



Education for Patients Undergoing Robotic Prostatectomy with Dr. Box

This document is meant to be a general educational resource for Dr. Box's patients undergoing prostatectomy. Its guidance will apply to most patients in most situations. Please read in its entirety.

Diet

- Advance diet slowly. When you get home, please drink plenty of water.
- If you are hungry, please start with clear liquids (sports drinks are great for this) and light foods such as Jell-O, soups, or crackers. Avoid greasy or heavy foods.

Activity

- No lifting over 10 pounds for 4 weeks after surgery.
- Walking is encouraged as it helps with bowel function and prevents blood clots.
- It is okay to go up and down stairs.
- You may ride in a car but do not drive until the catheter has been removed.
- You may shower on the day of discharge. No swimming pools or baths for 2 weeks after surgery.

Medications

- Dr. Box strongly believes in a **non-narcotic** approach to pain management following surgery. Narcotics (such as Norco or Percocet) can lead to constipation, breathing problems, and addiction.
- Fortunately, the medications prescribed have been PROVEN to provide EXCELLENT pain relief.
- You will be provided prescriptions for these medications to take following surgery:
 1. Ibuprofen 600 mg (aka Advil)
 - i. An anti-inflammatory to reduce post-operative discomfort.
 - ii. Please take 1 tablet every 6 hours while awake for the first few days after surgery.
 - iii. This medication is very safe but is processed by the kidneys. Do not take if you have any sort of medical kidney disease.
 2. Acetaminophen 650 mg (aka Tylenol)
 - i. Another medication to reduce post-operative discomfort.
 - ii. Please take 1 tablet every 6 hours while awake for the first few days after surgery.
 3. MiraLAX
 - i. A stool softener. Constipation is common after any type of surgery and can contribute to post-operative discomfort.
 - ii. Please take 1 scoop mixed with water daily.
 - iii. You should have 1-2 formed stool each day. Please stop taking this medication if you develop loose stools.
- You should alternate between Ibuprofen and Acetaminophen every 3 hours. For example, take Acetaminophen at 9 am, Ibuprofen at 12 pm, Acetaminophen at 3 pm, Ibuprofen at 6 pm.

Managing Expectations

- Some pain is to be expected after surgery. It is typical for the worst pain to be in the right lower quadrant of the abdomen. Do not be concerned, this is normal. Pain is typically worse with motion and will go away with time.
- It is also common to experience bruising in this area and around the other incisions.
- Patients may experience swelling of the scrotum and genitals in the first week after the operation. Occasionally, this swelling can be as large as an orange. This is normal and is a response of the body to the trauma of surgery. This fluid will reabsorb naturally over the next several weeks after the operation. Elevation of the scrotum and penis with a washcloth or towel when at rest may help this process.

Returning to Work

- The ability to return to work depends on work activity. Many patients can return to work at a desk job from 2 to 3 weeks after the operation. Jobs that require heavy exertion may require 4 to 6 weeks off. Heavy lifting (over 10 pounds) should be avoided for the first 4 weeks after surgery.

Follow Up

- Follow up appointment approximately 7 days after surgery. The office will call you to schedule this.

WHAT YOU SHOULD KNOW ABOUT SURGERY FOR PROSTATE CANCER



About Prostate Cancer®

Surgery for prostate cancer involves removing the prostate gland, surrounding tissue and a few lymph nodes. The entire prostate gland must be removed to make sure cancer cells aren't left behind. This procedure is called a radical prostatectomy or "RP."

When is surgery the best treatment?

The decision of whether to have surgery can be difficult. Talk with your doctors and your family as you consider what treatment is best for you. It is important to consider the following:

- **Your Cancer Stage and Grade.** Surgery is best for stages T1 or T2 prostate cancer (cancer confined to the prostate) and sometimes stage T3 prostate cancer (cancer spread outside the prostate).
- **Your Overall Health and Age.** Surgery is offered to men healthy enough to handle a major operation and likely to live 10 years or more.
- **Your Personal Wishes.** Some men want their cancer completely removed. Others worry about how side effects from their treatment could affect their quality of life.

What are my chances of being cured with surgery?

If your cancer is confined to the prostate, the chance of cure with surgery alone at 10 years is more than 90 percent.

What are the side effects of surgery?

How serious your side effects may be is based on your age and health, and the type of surgery you select. But you may deal with:

- **Erection Problems (impotence or erectile dysfunction).** Erections recover over the course of 24 months or longer and are, for some men, less rigid and durable. If problems continue, medications and devices can help. Your doctor may also prescribe medications and devices during recovery to help bring back erection function.
- **Bladder Problems (incontinence).** Trouble controlling your urine is often temporary, but can last 6 to 12 months. You could also develop bladder irritation or infection, urine leakage and blockage of the urine flow. Physical therapy can improve bladder control.
- **Changes in Penis Shape.** There is a risk of developing a curve to your penis or a slight shortening of the length of your penis.
- **Bleeding.** You may be asked to donate your own blood before surgery or receive a hormone to boost your blood count.
- **Blood Clots in the Leg or Pelvic Veins.** This occurs in a very small group of patients.
- **Changes in Orgasm.** You may find that there is very little (if any) ejaculate after surgery, and orgasms may be less intense. Orgasm intensity may increase over time.
- **Infertility.** After surgery, you can no longer father a child through sexual intercourse. If this is a concern, talk with your doctor about other options, like artificial insemination.

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KNOW YOUR STATS ABOUT LIFE AFTER PROSTATE CANCER

**Know
Your
Stats**

About Prostate Cancer®

INCONTINENCE can sometimes occur as a result of treatment for prostate cancer. Now that you know your stats about the disease, and you've developed a solid game plan with your doctor, it's time to plan out your defense for any side effects of treatment. Many men experience incontinence as a result of prostate cancer treatment, but most men will ultimately recover urinary control.

WHAT IS INCONTINENCE? Incontinence is the inability to control your urine. After prostate cancer treatment, you may experience leakage or dribbling of urine. Because incontinence may affect your physical and emotional recovery, it is important to understand what your options are.

WHAT ARE THE DIFFERENT TYPES OF INCONTINENCE?

There are several different types of incontinence:

- **STRESS INCONTINENCE**, the most common, is urine leakage when coughing, laughing, sneezing or exercising.
- **OVERFLOW INCONTINENCE** is the inability to empty the bladder completely, taking longer to urinate and when you do urinate, it is not a powerful stream.
- **URGE INCONTINENCE** is the sudden need to go to the bathroom even when the bladder is not full because the bladder is overly sensitive.
- **MIXED INCONTINENCE** is a combination of stress and urge incontinence with symptoms from both types.
- **CONTINUOUS INCONTINENCE**, which is not common, is the inability to control urine at any time.

HOW LONG CAN INCONTINENCE LAST AFTER TREATMENT?

Improvement can take several weeks to several months. It varies from patient to patient; your particular recovery could be quick or slow.

HOW DO YOU TREAT INCONTINENCE? Treatment is based on numerous factors including the type and severity of your incontinence. There are a variety of treatment options which can potentially help you regain complete control:

- **KEGEL EXERCISES:** Strengthen your bladder control muscles.

- **LIFESTYLE CHANGES:** Modifying your diet, losing weight and regular emptying of the bladder can decrease urination frequency.
- **MEDICATIONS:** Affect the nerves and muscles around the bladder, helping to maintain better control.
- **NEUROMUSCULAR ELECTRICAL STIMULATION:** Strengthens bladder muscles.
- **SURGERY:** Consists of injecting collagen to tighten the bladder sphincter, implanting a urethral sling to tighten the bladder neck, or an artificial sphincter device used to control urination.

There are also many products available that do not treat incontinence but help maintain a high quality of life.

WHAT ARE THE SIDE EFFECTS FROM TREATMENT FOR INCONTINENCE?

It is important to know what side effects you might experience with each of the available treatment options.

- **MEDICATIONS** may cause dry mouth and, in rare cases, constipation, heartburn, blurry vision and rapid heartbeat.
- **NEUROMUSCULAR ELECTRICAL STIMULATION** may cause pain or infection and it is possible for the device to move.
- **SURGERY** can cause various side effects depending on the type of surgery. The effectiveness of collagen injections can decrease over time, making future injections necessary; implantation of a urethral sling can cause infection and/or the sling could erode; and an artificial sphincter may cause pain and/or require replacement after several years.

It is always important to speak with your doctor if you are experiencing any urinary issues after your prostate cancer treatment. As a team, you can determine what will be best for you.

Touchdown time – you've survived the biggest game of your life, and there is so much to live for!

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KNOW YOUR STATS ABOUT LIFE AFTER PROSTATE CANCER



About Prostate Cancer®

After prostate cancer, men can experience various side effects including **ERECTILE DYSFUNCTION (ED)**. Knowing your stats about prostate cancer also means working out a game plan with your doctor regarding any possible side effects of treatment, including ED. Your doctor can help you understand the causes of ED, and therapies that could help you recover. The following questions are frequent concerns of men:

WHAT CAUSES ED AFTER PROSTATE CANCER

TREATMENT? Surgery may damage the nerve bundles that control blood flow to the penis, causing ED. Nerves involved in the erection process surround the prostate gland. While most surgeons try to perform a nerve-sparing procedure, it is not always possible. In addition, there could be a decreased amount of blood flowing to the penis after treatment.

HOW LONG CAN ED LAST AFTER TREATMENT? Men can experience ED issues for varying periods of time. However, the ability to recover is dependent in part upon how well you were able to perform sexually before surgery, as well as the type of treatment you had.

HOW WOULD I KNOW IF I HAVE ED? ED is characterized by the inability to achieve and maintain an erection for satisfactory sexual performance. To properly diagnose ED, your physician will perform a physical examination, various laboratory tests and discuss your medical and sexual history.

HOW IS SEXUAL DYSFUNCTION TREATED? The following are possible treatment options for ED:

- **ORAL MEDICATIONS:** Improve blood flow to the penis.
- **VACUUM PUMPS:** Mechanical devices that, when placed over the penis, create a vacuum and draw blood into the penis, creating an erection.

- **INJECTIONS:** Medication is injected into the penis to allow for more blood flow, which creates an erection.
- **PENILE IMPLANT:** For persistent and permanent ED, a surgical procedure places a device in the erectile tissue of the penis to inflate and deflate the implant.

WHAT ARE THE SIDE EFFECTS FROM TREATMENT

FOR ED? Each treatment has side effects. Speak with your doctor about which treatment is best for you and the possible side effects from each.

- **ORAL MEDICATIONS:** Common side effects include headache, upset stomach, nasal congestion, problems with vision and prolonged erections (lasting more than four hours). If you are taking other medications such as nitroglycerin or a long-acting nitrate to treat chest pain, you should not take an oral ED medication because it can cause low blood pressure.
- **VACUUM PUMPS:** Can cause penile tissue damage after prolonged usage.
- **INJECTIONS:** You can experience pain, scarring or bruising at the site of injection.
- **PENILE IMPLANTS:** Side effects can include infection at the site of the implant, erosion of the device, mechanical failure and/or possible difference in the length of your penis.

It is always important to speak with your doctor if you are experiencing any urinary issues after your prostate cancer treatment. As a team, you can determine what will be best for you.

Touchdown time – you’ve survived the biggest game of your life, and there is so much to live for!

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STEP 1: PRESERVE

This handout goes through STEP 1 of the [UroPlan Restoration Roadmap](#) and explains how pelvic surgery can affect both bladder control and erections. Things are organized in a question/answer format and have been broken into two sections with the first addressing bladder and urine control and the second addressing erectile preservation. **This first step is what men should focus on prior to surgery and continue throughout the recovery process.** Please remember that each of the exercises and therapies discussed here should ideally be started prior to surgery and continued throughout the healing process in the months following surgery.

Section 1: Bladder and Urine Control Preservation

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

Bladder control, also known as continence, is the ability to hold urine without leaking. This is mostly controlled by a small muscle known as the urinary sphincter. This muscle wraps around the urine tube, known as the urethra, and squeezes it shut, preventing urine leakage.

The sphincter is very close to the prostate and, as such, can be stressed when the prostate is removed. In addition, the prostate itself helps with urine control. As a result, most men will experience some degree of bladder leakage following prostate removal as the sphincter recovers from surgery and works to control urine flow by itself as the prostate is no longer there to help it.



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

The sphincter is a muscle and, like other muscles, gets stronger with regular exercise. The ideal exercises that can help with the recovery of urine control are known as [Kegel exercises](#). These are a type of pelvic contraction that work the sphincter and other pelvic muscles that assist with bladder control. Here's a step-by-step regimen 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 hand gently on your belly to detect unwanted abdominal action.
4. Extend the time. Gradually increase the length of contractions and relaxations. Work your way up to 10-second contractions and relaxations.
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").
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 are going to make it to the toilet, doing Kegels may get you safely to a restroom.

Click the QR code or visit this website to watch a helpful video for Kegels: <https://tinyurl.com/38r5hk59>



As with our other interventions, **we recommend that men start practicing their Kegel exercises as soon as 2 weeks prior to surgery and resume them after their catheter has been removed.**

Section 2: Erectile Preservation

How do erections work?

Regarding sexual function, the male erection is essentially the result of two inflatable tubes that start in the pelvis and extend down the length of the penis. These tubes are known as the corpora cavernosa. When a man is aroused, an electrical signal travels from the brain to the deep nerves of the pelvis, to the arteries that supply these inflatable tubes. These arteries expand and allow the rush of blood that provides an erection.

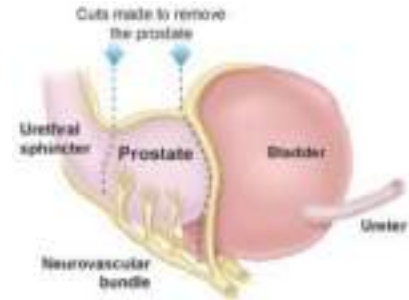


How does pelvic surgery affect erections?

The nerves that supply erection are densely attached to the prostate. Completely removing them disrupts the pro-erection electrical signal that comes from the brain, preventing erections. Many men undergo what are known as 'nerve-sparing' procedures if their anatomy and cancer allows it. With this approach, these nerves are gently separated from the prostate, which improves men's chances of recovering sexual function.

However, even if these nerves are spared, men will still experience a temporary 'paralysis' of the nerves that can take several months to resolve. This does not affect sensation, but it will prevent men from achieving erections immediately following surgery. This presents a challenge.

The soft, spongy tissue inside the erection tubes of the penis requires significant blood flow to stay healthy. Practically, this is provided by the 3-4 erections most men achieve while sleeping or upon waking up. These daily erections go away when a man undergoes prostate surgery. Even if a man's nerves are spared and are only temporarily 'paralyzed,' this lack of regular blood flow can cause significant scarring inside the erectile tubes. Ultimately, this leads to a loss of penile length, a loss of penile girth, and ultimately worse erectile function even if a man's pelvic nerves eventually recover from surgery.



The goal of the penile rehabilitation portion of the UroPlan Restoration Roadmap is to exercise and **preserve** this tissue to keep it as healthy as possible as the pelvic nerves recover from surgery. This gives men their best chance to preserve their natural sexual function.

Does prostate removal affect ejaculation?

When a man experiences climax, there are several processes that occur simultaneously. The pleasurable sensation that accompanies climax is known as orgasm, while the pelvic contractions and expulsion of semen is known as ejaculation. When the prostate is removed, the expulsion of fluid is lost. Orgasm is pleasurable, and men will still experience pelvic contractions with climax, but no fluid will come out the tip of the penis.

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

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

- 1) A daily dose of tadalafil 5 mg (aka generic Cialis)
- 2) At least once daily use of a vacuum erection device (also known as a VED)
- 3) Twice daily dose of L-citrulline 1500 mg

What is the medication tadalafil (also known as Cialis)?

Tadalafil (the generic name for Cialis) is a medication known as a 'phosphodiesterase inhibitor.' It is typically prescribed to men with mild erectile dysfunction 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 daily dose of tadalafil is unlikely to cause regular erections immediately following surgery. Rather, 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 tadalafil 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 of these include nitroglycerine tablets, isosorbide mononitrate, and nitroglycerine patches.

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 important part of penile rehabilitation following prostate removal. By creating a seal with the skin and evacuating air from within the cylinder, blood is pulled into the erectile bodies of the penis. This can induce an erection under most circumstances. Regular use of the VED following surgery can help keep a man's erectile tissues healthy while his nerves are recovering. This helps to reduce the loss of penile length and girth many men report following surgery and minimizes scarring within the erectile bodies caused by 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 VED. The VED can either be a manual pump or battery powered. The Osbon Esteem Manual by Timm Medical Technologies is a cost-effective manually operated vacuum device that, although not battery powered, can provide equivalent results provided patients are willing to invest the extra effort required by manual devices. To learn more or to purchase this device, scan the QR code or visit this website: <https://tinyurl.com/237352w3>



VEDs are typically not covered by most major insurance companies, but they can often be purchased using funds from a health savings account, also known as an 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 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



UroPlan Restoration Roadmap: PRESERVE

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.

Frequency: **We recommend that patient complete the above 10-15 minutes exercise regimen at least once daily for best results.** If daily use is not possible, at least every other day usage should be considered.

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

For men who can't use a VED, we recommend using a penile traction device. These are devices that gently stretch the penis. However, because they don't utilize suction, bruising is rarely an issue. Although there are many different models, we typically recommend the PeniMaster Pro with the rod extender system or the RestoreX traction device. The PeniMaster Pro with the rod extender system is available at www.penimaster.com while the RestoreX traction device is available at www.restorex.com. Men should apply and wear their device for at least 30 minutes a day, every day.

When should I start my exercises?

Generally, we recommend that patients purchase their VED or traction device and start practicing their exercises as soon as 2 weeks prior to surgery. This allows men to get comfortable with their device as soon as possible. Following surgery, we recommend starting your exercises as soon as your catheter is removed. This may not be possible for men who are experiencing significant urinary leakage. We recommend trying to void completely prior to starting your exercises and perform your first few sessions lying flat in bed with your head and shoulders supported by pillows.

If you are still leaking, it's ok to delay starting your exercises until this improves, although we strongly recommend that patients should try to start no later than 1 month following surgery. If you are still leaking slightly at this point, you can put some light absorbent material at the end of the cylinder to absorb any urine that leaks (toilet paper, facial tissue or cotton balls all work well and are light enough to not affect vacuum). This will help avoid urine being pulled into the diaphragm which could damage the pump mechanism.

What about the supplement L-citrulline?

L-citrulline is a dietary supplement that is readily available over the counter and does not require a doctor's prescription. Like the tadalafil mentioned above, it has been shown in studies to boost the chemical pro-erectile signals in the penis, although it does so in a slightly different mechanism. That's why we recommend that men take L-citrulline in addition to their daily tadalafil.

We recommend a dose of 1500 mg twice daily. Although we do not recommend any brand, L-citrulline can be purchased easily from most health food stores or ordered online from Amazon (<https://amzn.to/2XJeAAu>). As with both the daily tadalafil and VED, we recommend that patients start taking their twice daily L-citrulline as soon as 2 weeks prior to surgery.

Conclusion

That's it! Those are the key exercises and interventions for both bladder/urine control and erectile preservation. **This is what you should focus on leading up to surgery and continue throughout the recovery process.** Although complete recovery is never guaranteed, these practices give men the best chance possible at recovery following prostate surgery.