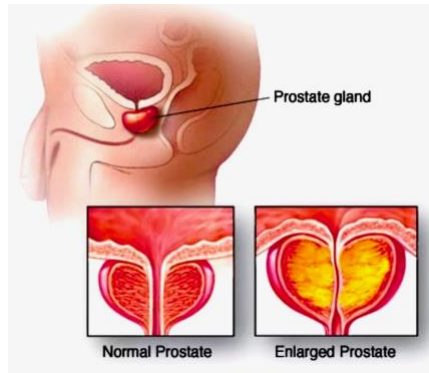


Enlarged Prostate - Benign Prostatic Hyperplasia (BPH)



Benign prostatic hyperplasia (BPH) — also called prostate gland enlargement — is a common condition as men get older. The prostate is a walnut sized gland that sits under the bladder. Urine flows from the bladder, through the prostate, into the urethra and then out of the body. When the inside of the prostate enlarges, it can block the flow of urine and cause a variety of symptoms. The prostate’s function is to contribute fluid to semen, but men can live without a prostate. The size of the prostate doesn’t necessarily determine the severity of symptoms. Some men with only slightly enlarged prostates can have significant symptoms, while other men with very enlarged prostates can have only minor symptoms. Having an enlarged prostate is not believed to increase your risk of developing prostate cancer.

The term “**LUTS**” (**Lower Urinary Tract Symptoms**) is used to describe the various urinary symptoms that a patient can experience. While LUTS can frequently be due to BPH, other conditions can cause LUTS such as overactive bladder, bladder stones, urethral strictures, prostate/bladder cancer, urinary infections, prior pelvic surgery, diabetes, sleep apnea, congestive heart failure, and neurologic conditions (Parkinson’s, dementia, multiple sclerosis, strokes). A man can have LUTS without having a significantly enlarged prostate.

“LUTS” (Lower Urinary Tract Symptoms):

- Frequency / Urgency: Frequent or urgent need to urinate
- Nocturia: Increased frequency of urination at night.
- Hesitancy: Difficulty starting urination
- Intermittency: Weak urine stream or a stream that stops and starts
- Post Void Dribbling: Dribbling at the end of urination
- Incomplete Emptying: Inability to completely empty the bladder
- Less common: UTI, blood in the urine, burning (dysuria), inability to urinate (retention), bladder stones
- Possible complications:
 - A bladder that doesn’t empty fully will be chronically stretched/distended. As a result, the bladder’s muscle will weaken & no longer contract well, making it harder to fully empty and can cause retention.
 - Higher pressures in the bladder from poor emptying can lead to kidney infections or kidney damage.

Diagnosis:

- Discussion about your symptoms, the severity of your symptoms, and your amount of bother, “**AUA Symptom Score**”
- **Digital rectal exam.** The doctor inserts a finger into the rectum to check the prostate for enlargement or abnormalities.
- **Urine test.** Analyzing a sample of urine can help rule out an infection.
- **Prostate-Specific Antigen (PSA) blood test.** PSA is a protein produced by the prostate. PSA can be high with an enlarged prostate. However, a high PSA can also be due to urinary infection, sexual activity, or prostate cancer.
- **Additional:**
- **Urinary flow test.** You urinate into a machine that measures the strength and amount of your urine flow.
- **Postvoid residual volume (PVR)** An ultrasound on the abdomen is used to measure how well you empty your bladder.
- **Transrectal ultrasound (TRUS).** An ultrasound probe in the rectum can determine the size of the prostate (in grams).
- **Cystoscopy.** A lighted, flexible instrument (cystoscope) is inserted into the urethra to look at the prostate and bladder,
- **Urodynamic & Pressure Flow studies.** Measure bladder pressures and determine how well the bladder muscles are working. These studies are typically used only in men with suspected neurological problems.

Treatment:

Many treatments are available for an enlarged prostate including medications, minimally invasive therapies, and surgery. If your symptoms are tolerable and not effecting your quality of life, you might decide to monitor your symptoms (“watchful waiting”).

Medications for BPH:

- **Alpha Blockers:**
 - Tamsulosin (Flomax), Alfuzosin (Uroxatral), Doxazosin (Cardura), Terazosin (Hytrin), Silodosin (Rapaflo). These open the prostate and make urination easier. Side effects might include dizziness and a harmless condition in which semen goes back into the bladder instead of out the penis (retrograde ejaculation).
- **5-Alpha Reductase Inhibitors:**
 - Finasteride (Proscar) and Dutasteride (Avodart). These can shrink the prostate by 25% by preventing cellular hormonal changes that cause prostate growth. They take up to 6 months to be effective and are only helpful in large prostates over 60g. They will *falsely lower* the PSA levels by half and *may* cause erectile dysfunction in a very small percent of men.
- **Combination therapy.** Some patients take both an alpha blocker *and* a 5-alpha reductase inhibitor at the same time if either medication alone isn't effective.
- **Tadalafil (Cialis).** This medication, which is usually taken to treat erectile dysfunction (typically 20mg), can also treat the symptoms of prostate enlargement if taken daily in the 5mg dosage. *This can be taken even if there isn't ED.*

Many men with BPH also have the same symptoms of **Overactive Bladder (OAB)** like frequency, urgency, leakage (incontinence). There are 2 medication types for OAB that can relax the bladder, limit frequency, and give more warning time.

- **Anti-Cholinergic Medications:** the original OAB medications
 - Detrol (Tolterodine), Ditropan (Oxybutnin), Vesicare (Solifenacin), Enablex (Darifenacin), Sanctura (Trospium), Fesoterodine (Toviaz). These inhibit the bladder muscle but can also cause dry mouth and constipation as well as confusion in elderly patients.
- **Beta-3 Adrenergic Receptor Agonists:** new class of OAB meds
 - Myrbetriq (Mirabegron) and Gemtesa (Vibegron). These medications generally have less side effects than the original OAB meds but can be expensive and some insurances may not cover them fully. Myrbetriq can raise some patients's blood pressure, while Gemtesa typically does not.

Minimally Invasive Treatments or Surgeries: May be an option or required if:

- Your symptoms are moderate to severe.
- Medication hasn't relieved your symptoms.
- You have urinary tract obstruction (retention), bladder stones, recurrent blood in your urine, or kidney problems.
- You prefer definitive treatment and do not want to take medications.

There are *several* prostate procedures; procedures will work better for certain sizes and shapes of prostates.

- Transurethral Resection of Prostate (TURP)
- Transurethral Incision of Prostate (TUIP)
- Aquablation of the Prostate
- Urolift
- Rezum Water Vapor Therapy
- Laser treatments (Greenlight PVP, holmium laser ablation of prostate (HoLAP), holmium laser enucleation of prostate (HoLEP))
- Robotic Simple Prostatectomy
- Prostate Artery Embolization (PAE)

Any type of prostate procedure can cause side effects. Depending on the procedure, complications might include:

- Semen flowing backward into the bladder instead of out through the penis during ejaculation (retrograde ejaculation)
- Temporary difficulty with urination, frequency, urgency
- Urinary tract infection
- Bleeding (Hematuria)
- Erectile dysfunction
- The need for a urinary catheter
- Very rarely, loss of bladder control (incontinence)

What can I do to help with symptoms of an enlarged prostate?

1. Maintain weight in a healthy range
2. Exercise and emphasize strength/resistance training, swimming, walking, yoga (Note: cycling can aggravate the prostate).
3. Avoid or reduce alcohol intake - can cause inflammation and makes it difficult for the prostate muscles to relax.
4. Quit smoking
5. Avoid liquids a few hours before bedtime or before going out.
6. Limit spicy foods.
7. Reduce salt and fat intake - Saturated fats and animal fat are linked to prostate cancer (butter, lard, whole-fat dairy, red meat).
8. Focus on healthy fats (omega 3 and 6 fatty acids, olive, sunflower, avocado oil, nuts, flaxseeds).
9. Drink coffee & green tea – may possibly reduce the risk of prostate cancer. ** Keep in mind that coffee can worsen some prostate conditions (urgency and frequent urination) because it's a diuretic so it's best to keep consumption moderate.
10. Manage stress – Yoga, meditation, acupuncture can help you manage stress and protect against prostate inflammation.
11. Foods that *may* protect your prostate against BPH:
 1. Berries – antioxidants
 2. Salmon, Mackerel, Herring, Sardines, Trout, Tuna – omega 3 fatty acids
 3. Citrus fruits – Vitamin C
 4. Nuts (walnuts)
 5. Cruciferous veggies – Broccoli, Cauliflower, Brussels sprouts, Cabbage, Collard greens, Arugula, Bok choy, Radish, Turnips
 6. Red Apples, Red peppers, Tomatoes, Watermelon, Pink grapefruit – Lycopene
 7. Ground Flaxseeds
12. Some supplements used for BPH: saw palmetto, zinc, beta-sitosterol, pygeum, rye pollen extract, stinging nettle, pumpkin seeds, and red clover. *Not definitively proven.*
13. Some supplements for prostate cancer prevention: lycopene, sulforaphane, pomegranate, vit D & E. *Not definitively proven.*

Please note: We do not endorse or recommend any specific herbal remedy or over-the-counter supplements (such as "Super Beta Prostate") as a treatment for *symptomatic* BPH.