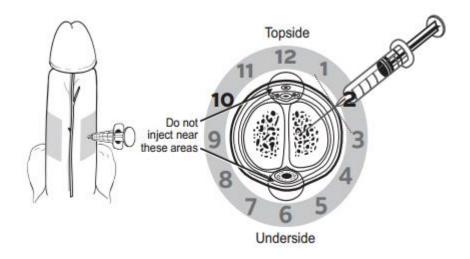


Figure 3: Choosing an injection site

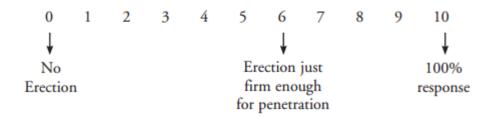
Injecting the Medication

- 1. Grasp the head of your penis, not the skin. If you are not circumcised, pull your foreskin back before grasping the head of your penis. Pull your penis straight out.
- 2. Locate the area to be injected (right behind the middle of your penis). Wipe it with an alcohol swab. Let go of the head of your penis and pick up the syringe with 2 hands.
- 3. Remove the cap covering the needle. Look at the syringe to make sure the dose is correct and you haven't pushed any medication out by accident. Hold the syringe between your thumb, index and middle fingers like a pen or a dart. Do not place your index finger or thumb on the plunger until the needle is all the way in the skin.
- 4. Once again, grasp the head of your penis and pull it straight out. You must keep tension on your penis; do not twist it since this could lead to injecting the wrong area.
- 5. Touch the needle to the skin and quickly slide it into the shaft of your penis. Remember to avoid any veins. Make sure to insert the needle at a slight angle (as showin in Figure 3).
- 6. Move your finger so that your index (pointer) finger or your thumb can push in the plunger.
- 7. Quickly push down on the plunger to inject the medication into the shaft of your penis. Be careful not to pull the syringe out as you are injecting the medication.
- 8. Quickly remove the needle after you have injected all the medication. Pull it straight out. Do not use a twisting or jerking motion because this may cause bruising. Apply pressure for 2 to 3 minutes with your thumb on the injection site and your index finger on the opposite side of your penis. If you are taking a blood thinner or aspirin, hold the pressure for 5 minutes.
- 9. Place the syringe in the sharps container.

Erection Scale

It usually takes between 2 to 6 injections to find the right dose for an erection firm enough to have sex. It is important that you follow the suggested course of therapy. It will help you safely

get the erection you desire in a suitable amount of time. To see how you are responding to the injections, use the grading scale below. Call your healthcare provider and them your responses, and whether you're getting the results you want. Your healthcare provider may tell you to increase your dose.



Your First Injection

Inject the medication as instructed by your healthcare provider. Use the erection scale in this guide and write down how firm your erection was and how much time it took until it became a 5 on the erection scale.

Do not change your dose without speaking with your doctor or nurse practitioner.

Do not give yourself a second injection on the same day if the first one does not work. You must wait 24 hours.

Do not take any erectile medications by mouth (orally) 18 hours before or after your injection.

Supplies

Your supplies will include:

- 1 vial (500 units) of medication prescribed by your healthcare provider
- 30 syringes (29 gauge, ½ inch)

Your medication cannot be ordered from your local retail pharmacy (CVS, Rite Aid, Duane Reade, Costco, etc.).

You will also need to buy alcohol pads from your local pharmacy.

Important Points

- Do not take more medication than the dose prescribed.
- Do not change the dose without speaking to your healthcare provider or nurse.
- Do not take more than 1 dose of medication in 24 hours.
- Do not give yourself another injection if the medication does not work. Speak with your healthcare provider if you are not getting the effects you want.
- You can inject up to 3 times a week as long as there is 24 hours between each injection.

- If you are currently receiving chemotherapy for cancer, you must ask your cancer doctor (oncologist) when you can safely inject.
- Do not take any other medication for ED without speaking to your healthcare provider. Examples of other ED medications are:
 - o Sildenafil (Viagra)
 - Vardenafil (Levitra)
 - Tadalafil (Cialis)
 - Avanafil (Stendra)
- Tell your doctor or nurse all the medications you are taking, especially if you are taking medication for:
 - High blood pressure
 - o Depression, or classified as an MAO inhibitor such as phenelzine (Nardil®)

Priapism (Erection That Lasts Too Long)

Priapism is an erection that lasts too long. Priapism can develop without sexual stimulation and doesn't go away after ejaculation. There is a small risk of having priapism for 4 hours or more after penile injection therapy. When an erection is rigid, no fresh blood flows into the penis. This means the penis is not getting oxygen, which can damage the tissue and lead to permanent erectile dysfunction (ED). The only way to correct this condition is to have a penile implant.



Figure 4. Pseudoephedrine HCl

If you develop priapism

• If you have an erection that lasts 2 hours, take four 30 mg tablets of pseudoephedrine HCl (Sudafed). Do not take extended-release or long-acting tablets, such as Sudafed 12 hour. Ask your pharmacist, doctor, or nurse if you have any questions. The Sudafed will be shipped by the compounding pharmacy along with the vial of medication and syringes.

- o If you want to buy the pseudoephedrine HCl (Sudafed) at your local pharmacy, you don't need a prescription to buy this medication, but the boxes are kept behind the pharmacy counter. Take the pseudoephedrine HCl (Sudafed) card that is hanging on the shelf to the pharmacist (see Figure 4). You will have to show a photo ID and then the pharmacist will give you the box to purchase.
- Make sure to have pseudoephedrine HCl (Sudafed) with you as long as you are using the penile injections.
- o If you have problems with your heart, talk with your cardiologist about whether it's safe for you to take pseudoephedrine HCl (Sudafed).
- If you have an erection that lasts 3 hours (you still have an erection 1 hour after taking the Sudafed), speak with your doctor or nurse.
 - o On Mondays through Fridays from 9:00 AM to 5:00 PM, call the clinic office line.
 - After 5:00 PM, during the weekend, and on holidays, call the doctor on call for Dell Seton Medical Center.
- If you have an erection that lasts 4 hours and you haven't talked to a doctor or nurse, this is a medical emergency. You should treat it with the same urgency as a heart attack. Erections lasting longer than 4 hours can cause permanent damage.

• After Pelvic Surgery for Prostate or Bladder Cancer

If you have had pelvic surgery within the past year, your doctor may have told you to take a lower dose of sildenafil (Viagra), vardenafil (Levitra), avanafil (Stendra), or tadalafil (Cialis)every night. This improves the chance that your erectile function will return. It may also help save erectile tissue.

- When you start injection therapy, take sildenafil (Viagra), vardenafil (Levitra), or avanafil (Stendra)only on the nights that you are not giving yourself an injection.
 - o 25 mg or 50 mg of sildenafil (Viagra)
 - o 10 mg of vardenafil (Levitra)
 - o 50 mg of avanafil (Stendra)
- If you take 5 mg of tadalafil (Cialis) daily, you can take the medication on the same day you take an injection.

Your response to pills may improve over the first 18 to 24 months after surgery. Try taking a full dose once a month. Take 100 mg of sildenafil (Viagra) or 20 mg of vardenafil (Levitra) on an empty stomach (2 hours before or 2 hours after a meal) or 200 mg of avanafil (Stendra) which can be taken with food.

Record your response. To achieve the best response, you must be:

- Relaxed
- Sexually aroused, either from contact with a partner or from self-stimulation
- Not tired