

Procedure Specific Information Sheet

Green Light Laser Prostate Surgery

What is green light laser prostate surgery?

Green light laser prostate surgery is a minimally invasive procedure that is performed with a small laser fiber that is inserted through a cystoscope (tube-like camera used for inspecting the bladder). The laser is aimed at the internal part of the prostate thereby vaporising it and creating a wide open channel for urine to flow through.

What condition does it treat?

It treats a common condition in men called benign prostatic hyperplasia (BPH), which is a benign enlargement of the prostate that causes compression of the urethra (water passage) and bothersome urinary symptoms.

How does this compare to a standard TURP operation?

For decades, the gold standard for treating BPH has been a transurethral resection of the prostate (TURP) operation. During a TURP, an electrical cutting loop is passed down a cystoscope to chip away the obstructive prostate from the inside to create an open channel. The green light laser technology has been improved over the years such that it may now be considered the new gold standard treatment because it combines the excellent long term results that one gets with traditional TURP, with some other advantages.

The advantages it has over a standard TURP are:

- Less bleeding during and after the procedure
 - Less need for blood transfusion.
- Faster recovery
 - Patients go home earlier.
 - Earlier return to work.
- Patients can stay on blood thinning medications during surgery
 - Some patients cannot come off their blood thinning medications because of their medical conditions.
 - Green light laser surgery is ideal for these patients.

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- Shorter (or even no) post-operative catheter time
 - Catheter time is usually < 24 hours as compared to 2 to 3 days for standard TURP.
- Less risk of water intoxication
 - In standard TURP operations, patients may absorb the irrigation fluid and become 'water-intoxicated' which can potentially be dangerous.
 - In green light laser surgery, because opened blood vessels are quickly sealed, less fluid is absorbed through these vessels, hence reducing the risk of water intoxication.
- Potentially less risk of erectile dysfunction (ED)
 - The reported rate of ED with laser surgery is < 1%, whereas in standard TURP, it is about 2% - 4%.

What disadvantages are there over a standard TURP?

- Patients may experience more irritation when urinating such as burning and greater frequency and urge to urinate.
- Because the prostate is vaporised by the laser, no tissue is collected and sent for analysis. However, this is not important in most patients because this operation is done primarily to relieve urinary symptoms, not to detect prostate cancer. Those who are suspected of having prostate cancer are assessed and treated differently.

What happens during the surgery?

You will be given either spinal or general anaesthetic for the procedure. The surgery typically takes 1 to 2 hours; the larger the prostate gland, the longer the operation. A rigid cystoscope is then passed down the urethra to the location of the prostate. The laser fiber is introduced and the prostate is systematically vaporised until the obstruction is removed. At the end of the procedure, a temporary catheter may be placed to drain the bladder.

What can I expect after the surgery?

Some patients may be able to go home on the same day of the surgery, but you will need someone else to drive you home. Otherwise, the average stay in the hospital is about one day.

The catheter will be removed before you go home. In some patients with compromised bladder function or those with severe urinary symptoms, the catheter may be left in for a longer time. These patients are taught how to look after the catheter and can still be discharged the day after the surgery.

Most patients experience an almost immediate (within 24 hours) improvement in their urinary symptoms. You are expected to see mild bleeding in the urine. You are encouraged to drink more water at home and to avoid straining when opening your bowels.

You may experience burning when urinating and also the frequent urge to pass urine. Uncommonly, some patients may not get to the toilet in time and leak urine (urge incontinence). This is because the bladder needs some time to adjust to having less obstruction and to relax itself. A short course of bladder calming medications can sometimes help with these symptoms.

The time to full recovery depends also on patient factors such as other medical conditions and age. In general, you are advised to do only light duties (no heavy lifting, gardening or impact sports) for the first 2 weeks after surgery and slowly increase your activity level back to normal by 6 weeks' time.

What are the risks of the surgery?

The risks are:

- Bleeding (usually mild)
- Infection
- Incontinence (1%)
- Erectile dysfunction (reported in < 1% of cases)
- Retrograde ejaculation (> 70%) – back flow of semen into the bladder during ejaculation.

How do I know if I should seek medical attention urgently after the operation?

- If you see large amounts of blood (a spoonful or more) or heavy clots in the urine.
- If you see blood that is bright red in colour.
- If you feel feverish (temperature > 38 degrees celcius) and you are having shakes and chills.
- If you have a catheter and it is blocked (urine is not draining into the bag).