



Holmium Laser Enucleation of the Prostate (HoLEP)

Holmium laser enucleation of the prostate (HoLEP) is a treatment for men with benign prostatic hyperplasia (BPH), or an enlarged prostate. Holmium laser prostate surgery is minimally invasive, it is done without any incisions on the body. The procedure uses a laser to remove tissue that is blocking urine flow through the prostate. A separate instrument is then used to cut the prostate tissue into easily removable fragments. Dr. Garrick Simmons of Five Valleys Urology, is the only surgeon in Montana to offer this procedure. He received specific training in the procedure.

Advantages of HoLEP

1. HoLEP requires no incisions. HoLEP removes the entire portion of the prostate that can block urine flow.
2. It can be an option to treat a severely enlarged prostate with a lasting solution.
3. Patients typically require a shorter hospital stay.
4. Patients are back to daily activities in a matter of days.
5. HoLEP also preserves removed tissue so that it can be examined in the laboratory for other conditions, including prostate cancer.
6. As with other types of prostate laser surgery, HoLEP can offer faster recovery and symptom relief compared with traditional prostate surgery. Rarely, re-treatment with HoLEP may be needed for urinary symptoms.

How Does The HoLEP Work?

HoLEP was developed in the 1990s as a more effective and potentially less costly surgery for urinary obstruction due to BPH, as compared to other surgical options such as laser vaporization and transurethral resection of the prostate. The holmium laser is a surgical laser that has been found particularly effective in performing several types of urological surgeries. In the case of HoLEP, the laser is used to cut and remove the bulky prostate tissue that is blocking the flow of urine.

HoLEP requires the patient to be under general anesthesia ("asleep" throughout the procedure). If a patient cannot have general anesthesia for some reason, a spinal anesthetic can be used—this allows him to remain awake but blocks all feeling from the waist down. An injection of an antibiotic is given to reduce the chances of infection. The patient is placed on his back with the legs raised during the procedure. A surgical instrument called a resectoscope is inserted through the urethra (the channel that carries urine from the bladder). The resectoscope includes a camera that allows the surgeon to view the internal structure of the prostate gland, and to see where incisions are being made during surgery. The laser is inserted into the resectoscope and is used to enucleate (free up) the enlarged prostate tissue from the capsule (outer shell) and then to seal up any blood vessels. The tissue that has been removed is deposited in the bladder. The laser is removed from the resectoscope and is replaced by a morcellator. This device is used to suction out the tissue that was left behind in the bladder. When tissue removal is complete, the resectoscope is withdrawn and a urinary catheter is put in place.

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What Happens After a HoLEP?

You should expect to go home the same day of your surgery; overnight stays are rarely necessary. Some bleeding from the prostate is to be expected following surgery. For most patients this will clear in about 12 hours. The need for a blood transfusion due to excessive bleeding following HoLEP surgery is rare. Fluid will be flushed through the catheter to clear blood from the urine after the surgery.

Eating and drinking are permitted the same day of the procedure as soon as the patient is able to do so safely. The catheter is usually removed the morning after surgery if there is no excessive bleeding. If the patient is able to urinate well at least two to three times after the catheter is removed, then he can go home without the catheter. If he is unable to urinate, then the catheter is replaced and will be removed again in one week. In certain cases, such as scar tissue in the urethra, the catheter may just be left in for one week after surgery and then removed in clinic.

At first, passing urine may be painful and more frequent than usual. Medications may be used to relieve symptoms until some improvement is noted within a few days. Patients are encouraged to drink plenty of fluids once the catheter is removed. This fluid helps clear the urine of blood more efficiently.

Symptoms such as frequency, urgency, and waking up at night to urinate may take several months to permanently improve because the bladder must adjust to the removal of the prostate tissue and muscle control in the pelvic area can be weakened by the surgery.

- The patient will be seen by the doctor following surgery to monitor recovery and to repeat tests, such as urinary flow rate, bladder scan, and symptom score. These tests gauge the effectiveness of the surgery. Typically, patients are seen at six weeks and six months after surgery.
- The use of pelvic floor exercises (also known as Kegel exercises) as soon as possible can help improve problems with urinary incontinence.

What are some side-effects of HoLEP?

The most common side effects include:

- Temporary burning and bleeding during urination. Some blood may be seen in the urine for weeks after surgery. This is usually not an indication of anything serious, only that the healing process is not yet finished.
- Urinary incontinence (inability to control urine flow) is expected in all patients immediately after surgery and they should wear pads for the first few days/weeks. This typically improves over the course of several weeks. Performing Kegel exercises can help decrease leakage from stress maneuvers such as coughing, sneezing, or lifting. The rate of long term leakage from stress maneuvers is low. Patients may also have leakage with urgency and this may be treated with medication. The risk of urge incontinence can be dependent on several factors including age, prostate size, symptoms, and other medical problems.
- Retrograde ejaculation or “backwards ejaculation.” In 75 percent of cases, the patient will not see any fluid during ejaculation during sexual activity after surgery.

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- Erectile function is generally not significantly affected. A small percentage of patients have reported improved erectile function while a small percentage have reported decreased erectile function.

What are the risks or potential complications of HoLEP?

- Injury to the urethra or development of scar tissue at a later date.
- Injury to the capsule of the prostate (typically treated with longer catheterization).
- Injury to the bladder or ureteral orifices (where urine from the kidneys drains out).
- Infection of the bladder, testes or kidneys.
- Return of urinary obstruction at a later date requiring another operation (1 to 2 percent).
- Need for transfusion or reoperation due to bleeding.
- Failure to relieve all symptoms and/or need for prolonged catheterization after surgery.
- Five to 15 percent of patients are found to have previously undiagnosed prostate cancer in their prostate specimen. Prostate cancer can be treated after HoLEP.
- Standard risks of anesthesia including blood clots, heart attacks, etc.

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's function, and occasionally a chest x-ray. This is typically requested to be done two weeks prior to your surgical date, 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 time to get this testing done. You may report in to the pre-op nurse any time between 10am and 4pm 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 (406-327-4035).

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 or primary care provider chosen to perform the testing. Again, please try to have this testing done two weeks prior to your surgery date. If you or the facility where you are having testing done have any questions, please call Five Valleys Urology surgery coordinator 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.

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. 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: 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.

- Drink 8-10 glasses of fluid daily to keep urine clear and flowing freely.
- Return to normal diet, but avoid caffeine, alcohol, and acidic foods which may irritate the urethra.
- Do not strain when having a bowel movement. Use a mild laxative as needed to avoid straining with bowel movements.

Activity Level: It is good for you to walk around. Do not sit in one place for long periods. When you do sit, you may benefit from sitting on a donut-shaped pillow since the surgical area is right where you sit. We recommend light activity after surgery (no lifting more than 10 pounds, straining, squatting, pulling, etc.). You can advance yourself progressively to normal activities after one week: No biking, motorcycling, or horseback riding for eight 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, but no tub baths, swimming, or hot tubs for four weeks after surgery. Do not drive for one week after surgery or as long as you are taking prescription pain medications. Do not have sexual intercourse for four weeks.

Clothing

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

Medications

Resume taking regular medications, but do not take blood-thinners such as Aspirin, Coumadin, or Plavix until discussed with your doctor. IF you have been taking Flomax, Proscar/Avodart prior to surgery, you do not need to resume taking these medications.

CONTACT INFORMATION:

The Surgery Coordinators 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 IF YOU ARE EXPERIENCING ANY OF THE FOLLOWING SYMPTOMS:

- Temperature over 101.5 F
- Heavy bleeding or clots persisting longer than 24 hours
- Any pain that is not relieved by prescribed pain medications
- Your catheter is not draining (be sure the tubing is not kinked)
- Inability to urinate

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