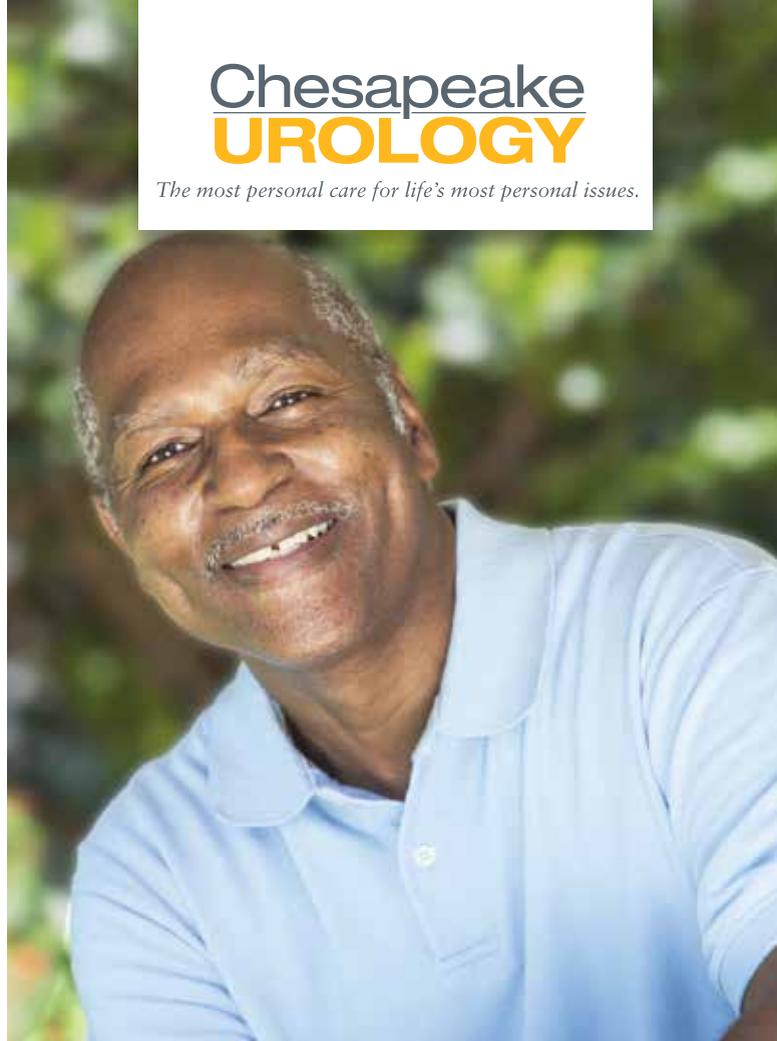


Chesapeake UROLOGY

The most personal care for life's most personal issues.



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Chesapeake Urology physicians are specially-trained in the most advanced, minimally invasive therapies for treating your enlarged prostate/BPH symptoms and restoring your quality of life.

To learn more about Chesapeake Urology and the diagnosis and treatment of enlarged prostate/BPH – visit www.chesapeakeurology.com or call 877-422-8237 to schedule an appointment with one of our experienced urologists.

OVERCOMING ENLARGED PROSTATE/BPH

A Patient's Guide

877-422-8237

www.chesapeakeurology.com

Overcoming Enlarged Prostate/BPH



Benign Prostatic Hyperplasia (BPH), also known as enlarged prostate, is a common, benign (not cancerous) condition in older men in which the prostate gland enlarges. The prostate is a walnut-sized gland that produces semen, the fluid that transports sperm. Located below the bladder and surrounding the urethra (the tube carrying urine out of the body), an enlarged prostate can squeeze the urethra and cause difficulty with urination.

As many as 50% of men experience symptoms of an enlarged prostate by age 60, and 90% of men will report symptoms by age 85.

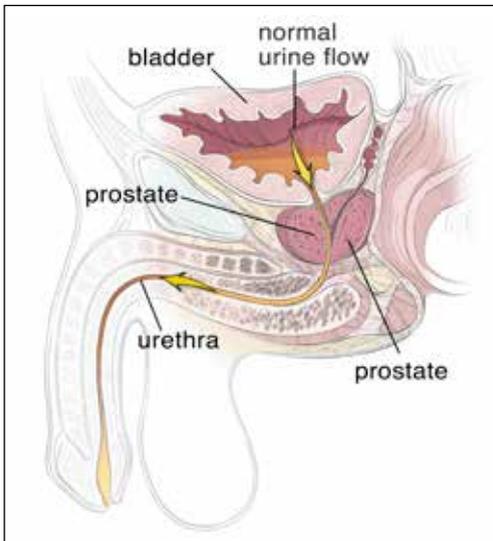
Source: National Association for Continence

Rest assured that when enlarged prostate affects your life, the specialists at Chesapeake Urology have the experience and the results that men want and need to restore quality of life and alleviate the symptoms of an enlarged prostate. From more conservative, non-surgical measures to innovative minimally invasive procedures, our urologists provide the most advanced care for men living with enlarged prostate.

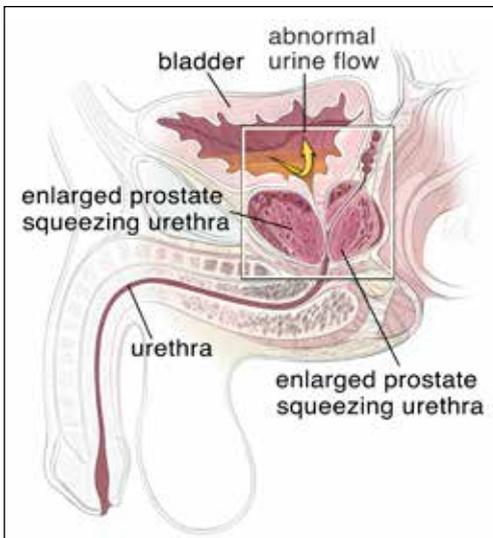
What Causes an Enlarged Prostate?

Benign Prostatic Hyperplasia (BPH) is related to the normal aging process and is influenced by changes in the body's levels of the male hormone testosterone. In some cases, an enlarged prostate may also be genetic. More than half of men age 50 and older and 90 percent of men age 80 and older have enlarged prostate.

Normal Prostate



Enlarged Prostate / BPH



Symptoms of an Enlarged Prostate/BPH

While some men with an enlarged prostate experience no symptoms, many others may experience a variety of urinary symptoms that can range from mild and barely noticeable to severe and life-altering.

Some of the more common symptoms men with enlarged prostate experience include:

- Recurring, sudden need to urinate.
- Increasingly frequent urination, especially at night.
- Weak or interrupted urine stream.
- Difficulty starting urination.
- Urine leakage (urinary incontinence).
- Inability to completely empty the bladder.

Caffeine, alcohol, spicy or acidic foods, certain cold and pain medications, and constipation can make symptoms worse. Left untreated, symptoms may worsen over time and can cause complications that may include inability to urinate (urinary retention), bladder or kidney damage, bladder stones or urinary tract infections.

Men experiencing any of these urinary symptoms should have a thorough evaluation performed by a urologist as other conditions such as a urinary tract infection, prostatitis (inflammation of the prostate), overactive bladder, prostate cancer and diabetes can cause similar symptoms.

Diagnosing Enlarged Prostate/BPH

The first step to diagnosing enlarged prostate is to see a urologist experienced in treating enlarged prostate. Your doctor will take a complete medical history and perform a physical exam, urinalysis, as well as a digital rectal exam (DRE). Your urologist may order blood work that includes a prostate specific antigen (PSA) test. Elevated levels of PSA can indicate enlarged prostate, prostatitis (prostate inflammation) or prostate cancer. Through this comprehensive evaluation, your urologist will determine whether your urinary symptoms are indeed caused by enlarged prostate and next steps to treating your urinary symptoms.

Additional tests to make the most accurate diagnosis may include:

- **Uroflow:** Measures the flow of your urine stream and is often performed in patients who have an obstruction or other problems with urination.
- **Bladder Ultrasound (post void residual):** A non-invasive ultrasound test that assesses the ability of the bladder to empty.
- **Cystoscopy:** A small telescope is used to look inside the bladder to assess your internal prostate size and your bladder for stones, tumors, and signs of obstruction or other abnormalities that may cause your symptoms.
- **Urodynamics:** A procedure which helps determine whether a blockage of the prostate is the cause of your urinary symptoms. This test is also useful to assess bladder function.
- **Pelvic ultrasound:** Ultrasound to assess prostate size. This test is also useful to assess bladder function.
- **Urocuff:** A novel, new non-invasive diagnostic test to assess bladder function and obstruction.

Treatment for Enlarged Prostate/BPH

Treatment for enlarged prostate focuses on alleviating bothersome symptoms and will depend on the severity of your symptoms and how much they interfere with your lifestyle. Men with minimal urinary issues may only need to make lifestyle changes; those with more pronounced symptoms or complications from an enlarged prostate may require medication or a minimally invasive procedure to restore urinary function and quality of life. Your doctor can help you determine which treatment is most appropriate for you.

Lifestyle Changes

- Avoid caffeine, acidic drinks such as colas, tomato and orange juices, and alcohol. Cold medications containing antihistamines or pseudoephedrine can cause urinary problems. Constipation can also make it more difficult to urinate.
- Limit evening beverages and urinate when you first feel the urge.



Medications for Enlarged Prostate/BPH

Your doctor may prescribe one, or a combination of, medications that can help alleviate many of your urinary symptoms caused by your enlarged prostate. Medications often have some side effects, so talk to your urologist about which medication is right for you.

Medications for enlarged prostate may include:

- **Alpha blockers** such as Flomax and Rapaflo to relax the smooth muscle tissue in the bladder and prostate, making it easier to urinate.

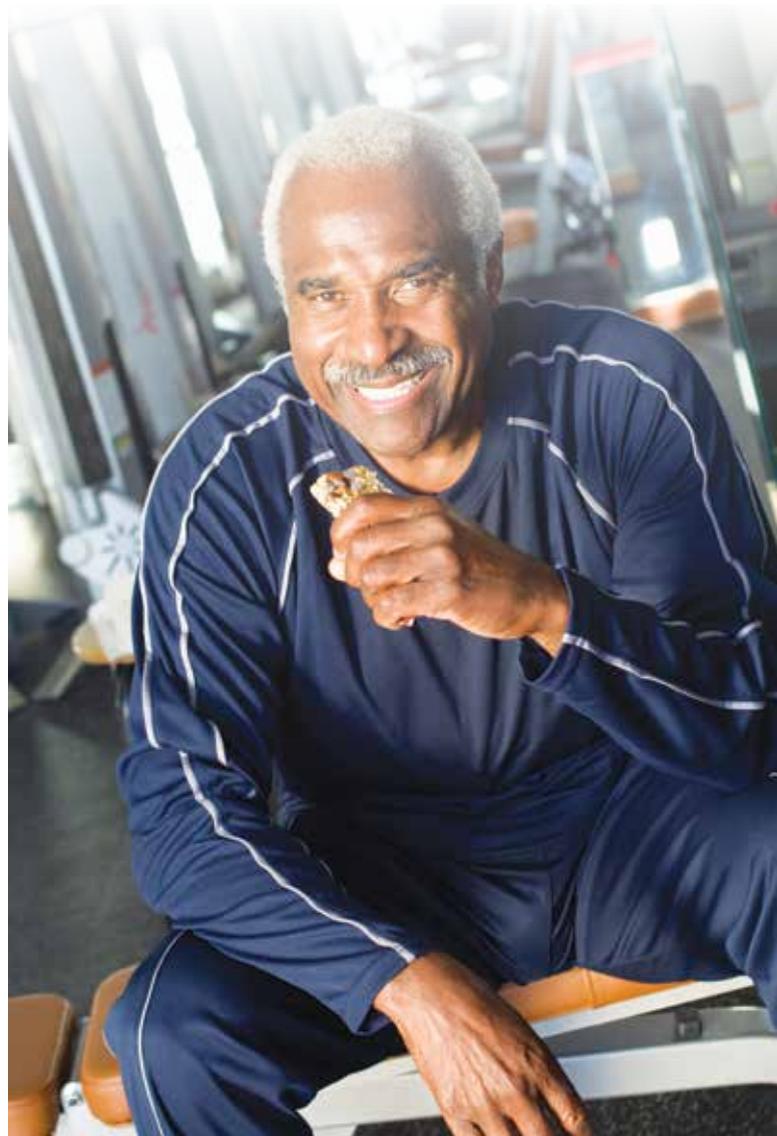
Potential side effects may include: headaches, dizziness, light-headedness, fatigue, ejaculatory dysfunction, and a possible increased risk of stroke or dementia.
- **Enzyme (5-alpha reductase) inhibitors**, such as Avodart and Proscar, shrink the prostate by preventing the conversion of testosterone to dihydrotestosterone, a key ingredient in prostate enlargement. It's important to note that these medications are only indicated for men with extremely enlarged prostates. These medications work by reducing the size of the prostate to help alleviate symptoms such as difficulty beginning urine flow, weak stream and urinary urgency.

Potential side effects may include: erectile dysfunction, decreased libido, reduced semen release during ejaculation, and occasional breast tenderness.
- **Anticholinergics** to relax the bladder muscle and reduce frequency and urgency.

Potential side effects may include: dry mouth, constipation, blurry vision, drowsiness, and memory impairment.

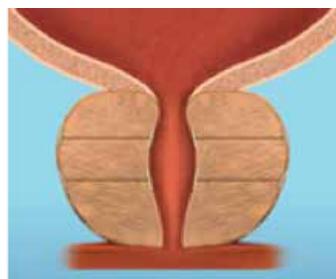
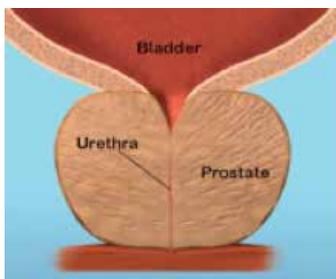
Minimally Invasive Treatments for Enlarged Prostate/BPH

Specialized procedures to treat enlarged prostate are excellent and effective alternatives to long-term medication therapy, often with quick results, fewer side effects and improved quality of life. Your urologist can work with you to determine the best treatment option, which can include one of the following minimally invasive procedures:



The UroLift® System

The UroLift System treatment is a revolutionary, new treatment and is an excellent alternative to long term medications and traditional surgery to treat BPH. This new, minimally invasive approach to treating BPH lifts or holds the enlarged prostate tissue out of the way so it no longer blocks the urethra, relieving urinary symptoms. Permanent implants are inserted utilizing a special delivery device and act like “window curtain tie-backs,” holding the lobes of the enlarged prostate open to relieve obstruction of the urethra. Unlike other prostate procedures, there is no cutting, heating, or removal of prostate tissue involved in this minimally invasive procedure, which minimizes recovery time.



How UroLift Works:

Step 1: The UroLift delivery device is placed through the urethra to access the enlarged prostate.

Step 2: UroLift implants are permanently placed to hold the enlarged prostate tissue out of the way and increase the opening of the urethra.

Step 3: The UroLift delivery device is removed.

Advantages of the UroLift System:

- Minimally invasive procedure with minimal downtime in normal daily activities.
- Outpatient procedure which can be done under local or light sedation.
- No catheter placement is needed.
- Only treatment that preserves sexual function – typically, no sexual side effects such as erectile dysfunction or ejaculatory dysfunction.
- Covered by almost all insurance carriers, and reduces ongoing medication costs.
- Lower urinary tract symptom relief in as early as two weeks after treatment.

Recovery may include:

- Hematuria (blood in urine).
- Temporary urge incontinence.
- Temporary urinary urgency.
- Temporary pelvic pain.
- Very rarely, migrated clips may need to be removed.

The REZŪM® System

Rezūm is a simple and effective office-based treatment that uses thermal energy in water vapor to reduce and shrink obstructive tissue surrounding the prostate. This new, minimally invasive procedure reduces the obstruction from the prostate but minimizes unwanted side effects sometimes experienced with medications or other more invasive procedures (sexual side effects).

How Rezūm works

- A thin device, similar in shape and size to a cystoscope, is inserted into the urethra. A small amount of sterile water is then heated within this device's inductive coil to create stored thermal energy in the form of water vapor.
- Using sterile water vapor (steam), targeted and controlled doses of stored thermal energy are delivered directly to the region of the prostate gland with the obstructive tissue that causes BPH.
- Water vapor is delivered directly into the enlarged tissue that is causing the obstruction, and dispersed through the spaces in the tissue, causing the obstructive tissue to die.
- The tissue that was causing compression of the urethra is reduced, enabling improved urine flow.

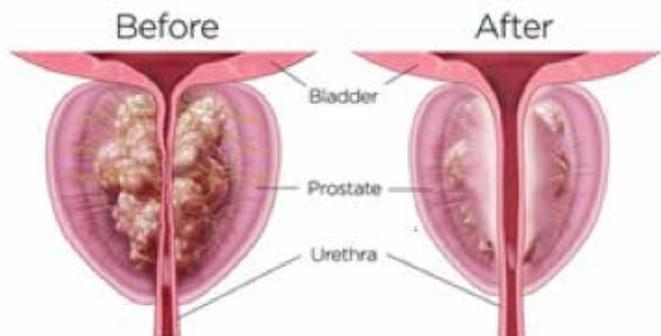
Benefits of Rezūm

Rezūm water vapor therapy has been proven to provide patients with significant improvement in BPH symptoms, including frequency, urgency, weak stream, straining to urinate and nocturia (frequent nighttime urination) while preserving erectile function and urinary continence. Usually patients will note improvement in as early as two weeks, although maximum benefit will be in three months.

- The Rezūm treatment is minimally invasive.
- The procedure takes less than a half hour and can be done awake with local anesthesia or under light sedation.
- Rezūm is performed in your urologist's office or in one of Chesapeake Urology's Summit Ambulatory Surgery Centers (ASC).
- Rezūm is covered by most insurance plans.

Recovery may include:

- Hematuria (blood in the urine).
- Temporary discomfort during urination.
- Temporary increase in urinary frequency.
- Retrograde ejaculation.



Laser Vaporization of the Prostate

Laser vaporization of the prostate (utilizing GreenLight™ Laser Therapy) is a technique that uses a special laser to heat and vaporize the prostate tissue that is obstructing part of the urethra. In studies comparing the laser technique with the more traditional surgical procedure called Transurethral Resection of the Prostate (TURP), GreenLight Laser Therapy improves symptoms of an enlarged prostate and quality of life as effectively, but with fewer side effects.

Most men are good candidates for laser vaporization therapy, which is an outpatient procedure performed in one of Chesapeake Urology's Summit Ambulatory Surgery Centers. In this procedure, a small fiber is inserted into the urethra through a cystoscope. Laser energy is delivered through the fiber to remove the enlarged prostate tissue, restoring natural urine flow and relieving symptoms of enlarged prostate quickly.

Advantages of Laser Vaporization Therapy:

- The procedure is minimally invasive and performed on an outpatient basis.
- Most men return home only a few hours after the procedure.
- Quick recovery and return to normal activities.
- Normal urine flow is restored quickly.
- Very few long term side effects.
- Long-lasting relief from bothersome urinary symptoms.

Risks:

Some patients may experience side effects from laser vaporization treatment such as:

- Urinary tract infection (UTI).
- Retrograde ejaculation (semen released through ejaculation goes into the bladder rather than out of the penis, which can inhibit fertility). This results in a dry climax.

Radio Frequency (RF) Therapy, also known as Transurethral Needle Ablation (TUNA), is an in-office therapy utilizing targeted, low-level radio frequency energy that produces heat to effectively shrink the prostate tissue, allowing men to urinate more normally. RF therapy is an excellent alternative for men who do not wish to take daily medications for the long-term and who wish to avoid the side effects and costs associated with many medications.

Advantages of RF Therapy:

- In-office, safe and effective procedure.
- Fast, long lasting relief from urinary symptoms.
- Minimal side effects.
- Precision of energy waves treat only the targeted area.

Recovery may include:

- Urinary tract infection (UTI).
- Pain, bleeding or discomfort may occur but usually ceases in a few weeks.
- Temporary obstruction (blockage).
- Possible risk of retrograde ejaculation.

Surgical Procedures to Treat Enlarged Prostate/BPH

Minimally invasive surgical procedures performed by an experienced urologist at Chesapeake Urology seek to open a passage through the prostate to allow urine to flow with less effort. Many are called “transurethral” because instruments are passed through the opening at the tip of the penis and into the urethra.

Surgery to treat enlarged prostate is often reserved for men with severe symptoms such as:

- Not being able to urinate or very limited urination.
- Having a partial urethral blockage causing recurrent urinary tract infections (UTIs) or bladder damage.
- Kidney damage and hematuria (blood in urine).

Transurethral Resection of the Prostate (TURP) – In this surgical procedure, obstructing prostate tissue is removed using an instrument called a resectoscope, which is inserted through the urethra. Using the resectoscope, your doctor can remove the prostate tissue that is blocking the flow of urine. This technique is effective at resolving urinary symptoms caused by an enlarged prostate. TURP is typically performed in a Summit Ambulatory Surgical Center (ASC), although in some cases, it may be performed in a hospital.

Side effects of TURP may include:

- Blood clots.
- Retrograde ejaculation/reduction of semen emission (semen released through ejaculation goes into the bladder rather than out of the penis, which can inhibit fertility).
- Erectile dysfunction, which is less common.
- Mild hematuria.
- Urinary tract infection (UTI).
- Temporary difficulty urinating, which usually resolves a few days after the procedure.

Suprapubic Prostatectomy – Reserved for extremely large prostate glands, this is a laparoscopic surgical procedure to remove the obstructing prostate.

A man is most likely to develop enlarged prostate when he has the following risk factors: lack of physical activity, obesity, increasing age, recurring erectile dysfunction, and family history of the same condition.



Clinical Trials for Enlarged Prostate/BPH

Chesapeake Urology has a robust clinical trials program through Chesapeake Urology Research Associates (CURA). A clinical trial is a carefully designed research study that investigates the effectiveness and safety of new and experimental drugs and specific treatments for a particular disease. Well-designed clinical trials are the fastest way to find treatments for a variety of diseases and conditions. A clinical trial follows a specific protocol of tests, medications and procedures for a specified duration of time. One trial may take place in multiple locations throughout a region or even throughout the country, but they all follow the same protocol in each location to ensure uniform results. Participants are closely monitored by Chesapeake Urology's knowledgeable, experienced physicians (investigators) and clinical research coordinators.

Patients enrolled in a research study must meet a standard set of criteria to be eligible for the trial. To learn more about clinical trials for enlarged prostate/BPH at Chesapeake Urology, visit our website at www.chesapeakeurology.com or call 443-471-5753.

Frequently Asked Questions About Enlarged Prostate/BPH

Q: How common is enlarged prostate in men?

A: BPH or enlarged prostate is quite common as men age. In fact, according to the National Association for Continence, as many as 50% of men experience symptoms of an enlarged prostate by age 60, and 90% of men will report symptoms by age 85.

Q: Does an enlarged prostate mean I have prostate cancer?

A: No. Enlarged prostate is a benign (non-cancerous) and common condition in men as they age and does not indicate prostate cancer. Your doctor will perform a thorough physical evaluation and perform tests such as a digital rectal exam and PSA test to rule out other conditions that could be causing your urinary symptoms, including prostate cancer.

Q: What are the treatment options for enlarged prostate?

A: While there is no cure for an enlarged prostate, there are treatments that are focused on alleviating the symptoms. For mild symptoms, men can try lifestyle changes such as changes to diet. Certain medications may help relieve urinary symptoms and Chesapeake Urology physicians are also experienced in innovative, minimally invasive procedures including laser techniques to help eliminate most urinary symptoms and restore quality of life without the need for life-long medications.

Q: What are the advantages and side effects of medications to treat enlarged prostate?

A: Alpha blockers, which are medications originally used to treat high blood pressure, usually work well to reduce urinary symptoms of an enlarged prostate, but do not shrink the prostate. Side effects may include headaches, dizziness, light-headedness, fatigue and ejaculatory dysfunction. 5-alpha reductase inhibitors work by increasing urinary flow, particularly in men with very enlarged prostates. This medication also reduces the occurrence of the sudden inability to urinate in some men. Side effects are often sexual in nature and typically include: erectile dysfunction, decreased libido and reduced semen release during ejaculation. Anticholinergics relax the bladder muscle and reduce frequency and urgency. Side effects can include dry mouth, blurry vision, constipation, urinary retention, drowsiness, and memory impairment. Patients will need to remain on medications for the long term to experience improvement in BPH symptoms.

While an enlarged prostate is not life-threatening, the discomfort it brings is enough reason for one to seek treatment. Ignoring its early symptoms could also lead to the development of serious conditions such as irreversible damage to the kidneys and bladder as well as kidney stone formation.

Q: What are the risks associated with minimally invasive procedures to treat enlarged prostate?

A: As with any procedure, there are some risks associated with each technique to treat an enlarged prostate including:

- Laser vaporization of the prostate (GreenLight™ Laser Therapy): urinary tract infection (UTI), temporary pain, bleeding or discomfort; and retrograde ejaculation/reduction of semen emission.
- Radio frequency therapy: urinary tract infection; temporary obstruction (blockage); and temporary pain, bleeding or discomfort, which usually ceases in a few weeks.
- Transurethral resection of the prostate and transurethral vaporization (TURP and TUVP): blood clots; retrograde ejaculation (semen released through ejaculation goes into the bladder rather than out of the penis, which can inhibit fertility); erectile dysfunction, which is a less common side effect; mild hematuria (blood in the urine); urinary tract infection; temporary difficulty urinating, which usually resolves a few days after the procedure.
- UroLift® System: temporary pelvic pain, temporary urinary urgency.
- Rezūm®: Blood in the urine and/or sperm, temporary discomfort during urination, temporary urinary frequency, and retrograde ejaculation.

Q: What is the UroLift® System and how does it help relieve symptoms of enlarged prostate/BPH?

A: The UroLift System is an alternative to medications and surgery for the treatment of enlarged prostate/BPH. This minimally invasive approach lifts or holds the enlarged prostate tissue out of the way so it no longer blocks the urethra, relieving urinary symptoms. Permanent implants are inserted utilizing a special delivery device that holds the lobes of the enlarged prostate open to relieve obstruction of the urethra. There is no cutting, heating, or removal of prostate tissue involved in this minimally invasive procedure.

Q: What is a clinical trial and are there any trials for enlarged prostate/BPH?

A: A clinical trial is a carefully designed research study that investigates the effectiveness and safety of new and experimental drugs and specific treatments for a particular disease or condition. Well-designed clinical trials are the fastest way to find treatments for a variety of diseases and conditions. A clinical trial follows a specific protocol of tests, medications and procedures for a specified duration of time. Participants in a trial are closely monitored by Chesapeake Urology's experienced physicians (investigators) and clinical research coordinators. Patients enrolled in a research study must meet a standard set of criteria to be eligible for the trial. Learn more about clinical trials at Chesapeake Urology - visit www.chesapeakeurology.com or call 443-471-5753.