What is Benign Prostatic Hyperplasia (BPH)?

Benign prostatic hyperplasia (BPH) is an enlarged prostate. The prostate goes through two main growth periods as a man ages. The first occurs early in puberty, when the prostate doubles in size. The second phase of growth begins around age 25 and continues during most of a man's life. As you age, your prostate may get larger. Benign prostatic hyperplasia often occurs with the second growth phase.

As the prostate enlarges, it can then squeeze down on your urethra. The bladder wall becomes thicker. Eventually, the bladder may weaken and lose the ability to empty completely, leaving some urine in the bladder. The narrowing of the urethra and urinary retention—the inability to empty the bladder completely—cause many of the problems associated with benign prostatic hyperplasia. BPH is benign. This means it is not cancer. It does not cause nor lead to cancer. But BPH and cancer can happen at the same time.

BPH is common in aging men. About half of all men between the ages of 51 and 60 have BPH. Up to 90% of men over age 80 have BPH.

The Prostate

The prostate is part of the male reproductive system. It is about the size of a walnut and weighs about an ounce. The prostate is below the bladder and in front of the rectum. The prostate goes all the way around a tube called the urethra. The urethra carries urine from the bladder out through the penis. The main job of the prostate is to make fluid for semen. During ejaculation, sperm made in the testicles moves to the urethra. At the same time, fluid from the prostate and the seminal vesicles also moves into the urethra. This mixture—semen—goes through the urethra and out the penis.
What Are The Symptoms of BPH?

With BPH, the prostate gets larger. When it is enlarged, it can irritate or block the bladder. A common symptom of BPH is the need to urinate often. This can be every one to two hours, especially at night.

Other symptoms include:

- Feeling that the bladder is full, even right after urinating
- Feeling that urinating "can't wait"
- Weak urine flow
- Dribbling of urine
- The need to stop and start urinating several times
- Trouble starting to urinate
- The need to push or strain to urinate

In severe cases, you might not be able to urinate at all. This is an emergency. It must be treated right away.

How Can BPH Affect Your Life?

In most men, BPH gets worse as you age. It can lead to bladder damage and infection. It can cause **blood in the urine** It can even cause kidney damage. Men with BPH should get treated.

What Causes BPH?

The cause of benign prostatic hyperplasia is not well understood; however, it occurs mainly in older men. Benign prostatic hyperplasia does not develop in men whose testicles were removed before puberty. For this reason, some researchers believe factors related to aging and the testicles may cause benign prostatic hyperplasia.

Throughout their lives, men produce testosterone, a male hormone, and small amounts of estrogen, a female hormone. As men age, the amount of active testosterone in their blood decreases, which leaves a higher proportion of estrogen. Scientific studies have suggested that benign prostatic hyperplasia may occur because the higher proportion of estrogen within the prostate increases the activity of substances that promote prostate cell growth.

Another theory focuses on dihydrotestosterone (DHT), a male hormone that plays a role in prostate development and growth. Some research has indicated that even with a drop in blood testosterone levels, older men continue to produce and accumulate high levels of DHT in the prostate. This accumulation of DHT may encourage prostate cells to continue to grow. Scientists have noted that men who do not produce DHT do not develop benign prostatic hyperplasia.

What Are The Risk Factors For BPH?

Risk factors include aging and a family history of BPH. Other risk factors are obesity, lack of physical activity, and erectile dysfunction (ED).

Can BPH be Prevented?

There is no sure way to prevent BPH. Because excess body fat may affect hormone levels and cell growth, diet may play a role. Losing weight and eating a healthy diet, with fruits and vegetables, may help prevent BPH. Staying active also helps weight and hormone levels.
How is BPH Diagnosed?

The American Urological Association (AUA) developed a BPH Symptom Score Index. It asks how often urinary symptoms happen. The score rates BPH as mild to severe. Take the test and talk with your healthcare provider about your results.

Your health care provider will review your Symptom Score and take a medical history. There will be a physical exam with a digital rectal exam (DRE). You may also have:

- Urinalysis (urine test)
- PSA blood test to screen for prostate cancer
- Urinary blood test to screen for bladder cancer
- Post-void residual volume (PVR) to measure urine left in the bladder after urinating
- Uroflowmetry to measure how fast urine flows
- Cystoscopy to look at the urethra or bladder with a scope
- Urodynamic pressure to test pressure in the bladder during urinating
- Ultrasound of the prostate

You should see your health care provider if you have symptoms. See your health care provider right away if you have blood in your urine, pain or burning when you urinate, or you cannot urinate.

PSA Test

The prostate-specific antigen (PSA) blood test, tests the level of prostate-specific antigen (PSA) in the blood. PSA is a protein made only by the prostate gland. The PSA test can be done in a lab, hospital or health care provider’s office. There is no special preparation. The PSA test should come before the health care provider does a DRE. Ejaculation can raise the PSA level for 24 to 48 hours. So the patient should not ejaculate for two days before a PSA test.

Very little PSA is found in the blood of a man with a healthy prostate. A low PSA is better for prostate health. A rapid rise in PSA may be a sign that something is wrong. One possible cause of a high PSA level is benign (non-cancer) enlargement of the prostate. Inflammation of the prostate, called prostatitis is one more common cause of high PSA levels.

DRE

The digital rectal examination (DRE) is done with the man bending over or lying curled on his side. The health care provider puts a lubricated gloved finger into the rectum. The health care provider will feel the prostate. They will be looking for abnormal shape or thickness in the prostate. The DRE can help your health care provider find prostate problems.
How is BPH Treated?

There are many treatments for BPH. You and your health care provider will decide together which treatment is right for you. Mild cases of BPH may need no treatment at all. In some cases, minimally invasive procedures that do not require anesthesia are good choices. And sometimes a combination of medical treatments works best.

The main treatments for BPH are:

- Watchful Waiting/Active Surveillance
- Medical Therapies
- Minimally Invasive Surgeries
- Surgeries

Watchful Waiting/Active Surveillance

BPH is monitored but there is no active treatment. Diet and medicine can control symptoms. You will have a yearly exam. Your health care provider will look for worse or new symptoms before beginning active treatment.

What Are The Benefits, Risks and Side Effects of Watchful Waiting/Active Surveillance?

There are no side effects. But it may be harder to reduce your symptoms later.

Who Are Good Candidates for Watchful Waiting/Active Surveillance?

Men with mild symptoms may be good candidates for this treatment. Men with moderate symptoms who are not bothered by the symptoms are also good candidates.

Medical Therapies

Alpha Blockers

Alpha blockers are pills that relax the muscles of the prostate and bladder. They improve urine flow. They reduce blockage. They reduce symptoms of BPH. The pills do not reduce the size of the prostate. Alpha blockers include alfuzosin (Uroxatral), terazosin (Hytrin), doxazosin (Cadura) and tamsulosin (Flomax).

What are The Benefits, Risks and Side Effects of Alpha Blockers?

One benefit of alpha blockers is that they work right away. Side effects include dizziness, lightheadedness, fatigue and difficulty ejaculating.

Who Are Good Candidates for Alpha Blockers?

This treatment is good for men with moderate to severe BPH. Men who are bothered by their symptoms are good candidates. This is not a good choice if you are about to have cataract surgery.
What Are 5-Alpha Reducatase Inhibitors?

5-Alpha reducatase inhibitors block the production of dihydrotestosterone (DHT). DHT is a male hormone that plays role in prostate development and growth. DHT accumulates in the prostate and may cause prostate growth. 5-Alpha reducatase inhibitors are pills that increase urine flow and shrink the prostate. These drugs include finasteride (Proscar) and dutasteride (Avodart).

What Are The benefits, Risks and Side Effects of 5-Alpha Reducatase Inhibitors?

These drugs lower the risk of BPH complications. They lower the need for surgery. Side effects are sexual, such as erectile dysfunction and reduced libido (sex drive). You must take them indefinitely to prevent symptoms.

Who Are Good Candidates for 5-Alpha Reducatase Inhibitors?

These drugs may be best for men with very large prostate glands. Older men are good candidates.

What is Combination Therapy?

Combination therapy uses an alpha blocker and a 5-alpha reducatase inhibitor together. Several studies, such as the Medical Therapy of Prostatic Symptoms (MTOPS) study, have shown that combining two classes of medications, instead of using just one, can more effectively improve symptoms, urinary flow, and quality of life. The combinations include:

- Finasteride (Proscar) and doxazosin
- dutasteride (Avodart) and tamsulosin (Jalyn ), a combination of both medications that is available in a single tablet
- alpha blockers and antimuscarinics

A urologist may prescribe a combination of alpha blockers and antimuscarinics for patients with overactive bladder symptoms. Overactive bladder is a condition in which the bladder muscles contract uncontrollably and cause urinary frequency, urinary urgency, and urinary incontinence. Antimuscarinics are a class of medications that relax the bladder muscles.

What Are The Benefits, Risks and Side Effects of Combination Therapy?

Alpha blockers and 5-alpha reducatase inhibitors work better together than either one alone. They prevent BPH from getting worse. They improve symptoms. But there may be more side effects. There may be side effects from each drug.

Who Are Good Candidates for Combination Therapy?

Men with larger prostates are good candidates for this treatment.

What Are Phytotherapies?

These are herbal therapies. They are very popular. They are "self treatment." They are not prescribed by a health care provider. One popular herb is saw palmetto.

What Are The Benefits, Risks and Side Effects of Phytotherapies?

Herbal treatments have not been proven to work. In fact, some studies show they do not work. Also, the quality and purity of these over-the-counter supplements vary.

Who Are Good Candidates for Phytotherapies?

This treatment is not currently recommended by health care providers.
Minimally Invasive Surgeries

What are Minimally Invasive Surgeries?

Minimally invasive surgeries can be done in your doctor’s office or an outpatient center. Choosing the right surgery for you may depend on:

- The size of your prostate.
- How healthy you are.
- Your personal choice.

There are several types of minimally invasive procedures to choose from, they include:

- Prostatic Stent
- High Intensity Focused Ultrasound (HIFU)
- Holmium Laser Enucleation of Prostate (HoLEP)
- Interstitial Laser Coagulation (ILC)
- Transurethral Electroevaporation of The Prostate TUPV
- Transurethral Microwave Thermotherapy (TUMT)
- Transurethral Needle Ablation (TUNA)
- Photoselective Vaporization (PVP)
- UroLift
- Catheterization

What Are the Benefits, Risks, and Side Effects of Minimally Invasive Surgeries?

Getting relief from your symptoms is the biggest benefit of having minimally invasive surgery. In addition, some men have fewer problems controlling their urine after they have one of these types of surgeries. However, by having a minimally invasive surgery, you may be at a higher risk for needing another surgery in the future. Side effects from minimally invasive surgery may include:

- Erectile dysfunction issues.
- Semen flowing backward into the bladder instead of out of the penis (retrograde ejaculation).
- Urinary Tract Infection.
- Blood in your urine.
- Burning with urination.
- Needing to urinate more often.
- Sudden urges to urinate.

Who Are Good Candidates for Minimally Invasive Surgeries?

Men who are having trouble urinating are good candidates for a minimally invasive surgery. In addition, you may be a good candidate for this type of surgery if you:

- Have symptoms that are moderate to severe.
- Have urinary tract obstruction, bladder stones and/or blood in your urine.
- Can’t empty your bladder completely.
- Have bleeding from your prostate
- Urinate very slowly
- Have taken medications and they did not work

What is A Prostatic Stent?

The stent is a spring-like device. It is placed inside the urethra. The stent holds the urethra open. There are many kind of stents.

What Are The Benefits, Risks and Side Effects of Prostatic Stent?
This treatment does not require anesthesia. But it may lead to incontinence. The stent may become dislodged. Stones may form on the stent. There may be blockage. The stent may be hard to remove. Minor side effects include having to urinate often and right away, dribbling of urine, discomfort, and light bleeding.

**Who Are Good Candidates For Prostatic Stents?**

Men with many medical problems may be good candidates. Men for whom surgery is high-risk may also be good candidates.

Prostatic stents are used for men who would otherwise use a catheter or transurethral microwave thermotherapy (TUMT). You should not get the stent if your urethra is narrow. You should not get a stent if you have urinary infection, bladder stones, weak bladder or cancer. And you should not get a stent if you will soon have urethra treatments for **kidney stones**.

**What is High Intensity Focused Ultrasound (HIFU)?**

With high-intensity focused ultrasound (HIFU), an ultrasound probe is placed in the rectum. The sound waves heat the prostate to very high temperatures. This high temperature kills prostate tissue causing it to shrink.

**What Are The Benefits, Risks and Side Effects of HIFU?**

The recovery time for HIFU is usually only a few days. Your health care provider sets the temperature for the needed effect. But this treatment requires anesthesia. As with any surgery, anesthesia poses a risk. There is also a risk that you may need a catheter after the treatment. Side effects include not being able to urinate and **blood in the urine**.

**Who Are Good Candidates for HIFU?**

Men with larger prostates who wish to avoid more invasive surgery may be good candidates for this treatment.

**What is Interstitial Laser Coagulation (ILC)?**

In Interstitial Laser Coagulation (ILC), the surgeon uses a "cystoscope" (metal tube through which a visual lens and laser can be passed). The surgeon uses a laser to pierce into the prostate. The laser energy burns the tissue.

**What Are The Benefits, Risks and Side Effects of ILC?**

Studies to date have shown limited long term benefits. This treatment requires anesthesia. As with any surgery, anesthesia poses a risk. But you can usually go home the same day.

**Who Are Good Candidates for Interstitial Laser Coagulation (ILC)?**

Men with larger prostates who wish to avoid more invasive surgery may be good candidates for this treatment.

**What is Transurethral Electroevaporation of The Prostate (TUVP)?**

With transurethral electroevaporation of the prostate (TUVP), the surgeon uses a resectoscope. It passes through the penis into the urethra. An electrode moves across the prostate surface. It sends an electrical current that vaporizes prostate tissue. The vaporizing effect goes below the prostate surface. Blood vessels are coagulated and sealed.

**What Are The Benefits, Risks and Side Effects of TUVP?**

There is little bleeding and fluid absorption. You stay one night in the hospital. But you can usually return home without a catheter. This treatment requires anesthesia. As with any surgery, anesthesia poses risks.

**Who Are Good Candidates for TUVP?**

Men with larger prostates who wish to avoid more invasive surgery may be good candidates for this treatment.
What is Transurethral Microwave Thermotherapy (TUMT)?

Transurethral microwave thermotherapy (TUMT) uses microwaves to destroy prostate tissue. A urologist inserts a catheter through the urethra to the prostate, and a device called an antenna sends microwaves through the catheter to heat selected portions of the prostate. The temperature becomes high enough inside the prostate to destroy enlarged tissue. A cooling system protects the urinary tract from heat damage during the procedure.

What Are The Benefits, Risks and Side Effects of TUMT?

TUMT is a minimally invasive surgery that does not require anesthesia. The surgeon numbs the skin and gives you a pain pill. TUMT only takes an hour. It may relieve bladder obstruction. It is low-risk treatment.

This treatment has advanced recently. It now uses higher energy devices. It is reliable. There is no blood loss or fluid absorption. You can usually go home the same day. Many urologists have the technology. Outcomes are better long term.

But, there is still a risk of adverse outcomes from the procedure. And urinary tract symptoms occur in about 25% of men. The long term effectiveness is still unclear.

Who Are Good Candidates for TUMT?

Good candidates may include men with too many medical problems for invasive surgery. Men with weak hearts may be good candidates because there is no blood loss. So are men who want to avoid anesthesia.

What is Transurethral Needle Ablation (TUNA)?

During transurethral needle ablation (TUNA) a specially adapted visual instrument (cystoscope) is inserted through the tip of your penis into the tube that carries urine from your bladder (urethra). Using the cystoscope, your health care provider will guide a pair of tiny needles into the prostate tissue. Low-level, high-frequency radio waves are passed through the needles to create heat. The heat kills prostate tissue and shrinks the prostate.

What Are The Benefits, Risks and Side Effects of TUNA?

With TUNA, your health care provider will only use local anesthesia. It is done in the health care provider’s office. It only takes 30-45 minutes. It is an effective short-term treatment. Serious complications are rare. There is little bleeding. There are very few sexual side effects. But BPH symptoms may return. And there may be adverse outcomes from the procedure. There may be a burning feeling.

Who Are Good Candidates for TUNA?

Good candidates may include men with too many medical problems for invasive surgery. Men with weak hearts may be good candidates because there is no blood loss. So are men who want to limit anesthesia.

What is Photoselective Vaporization (PVP)?

Photoselective vaporization of the prostate (PVP) uses a high-powered laser. The laser vaporizes the obstructing prostate tissue.

What Are The Benefits, Risks and Side Effects of PVP?
PVP is becoming very popular. Most men can have a PVP without adverse events. PVP is replacing more invasive surgery. It is done in the office or as an outpatient at the hospital. There is little bleeding. There are few side effects. After PVP, you can often stop medical therapy.

**Who Are Good Candidates for PVP?**

Good candidates include men with too many medical problems for invasive surgery. Men with weak hearts are good candidates because there is no blood loss. So are men who want to limit anesthesia.

**What is UroLift?**

UroLift opens the blocked urethra. It lifts and holds the enlarged prostate out of the way. Small implants are delivered through a needle. The goal is to relieve symptoms.

**What Are The Benefits, Risks and Side Effects of UroLift?**

With UroLift, health care providers do not have to cut into your body, destroy the prostate or remove any tissue. With UroLift men may have fewer sexual side effects than with other minimally invasive surgeries.

**Who Are Good Candidates for UroLift?**

Most men with enlarged prostates and urinary symptoms may be good candidates for this treatment. In some men, symptoms that remain after treatment are from another source. Men who have this treatment can still have other treatment if they need it.

**What Is Catheterization?**

This treatment places a tube called a catheter into the bladder. The tube drain urine. Catheters can be "clean," place and removed every six to eight hours. Or they can be "indwelling," left in the bladder for short or long period of times. Catheters can be placed into the bladder through the urethra. Or the provider may make a small puncture in the bladder above the pubic bone. This is called a suprapubic tube. Clean catheterization can be done by you or a caregiver. Clean catheterization is when you remove the catheter once the flow of urine has stopped, no tubes are left in the bladder.

**What Are The Benefits, Risks and Side Effects of Catheterization?**

Catheters' benefits are temporary. Infection is the biggest risk of having a catheter in place for long periods. Bacteria can stick to the surface of the catheter. This makes it hard for the immune system or antibiotics to work. After a few years, there is a higher risk of bladder cancer. This is probably due to the long-term irritation from the catheter sitting in the bladder. Clean intermittent catheterization (CIC) has lower risk of infection and cancer than an indwelling catheter.

**Who Are Good Candidates for Catheterization?**

Good candidates for a catheter include men waiting for medication to work or for surgery. Catheters are also used during treatment for an infection. They may be a good choice for men with multiple medical problems and a short life expectancy. The risk and discomfort of surgery may outweigh the risk of infection or cancer. Catheterization is chosen over medications or surgery for men with bladder control problems and a blocked prostate.

**Surgery**

When medical therapy fails and in severe cases, surgery can remove obstructing prostate tissue. Surgery is almost always recommended if you:
What is Transurethral Resection of the Prostate (TURP)?

Transurethral Resection of the Prostate (TURP) is the most common surgery for BPH. In the United States, about 150,000 men have TURPs each year. TURP uses electric current or laser light.

After anesthesia, the surgeon inserts a resectoscope through the tip of the penis into the urethra.

The resectoscope has a light, valves for irrigating fluid, and an electrical loop. The loop cuts tissue and seals blood vessels. The removed tissue flushes into the bladder and out of the body. A catheter is placed in the bladder through the penis.

What Are The Benefits, Risks and Side Effects of TURP?

This treatment has excellent outcomes. All treatments are generally compared with it. There are no cuts. The hospital stay is one to two days. The catheter may be removed before you go home. Or it may be removed later as an outpatient. This surgery does require anesthesia. As with any surgery, anesthesia poses a risk.

Who Are Good Candidates for TURP?

Men who require surgery may be good candidates for TURP. It does not remove the entire prostate. There may be less need for further treatment with TURP.

What is Transurethral Incision of the Prostate (TUIP)?

Transurethral incision of the prostate (TUIP) is used if you have a smaller prostate gland but major blockage. Instead of cutting and removing tissue, this procedure widens the urethra. The surgeon makes small cuts in the bladder neck, where the urethra joins the bladder, and in the prostate. This reduces the pressure of the prostate on the urethra. It makes urination easier. The hospital stay is one to three days. A catheter is left in your bladder for one to three days after surgery.

What Are The Benefits, Risks and Side Effects of TUIP?

TUIP may improve the ability to urinate. It may ease symptoms. Temporary urine retention, urinary tract infection, dry orgasm (climax), incontinence and erectile dysfunction may happen. Some men need follow-up treatment.

Who are Good Candidates for TUIP?

Men who do not want a complete prostatectomy (removal of the prostate) but need surgery are good candidates for TUIP.

What is Holmium Laser Enucleation of Prostate (HoLEP)?

With holmium laser enucleation of prostate (HoLEP), the surgeon places a resectoscope through the penis into the urethra. The laser vaporizes the prostate tissue.
What are the benefits, risks and side effects of HoLEP?

There is very little bleeding. There is a short recovery time. You will need a catheter, but it is usually removed the next day. You will only stay one night in the hospital. But, this treatment requires anesthesia. As with any surgery, anesthesia poses a risk.

Who are Good Candidates for HoLEP?

Men with larger prostates who wish to avoid more invasive surgery may be good candidates for this treatment.

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There are no side effects. But it may be harder to reduce your symptoms later.

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Medical Therapies

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Alpha blockers are pills that relax the muscles of the prostate and bladder. They improve urine flow. They reduce blockage. They reduce symptoms of BPH. The pills do not reduce the size of the prostate. Alpha blockers include alfuzosin (Uroxatral), terazosin (Hytrin), doxazosin (Cadura) and tamsulosin (Flomax).

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One benefit of alpha blockers is that they work right away. Side effects include dizziness, lightheadedness, fatigue and difficulty ejaculating.

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This treatment is good for men with moderate to severe BPH. Men who are bothered by their symptoms are good candidates. This is not a good choice if you are about to have cataract surgery.

What Are 5-Alpha Reducatase Inhibitors?

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What is Combination Therapy?

Combination therapy uses an alpha blocker and a 5-alpha reductase inhibitor together. Several studies, such as the Medical Therapy of Prostatic Symptoms (MTOPS) study, have shown that combining two classes of medications, instead of using just one, can more effectively improve symptoms, urinary flow, and quality of life. The combinations include:

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What Are the Benefits, Risks, and Side Effects of Minimally Invasive Surgeries?
Getting relief from your symptoms is the biggest benefit of having minimally invasive surgery. In addition, some men have fewer problems controlling their urine after they have one of these types of surgeries. However, by having a minimally invasive surgery, you may be at a higher risk for needing another surgery in the future. Side effects from minimally invasive surgery may include:

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- Blood in your urine.
- Burning with urination.
- Needing to urinate more often.
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Who Are Good Candidates for Minimally Invasive Surgeries?
Men who are having trouble urinating are good candidates for a minimally invasive surgery. In addition, you may be a good candidate for this type of surgery if you:

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The recovery time for HIFU is usually only a few days. Your health care provider sets the temperature for the needed effect. But this treatment requires anesthesia. As with any surgery, anesthesia poses a risk. There is also a risk that you may need a catheter after the treatment. Side effects include not being able to urinate and blood in the urine.

**Who Are Good Candidates for HIFU?**

Men with larger prostates who wish to avoid more invasive surgery may be good candidates for this treatment.

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In Interstitial Laser Coagulation (ILC), the surgeon uses a "cystoscope" (metal tube through which a visual lens and laser can be passed). The surgeon uses a laser to pierce into the prostate. The laser energy burns the tissue.

**What Are The Benefits, Risks and Side Effects of ILC?**

Studies to date have shown limited long term benefits. This treatment requires anesthesia. As with any surgery, anesthesia poses a risk. But you can usually go home the same day.

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Men with larger prostates who wish to avoid more invasive surgery may be good candidates for this treatment.

**What is Transurethral Microwave Thermotherapy (TUMT)?**

Transurethral microwave thermotherapy (TUMT) uses microwaves to destroy prostate tissue. A urologist inserts a catheter through the urethra to the prostate, and a device called an antenna sends microwaves through the catheter to heat selected portions of the prostate. The temperature becomes high enough inside the prostate to destroy...
In TUMT, microwaves heat part of the prostate enlarged tissue. A cooling system protects the urinary tract from heat damage during the procedure.

**What Are The Benefits, Risks and Side Effects of TUMT?**

TUMT is a minimally invasive surgery that does not require anesthesia. The surgeon numbs the skin and gives you a pain pill. TUMT only takes an hour. It may relieve bladder obstruction. It is low-risk treatment.

This treatment has advanced recently. It now uses higher energy devices. It is reliable. There is no blood loss or fluid absorption. You can usually go home the same day. Many urologists have the technology. Outcomes are better long term.

But, there is still a risk of adverse outcomes from the procedure. And urinary tract symptoms occur in about 25% of men. The long term effectiveness is still unclear.

**Who Are Good Candidates for TUMT?**

Good candidates may include men with too many medical problems for invasive surgery. Men with weak hearts may be good candidates because there is no blood loss. So are men who want to avoid anesthesia.

**What is Transurethral Needle Ablation (TUNA)?**

During transurethral needle ablation (TUNA) a specially adapted visual instrument (cystoscope) is inserted through the tip of your penis into the tube that carries urine from your bladder (urethra). Using the cystoscope, your health care provider will guide a pair of tiny needles into the prostate tissue. Low-level, high-frequency radio waves are passed through the needles to create heat. The heat kills prostate tissue and shrinks the prostate.

**What Are The Benefits, Risks and Side Effects of TUNA?**

With TUNA, your health care provider will only use local anesthesia. It is done in the health care provider’s office. It only takes 30-45 minutes. It is an effective short-term treatment. Serious complications are rare. There is little bleeding. There are very few sexual side effects. But BPH symptoms may return. And there may be adverse outcomes from the procedure. There may be a burning feeling.

**Who Are Good Candidates for TUNA?**

Good candidates may include men with too many medical problems for invasive surgery. Men with weak hearts may be good candidates because there is no blood loss. So are men who want to limit anesthesia.

**What is Photoselective Vaporization (PVP) ?**

Photoselective vaporization of the prostate (PVP) uses a high-powered laser. The laser vaporizes the obstructing prostate tissue.

**What Are The Benefits, Risks and Side Effects of PVP?**

PVP is becoming very popular. Most men can have a PVP without adverse events. PVP is replacing more invasive surgery. It is done in the office or as an outpatient at the hospital. There is little bleeding. There are few side effects. After PVP, you can often stop medical therapy.

**Who Are Good Candidates for PVP?**
Good candidates include men with too many medical problems for invasive surgery. Men with weak hearts are good candidates because there is no blood loss. So are men who want to limit anesthesia.

**What is UroLift?**

UroLift opens the blocked urethra. It lifts and holds the enlarged prostate out of the way. Small implants are delivered through a needle. The goal is to relieve symptoms.

**What Are The Benefits, Risks and Side Effects of UroLift?**

With UroLift, health care providers do not have to cut into your body, destroy the prostate or remove any tissue. With UroLift men may have fewer sexual side effects than with other minimally invasive surgeries.

**Who Are Good Candidates for UroLift?**

Most men with enlarged prostates and urinary symptoms may be good candidates for this treatment. In some men, symptoms that remain after treatment are from another source. Men who have this treatment can still have other treatment if they need it.

**What Is Catheterization?**

This treatment places a tube called a catheter into the bladder. The tube drains urine. Catheters can be "clean," place and removed every six to eight hours. Or they can be "indwelling," left in the bladder for short or long period of times. Catheters can be placed into the bladder through the urethra. Or the provider may make a small puncture in the bladder above the pubic bone. This is called a suprapubic tube. Clean catheterization can be done by you or a caregiver. Clean catheterization is when you remove the catheter once the flow of urine has stopped, no tubes are left in the bladder.

**What Are The Benefits, Risks and Side Effects of Catheterization?**

Catheters' benefits are temporary. Infection is the biggest risk of having a catheter in place for long periods. Bacteria can stick to the surface of the catheter. This makes it hard for the immune system or antibiotics to work. After a few years, there is a higher risk of bladder cancer. This is probably due to the long-term irritation from the catheter sitting in the bladder. Clean intermittent catheterization (CIC) has lower risk of infection and cancer than an indwelling catheter.

**Who Are Good Candidates for Catheterization?**

Good candidates for a catheter include men waiting for medication to work or for surgery. Catheters are also used during treatment for an infection. They may be a good choice for men with multiple medical problems and a short life expectancy. The risk and discomfort of surgery may outweigh the risk of infection or cancer. Catheterization is chosen over medications or surgery for men with bladder control problems and a blocked prostate.

**Surgery**

When medical therapy fails and in severe cases, surgery can remove obstructing prostate tissue. Surgery is almost always recommended if you:

- Are unable to urinate
- Have kidney damage
- Have frequent urinary tract infections
- Have a lot of bleeding
- Have stones in the bladder
What is Transurethral Resection of the Prostate (TURP)?

Transurethral Resection of the Prostate (TURP) is the most common surgery for BPH. In the United States, about 150,000 men have TURPs each year. TURP uses electric current or laser light.

After anesthesia, the surgeon inserts a resectoscope through the tip of the penis into the urethra.

The resectoscope has a light, valves for irrigating fluid, and an electrical loop. The loop cuts tissue and seals blood vessels. The removed tissue flushes into the bladder and out of the body. A catheter is placed in the bladder through the penis.

What Are The Benefits, Risks and Side Effects of TURP?

This treatment has excellent outcomes. All treatments are generally compared with it. There are no cuts. The hospital stay is one to two days. The catheter may be removed before you go home. Or it may be removed later as an outpatient. This surgery does require anesthesia. As with any surgery, anesthesia poses a risk.

Who Are Good Candidates for TURP?

Men who require surgery may be good candidates for TURP. It does not remove the entire prostate. There may be less need for further treatment with TURP.

What is Transurethral Incision of the Prostate (TUIP)?

Transurethral incision of the prostate (TUIP) is used if you have a smaller prostate gland but major blockage. Instead of cutting and removing tissue, this procedure widens the urethra. The surgeon makes small cuts in the bladder neck, where the urethra joins the bladder, and in the prostate. This reduces the pressure of the prostate on the urethra. It makes urination easier. The hospital stay is one to three days. A catheter is left in your bladder for one to three days after surgery.

What Are The Benefits, Risks and Side Effects of TUIP?

TUIP may improve the ability to urinate. It may ease symptoms. Temporary urine retention, urinary tract infection, dry orgasm (climax), incontinence and erectile dysfunction may happen. Some men need follow-up treatment.

Who are Good Candidates for TUIP?

Men who do not want a complete prostatectomy (removal of the prostate) but need surgery are good candidates for TUIP.

What is Holmium Laser Enucleation of Prostate (HoLEP)?

With holmium laser enucleation of prostate (HoLEP), the surgeon places a resectoscope through the penis into the urethra. The laser vaporizes the prostate tissue.

What are the benefits, risks and side effects of HoLEP?
There is very little bleeding. There is a short recovery time. You will need a catheter, but it is usually removed the next day. You will only stay one night in the hospital. But, this treatment requires anesthesia. As with any surgery, anesthesia poses a risk.

**Who are Good Candidates for HoLEP?**

Men with larger prostates who wish to avoid more invasive surgery may be good candidates for this treatment.

**What Happens After Treatment?**

For most men, symptoms improve after treatment. Infection, bleeding, incontinence, and erectile dysfunction may occur after some treatments. In some cases, scar tissue may form. There may be complications after surgery. Some men need further or new treatment.

**What are the long term side effects of treatment?**

Side effects vary with the type of treatment you choose. Most side effects are temporary. It may take a while for sexual function to return fully. Most experts agree that if you were able to have an erection shortly before surgery, you will probably be able to after surgery. Most men find little or no difference in orgasm. They may have retrograde ejaculation. This is when semen enters the bladder rather than being sent out. For most men, side effects lessen with time. But there may be long term side effects for some men for some treatments.

**How can you prevent a recurrence of BPH?**

Once you have been treated, taking medication continually can prevent BPH symptoms from returning or getting worse. In some men, a different treatment may be necessary. Some men they will need repeated treatments to get rid of bothersome symptoms. In older men, it may be possible to control the symptoms of BPH to the end of life.