What happens as the prostate enlarges and causes blockage?

The prostate enlarges in all men and is an inevitable consequence of aging. As the prostate enlarges, it crowds the urinary pathway and causes difficulty with urination in one out of four men.

As the prostate causes obstruction and crowds the urinary pathway, the bladder has to work harder to push urine past the obstruction. The bladder muscle becomes thicker and less elastic. When the bladder is less elastic, it can no longer stretch further to hold increasing volumes of urine. It reaches a certain point, and then it wants to empty. As the bladder storage capacity decreases, the patient experiences urinary symptoms including frequency (the need to go more often) and urgency (the need to go right away).

Do pills always work for treating the enlarged prostate?

When treatment for the enlarged prostate (BPH) is required, there are a variety of choices available. For many men, drug therapy provides excellent treatment. However, for some men, ongoing treatment with medication is not the answer. Some men have bothersome side effects related to the pills they take for the enlarged prostate. Proscar and Avodart, pills which reduce the size of the enlarged prostate, can interfere with sexual function in a subset of men. The alpha blockers – Hytrin, Cardura, Flomax, Uroxatral and Rapaflo – work by relieving the grip of the prostate as it crowds the urinary pathway. Possible side effects include dizziness, lightheadedness, nasal stuffiness, and retrograde ejaculation (retrograde ejaculation describes the circumstance where a man has an orgasm but the ejaculated fluid flows back into the bladder rather than out through the tip of the penis). In addition to these potential side effects, another drawback to drug therapy for some men may be cost.
When is it time for a procedure for the enlarged prostate?

Indications for BPH treatment include urinary retention, large postvoid residual (the amount of urine left behind in the bladder after voiding) which can interfere with kidney function, bleeding, recurrent urinary infection, and bothersome voiding symptoms. When pills are not working or when they cause side effects, different types of intervention are available.

What types of procedures are available?

A recent review lists over a dozen types of procedures available to treat BPH. Current standards for intervention for the enlarged prostate include transurethral microwave thermotherapy (TUMT), transurethral needle ablation (TUNA), different types of laser coagulation of the prostate, and transurethral resection of the prostate (TURP), including button TURP. In recent years, photo selective vaporization of the prostate (green light laser PVP) has emerged as an effective and minimally invasive procedure available for managing BPH.

How do the procedures get rid of obstruction?

In the TUMT, TUNA, and laser coagulation (not photo vaporization) procedures, heat is used to coagulate (shrink) the enlarged portion of the prostate so that over the next several months, the enlarged portion of the prostate reduces in size. Once the enlarged portion has reduced in size, there is less crowding of the urinary pathway, which can eventually lead to improved urination. These procedures do not actually remove any of the enlarged and obstructing portions of the prostate.

In green light laser PVP and TURP, the obstructing portions of the prostate that block the urinary pathway are removed. This actual removal of the blockage distinguishes them from the other procedures that coagulate the prostate. With vaporization or resection (removal), the urinary pathway is opened up which leads to more immediate improvement in urinary flow.

How are TURP and green light laser done?

TURP has been the gold standard for years for the treatment of BPH. In a TURP, the actual enlarged portion of the prostate is shaved away, which opens up the blocked portion of the urethra.
For TURP, an instrument called the resectoscope is introduced through the urethra, the urinary pathway in the penis. The resectoscope is a fiber optic instrument used to look into the bladder.

During the procedure, the enlarged portions of the prostate are trimmed away.

In the button TURP, the enlarged portions are photo vaporized or melted away with the application of the surgical instrument.

After resection or removal of the blocking portions of the prostate, the urinary pathway is opened.
PVP uses a Green Light laser (called a KTP laser) to remove the actual enlarged and obstructing portions of the prostate by vaporization.

CLICK PICTURES BELOW TO WATCH VIDEO OF THIS PROCEDURE

As in the TURP, the enlarged and blocking portions of the prostate are removed, which leads to an open urinary pathway.

What are outcomes and what is the recovery after surgery?

TURP of the past was burdensome for patient recovery, with its attendant risks of bleeding, incontinence, and impotence, as well as the need for a one- to five-day hospital stay and significant restrictions on activity for a six-week postoperative period. With current technology, including bipolar TURP and button TURP, the procedure is much less invasive.

The risk of general complications, such as heart and lung problems, is the same as for any other operation.
PVP, bipolar TURP and button TURP have the following advantages: outpatient or overnight procedure, less chance of bleeding, faster return to activities and reduced time period of catheterization.

These procedures are typically done in an outpatient setting with a regional or general anesthesia. Most men are asked to stop one week in advance any medications which can promote bleeding, such as aspirin, and anti-inflammatory medications (i.e., Advil, Nuprin). If men are on Coumadin, which is a blood thinner, this should also be stopped one week in advance. Men are typically sent home several hours after the procedure. Men have a catheter in for overnight. Postoperatively, men may notice for the first 6-8 weeks urinary frequency (the need to urinate more often), urgency (the need to urinate promptly once the urge is felt), and dysuria (burn or discomfort with urination). They may see blood which may develop on an intermittent basis over several weeks. Increased fluid intake is recommended during the first several weeks, preferably water, to promote increased urinary output. Strenuous exercise and heavy lifting, including bike riding, running on treadmills, working with vibrating equipment (e.g., riding a tractor mower), and engaging in sexual intercourse should be avoided for two weeks. For most patients, the PVP procedures typically do not interfere with sexual function and men are still able to have an erection and orgasm the same as they did preoperatively. Retrograde ejaculation, also known as “dry climax”, develops in a third of the men. After intervention to relieve the obstruction is carried out, it may take some time for the bladder to regain some elasticity to then allow lessening of frequency and urgency.

A useful framework to assess the above information is to determine how much difficulty the underlying condition, the enlarged prostate, causes, and then to look at the options that are available to help, along with the burdens that go along with those efforts to help.

When the enlarged prostate has caused enough trouble that it needs attention, the green light laser and bipolar or button TURP have emerged as attractive minimally invasive outpatient procedures which provide significant improvement in the majority of men typically with a low risk of adverse effects and offer the added advantage of a prompt return to normal lifestyle.