




P a t i e n t   I n f o r m a t i o n

A photograph of a male golfer in mid-swing on a golf course. He is wearing a bright green polo shirt, dark navy blue trousers, a white baseball cap, and white golf gloves. He is holding a golf club, likely a driver, and is captured from the back. The background shows a grassy golf course under a clear blue sky. A large, semi-transparent, light brown rounded rectangle is overlaid on the bottom right of the image, containing the text "Freedom From an Enlarged Prostate".

Freedom From an Enlarged Prostate



**GreenLight™** Laser Therapy



Your physician has determined that the symptoms you are experiencing are due to Benign Prostatic Hyperplasia (BPH), also known as an enlarged prostate. Historically, this condition has been treated with medication or an invasive surgical procedure, Transurethral Resection of the Prostate (TURP). Today you have the opportunity to choose an advanced, treatment option known as GreenLight™ Laser Therapy.



## What is the Prostate?

The prostate is a gland in the male genital-urinary tract. The main function of the prostate is to produce fluid that transports sperm during ejaculation. The prostate is located below the bladder and surrounds the urethra. The urethra is the tube that carries urine from the bladder through the penis. Another name for the urethra is the urinary channel.

## What is BPH (Benign Prostatic Hyperplasia)?

BPH is a non-cancerous (benign) enlargement of the prostate. Your prostate grew to normal size during your teenage years. Usually, the prostate grows to the size of a walnut. The prostate may begin to grow again when a man reaches middle age. The reasons for this growth are not fully known. By the age of 80, 80% of men have BPH. BPH causes symptoms in many older men.

**Normal Prostate**



**Enlarged Prostate**



## What are the Symptoms of an Enlarged Prostate?

An enlarged prostate presses on the urethra. The pressure can obstruct the flow of urine through the urethra. Obstruction of the flow of urine can cause problems, including:

- **Frequent urination, especially at night** (*nocturia*)
- **Weak urine flow**
- **Sudden urge to urinate** (*urgency*)
- **Trouble starting and stopping your urine stream** (*hesitation*)
- **Inability to completely empty your bladder**
- **Pushing or straining to urinate**
- **Pain or burning during urination**

## How Severe are My Symptoms?

The American Urological Association (AUA) has developed a questionnaire to help you and your doctor determine the severity of your BPH symptoms. This questionnaire is called the AUA Symptom Index.

You may determine the severity of your own symptoms by completing the AUA Symptom Index on the next page. Circle your score for each question. Add the total of all of the numbers you circled to determine your Total Symptom Score.

## AUA BPH Symptom Score Questionnaire

*Courtesy American Urological Association 1992*

### Question

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**Incomplete emptying:** Over the past month, how often have you had a sensation of not emptying your bladder completely after you finished urinating?

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**Frequency:** Over the past month, how often have you had to urinate again less than 2 hours after you finished urinating?

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**Intermittency:** Over the past month, how often have you found that you stopped and started again several times when you urinated?

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**Urgency:** Over the past month, how often have you found it difficult to postpone urination?

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**Weak-stream:** Over the past month, how often have you had a weak urinary stream?

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**Straining:** Over the past month, how often have you had to push or strain to begin urination?

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**Nocturia:** Over the past month, how many times did you typically get up at night to urinate?

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**Symptom Score** *Add up the points for all questions to determine the severity of your symptoms*

Your AUA Symptom Score will indicate the severity of your BPH symptoms.

**Symptom Score (Severity) — 1 to 7 (Mild), 8 to 19 (Moderate), 20 to 35 (Severe)**





**Freedom** to be yourself again





## What is GreenLight™ Laser Therapy?

GreenLight™ Laser Therapy is a procedure performed with a small fiber that is inserted into the urethra through a cystoscope. The fiber delivers high powered laser energy which quickly heats up the prostate tissue, causing the tissue to vaporize. This process is continued until all of the obstructive prostate tissue has been removed. Natural urine flow is rapidly restored and urinary symptoms are quickly relieved in most patients.

GreenLight Laser Therapy combines the effectiveness of the “gold standard” transurethral resection of the prostate (TURP) surgical procedure with fewer side effects. The result is a wide open channel for urine flow to pass through, but with fewer risks of side effects, including erectile dysfunction and bleeding, common with TURP.

GreenLight Laser Therapy can be performed in a hospital outpatient center, surgical center, or specially equipped physician's office. Typically no overnight stay is needed. However, in some cases when a patient travels a long distance, has other medical conditions to consider, or is in frail condition an overnight stay may be recommended.



## What to Expect **DURING** Your GreenLight™ Laser Therapy Treatment

First, the physician will perform an evaluation to see if you are a candidate for this therapy. Then, on the day of your procedure, you will come to the treatment center. You should have someone drive you home since this an outpatient procedure.

Each patient is different, therefore treatment procedures may vary. Below is a general description of the procedure and what to expect:

1. Before treatment your physician may give you medication to help you relax during the procedure. Other medications that your physician may give you are to avoid infections.
2. You may be asked to empty your bladder.
3. You will be brought into the procedure room and moved to the treatment bed where you will lie on your back. You will be provided anesthesia that will allow you to sleep through the entire procedure. Depending on the treatment center, other types of anesthesia may be used, including spinal block or pudendal block.
4. Once you are asleep or the anesthesia block takes effect, your physician will insert a cystoscope through the urethra.
5. The laser fiber is introduced through the cystoscope and advanced into the urethra at the location of the prostate.



6. The physician systematically vaporizes the enlarged prostate tissue until the obstruction is removed.
7. At the end of the procedure the physician may place a temporary catheter to let urine drain from your bladder.

**Enlarged Prostate**



**During GreenLight  
Laser Procedure**



## What to Expect **AFTER** Your GreenLight™ Laser Therapy Treatment

Since this is an outpatient procedure, you will typically go home within a few hours after treatment. You should have someone drive you home after the procedure.

If a catheter was placed in your bladder at the end of the procedure, it will typically be removed within 24 hours. However, patients with compromised bladder function or those who have required prolonged catheterization as a result of severe urinary symptoms may require a catheter for a longer period of time.

Most patients experience very rapid relief of symptoms and a dramatic improvement in urine flow. This typically occurs within 24 hours of the procedure. However, medical history, health condition and other factors can influence treatment recovery.

**Enlarged Prostate**



**After GreenLight Laser Procedure**



You may experience mild discomfort such as slight burning during urination and small amounts of blood in your urine for a week or so. Also, depending on the condition of your bladder, you may experience greater frequency and urge to urinate.

This will resolve over time as your bladder adjusts now that the obstruction in your urethra has been removed.

## What are the **ADVANTAGES** of a GreenLight Laser Therapy Treatment?

- **Rapid urine flow improvement** <sup>2</sup>
- **Quick return to normal activities** <sup>7</sup>
- **Virtually bloodless procedure** <sup>2,3,5</sup>
- **A definitive, long lasting treatment** <sup>4</sup>
- **Less than 1% reported cases of erectile dysfunction** <sup>1</sup>
- **Short to possibly no catheterization**  
*(less than 24 hours in most cases)* <sup>8</sup>
- **Outpatient procedure in otherwise healthy patients** <sup>8</sup>
- **Over 500,000 patients treated worldwide**

1. Malek RS, Kuntzman RS, Barrett DM. Photoselective potassium-titanyl-phosphate laser vaporization of the benign obstructive prostate: observations on long-term outcomes. J Urol. 2005 Oct;174 (4 Pt 1):1344-8.

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3 Ruszat R, Wyler S, Seifert H-H, et al. Photoselective vaporization of the prostate: subgroup analysis of men with refractory urinary retention. Eur Urol 2006;50:1040-9, discussion 1049.

4 Hai MA. Photoselective vaporization of prostate: five-year outcomes of entire clinic patient population. Urology 2009;73:807-10.

5 Bouchier-Hayes DM, Anderson P, Van Appledorn S, Bugeja P, Costello AJ. KTP laser versus transurethral resection: early results of a randomized trial. J Endourol 2006;20:580-5.

6 EAU Guidelines on Laser Technologies Thomas R.W. Herrmann a,\*; Evangelos N. Liatsikos b; Udo Nagele c; Olivier Traxer d; Axel S. Merseburger a EAU Guidelines Panel on Lasers, Technologies a Department of Urology and Urooncology, Medical School of Hanover [MHH], Hanover, Germany; b Department of Urology, University Hospital of Patras, Patras, Greece; c Department of Urology and Andrology, Bezirkskrankenhaus Hall, Hall in Tirol, Austria; d Department of Urology, Hoˆpital Tenon, Paris, France

7 GreenLight HPS 120-W Laser Vaporization versus Transurethral Resection of the Prostate for the Treatment of Lower Urinary Tract Symptoms due to Benign Prostatic Hyperplasia: A Randomized Clinical Trial with 2-year Follow-up Capitan C, Blazquez C, Martin MD, Hernandez V, de la Peˆna E, Llorente C Eur Urol. 2011Oct; 60(4): 734-739

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## What are the **RISKS** of a GreenLight™ Laser Therapy Treatment?

Every medical treatment may have side effects. The same is true for GreenLight Laser Therapy. Below are common side effects experienced with GreenLight:

- Hematuria – Blood in the urine
- Bladder urgency – An urgent need to urinate
- Irritation of the urinary tract – Frequent urination, burning sensation
- Retrograde ejaculation

*You should contact your doctor immediately if:*

- You see large amounts of blood (*a spoonful or more*) in your urine
- You see blood that is bright red in color
- You have a temperature in excess of 37°C
- You experience chills or shaking

*Also, if a catheter was placed; contact your doctor immediately if:*

- Your urine drainage bag is not filling with urine
- There is leaking around the catheter



## **What are the Alternative Treatments for BPH?**

- Watchful waiting
- Drug therapy
- Microwave or heat therapies
- Other lasers
- More invasive surgical procedures

## Frequently Asked Questions about GreenLight™ and Enlarged Prostate

### **Q. Is BPH a type of cancer?**

A. No, BPH is not a type of cancer

### **Q. Do I have to stay in the hospital after a GreenLight procedure?**

A. GreenLight is generally an out-patient procedure. Typically, no overnight stay in the hospital is required, but it will depend on your individual condition.

### **Q. Will the GreenLight Laser Therapy treatment affect my sexual function?**

A. More than 99% of patients treated with GreenLight Laser Therapy did NOT experience any form of erectile dysfunction following treatment.<sup>1</sup> If you are sexually active, you can look forward to remaining so. However, approximately 30% of patients experience retrograde ejaculation.<sup>1,2</sup>

### **Q. How long before my symptoms improve?**

A. Most patients experience very rapid relief of symptoms and improvement in urine flow within 24 hours of the procedure. However, medical history, health conditions, and other factors can influence treatment and recovery.





**Q. Will I continue to need BPH medications after the GreenLight Laser Therapy treatment?**

A. As with any medication, ask your doctor what regimen is appropriate for you.

**Q. How soon can I return to work?**

A. Most patients can resume normal activities within a couple of days. Strenuous activities can be resumed within two weeks. Your urologist will discuss this and your specific condition with you during your consultation.

**Q. How long do the results last?**

A. Clinical studies report that GreenLight Laser Therapy offers rapid and lasting symptom relief for at least five years. *(Based on 5 year follow-up data).*

1. Malek RS, Kuntzman RS, Barrett DM. Photoselective potassium-titanyl-phosphate laser vaporization of the benign obstructive prostate: observations on long-term outcomes. J Urol. 2005 Oct;174(4 Pt 1):1344-8.

2. Barber NJ, Muir GH. High-power KTP laser prostatectomy: the new challenge totansurethral resection of the prostate. Curr Opin Urol. 2004 Jan;14(1):21-5.

## Glossary

**Benign Prostatic Hyperplasia (BPH):** A non-cancerous enlargement of the prostate.

**Bladder spasm:** Involuntary contraction of muscles affecting the bladder wall.

**Catheter:** A flexible tube for withdrawing fluids from (or introducing fluids into) a cavity of the body, especially for inserting into the bladder, through the urethra, to remove urine.

**Cystoscope:** An instrument used to look at the urethra and inside the bladder.

**Erectile dysfunction:** Unable to have or maintain an erection of the penis.

**Genital:** All parts of the reproductive system. The visible body parts are commonly referred to as "genitals".

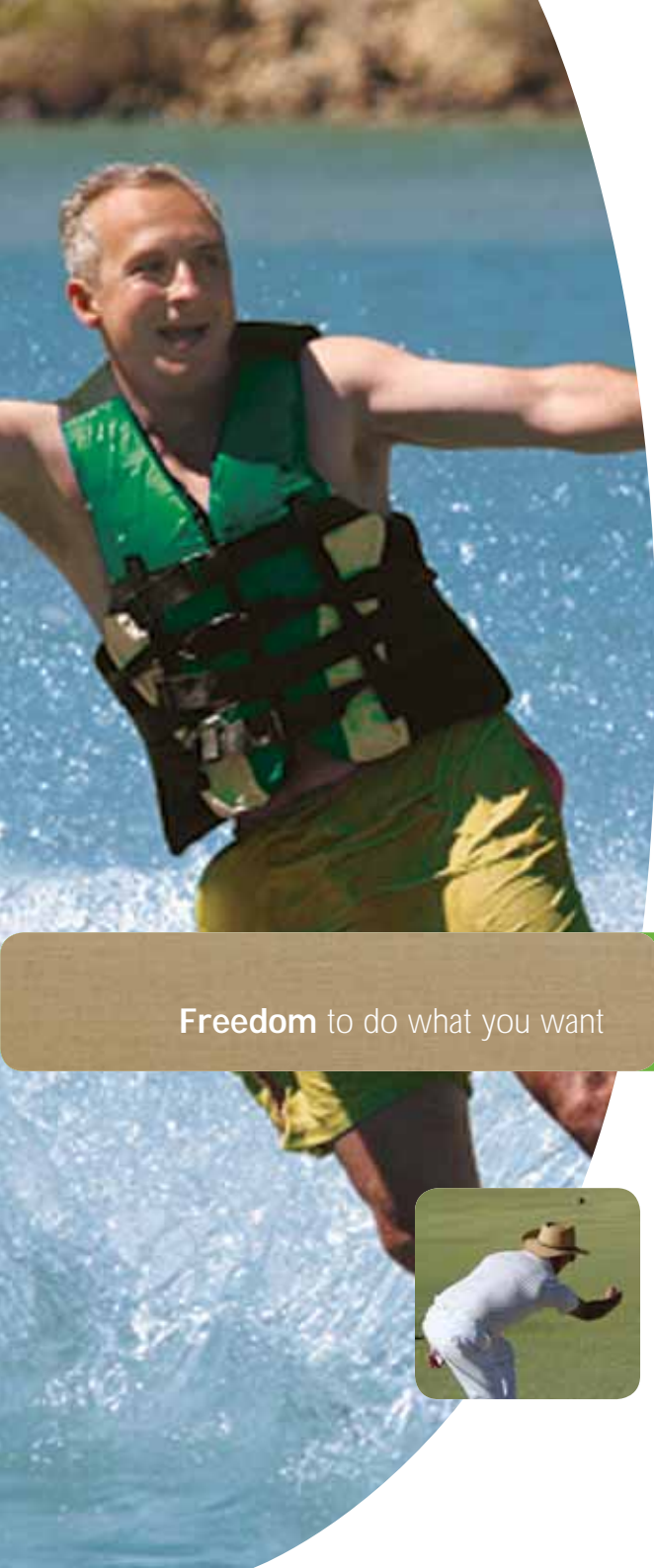
**Hematuria:** Blood in the urine.

**Laser energy:** A highly concentrated, very intense beam of light energy that can create very high temperatures.

**Retrograde ejaculation:** Ejaculation backwards into the bladder instead of forward through the urethra.

**Transurethral:** To the urethral tube through the penis.

**Urethra:** The tube through which urine is passed from the bladder.



**Freedom** to do what you want



All surgical treatments have inherent and associated risks. The most common risks associated with Photoselective Vaporization of the Prostate (PVP) are: hematuria; short term dysuria; and, urinary tract infections. You should talk with your doctor about benefits and risks before moving forward with any treatment option.



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