Prostate Condition

Benign Prostatic Hyperplasia (BPH)

QDxPathology

What is benign prostatic hyperplasia (BPH)?

As a man ages, his prostate gland commonly becomes enlarged. This condition is known as benign prostatic hyperplasia (BPH).

Who is likely to have BPH?

While it rarely affects men under age 40, BPH affects more than half of men in their 60s and 90 percent in their 70s and 80s. BPH is the cause of more than 4.5 million visits to physicians.

What characterizes BPH?

Men with BPH have the need to urinate more frequently than normal, especially at night. This condition develops as the prostate enlarges and presses against the urethra, causing it to narrow. As a result, the bladder contracts even when it contains small amounts of residual urine, causing more frequent urination. Over time, the bladder may weaken and lose the ability to empty itself, causing symptoms such as a weak or interrupted urine stream, urine leaking from the penis, and the urgent need to urinate. Sometimes, men may find themselves unable to urinate at all. This condition–called acute urinary retention–can be triggered by an over-the-counter decongestant drug known as sympathomimetic, by alcohol, by cold temperatures, or by a long period of immobility.

While no connection between BPH and prostate cancer exists, their symptoms are similar. Therefore, men experiencing these symptoms should see a physician right away. Also, over time, severe BPH can cause serious problems including urinary tract infections, bladder or kidney damage, bladder stones, and incontinence—the inability to control urination. When BPH is found in its early stages, there is a lower risk of developing these problems.

How does the pathologist make the diagnosis?

You may notice BPH symptoms yourself, or your primary care physician may find prostate enlargement by performing a ***digital rectal examination (DRE)***. If your physician suspects BPH, you may be referred to a urologist, a physician specializing in problems of the urinary tract and male reproductive system.

Your doctor or specialist may conduct additional tests or studies. One procedure, called a ***urine flow study***, involves urinating into a device that measures how quickly the urine is flowing. In a procedure called a ***cystoscopy***, the urologist inserts a cytoscope (a small tube with a lens and light) through the urethra's opening in the penis. This test enables the urologist to determine the location and degree of the urethra obstruction.

What does the pathologist look for?

To rule out cancer, your physician or specialist may recommend a prostate-specific antigen ***(PSA) blood test***. Produced by prostate cells, PSA is a protein that often rises to higher levels in the blood of men with prostate cancer.

Some physicians recommend a PSA test and DRE for all men age 50 or older or at age 40 if you are African American or have a family history of prostate cancer. The pathologist reviews the results of the PSA blood test as a possible indicator for cancer.

If there are signs of prostate cancer, the urologist may recommend ***rectal ultrasound***, which creates an image of the prostate on a display screen. Using this image as a guide, the urologist can gather a prostate ***biopsy sample***. The pathologist examines this tissue under a microscope to diagnose whether or not the cells are benign or cancerous.

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Definitions

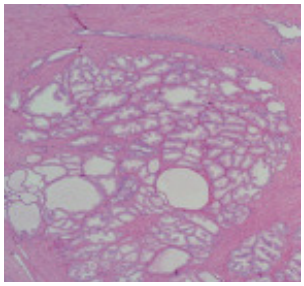
Benign:
Not cancerous.

Prostate:
Part of the male reproductive system, the prostate gland produces a fluid that helps make up semen. This fluid activates the sperm during sexual climax.

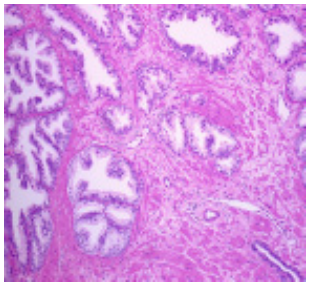
Hyperplasia:
Abnormal increase in size, or hypertrophy.

Urethra:
Urine travels through this tube from the bladder, through the prostate, and out through the penis.

Pathologist:
A physician who examines tissues and fluids to diagnose disease in order to assist in making treatment decisions.



Benign prostatic hyperplasia (BPH).



Normal prostatic cells.

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How do doctors determine what treatment will be necessary?

If no cancer is found and the gland is mildly enlarged, your physician may recommend no treatment because mild cases of BPH can clear up without treatment. Instead, your doctor may recommend regular checkups to watch for early problems. If BPH has caused a urinary tract infection, your physician will usually prescribe antibiotics to clear it.

If symptoms cause enough discomfort or problems to warrant treatment, your physician may prescribe medication. Finasteride (Proscar) and dutasteride (Avodart) are designed to shrink or stop the growth of the prostate without using surgery. Terazosin (Hytrin), doxazosin (Cardura), tamsulosin (Flomax), and alfuzosin (Uroxatral) can improve urine flow and reduce bladder outlet obstruction. The Medical Therapy of Prostatic Symptoms (MTOPS) Trial, supported by the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), found that using finasteride and doxazosin together to treat BPH is more effective than using either drug alone. The two-drug regimen reduced the risk of BPH progression by 67 percent, compared with 39 percent for doxazosin alone and 34 percent for finasteride alone.

Because drug treatment is not always effective, other procedures relieve BPH symptoms in a less invasive way than open surgery. These treatments deliver low-level radiofrequency energy, microwaves, or heated water through a catheter or needle to destroy excess prostate tissue without adverse side effects.

If surgery is necessary, most physicians recommend removing the enlarged part of the prostate. Surgeons use a procedure called ***transurethral resection of the prostate (TURP)*** for 90 percent of all BPH-related surgeries. This procedure is less invasive than open surgery and requires a shorter recovery time. In another procedure–***transurethral incision of the prostate (TUIP)***, surgeons widen the urethra instead of removing prostate tissue. While some experts believe TUIP provides the same relief as TURP with less risk of side effects, its advantages and long-term effectiveness have not been clearly established.

Open surgery–which requires an external incision–is recommended if the prostate is greatly enlarged, when there are complicating factors, or when the bladder has been damaged and needs to be repaired. A procedure called ***prostatectomy*** is performed during open surgery to remove the periurethral–the enlarged portion of the prostate. As an alternative to open surgery, ***laser surgery*** offers certain advantages but has not yet established a record for long-term effectiveness.

At the end of surgery, surgeons insert a ***Foley catheter*** through the penis opening to drain urine from the bladder to a collection bag. This catheter is usually kept in place for several days and may cause pain or discomfort. Also, some blood in your urine after surgery is normal and should go away over time. Drinking water will help to flush out the bladder and speed healing.

After surgery, you may experience discomfort, urgency, or a lack of control during urination. Over time, as the bladder returns to normal, these problems should go away. Also, you may experience a temporary loss of sexual function. In some cases, a prostate surgical procedure can make a man sterile and unable to father children by causing a condition called ***retrograde ejaculation*** or ***dry climax***. This condition, which causes semen to be ejaculated into the bladder rather than through the penis, can sometimes be treated with a drug called pseudoephedrine, found in many cold medicines, or imipramine.

Following treatment, you should have a DRE once a year and have any symptoms checked by your doctor. Since BPH surgery usually leaves behind a good part of the prostate, problems can develop again. However, surgery usually offers relief from BPH for at least 15 years, and only 10 percent of the men having BPH surgery need a second operation.

What kinds of questions should I ask my doctors?

Ask any question you want. There are no questions you should be reluctant to ask. Here are a few to consider:

Please describe the type of condition I have and what treatment options are available.

What treatment options do you recommend?

Why do you believe these are the best treatments?

What are the pros and cons of these treatment options?

What are the side effects?

Is your medical team experienced in treating the type of condition I have?

Can you provide me with information about the physicians and others on the medical team?

If I want a second opinion, could you provide me with the names of physicians and/or institutions that you would recommend?

For more information, go to http://kidney.niddk.nih.gov (National Kidney and Urologic Disease Information Clearinghouse) or www.urologychannel.com (Urology Channel). Type the keywords benign prostatic hyperplasia or BPH into the search box.

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