

Patient Expectations Following Greenlight XPS

1. **Hematuria** – it is common for men to have light pink to cherry red urine following the procedure. This small amount of blood in the urine usually resolves within 7-14 days after the procedure however may persist slightly longer for those men on blood thinners such as Aspirin, Coumadin, Plavix or Pradox. If possible, such medications should be discontinued for 2 weeks following the Greenlight intervention. Similarly, patients should avoid strenuous activities to allow the prostatic tissues to heal for 2 weeks and drink lots of fluids to rinse the urinary system. This also includes avoiding constipation during the early post-operative period to avoid forcing to defecate.

2. **Dysuria** – it is common in 30-50% of men to have light burning during urination for 3-4 weeks after the procedure. Discomfort is really only during the passage of urine, particularly at the end of voiding (terminal dysuria). Otherwise, there is really not much pain. The burning during passage of urine is due to the inflammation in the prostatic urethra (channel in the prostate) that was opened by the Greenlight laser and that is healing. Anti-inflammatories (Ibuprofen/Motrin) medication is usually recommended for the initial 2 weeks after the surgery to minimize this discomfort. Dysuria can come times last longer, particularly in men with diabetes, elder age >70, on prednisone or having prostate radiation previously. These medical situations all delay healing- as such, longer time is needed to heal. If the burning however begins to increase after the surgery, or is associated with a fever, this may be a sign of an infection. A physical evaluation by a physician and a urine culture will be needed.

3. **Tissue debris in urine** – it is common after the procedure to pass small fragments in the urine. This usually resolves in 4-6 weeks after the procedure. This is related to the thin coagulated area in the channel of the prostate that sloughs off and is eliminated in the urine. This is a natural process of healing to allow the new underlying layer of tissue (urothelium) to grow. Drink plenty of water and fluids to help keep the urine clear.

4. **Urinary urgency and frequency** – it is common for 20-25% of men to have an overactive bladder associated to either medical conditions, the inflammation of the prostate and bladder neck as well as the chronic obstruction caused by the prostate. Most often, the frequency of small voided volumes and rapid need to go to the bathroom should dissipate within 2 weeks of the surgery. If not, a physical evaluation by a physician and a urine culture will be needed. A bladder ultrasound should also be done to ensure that there is no urinary retention. Possible treatment for an overactive bladder that persists after 3-4 weeks may include a medication that relaxes the bladder muscle wall (anticholinergic muscle – ie. Vesicare, Ditropan, Detrol).

5. **Urinary incontinence** – Occasionally, <5% of men experience urinary leakage after transurethral prostate resection, be it conventionally or laser. By unblocking the prostate, there is less resistance and the sphincter muscle below the prostate may need exercises to reinforce continence. This is referred to as the Kegel exercises. Incontinence may be divided into 3 different categories:

-**Stress incontinence:** leakage that occurs during abdominal forcing such as coughs, standing up, straining. This occurs more frequently in men >70, men with a prolonged catheter, neurological diseases (Parkinsons, Alzheimers, vertebral disc disease and other neuromuscular conditions) as well as diabetics. In these instances, the muscle of the sphincter is weak and needs to be reinforced with exercises and perhaps a pelvic physiotherapist.

-**Urge incontinence:** leakage that occurs not related to movements but do to a bladder spasm. Occasionally, due to an overactive bladder (urinary frequency and urgency), the bladder muscle contracts involuntarily and pressure on the urine stored in the bladder is forced out. The treatment here would include the use of medication that relaxes the bladder muscle wall (anticholinergic muscle – ie. Vesicare, Ditropan, Detrol).

-**Total incontinence:** Very rarely, in <1%, men may have constant leakage of urine following the surgery. This may be related to a weakening or injury of the sphincter muscle during the treatment. Similarly, men with chronic catheterization prior to surgery and those with neuromuscular diseases may also have a very weak urinary sphincter. Aggressive Kegel exercises and the assistance of a pelvic physiotherapist to biofeedback care will be needed.

6. **Retrograde ejaculation:** Although undesirable and concerning, particularly for younger men, retrograde ejaculation is **not** a harmful condition. This is expected to occur in 80% of men following any prostatic surgery procedure- standard transurethral resection of the prostate or Greenlight. The elimination of resistance from the prostate allows the semen/ejaculate into the bladder rather than out through the penis. Occasionally, this may return within the 1st year after surgery however may persist in 60-70% of men after prostate surgery.

7. **Erectile dysfunction:** The impact of laser treatment on prostate tissues and nerve tissue outside the capsule of the prostate for erections is much less than compared to the standard TURP surgery with electrical loop. In 2 recent published series, the impact of Greenlight surgery on erectile function was minimal with only 5% of men noting a decrease in erection function. In cases where erections are weakened, medications such as Viagra, Cialis or Levitra can be offered. Interestingly, in the current literature, there are a significant number of men that have even noted an improvement in erectile function following Greenlight surgery. This is multifactorial and may be related to the discontinuation of prostate medications, particularly Proscar/Avodart.

8. **Return to activities:** A very common question following Greenlight is the return to work and activities. The answer is dependent on many factors and will be individualized to the patient's medical and social factors.

-Work: In short, most men can resume work in full by 2-3 weeks after the surgery. This is particularly the case for jobs where office deskwork is dominant. In instances where heavy lifting (>50 lbs) is required, 3-4 weeks may be suggested to allow complete healing and avoid delayed bleeding (hematuria). This is especially the case for any men on anticoagulation medication such as Aspirin, Coumadin, Plavix or Pradox.

-Sexual activity: Patients should avoid sexual activity for 2-3 weeks following surgery to allow adequate healing of the prostate. Clinical signs that healing is resolving is the hematuria and dysuria. Too early engagement in sexual activity may increase blood in the urine as well as the prostatic discomfort.

-Diet: Patients can enjoy a full, regular diet following the surgery. Plenty of fluids, particularly water should be encouraged. Fluids that irritate the bladder such as alcohol, caffeine (tea/coffee) and spicy foods should be avoided during the initial 2 weeks of healing.

9. Preparation for initial office visit: At the first office visit, all patients should come with a relatively full bladder. A urine flow study along with a bladder ultrasound scan will be performed to assess the speed and emptying of the bladder. You will also be asked complete the International Prostate Symptom Score (IPSS) questionnaire (attached). **Kindly complete this the day prior to your physician visit.**

NAME: _____

International Prostate Symptom Score
STANDARDIZED VOIDING SYMPTOM EVALUATION

DATE: _____

	Not At All	Under 1/5 the time	Under 1/2 the Time	1/2 Time	Over 1/2 the Time	Almost Always	Your Score
1. Incomplete Emptying Over the last month, how often have you had a sensation of not emptying your bladder completely after you finish urinating?	0	1	2	3	4	5	
2. Frequency Over the last month, how often have you had to urinate again less than two hours after you finished urinating?	0	1	2	3	4	5	
3. Intermittency Over the last month, how often have you found you stopped and started again several times when you urinated?	0	1	2	3	4	5	
4. Urgency Over the last month, how often have you found it difficult to postpone urination?	0	1	2	3	4	5	
5. Weak Stream Over the last month, how often have you had a weak urinary stream?	0	1	2	3	4	5	
6. Straining Over the last month, how often have you had to push or strain to begin urination?	0	1	2	3	4	5	
	None	1 Time	2 Times	3 Times	4 Times	5+ Times	Your Score
7. Nocturia Over the last month, how many times did you most typically get up to urinate from the time you went to bed at night until the time you got up in the morning?	0	1	2	3	4	5	
Total IPSS Score →					SUM	→	<u> </u>
Quality of Life Assessment							
How would you feel if you had to live with your urinary condition the way it is now, no better, no worse for the rest of your life? (CIRCLE ONE)	Delighted	Pleased	Mostly satisfied	Mixed	Mostly dissatisfied	Unhappy	Terrible

