



Prostate Cancer Survivorship Program

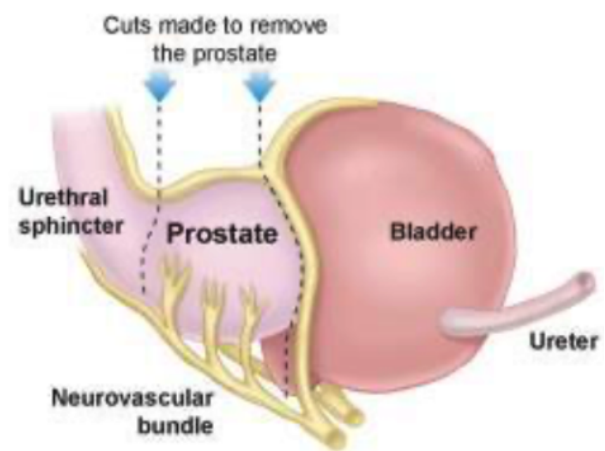
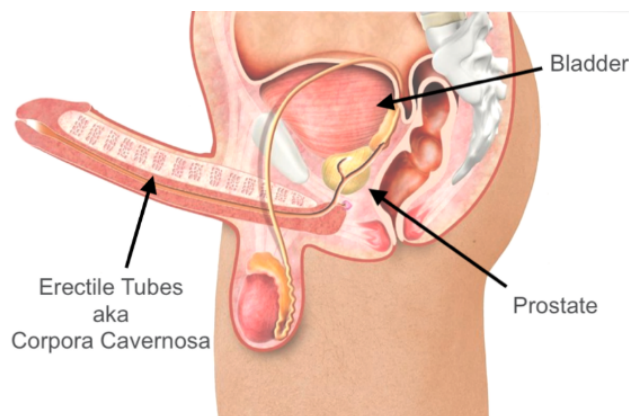
Preserving Erectile Function

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This handout explains how pelvic surgery can impact both erectile function and bladder control. The information is organized in a question-and-answer format and is divided into two sections. The first section focuses on erectile preservation, while the second addresses bladder and urine control. Men should prioritize these factors before surgery and continue to address them during recovery.

It is important to note that all exercises and therapies discussed here should ideally begin prior to surgery and continue throughout the healing process in the months that follow.

Section 1: Erectile Preservation



How do erections work?

The male erection primarily occurs due to two inflatable tubes called the corpora cavernosa, which begin in the pelvis and extend down the length of the penis.

When a man becomes aroused, an electrical signal from the brain travels through the deep nerves of the pelvis to the arteries supplying these inflatable tubes. As a result, these arteries expand, allowing increased blood flow that leads to an erection.

How does pelvic surgery affect erections?

The nerves that supply erections are closely attached to the prostate. Completely removing these nerves disrupts the pro-erectile signals from the brain, making it impossible to achieve erections. To address this, many men now undergo what are known as "nerve-sparing" procedures, if their anatomy permits. In this approach, the nerves are gently separated from the prostate, improving the chances of recovering sexual function.

However, even when the nerves are spared, men may still experience temporary "paralysis" of these nerves, which can take several months to resolve. While this does not affect sensation, it does prevent men from achieving erections immediately after surgery, which presents a challenge.

The soft, spongy tissue inside the erectile tubes requires significant blood flow to remain healthy. Typically, this blood flow is provided by the 3-4 erections most men experience while sleeping or upon waking. Unfortunately, these nightly erections tend to diminish following pelvic surgery. Even if a man's nerves are spared and are only temporarily "paralyzed," the absence of regular blood flow can lead to significant scarring inside the erectile tubes. This ultimately results in a loss of penile length and girth, as well as worse erectile function, even if the pelvic nerves eventually recover after surgery.

The goal of penile rehabilitation is to exercise and preserve this tissue to keep it as healthy as possible while the pelvic nerves recover from surgery. This approach offers men the best chance to protect their natural sexual function.

Does prostate removal affect ejaculation?

When a man experiences an orgasm, several processes occur at the same time. The pleasurable sensation that accompanies climax is referred to as orgasm, while the pelvic contractions and expulsion of semen is called ejaculation. If the prostate is removed, fluid expulsion is lost. However, orgasm can still be pleasurable, and men will continue to experience pelvic contractions during climax, even though no fluid will be expelled from the tip of the penis.

How can we preserve the erectile tissue while the pelvic nerves recover?

There are two main components to erectile tissue preservation following pelvic surgery:

- 1) At least once daily use of a vacuum erection device (also known as a VED)
- 2) Viagra 3 times a week before surgery and daily after the catheter is removed.

What is a Vacuum Erection Device, also known as a VED?

A VED is an external pump that a man can use to achieve an erection, and it is an essential part of penile rehabilitation following prostate removal.

How does it work?

By creating a seal with the skin and removing air from the cylinder, blood is drawn into the erectile tissues of the penis, which can induce an erection in most situations. Regular use of the vacuum erection device (VED) after surgery can help maintain the health of a man's erectile tissues while his nerves recover.

This practice helps to reduce the loss of penile length and girth that many men experience following surgery, and it minimizes scarring within the erectile tissues caused by a lack of regular blood flow.



What are the side effects of the VED?

Although the VED is generally considered to be safe, some men may experience bruising because of the suction. This is typically mild, but men who are on blood-thinning medication (like Coumadin, Warfarin, Rivaroxaban, Xarelto, Clopidogrel, or Plavix) are at a higher risk and should use caution when using their VED. Some men report that the VED is uncomfortable when they are first learning how to use it.

Which VED should I use?

There are many different types and brands of Vacuum Erection Devices (VEDs). These devices can be either manual or battery-powered. While no specific type or brand has been proven to be superior for penile rehabilitation, battery-powered devices are generally preferred because they are quicker and easier for patients to use.

Unfortunately, due to the wide variety of devices available on the market, we cannot provide troubleshooting support for each individual device.

Most major insurance companies typically do not cover VEDs; however, they can often be purchased using funds from a Health Savings Account (HSA).

What exercise schedule should I follow with my VED?

We recommend the following exercise regimen.

Step 1: Please apply a water-soluble lubricant to the head of your penis, inside the cylinder (about finger length deep), and around the opening/rim of the cylinder (imagine you're putting toothpaste on a toothbrush).

Step 2: Place your penis in the cylinder and give it a slight twist against your body to 'seat' the lubricant and ensure an air-tight seal.

Step 3: Press and hold the power button (grey button) for 3-5 seconds, then pause for 3-5 seconds and repeat. You will continue to pump in intervals of 3-5 seconds on and 3-5 seconds off until you achieve a full erection. This process usually takes about 1 ½ to 2 minutes.

For manually operated devices, you will need to replicate the above process using the hand pump. Fully pump the device until you've achieved a full erection.

Step 4: Once fully erect, hold the erection in the cylinder for 30 seconds. After 30 seconds, press the release button to release the vacuum. This will allow your erection to come down.

Step 5: Please repeat steps 2-4 for 10-15 minutes – the goal is to try to create between 8-12 erections in that time span.

What if I can't use a VED for some reason?

For men who are unable to use a vacuum erectile device (VED), we recommend a penile traction device. These devices gently stretch the penis, and since they do not rely on suction, the risk of bruising is minimal. Men should use the device for at least 30 minutes each day, consistently. Each device comes with detailed instructions, and we encourage patients to refer to these guidelines when using their device.

When should I start my exercises?

We generally recommend that patients purchase their Vacuum Erection Device (VED) or traction device and begin practicing their exercises at least two weeks before surgery. This allows men to become familiar with their device. After surgery, we advise starting your exercises as soon as the catheter is removed. However, this may not be feasible for men who experience significant urinary leakage. If that applies to you, we suggest waiting before starting your exercises.

For your initial sessions, try performing the exercises while lying flat in bed, with your head and shoulders supported by pillows. If you are still experiencing leakage, it's perfectly fine to postpone starting your exercises until this improves. However, we strongly recommend that patients begin no later than one month after surgery. If you still have slight leakage at that point, you can place a light absorbent material at the end of the cylinder to catch any urine that may leak. Options such as toilet paper, facial tissue, or cotton balls work well because they are light enough not to interfere with the vacuum. This precaution will help prevent urine from being drawn into the diaphragm, which could damage the pump mechanism.

What is the medication Sildenafil (also known as Viagra)?

Sildenafil (the generic name for Viagra) is a medication known as a 'phosphodiesterase inhibitor'. It is typically prescribed to men with mild erectile dysfunction as a way to boost the chemical pro-erectile signals in the penis. This can allow men with mild erectile dysfunction to achieve erections by improving blood flow to the penis.

In the context of penile rehabilitation, the prescribed dose of Sildenafil is unlikely to cause regular erections immediately following surgery. Instead, it promotes blood flow to the erectile tissues, which can help reduce scarring and shrinkage as the pelvic nerves recover. It should be taken every day leading up to and following surgery, regardless of whether sexual activity is desired.

Although Sildenafil is incredibly safe, it should NOT be taken by men who are also taking 'nitrate' containing medications, as it may cause an unsafe drop in blood pressure. Some examples include nitroglycerin tablets, isosorbide mononitrate, and nitroglycerin patches. If you're unsure if you're taking one of these medications, please call our office to review your medication list before you start taking this medication.

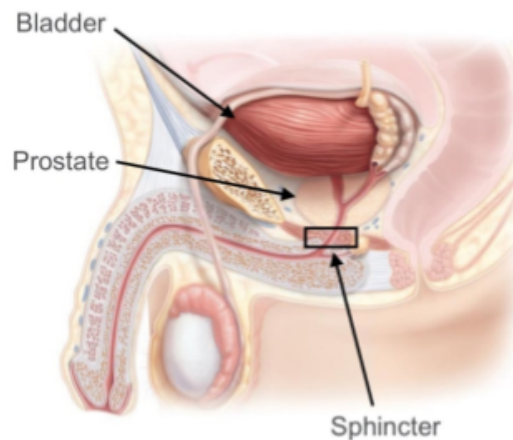
Our pharmacy can help provide you with this medication. Please ask your provider about this.

Section 2: Bladder and Urine Control Preservation

How does bladder control work and how does prostate surgery affect it?

Bladder control, also known as continence, refers to the ability to hold urine without leaking. This function is primarily managed by a small muscle called the urinary sphincter. This muscle surrounds the urethra, the tube that carries urine, and tightens to prevent leakage.

The sphincter is located very close to the prostate, which means it can be affected when the prostate is removed. Additionally, the prostate contributes to urine control. As a result, most men experience some degree of bladder leakage after prostate surgery. This occurs while the sphincter is recovering and adjusting to manage urine flow on its own without the supportive role of the prostate.



How can we promote early recovery of bladder and urine control?

The sphincter, like other muscles, becomes stronger with regular exercise. The best exercises for improving urine control are known as Kegel exercises. These exercises involve pelvic contractions that target the sphincter and other pelvic muscles involved in bladder control. Here is a guide for performing Kegel exercises:

- 1. Locate your pelvic muscles.** Pretend you are trying to avoid passing gas or, when urinating, try to stop your urine stream. If you've identified the right muscles, you'll feel the contraction more in the back of the pelvic area than the front.
- 2. Choose your position.** Start by lying on your back until you get the feel of contracting the pelvic floor muscles. When you have the hang of it, practice while sitting and standing.

3. Work on contracting while relaxing your other muscles. Contract your pelvic floor muscles for 3-5 seconds. Relax for 3-5 seconds. Repeat the contract/relax cycle 10 times. Don't contract your abdominal, leg, or buttock muscles, or lift your pelvis. Place a gentle hand on your belly to detect any unwanted abdominal movement.

4. Extend the time. Gradually increase the length of contractions and relaxations. Work your way up to 10-second contractions and relaxation.

5. Aim high. Try to do at least 30 to 40 Kegel exercises every day. Spreading them throughout the day is better than doing them all at once. Since these are stealth exercises that nobody notices except you, try to sneak in a few when waiting at a stoplight, riding an elevator, or standing in a grocery line.

6. Diversify. Practice short, 2 to 3-second contractions and releases (sometimes called "quick flicks") as well as longer ones.

7. Kegel exercises in an emergency. After surgery, if you leak urine when you cough, sneeze, laugh, bend over, or lift something heavy (known as stress incontinence), doing one or more Kegels before a 'trigger' may be enough to prevent any leakage. If you have the urge to urinate and doubt, you'll make it to the toilet. Doing Kegels may help you get to a restroom safely.

As with our other interventions, we recommend that men begin practicing Kegel exercises at least 2 weeks before surgery and resume them after their catheter is removed.

Conclusion

That's it! These are the essential exercises and interventions for preserving erectile function and bladder/urine control. Focus on these leading up to your surgery and continue with them throughout the recovery process. While complete recovery is not guaranteed, practicing these techniques will give men the best possible chance of recovery after pelvic surgery.

If you have any questions or concerns about what has been discussed, please feel free to call us at (614) 396-2684.

