Memorial Sloan Kettering Cancer Center

PATIENT & CAREGIVER EDUCATION

Penile Injection Therapy

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



Read this resource carefully before starting injection therapy. If you do not follow the instructions in this resource, your doctor or advance practice provider (APP) may stop prescribing your penile injection medicine and supplies.

About penile injection therapy

The tissue that causes you to get an erection (erectile tissue) is a muscle. Going long periods of time without an erection is unhealthy for erectile tissue and may damage it.

We believe having erections keeps erectile tissue healthy. A penile injection helps you have an erection. It works best if it's given about 5 to 15 minutes before you want an erection.

Giving yourself the injection

Your APP will review the instructions below with you. Generally, the training for the injections takes 2 office visits. **Each visit may take up to 1 hour, so you should plan your schedule on the day of your appointment.**

Use this resource to help you the first few times you inject on your own.

Do not take these medicines within 18 hours of injecting (before or after):



- Sildenafil (Viagra®) - 20 mg to 100 mg
- Vardenafil (Levitra®) - 10 mg to 20 mg
- Avanafil (Stendra®) - 50 mg to 200 mg

If you take tadalafil (Cialis®) 10 mg or 20 mg, **do not** inject within 72 hours (3 days) of taking it.

If you're using tadalafil (Cialis) 5 mg daily, ask your APP how you should use it along with your injections.

Penile injection medicine

The 3 most commonly used medicines for injection therapy are Trimix, Bimix, and papaverine.

Most people start injection therapy with Trimix, which is a mixture of 3 ingredients: alprostadil, phentolamine, and papaverine. These ingredients work by relaxing the smooth muscle and opening the blood vessels in your penis, causing an erection.

Your APP will decide whether Trimix or a different medicine is best for you.

Storing your medicine

The alprostadil in Trimix can weaken over time. For that reason, Trimix should be stored in the refrigerator and away from light. This can keep it good for a few additional months. If you're using Bimix or papaverine, you don't need to keep the medicine in the refrigerator. These medicines don't have alprostadil.

Do not use the medicine if:

- It has particles or is cloudy.
- The rubber stopper comes off of the vial.

After your second training visit, your medicine will be delivered directly to your home from the compounding pharmacy (specialized pharmacy). Call the compounding pharmacy to make arrangements for billing and shipping. This will limit delays in delivery.

Call your APP when you need a new prescription.

Getting the injection ready

1. Prepare a clean surface for your supplies.
2. Gather your supplies:
    - 1 medicine vial
    - 1 syringe (one-time use only)
    - 2 alcohol wipes
    - Sharps container. You can use an empty detergent or bleach bottle with a cap, or a metal coffee can with a plastic top.
3. Wash your hands well with soap and water.

Drawing up the medicine from the vial

1. If you're using the medicine for the first time, take the cap off. Throw the cap away. Open an alcohol wipe 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. This will kill any bacteria on the rubber stopper.
2. Take the syringe out of its package. Take the cap off the needle. Be very careful not to let anything touch the needle. If anything touches the needle, you must throw the entire syringe away in the sharps container and use a new one. This is because it will no longer be sterile.
3. First, holding the syringe upright so the needle points toward the sky, pull the plunger of the syringe back past the dose you were told to inject. Next, push the plunger back up until the top of the plunger (the thin black line closest to the needle) is at the dose you were told to inject.
4. **Turn the syringe downward so the needle points toward the floor.** 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. Support the medicine vial with your other hand.

5. Holding the vial upright and the syringe downward, insert the needle through the circle in the center of the rubber stopper. Push the plunger down to inject the air into the vial (see Figure 1). You do this because the vial is pressurized. You must replace the amount of medicine you remove from the vial with air.



Figure 1. Injecting air into the vial

6. 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. Don't let go of the vial, or the needle will bend. Make sure the tip of the needle is in the medicine. Rotate the syringe so you're looking at the numbers and lines on the syringe.

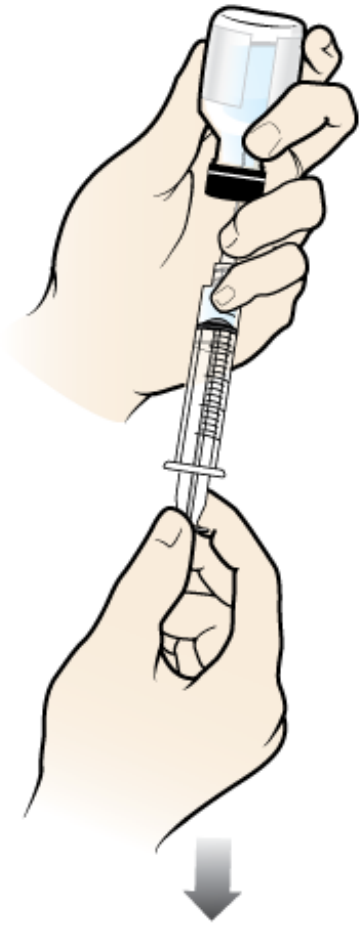


Figure 2. Withdrawing the medicine

7. Pull the plunger down past your prescribed dose. This will help remove any air bubbles. Slowly push the plunger back up to your prescribed dose. Check the amount of medicine in the syringe to make sure it's the correct dose.
8. Check for air bubbles in the syringe. If you see any air bubbles, pull more medicine into the syringe. They'll go to the top, towards the needle. Slowly push the air bubbles and the extra medicine back into the vial. Look at the syringe again to make sure you have the right amount of medicine.
9. When you have the correct amount, pull the needle out of the vial. Place the cap back on the syringe without touching or bending the needle. If you touch or bend the needle, you'll need to throw away the syringe and start at step 2. When you place the cap back on the syringe, make sure you don't push the plunger by accident. This will push the medicine into the cap and result in the wrong amount when it's time to inject yourself.
10. If you're using Trimix, put the medicine vial back into the refrigerator. If

you're using Bimix or papaverine, you don't need to keep your medicine in the refrigerator.

Choosing an injection site

You must inject the medicine into a specific area of your penis. This is so you don't inject into a nerve or blood vessel.

Imagine your penis is divided in 3 parts. You'll give the injection in the middle third of your penis at the 10 o'clock (left side) or the 2 o'clock (right side) position (see Figure 3).

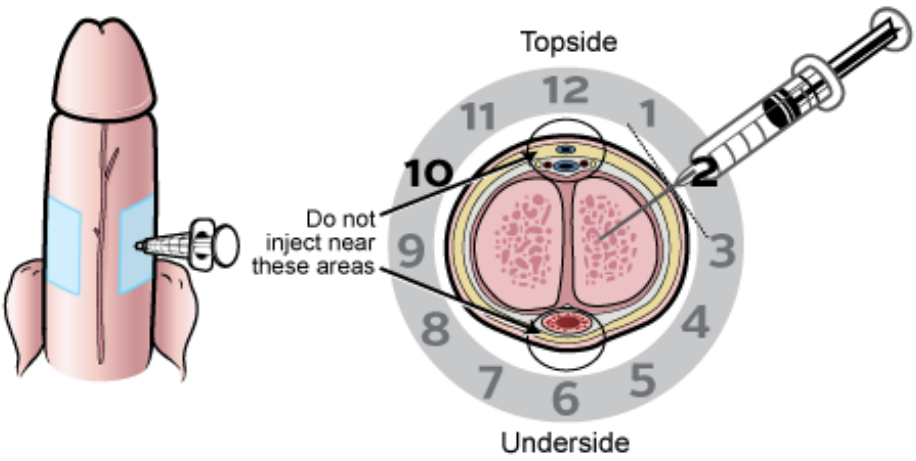


Figure 3. Choosing an injection site

To prevent trauma to your penile tissue, always change sides of your penis each time you inject the medicine (right side, then left side). Keep a record each time so you don't forget. Don't inject into any vein you can see or feel because it could cause a large bruise on your penis. Don't inject straight down on the top or the bottom of your penis.

Injecting the medicine

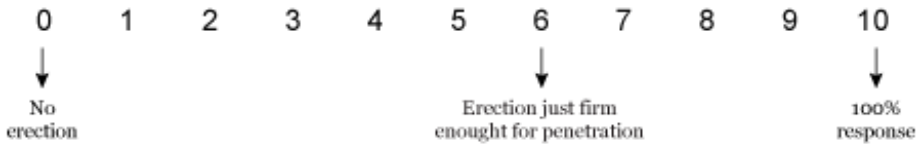
1. Grasp the head of your penis, not the skin. This will allow your penis to be more fully stretched. It's easiest to inject if your penis is pulled straight out in front of you. If you aren't circumcised, pull your foreskin back before grasping the head of your penis. This will prevent the needle from going between the skin and erectile tissue. For your injection to work, the medicine needs to go into the erectile tissue.

2. Locate the area to be injected (the middle third of your penis). Wipe it with an alcohol wipe. 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 medicine out by accident.
4. Hold the syringe between your thumb, index and middle fingers like a pen or a dart. The needle should be facing the floor. Don't place your index finger or thumb on the plunger.
5. Once again, grasp the head of your penis and pull it straight out. Keep pulling on your penis from the time the needle goes into your penis until it comes out. Don't twist your penis, since this could lead to injecting the wrong area.
6. Touch the needle to your 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 (either the 10 o'clock or 2 o'clock position, as shown in Figure 3).
7. Move your finger so your index finger or thumb can push in the plunger.
8. Quickly push down on the plunger to inject the medicine into the shaft of your penis. Be careful not to pull the syringe out as you're injecting the medicine.
9. Once you have injected all of the medicine, quickly pull the needle out of your penis. Pull it straight out. Don't use a twisting or jerking motion, because this may cause bruising. Apply pressure at the injection site 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're taking a blood thinner or aspirin, hold the pressure for 5 minutes. This will help to decrease any bleeding or bruising.
10. Place the syringe in the sharps container. You don't need to recap it.

Erection scale

It usually takes a few injections to find the right dose for an erection firm enough to have sex. It's important that you follow the treatment plan your APP gave you. **Don't adjust your own dosing.** If you're adjusting your own medicine dosing, the office will no longer be able to prescribe your medicine.

Please use the grading scale below to rate your level of hardness after injecting. Call your APP and tell them your responses and whether you're getting the results you want. Your APP will tell you which dose to try next based on your response.



Reporting your injections

Please make sure to include the information below in your injection reports.

For your first injection: inject _____ **units** of _____ while you're at home.

Units	Erection level (0 to 10)	Duration of hardness

Do not change your dose without speaking with your APP. Call your APP after each injection to report your response. Keep calling your APP after each injection until we find the right dose for you.

Do not give yourself your next injection until you have reported the result of your last injection.

Important points

- Do not take more medicine than the dose prescribed.
- Do not change the dose without speaking to your APP.
- Do not take more than 1 injection in 24 hours.
- Do not give yourself another injection if the medicine doesn't work. Speak with your APP if you aren't getting the effects you want.
- Your partner shouldn't inject you if they did not inject you at your training session.
- You can inject up to 3 times a week as long as there are 24 hours between each injection.
- If you're currently receiving chemotherapy for cancer, ask your oncologist (cancer doctor) when you can safely inject.
- Do not take any other medicine for ED without speaking to your APP.
- **Do not** go to sleep until your erection is bendable.
- **Do not** take these medicines within 18 hours of an injection (before or after):
  - Sildenafil (Viagra) - 20 mg to 100 mg
  - Vardenafil (Levitra) - 10 mg to 20 mg
  - Avanafil (Stendra) - 50 mg to 200 mg
- **Do not** inject within 72 hours (3 days) of taking tadalafil (Cialis) 10 mg or 20 mg.
- If you're using tadalafil (Cialis) 5 mg daily, ask your APP how you should use it along with your injections.
- Tell your APP all of the medicines you're taking, especially if you're taking one of these:
  - Medicine for depression or that's classified as an MAO inhibitor, such as phenelzine (Nardil®)
  - A sleep aid, such as trazodone (Oleptro ER®)

Supplies

Your APP will order your supplies for you from a compounding pharmacy. Your supplies will include:

- 1 vial (500 units) of _____ medicine
- 30 syringes (29 gauge, ½ inch)
- 24 pseudoephedrine HCl (Sudafed®) 30 mg tablets

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

Your injection medicine can't be ordered from your local retail pharmacy (such as CVS, Rite Aid, Duane Reade, or Costco). They'll be ordered from a specialty compounding pharmacy approved by MSK.

Please call your APP when your supplies run low. They'll order more supplies for you and will let you know if refills are included. You'll need to provide an injection report with each refill request. If refills are included, you can contact the compounding pharmacy directly to set up your billing and shipping.

Pseudoephedrine HCl (Sudafed)

Sometimes, penile injections can cause priapism (an erection that lasts too long). If you have priapism, taking pseudoephedrine HCl can help. Read the instructions in the "Treating priapism (an erection that lasts too long)" section for more information.



Figure 4. Pseudoephedrine HCl

If you want to buy the pseudoephedrine HCl at your local pharmacy, you don't need a prescription, but the boxes are kept behind the pharmacy counter.

Take the pseudoephedrine HCl card that's hanging on the shelf to the pharmacist (see Figure 4). You'll have to show a photo ID before the pharmacist

gives you the box to purchase.

Make sure to have pseudoephedrine HCl with you as long as you're using the penile injections.

If you have problems with your heart, talk with your cardiologist about whether it's safe for you to take pseudoephedrine HCl.

Treating priapism (an 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 orgasm. There is a risk of having priapism after penile injection therapy.

When you have a full erection, no fresh blood flows into your penis. This means your penis isn't getting oxygen, which can damage the tissue and lead to permanent ED.

If you develop priapism

- **If you have an erection at penetration hardness (a 6 or higher on the erection hardness scale) that lasts 2 hours, take 4 (30 mg) tablets of pseudoephedrine HCl (Sudafed).** Don't take extended-release or long-acting tablets, such as Sudafed 12 hour. Ask your pharmacist or APP if you have any questions. The pseudoephedrine HCl will be shipped by the compounding pharmacy along with the vial of medicine and syringes, or you can buy it at your local pharmacy. To learn more, read the "Pseudoephedrine HCl (Sudafed)" section above.
    - If your erection becomes less than penetration hardness within an hour of taking pseudoephedrine HCl, call your healthcare provider's office the next day to speak with your APP. You should not use your penile injections again until speaking to your APP. Your APP will make changes to your penile injection therapy medicine dose.
- **If you have an erection that lasts 3 hours (you still have an erection 1 hour after taking the pseudoephedrine HCl), call your APP and plan to go to**

MSK's Urgent Care Center or your local emergency room.

- Monday through Friday between 9 a.m. and 5 p.m., call your APP.
- Between 5 p.m. and 9 a.m., during the weekend, and on holidays, call 212-639-2000. Ask to speak to the urologist on call.
- Go to MSK's Urgent Care Center at Memorial Hospital (1275 York Avenue, between East 67th and East 68th Streets) if you're less than 30 minutes away. Your APP will call the Urgent Care Center so they know to expect you. Your APP will give you more instructions during your call.
- Go to your local emergency room if you're more than 30 minutes away from MSK's Urgent Care Center. Your APP will give you more instructions during your call.

- **If you have an erection that lasts 3 hours and you haven't talked to your APP, 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 to your erection tissue.
  - Go to MSK's Urgent Care Center if you're less than 30 minutes away. Ask the guard at the entrance to the hospital how to get there.
  - Go to your local emergency room if you're more than 30 minutes away from MSK's Urgent Care Center.
  - Tell the staff at the Urgent Care Center or emergency room that you've had an erection for 4 hours. A healthcare provider should see you immediately. If you aren't treated quickly, it's possible that you'll end up with permanent ED.
  - Give the healthcare provider the priapism card that was given to you to carry in your wallet. You can also have the healthcare provider call us at the numbers listed above.

After pelvic surgery for prostate or bladder cancer

If you have had pelvic surgery for prostate or bladder cancer within the past year, your healthcare provider may have told you to take a low dose of sildenafil (Viagra), vardenafil (Levitra), avanafil (Stendra), or tadalafil (Cialis) every night, except on days or nights you plan to inject. This improves the chance that your erectile function will return. It may also help save erectile tissue.

- **Do not** take these medicines within 18 hours of an injection (before or after):
  - Sildenafil (Viagra) - 20 mg to 100 mg
  - Vardenafil (Levitra) - 10 mg to 20 mg
  - Avanafil (Stendra) - 50 mg to 200 mg
- **Do not** inject within 72 hours (3 days) of taking tadalafil (Cialis) 10 mg or 20 mg.
- If you're using tadalafil (Cialis) 5 mg daily, ask your APP how you should use this medicine along with your injections.

Your response to oral ED medicines may improve over the first 18 to 24 months after surgery. Try taking a full dose once a month. A full dose is one of these:

- 100 mg of sildenafil (Viagra) taken on an empty stomach (2 hours before or 2 hours after a meal).
- 20 mg of vardenafil (Levitra) taken on an empty stomach.
- 200 mg of avanafil (Stendra) taken with or without food.
- 20 mg of tadalafil (Cialis) taken with or without 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

Traveling with your medicine

Speak with your APP about how to travel with your injection medicine. They can give you a letter explaining your treatment, if needed. If you need a letter, be sure to ask for it before your travel dates.

To safely travel with your medicine:

- You must travel with Sudafed
- You must be within an hour away from a hospital

Storing and disposing of your home medical sharps

Read *How To Store and Get Rid of Your Home Medical Sharps* (www.mskcc.org/pe/sharps) to learn how to store and dispose of home medical sharps.

If you have questions or concerns, contact your healthcare provider. A member of your care team will answer Monday through Friday from 9 a.m. to 5 p.m. Outside those hours, you can leave a message or talk with another MSK provider. There is always a doctor or nurse on call. If you're not sure how to reach your healthcare provider, call 212-639-2000.

For more resources, visit www.mskcc.org/pe to search our virtual library.

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