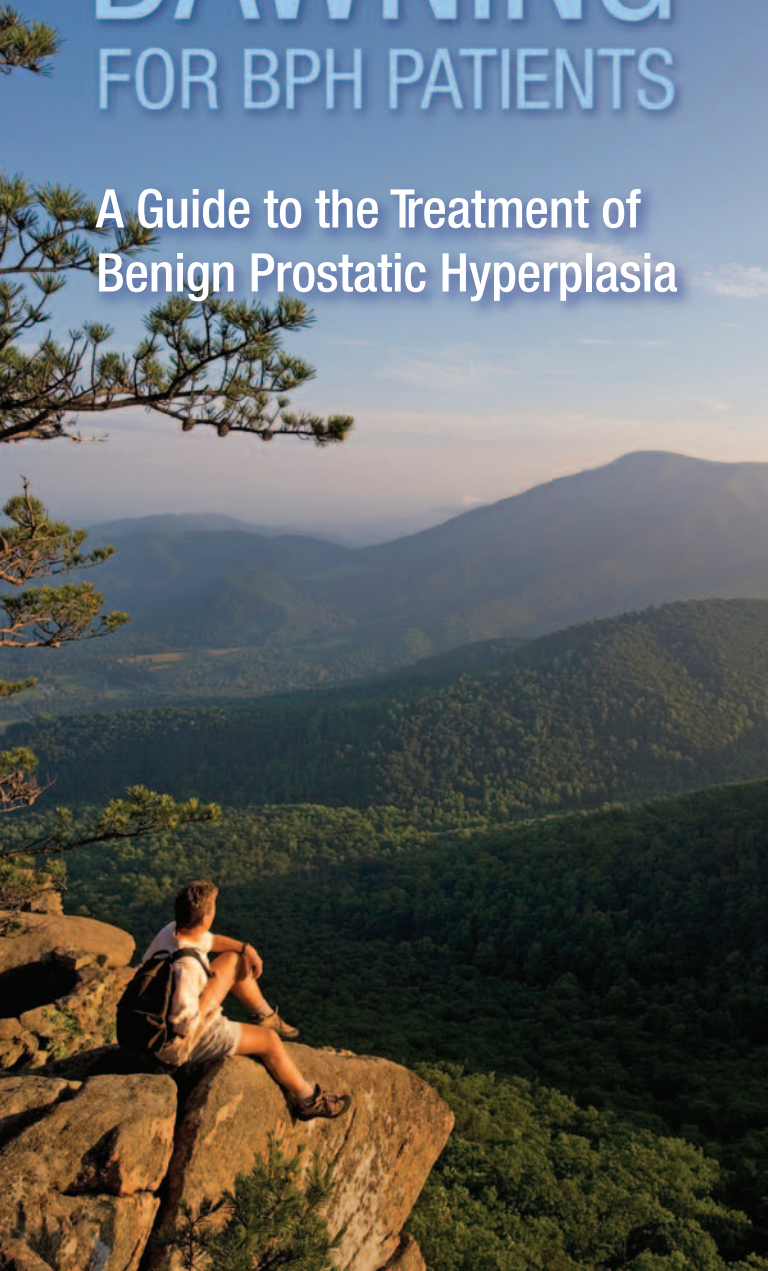


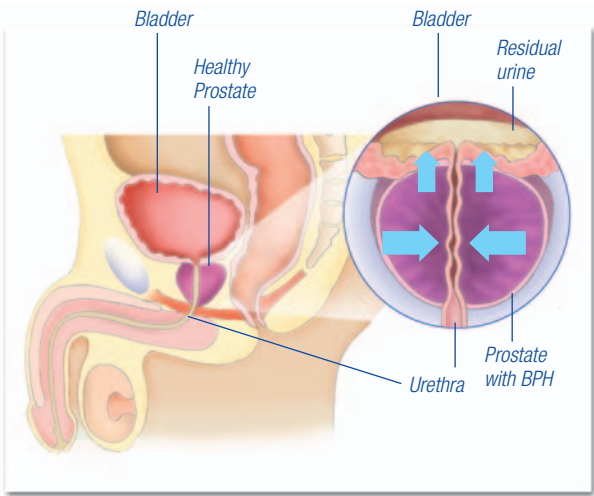
# A NEW DAY IS DAWNING FOR BPH PATIENTS

A Guide to the Treatment of  
Benign Prostatic Hyperplasia



## What is the Prostate?

The prostate gland is a part of the male reproductive system that produces most of the seminal fluid. A normal prostate is the size of a chestnut and weighs about 20 grams. It is situated below the urinary bladder and surrounds parts of the urethra, which is the tube that carries urine from the bladder to exit the body.



*Fig. 1: Anatomy of a healthy (left) and an enlarged (right) prostate gland. The arrows symbolize the pressure on the urethra.*

## Benign Prostatic Hyperplasia (BPH) by Definition

The prostate begins to enlarge as a natural process of aging. In some men, the increase in size causes urination problems. Doctors refer to this condition as benign (non-cancerous) prostatic hyperplasia (BPH) or benign prostatic syndrome (BPS). Not all men who have an enlarged prostate experience symptoms. Yet if the prostate gland begins to expand substantially, it presses on the urethra and narrows it (see Fig. 1). This leads to the typical voiding disorders. Today, many men suffer from

the symptoms of BPH. The number increases with age: about 30 percent of men over 50, 40 percent of men over 60 and up to 50 percent of those over 70 years of age.<sup>1</sup>

## What are the Symptoms of BPH?

BPH manifests a variety of symptoms<sup>1</sup> that differ from patient to patient. The narrowing of the urethra causes various urination problems such as:

- Difficulty starting to urinate
- Sudden, recurrent urge to urinate
- Dripping and leaking after urination
- Interrupted, slow or weak urine stream
- Frequent urination, especially at night
- Painful, pushing or straining to urinate
- Inability to empty the bladder completely

Sometimes these symptoms can reduce the quality of life to such a great extent that those affected build their daily routines around the condition. They avoid drinking or plan their errands around easy access to toilet facilities. When symptoms are interfering with daily routine, it is highly recommended that patients consult a physician for an effective therapy. If BPH is not treated, it holds considerable risks. Without treatment it can lead to complications such as severe urinary tract infections, urinary retention or even kidney failure.



# Determine Your BPH Symptoms

The American Urological Association symptom index is used to determine your symptom severity. Please answer the following

Over the past month	Not at all
1. How often have you had the sensation of not emptying your bladder completely after you finished urinating?	0
2. How often have you had to urinate again less than two hours after you finished urinating?	0
3. How often have you found you stopped and started again several times when you urinated?	0
4. How often do you find it difficult to postpone urination?	0
5. How often have you had a weak urinary stream?	0
6. How often have you had to push or strain to begin urination?	0
7. 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?	None

Add Symptom Scores:

**Total AUA Symptom Score** =

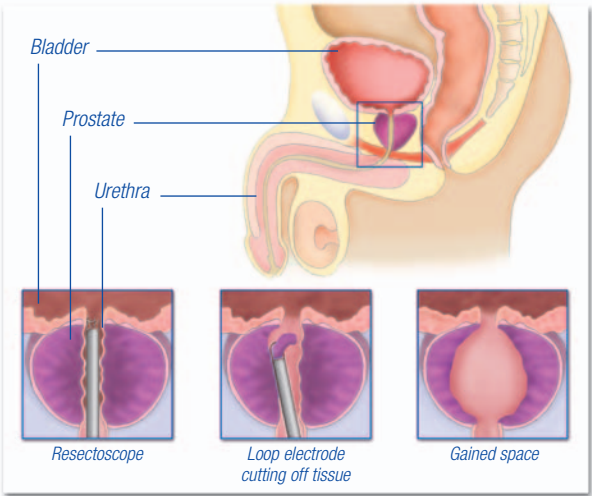
questions based upon your experience over the past month.  
 Circle your answers and add up your scores at the bottom.

Less than one time in five	Less than half the time	About half the time	More than half the time	Almost always				
1	2	3	4	5				
1	2	3	4	5				
1	2	3	4	5				
1	2	3	4	5				
1	2	3	4	5				
1	2	3	4	5				
1	2	3	4	5				
1	2	3	4	5				
<input type="text"/>	+	<input type="text"/>	+	<input type="text"/>	+	<input type="text"/>	+	<input type="text"/>

The total score runs from 0 to 35 points. Higher scores indicate more severe symptoms. Scores less than seven are considered mild and generally do not warrant treatment. Regardless of the score, if your symptoms are bothersome you should notify your doctor.

# BPH Therapy

BPH therapy aims at reducing the patients' symptoms and improving their quality of life. Moderate symptoms can usually be treated successfully with medication. Surgery becomes necessary in cases where the medication is either not effective, not well tolerated, or if there are severe complications. Ultimately, three out of ten men suffering from benign prostatic hyperplasia have to undergo surgery. Surgery constitutes the



*Fig. 2: Conventional TURP: obstructive tissue is sliced away with a wire loop electrode.*

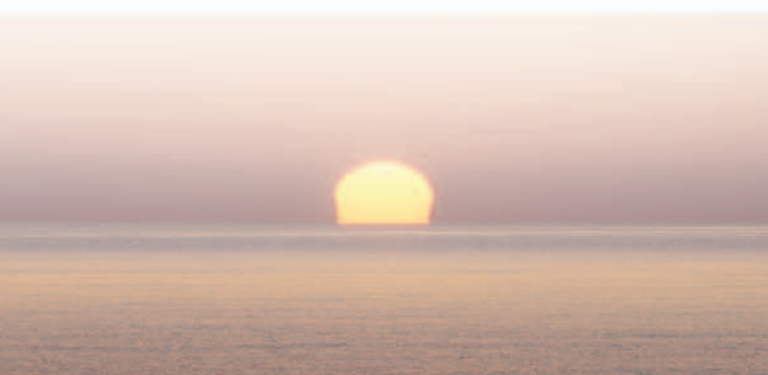
most effective and permanent treatment option, as it directly targets the cause of the problem. The enlarged tissue is surgically removed and the urethra is relieved from the pressure.

Today, doctors can choose from a variety of safe and effective minimally invasive surgical options by which the prostatic tissue is removed through the penis via the urethra (transurethral).

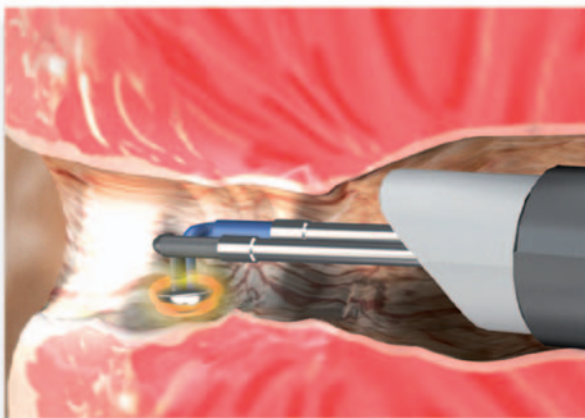
Transurethral resection of the prostate (TURP) represents the standard procedure, and has been performed in the most cases to date. TURP is usually performed under general or spinal anesthesia. The surgeon reaches the prostate by inserting a thin, tube-like instrument (resectoscope) through the urethra. A light source and a very small camera attached to the resectoscope allow the surgeon to see a magnified view of the prostate. A wire loop electrode at the tip of the resectoscope is passed along the enlarged prostatic tissue as the surgeon cuts away the obstructing tissue one piece at a time. The prostate is virtually “shelled out” from the inside and symptoms are reduced effectively (see Fig. 2). Despite the gentle, minimally invasive treatment, there is a chance of side effects such as bleeding or tissue irritation.

## **New and More Gentle Button Plasma Vaporization**

Button plasma vaporization is a completely new surgical option that is now available to doctors for the treatment of benign prostatic hyperplasia. It is an innovative advancement to a conventional TURP in which prostate tissue is removed more gently using low temperature plasma energy. This device is not for use in treating prostate cancer.



As opposed to the conventional TURP, this new procedure does not cut and shave off tissue with a loop or burn it away with a laser, but gently vaporizes the tissue with a small button-shaped electrode. Using low-voltage energy, a plasma field is created that coats the half-spherical shaped button. Tissue in contact with this plasma field is vaporized. The surgeon uses a unique



*Fig. 3: The new Button gliding over the tissue, vaporizing it without cutting.*

hovering technique so there is virtually no direct contact needed between the Button and tissue. This advanced Button not only vaporizes the enlarged tissue, it also coagulates the remaining healthy tissue and leaves behind a smooth surface. Bleeding during and after surgery can be minimized from the start encouraging a rapid healing process.

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*The Button represents the forefront  
of innovation for the minimally invasive  
surgical treatment of BPH.*

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Button plasma vaporization constitutes a more advanced procedure than standard loop resection or laser surgery and provides the patient with the maximum degree of safety while being as effective as the current standard treatment option. Even though the tissue is removed more gently, the symptoms



can be relieved just as effectively and with the same long lasting results as prior standard procedures including some types of minimally-invasive procedures that may require a second treatment.

## After Button Plasma Vaporization – Quick Recovery

In contrast to other standard energy treatments that operate with high temperature, the Button plasma vaporization uses low temperature plasma energy to safely remove BPH tissue while minimizing damage to surrounding healthy tissue. Personal risks of side effects following surgery are based on individual results; however, the Button vaporization method may minimize the side effects resulting in:<sup>2</sup>

- Short procedure time
- Short catheterization time following the procedure
- Brief post-operative hospital stay
- Minimal post-operative discomfort
- Quick return to normal activities



## What are the Potential Risks of the Button Plasma Vaporization Therapy?

Every medical treatment may have side effects. The same is true for the Plasma Button Therapy. The potential side effects are:

- Blood in the urine
- Cramping in the bladder or an urgent need to urinate
- Frequent urination, burning sensation

You should contact your doctor immediately if:

- You see large amounts of blood in your urine
- You have a temperature in excess of 101° F
- You experience chills or shaking

The risk for serious complications depends on your medical condition and age, as well as on the experience of the surgeon and anesthesiologist. Ask your doctor what you should expect after surgery, as well as the risks that may occur with surgery.

Alternative non-surgical treatments for BPH:

- Watchful waiting
- Drug therapy
- Microwave or heat therapies



## Glossary of Terms

**Benign Prostatic Hyperplasia (BPH)** Enlargement of the prostate not caused by cancer.

**Bladder** A pouch of flexible muscle where urine is temporarily stored before voiding out of the body through the urethra.

**Catheterization** A thin, flexible tube (catheter) is passed into the bladder to allow urine to drain.

**Plasma** Plasma is an electrically conductive cloud or gas that is created when radio frequency energy contacts the tissue. This conductive cloud or “plasma” allows the energy to cross at lower energy levels.

**Prostate** A walnut-shaped gland in men that surrounds the urethra at the neck of the bladder and supplies the fluid for semen.

**Resection** Removal of a portion or all of an organ or other structure.

**Resectoscope** A narrow, tube-shaped instrument used to visualize the urologic anatomy and resect tissue.

**Urethra** The canal through which urine leaves the bladder to exit the body.

**Vaporization** The transition of a solid (tissue) directly into a gas.

#### Notes

1. Roehrborn CG, McConnell JD, *et al.* AUA Guideline on the Management of Benign Prostatic Hyperplasia (BPH). Available at: <http://www.auanet.org/content/guidelines-and-quality-care/clinical-guidelines.cfm?sub=bph>
2. These statements refer to clinical results based on the Olympus Button Vaporization Electrode used with the Olympus UES-40 Electrosurgical Generator.

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