

What Is A Da Vinci Robotic Prostatectomy:

Da Vinci Robotic Prostatectomy is the removal of the prostate gland, seminal vesicles, and sometimes lymph nodes for the purpose of curing prostate cancer. Instead of making one 5 inch cut through the muscle of the abdomen, the Da Vinci robotic approach uses 5 small 1 inch cuts that do not cut any muscle. Through these cuts instruments are placed into the abdomen along with a camera that enlarges the view to 10 times magnification. The Da Vinci robot is a tool used by the doctor to hold the laparoscopic instruments and camera, improving the precision, vision and skill with which the operation can be performed. The operation entails removal of the seminal vesicles and prostate while selectively preserving the muscles that help with urinary control, and the nerves that help with erectile function. The prostate sits between the bladder and penis, with a portion of the urethra running through it like a tunnel. So, after the prostate is removed the bladder is re-attached to the urethra with stitches, just as in open surgery but with the magnification and delicate precision of laparoscopic surgery and Da Vinci robotics.

Advantages of Da Vinci Robotic Prostatectomy

- 1) The published data from surgeons experienced with Da Vinci robotic prostate removal show that negative margin rates with Da Vinci surgery are equal to, and in some reports better than, that of traditional open surgery.
- 2) There is less blood loss than traditional open surgery and rarely need for blood transfusion
- 3) There is less pain after Da Vinci surgery (many patients do not require any pain medication)
- 4) Patients typically require a hospital stay of only 23 hours
- 5) Patients are back to daily activities in a matter of days
- 6) Urinary control can return as soon as a few weeks after surgery
- 7) Patients have an excellent opportunity to return to full erections when the nerves are spared
- 8) The abdominal scar is minimized, giving an improved cosmetic result

How Does The Robot Work?

The Da Vinci Surgical robot allows the doctor's hand movements to be scaled, filtered and translated into more precise movements of micro-instruments. A larger hand movement by the doctor translates into a smaller robot movement, and smaller movements can then become micro-precise. By replicating and scaling movements in real time, the robot allows the surgeon to more precisely perform the operation improving the outcome for patients. The robot cannot be programmed nor can it make decisions on its own. It is under the complete control of your doctor at all times. Use of the robot also significantly reduces surgeon fatigue by allowing your doctor to remain seated in a natural, comfortable position while operating.

Three-Dimensional Optics

Standard laparoscopic surgery uses one single camera and limits a surgeon's vision to a 2-D view similar to watching your television. The Da Vinci robotic camera consists of two high resolution fiber optic cameras which, like your eyes, produce a true Three-dimensional color picture available to the surgeon seated at the Da Vinci console. Magnification of 10x is achieved with these cameras whose position is precisely controlled by the doctor using a central robotic arm.

Robotic Micro-Instruments

Although visually similar to standard laparoscopic instruments, the robotic instruments have the additional advantage of being articulated. This means the instruments not only open and close but also fully turn and twist, allowing 7 degrees of motion. Unlike standard open surgical instruments, these instruments are much smaller. Many of the jaws of the tools are shorter in length than your fingernail and about as thin as the edge of a half dollar. This allows very small and precise movements and surgical cuts to carefully dissect out the prostate.

Minimizing Blood Loss

Similar to standard laparoscopic procedures, the lower abdomen is filled with carbon dioxide gas. The carefully regulated pressure of this acts like an invisible hand to reduce blood loss and gently sweeps bowel away from the site where the surgeon is operating. The gas is not harmful, does not affect cancer cells in any way, and is exhaled away after surgery. The enhanced visibility and magnification of the robotic cameras aid the surgeons in finding small blood vessels before they bleed, which translates into lower blood loss.

What Do I need to Do Pre-Operatively?

For 2 days prior to surgery you need to be on a liquid diet and drink one bottle of Magnesium Citrate each day. The evening prior to surgery a Fleets enema is used only if the stool is not yet clear. This is done to empty the intestines of stool and reduce the risk of bowel related complications.

How Long Does The Surgery Take?

Operating time averages less than five hours but it can be slightly longer depending on the difficulty of the case. The patient's hospital stay is usually less than 24 hours. This can vary, however, depending on how each individual recovers.

What Can I Expect When I Go Home?

Urinary Catheter – You will have a catheter in your penis for about a week. This diverts the flow of urine away from where we delicately sewed things back together and allows the urethra to heal up. You will get an x-ray, (cystogram), the morning of your one-week post operative

appointment. The doctor will evaluate your x-ray to see if your body has healed up well enough to remove the catheter that day. Please bring a padded undergarment the day of your appointment. After the catheter is removed it will be very difficult for you to hold your urine. While your catheter is in, it can cause irritation of the bladder which may cause the frequent urge to go to the bathroom, pain below your pubic bone, or leakage of urine around the catheter. This is normal and there are medications you can take to help reduce this occurrence.

Drainage Catheter – An additional drainage catheter will be placed in the left side of the abdomen. This catheter is typically removed before going home.

Medications – You will be prescribed an antibiotic to take daily until your urinary catheter is removed. You will begin this medication the day before the catheter is removed and continue it for a total of 5 to 7 days. You will also be given a stool softener. After any surgery the bowels tend to take some time before returning to regular function. Take your stool softener twice a day for a full month after the surgery to help your body get back into its normal routine. You may also get a medication for bladder spasms. Should bladder spasms arise, take the medication as prescribed to reduce the frequency and severity of the spasm. A pain medication will also be prescribed to use as needed. If this is too strong, Motrin, Advil, Ibuprofen or Tylenol may be used.

Post Operative Outcomes

Urinary Control – In recently published data, average pad usage 6 weeks after surgery was less than 2 pads per day and at 6 months post operatively was less than a pad per day.

Erectile Function – Recovery of erections varies based on patient age, whether or not one or both nerves were spared, and what sort of erections patients had before surgery. The magnification of the robotic camera and precision of the micro instruments allows the doctor to better identify and preserve the nerve tissue.

Cancer Control Rates – Cure rates vary depending on Gleason score, PSA, and your final cancer stage. The published data from experienced Da Vinci surgeons shows equal, and in some cases, better negative margin rates when compared to open surgery.

Summary

Da Vinci Robotic Prostatectomy is not experimental. It is the latest in cutting edge surgery for cancer of the prostate. The cure rates, urinary control rates, and post-operative erectile function all compare favorably to traditional open surgery. In addition, blood loss, need for blood transfusion, hospital stay, and return to full activity are all significantly better when compared to open retro-pubic surgery.

Da Vinci Robotic Prostatectomy may not be appropriate for all patients. Risks and benefits vary from patient to patient. Therefore, your specific risks and benefits should be discussed with your doctor prior to you deciding on this operative procedure.

Preservation of Urinary Control

Recovery of urinary control is dependent on many factors. Some of these factors are out of the doctor's control, like a patient's other medical conditions and the thickness and strength of their bladder neck. Other factors are under your doctor's control, like the amount of bladder neck musculature that is spared, avoiding thermal injury to the pelvic floor muscle fibers, and the length of urethra that is able to be preserved. Your prostate ultrasound pictures play an important role as they allow your doctor to create a pre-operative blueprint of how he is going to approach your bladder neck and urethra. Having this blueprint lets him plan out and contour his surgical movements in order to preserve the most bladder neck muscle possible, minimize manipulation and avoid thermal injury to the delicate pelvic floor muscles, and maximize the length of urethra he is able to preserve.

Pre-Operative Testing and Preparation

Once you have scheduled your surgery, the next step is to schedule your pre-operative testing. This generally consists of some blood work, and EKG, which is an electrical picture of your heart, and occasionally a chest x-ray. Be sure to do this at least one week prior to surgery so that if any of the results indicate the need for further testing this can be done without postponing your surgery.

Local patients having surgery done at St. Patrick's Hospital need no appointment to get this testing done. You may report in to the pre-op nurse any time between 10 am and 4 pm Monday through Friday. You will have a copy of the pre-op orders in the surgery packet given to you or sent to you when your surgery was scheduled. If your surgery is scheduled at Community Medical Center, please call to make an appointment with their pre-op nurse, this phone number is also included in your surgery packet (phone# 406-327-4020).

Out of town patients who wish to get their testing done locally should give the pre-op order provided in your surgery packet to the hospital and/or doctor chosen to do the testing. Please try to complete these two weeks before the surgery. If you or the facility where you are having testing done have any questions, please call Five Valleys Urology surgery scheduling at 406-532-5670.

If you have certain pre-existing cardiac conditions and/or pulmonary conditions, you may need to get pre-operative clearance from a cardiologist or pulmonologist prior to your surgery.

Follow the pre-operative diet instructions provided to you in your surgery packet. Two days prior to your surgery this will consist of a Full Liquid diet. The day before surgery this will consist of

a Clear Liquid Diet including specific times to drink 10 ounces of Magnesium Citrate and self administration of a Fleets enema. There will be NO alcoholic beverages allowed 48 hours before or 48 hours after your surgery. You will be instructed to have nothing to eat or drink after midnight the night before your surgery is scheduled. The only exception to this would be to take any medications you may have prescribed to control your blood pressure, some heart medications or thyroid medications with just enough water to swallow. No medications that are considered blood thinners should be taken 7 days prior to your surgery. Plavix must be discontinued ten days prior to your surgery with authorization from the prescribing physician.

Post Operative Instructions – (After your surgery)

Diet:

Continue your liquid diet such as jello, broth, or juices (no soda or carbonated beverages) until you are regularly passing gas without difficulty. You can slowly advance to regular food as tolerated. You may feel quite bloated and it can take 3-5 days to have a bowel movement, so in this early recovery period take it slow and avoid gas-producing foods such as beans and broccoli.

Activity Level:

It is good for you to walk around. Do not sit in one place for long periods of time. When you do sit you may benefit from sitting on a donut shaped pillow since the surgical area is right where you sit. Light activity (no lifting more than 10 pounds, no straining, squatting, pulling etc) for 6 weeks from your surgery date. You can advance yourself progressively to full activities after 6 weeks. Absolutely no biking, motorcycling, or horseback riding is advised for 8 weeks after your surgery. You can do as much walking and stair climbing as you can tolerate. You may take a shower 48 hours after surgery. No tub baths, swimming or hot tubs for four weeks after surgery. Do not drive for two weeks after your surgery or as long as you are taking pain medications.

Skin Integrity:

You will have 5 port sites (small incisions that the surgery is performed through) that will have steri-strips (small pieces of tape) and/or Band-Aids over them. Band-Aids may come off in 48 hours. Steri-strips may also come off as early as 48 hours post-surgery or they may stay in place until you are seen in the clinic, usually one week post operatively. Once your dressings are off, it is not uncommon to have a very small amount of drainage from where your dressings were. There are no staples or stitches to be taken out. It is normal to have bruising of the skin on your abdominal wall. This can develop anywhere from 1-5 days out from surgery. Although it can look scary, it is rarely anything to worry about and resolves in a few weeks.

Urinary Catheter (also called a Foley catheter):

During surgery you will have a urinary catheter placed in your bladder. A urinary catheter is a tube carrying urine from your bladder to the outside of your body into a bag. This urinary catheter will stay in place for about a week to aid in the initial healing process where the bladder was sewn to the urethra. There is a balloon on the end of the catheter that prevents it from falling out of the penis. At home, the catheter should drain into a large bag. When you want to go out, you can wear a smaller bag under your pant leg. A separate information sheet in this packet details the care of this catheter. Putting antibiotic ointment (ie Neosporin) or other lubricant like Vaseline on the tip of your penis a few times a day while the catheter is in place can help to reduce the discomfort at the tip of the penis that some patients experience. It is normal to have urine leak around the catheter as well as through it so be sure to wear pads in your underwear (ie Depends Guards for men) even with the catheter is in place. It is also normal, especially as you become more active, to have some blood in your urine. If you see blood in your urine, be sure to hydrate yourself well to flush any clots out.

Clothing:

After surgery, your abdomen may be bloated and it will be difficult to fit into your regular button pants. It is recommended that you wear pants with an elastic waist for comfort.

Medications:

You may resume your daily medications as soon as you are discharged from the hospital. The only exception to this is Coumadin or Warfarin which is generally resumed after the Foley catheter has been removed one week post operatively.

An antibiotic will be prescribed to you, to be taken by mouth. Start this the day prior to your catheter removal and continue taking this medication for a total of 5 days. A pain medication will also be prescribed for you to use as needed. You will receive these prescriptions the day of your discharge from the hospital.

A medication to reduce the frequency and severity of bladder spasms may also be prescribed and should be taken every morning until the catheter has been removed.

A stool softener should be taken by mouth two times daily. Senakot-S or Colace are good choices. You can buy this medication over the counter and do not need a prescription. All narcotic pain medications are constipating and a stool softener will help to prevent this.

Recovery Time:

The surgery usually takes approximately 5 hours and the hospitalization is usually two days. All patients go home with a catheter in place, continually draining the urine into a drainage bag.

You will be seen about one week after your surgery at Five Valleys Urology clinic to determine if the catheter will be removed at this visit. An x-ray done prior to this appointment, at a separate location, will help in making that determination. You may return to light activity within 23 hours and will be cleared to return to unlimited activity generally 4-6 weeks after the surgery. Most men have difficulty with urinary control at the beginning and will require some form of protection, such as a pad that secures inside your underwear (briefs not boxers). Within one to three months, you should see improvement in urinary control. Be patient and continue your kegel exercises.

Kegel exercises should be started/resumed after the foley catheter is removed. These exercises help you to regain urinary continence. It may be difficult to locate these muscles but this can be done by starting and stopping your urine stream. Once you have identified the correct muscles, repeat the flexing and relaxing of these muscles without urinating. Begin by squeezing the muscles for a count of 3, then relax for a count of 3. Work up to repeating these exercises for 2-3 minutes two to three times a day. This will help to strengthen the muscles that help you to hold your urine. You will be given a kegel instruction sheet in your "surgery packet" when your surgery is scheduled.

The recovery of potency after a prostatectomy can be slow and time-dependent. Even though the nerves to the penis can be spared, there is still some injury from trauma or stretching from the operation. These damaged nerves need time to heal. Issues regarding sexual function can be discussed at your follow-up visits.

Things you may encounter after surgery:

Bruising around the incision sites: Not uncommon and should not alarm you. This can look scary but is quite normal and will resolve over time.

Abdominal Distention, Constipation or Bloating: Make sure you are taking your stool softener as directed. If you don't have a bowel movement by the 3rd day of eating regular food, try taking Milk of Magnesia as directed on the bottle. If after two doses of Milk of Magnesia you have still not had a bowel movement, call the Urology clinic, you may be given a Dulcolax suppository at this time.

Weight Gain: Do not be alarmed. This is temporary due to the gas and fluid shifts. You should return to your pre-operative weight within a week.

Scrotal/Penile Swelling and Bruising: This is not abnormal and should not alarm you. It may appear immediately after surgery or may start 4-5 days after surgery. This should resolve in about 7-14 days. You may also try elevating your scrotum on a small towel or washcloth that you have rolled up when you are sitting or lying down to decrease the swelling. It is also recommended to wear Jockey or snug-fitting underwear for support, even with the catheter in place.

Bloody drainage around the Foley catheter or in the urine: Especially after increasing activity or following a bowel movement, this is not uncommon. While this is often alarming, it is not uncommon and usually resting for a short period of time improves the situation. Call the urology clinic if you see clots in your urine or if you have no urine output for one to two hours.

Bladder Spasms: It is not uncommon with the catheter in place and even after the catheter is removed to have bladder spasms. You may feel mild to severe bladder pain or cramping, the sudden, urgent need to urinate, or a burning sensation when you urinate. You will be prescribed a medication to take daily to help reduce this discomfort.

Perineal Pain (pain between your rectum and scrotum): Perineal discomfort may last for several weeks after surgery, but it will resolve. Call us if the pain medication does not alleviate this. You can also try elevating your feet on a small stool when you have a bowel movement, using Anusol ointment, and increasing the fiber and water intake in your diet. You may also benefit from using a donut shaped pillow to sit on.

Lower leg/ankle swelling: This is not abnormal and should not alarm you. It should resolve in about 7-14 days. Elevating your legs while sitting will help.

CONTACT INFORMATION:

Surgery scheduler at Five Valleys Urology can be reached at 406-532-5670

Five Valleys Urology physicians and Triage nurses are available to answer your questions at the clinic phone number 406-728-3366

CONTACT US IMMEDIATELY AND ASK TO SPEAK TO THE TRIAGE NURSE IF YOU ARE EXPERIENCING ANY OF THE FOLLOWING SYMPTOMS:

Temperature over 101 F

Urine stops draining from your catheter into the drainage bag

Any pain that is not relieved by prescribed pain medications

Large amount of blood clots in urine

Bladder spasms that are not relieved with prescribed pain medication

Our thanks to Dr. Randy Fagin for sharing his pre-op and post-op patient information.

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