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BPH and Minimally Invasive Therapy

By Robert S. Hollabaugh, Jr. MD

As men grow older, urinary difficulties commonly develop related to an enlarged prostate. This condition, called Benign Prostatic Hyperplasia or BPH, affects nearly half of men over the age of 50 years to some degree. Initially the size of a walnut, the prostate gland begins to grows during middle age and over time can obstruct urinary flow. BPH is NOT cancer, but can still have an aggravating or bothersome effect on daily living. As the condition progresses, a variety of symptoms arise:

- » frequent, urgent urination
- » problems starting or maintaining the urine stream
- » slow or weak stream
- » frequent nighttime visits to the bathroom
- » dribbling at the end of urination
- » sensation of incomplete emptying of the bladder

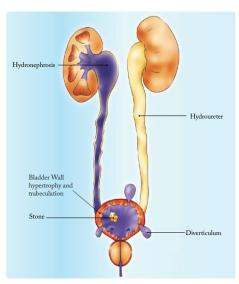
In severe cases, a man can reach the point of not being able to urinate at all. In this emergency, a foley catheter has to be placed thru the penis into the bladder to drain it (usually temporary but sometimes permanent). The progressive symptoms of BPH are caused by ongoing growth of the prostate gland. The prostate gland is located at the base of the bladder and

grows surrounding the urethra (water channel). As prostate tissue grows, the urethral lumen narrows and can obstruct.

Management of BPH aims to limit, lessen, or remove that overgrowth and blockage. To assess your situation, your physician may have you fill out questionnaire (AUA a standardized Symptom Score Sheet), consisting of questions related to your patterns of urination. In general, men who have minimal symptoms will be advised to simply watch and wait to see if things worsen over time. For those who have a significant amount of bother from their BPH symptoms, initial therapy usually involves medication. Two classes of medication are commonly used. Alphablocker medications (Flomax, Tamsulosin, Uroxatral, Rapaflo, and Doxazocin) relax the muscle tone of the prostate, opening the channel and relieving the blockage 5-alpha-reductase inhibitors of BPH. (Proscar, Finasteride, Avodart, and Dutasteride) can physically shrink the prostate and halt its growth, thus helping to reduce obstruction of urine flow. Other medications, like Cialis, have also been shown to improve the symptoms of BPH. All of these medications can be used alone or in combination. Not all urinary problems in men are prostate related. Many men, like women, may have overactive bladder (OAB). OAB symptoms of frequent and urgent urination are nearly identical to BPH symptoms, but are caused by a hyperactive bladder as opposed to a blocking prostate. These bladder symptoms are often controlled with medications like Detrol, Vesicare, oxybutynin or Myrbetriq. Sometimes, the blocking prostate can be the cause of overactive bladder.

In some cases, BPH can outgrow what medications can control. For patients who have progression of urinary difficulties or for those who get to the point of not being able to urinate at all, more aggressive management with surgery is often required. Transurethral resection of the prostate, or TURP, has long been the standard surgical treatment for BPH. A scope is inserted thru the penis and guided to the level of the prostate gland where the blocking portion of the prostate gland is trimmed out to open the water channel. Patients commonly refer to this process as a "ream job" or "roto-rooter." For many years, this was the only real option for patients with severe BPH problems. Criticisms of TURP in years past centered on risks of heavy bleeding and the need for full general anesthesia in a hospital setting.

In recent years, technological advances have introduced many new, less invasive options for patients that can



Severe BPH, if left untreated, can lead to bladder deterioration, kidney trouble, stones, and infection.

open the blocking prostate with safer, simpler approaches. Several options use "controlled heat" in the form of lasers, microwave energy, or steam to treat the enlarged prostate. Other new innovations can open the urinary pathway with sutures to tent open the blocking prostate tissue without even having to destroy tissue at all. While all patients with BPH are potential candidates for any of these types of therapy, minimally invasive therapies are most commonly used in patients who progress despite medications or prefer not to remain on medications as long-term therapy. In some instances, medical management is working but may cause undesirable side effects. In other cases, medication is working, but patients either do not like to take it or it costs too much. In any event, minimally invasive technology is very appealing to many BPH patients.

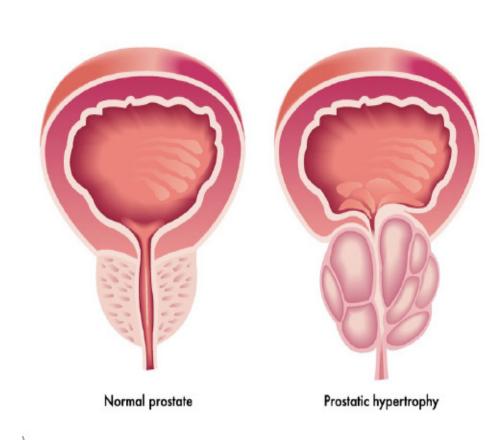
On the cutting edge of today's BPH therapy are **Rezum Prostate Therapy** and **Urolift**. Presently, Rezum offers the benefit of being able to be performed in the office with local anesthesia. After numbing the prostate and urethra in the office, Rezum uses a scope inserted thru the penis that delivers a steam

injection to the overgrown prostate. The steam permeates the prostate tissue in that area and remains confined in the prostate, limited by the gland's capsule. The heat from the steam causes the prostate tissue to wither away thereby relieving blockage. A foley catheter is left in place following the procedure for 2 days and then removed in the office. Patients often experience improved flow within just a few weeks, but the prostate continues to shrink for several months after the procedure so that the maximum benefit is apparent after 3-4 months. The side effects include mild blood in the urine and some irritative voiding for 1-2 weeks. Insurances have specific approval criteria related to prostate size for Rezum that your urologist can assess.

The Urolift procedure "tacks" the prostate lobes open to relieve blockage, a concept similar to pulling back the drapes of a window to open the view. During the procedure, the Urolift instrument is inserted thru the penis and positioned at the level of the blocking prostate tissue. A suture is then accurately fired into the prostate tissue. Tension tightening of the suture retracts the lobe of the prostate and opens the water channel. Multiple sutures can be used as needed depending on the size of the prostate gland. In many cases, no catheter is needed at all following the procedure. Because this procedure does not actually destroy prostate tissue (the sutures just "tent" it open) it has very few side effects, in particular no changes in ejaculatory function. Patients may see mild blood in the urine for several days following the procedure. Urolift is usually performed in an outpatient surgery center under general anesthesia.

Each of these procedures is considered low risk and has an excellent track record for medium to large sized prostate glands. Safe and simple, they represent stateof-the-art minimally invasive prostate therapies. These therapies are not designed for prostate cancer treatment, and huge prostate glands may need a more robust option. It is very simple for your urologist to determine if you are a good candidate. If not, many other technologies are available, including LASER (Evolve laser, Green Light Laser), Vaporization ("Button" TURP), and TUMT (transurethral microwave thermotherapy).

Minimally invasive procedures represent true advancements in the treatment of BPH, but clearly they are not for everyone. BPH is not the only cause of urinary difficulties, and careful evaluation by your doctor can determine whether your symptoms are caused by BPH or something else. Once the diagnosis of BPH has been made, physicians at the Conrad Pearson Clinic will decide which treatment options are best for you. Considerations for treatment will depend upon other health problems, as well as the specific size and architectural pattern of your prostate gland. Tests may be suggested to gather this needed information. A PSA test, a cystoscopy, and a prostate ultrasound are routine. It is very important for the PSA blood test to be done before any treatment for BPH is begun. Abnormal PSA results raise the question of prostate cancer, and must be further evaluated. If prostate cancer is found, cancer treatment becomes the priority and is completely different than BPH treatment. Cystoscopy identifies the extent of blockage by the prostate as well as other anatomic details of the urinary tract that might complicate matters. Cystoscopy involves using a lighted flexible scope to look in thru the tip of the penis to the bladder. Performed in the office, there is minimal discomfort as we use numbing jelly or mild sedation. In some cases, additional testing on the bladder is required. Urodynamics is a test that tells us about the function of



BEFORE TREATMENT

AFTER TREATMENT

the bladder, and it can help differentiate bladder problems from true prostate problems. Finally, the prostate's exact size and architecture can be measured by transrectal ultrasound imaging. This is critical as the safety and effectiveness of these newer technologies require that the heat energy be delivered to prostate tissue and not beyond. Not all prostate glands are the same size or shape, and only with accurate information can we generate a proper treatment plan.

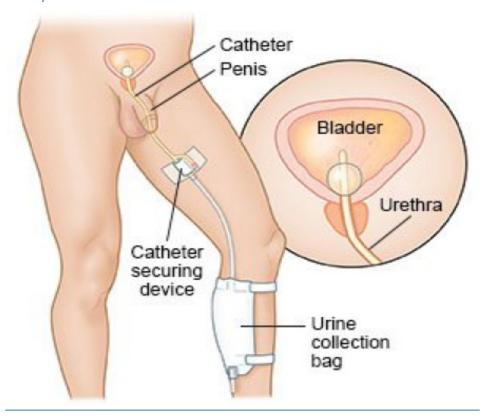
Prostate Helpful Hints: Fact and Fiction

As the prostate gland enlarges, the worsening symptoms of BPH can be a terrible nuisance. Here are some commonly held beliefs or recommendations that you may have heard.

One of the biggest nuisances is having to wake up from your sleep to urinate (Nocturia). Urinating once or twice thru the course of a night is common after age 50; however, more than 3-4 times per night is a nuisance. One commonsense household remedy for nocturia is to drink less fluids in the evenings. It is true that if you drink a lot before bedtime, you may have to get up more frequently thru the night. Controlling intake may help with symptoms, but it doesn't necessarily fix the underlying problem.

Factors other than evening fluid the consumption affect nightime urinary pattern. Your sleep cycle is also very important. Certain hormones that physiologically restrict nightime urine production are released only during certain phases of the sleep cycle. Poor sleep patterns can disrupt this rhythm and allow excessive urine production during the hours that you would prefer to be asleep. Make sure you do everything possible to maintain a healthy sleep cycle as you get older.

Foley Catheter Male



In treating hypertension, many people take blood pressure medications. One class of anti-hypertensives is called diuretics (Hydrochlorothiazide, Lasix, Furosemide). Diuretics trigger the kidneys to make more urine. This treats hypertension by ridding the body of excess fluid in tissues, but in doing so creates more urine and more frequent urination. Depending on when you take this type of pill, you many notice frequent urination for several hours. This is the desired effect of the pill; however, if it acts at night it can be a nuisance. Ask your doctor if the timing of the pill is critical and adjust when you take it to control the symptoms. Never start, stop, or adjust blood pressure medication

without your doctor's approval.

Many diseases can affect the patterns of urination. Depending on a person's medical history, the results of urinalysis, physical examination, doctor may conclude that something other than BPH is the cause of the Other common diagnoses that can affect the bladder include Urinary Infection, Diabetes, Urethral Stricture (scar), Multiple Sclerosis, Stroke, Neuropathy and Parkinson's Disease. Some diabetic medications, including Jardiance and Farxiga, can dramatically increase the frequency of urination. If so, ask your medical team if other medications can be substituted.

During wintertime often men experience a flare-up of "prostate trouble." It has nothing to do with the frigid weather per se; however, it does have to do with "winter cold" management. Most Over-the-counter "cold" medications have a decongestant in them. While decongestants dry up runny noses, they also will "swell" the prostate. Common decongestants include pseudoephedrine and phenylephrine. For many men who teeter on the edge of having problems with an enlarged prostate, taking a dose of a decongestant can push them over the edge and bring on a major strain in urination. If you have a lot of BPH symptoms, it is best to avoid decongestants. This same concept applies to men who have "hay fever" and sinus allergies and use decongestants to control these problems.

BPH and MINIMALLY INVASIVE THERAPY

Certain aspects of a person's diet and lifestyle may also aggravate urinary patterns and cause frequent urination.

Here are Some General Guidelines:

- Avoid CAFFEINE (Coffee, Tea, Colas, Chocolate
- Avoid ALCOHOL (Beer, Wine, or Liquor
- LOSE WEIGHT as extra weight places extra pressure on your bladder
- STOP SMOKING as Smoking causes bladder muscle irritability

While it is not critical to strictly follow all of these guidelines, you may be amazed to see the improvement in your urinary pattern if you can adopt a few lifestyle changes.

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