# What Is Benign Prostatic Hyperplasia (BPH)?

It is common for the prostate gland to become enlarged as a man ages. Doctors call this condition benign prostatic hyperplasia (BPH), or benign prostatic hypertrophy.

As a man matures, the prostate goes through two main periods of growth. The first occurs early in puberty, when the prostate doubles in size. At around age 25, the gland begins to grow again. This second growth phase often results, years later, in BPH.

Though the prostate continues to grow during most of a man's life, the enlargement doesn't usually cause problems until late in life. BPH rarely causes symptoms before age 40, but more than half of men in their sixties and as many as 90 percent in their seventies and eighties have some symptoms of BPH.

As the prostate enlarges, the layer of tissue surrounding it stops it from expanding, causing the gland to press against the urethra like a clamp on a garden hose. The bladder wall becomes thicker and irritable. The bladder begins to contract even when it contains small amounts of urine, causing more frequent urination. Eventually, the bladder weakens and loses the ability to empty itself, so some of the urine remains in the bladder. The narrowing of the urethra and partial emptying of the bladder cause many of the problems associated with BPH.

**Symptoms**

Many symptoms of BPH stem from obstruction of the urethra and gradual loss of bladder function, which results in incomplete emptying of the bladder. The symptoms of BPH vary, but the most common ones involve changes or problems with urination, such as

- a hesitant, interrupted, weak stream
- urgency and leaking or dribbling
- more frequent urination, especially at night

The size of the prostate does not always determine how severe the obstruction or the symptoms will be. Some men with greatly enlarged glands have little obstruction and few symptoms while others, whose glands are less enlarged, have more blockage and greater problems.

Sometimes a man may not know he has any obstruction until he suddenly finds himself unable to urinate at all. This condition, called acute urinary retention, may be triggered by taking over-the-counter cold or allergy medicines. Such medicines contain a decongestant drug, known as a sympathomimetic. A potential side effect of this drug may prevent the bladder opening from relaxing and allowing urine to empty. When partial obstruction is present, urinary retention also can be brought on by alcohol, cold temperatures, or a long period of immobility.

It is important to tell your doctor about urinary problems such as those described above. In eight out of 10 cases, these symptoms suggest BPH, but they also can signal other, more serious conditions that require prompt treatment. These conditions, including prostate cancer, can be ruled out only by a doctor's examination.

Severe BPH can cause serious problems over time. Urine retention and strain on the bladder can lead to urinary tract infections, bladder or kidney damage, bladder stones, and incontinence—the inability to control urination. If the bladder is permanently damaged, treatment for BPH may be ineffective. When BPH is found in its earlier stages, there is a lower risk of developing such complications.

**Diagnosis**

You may first notice symptoms of BPH yourself, or your doctor may find that your prostate is enlarged during a routine checkup. When BPH is suspected, you may be referred to a urologist. Several tests help the doctor identify the problem and decide whether surgery is needed. The tests vary from patient to patient, but the following are the most common:

- **Digital Rectal Examination (DRE)**
  This examination is usually the first test done. The doctor inserts a gloved finger into the rectum and feels the part of the prostate next to the rectum. This examination gives the doctor a general idea of the size and condition of the gland.
- **Prostate-Specific Antigen (PSA) Blood Test**

To rule out cancer as a cause of urinary symptoms, your doctor may recommend a PSA blood test. PSA, a protein produced by prostate cells, is frequently present at elevated levels in the blood of men who have prostate cancer.

- **Rectal Ultrasound and Prostate Biopsy**
  If there is a suspicion of prostate cancer, your doctor may recommend a test with rectal ultrasound. In this procedure, a probe inserted in the rectum directs sound waves at the prostate. The echo patterns of the sound waves form an image of the prostate gland on a display screen. To determine whether an abnormal-looking area is indeed a tumor, the doctor can use the probe and the ultrasound images to guide a biopsy needle to the suspected tumor. The needle collects a few pieces of prostate tissue for examination with a microscope.
- **Urine Flow Study**
  Your doctor may ask you to urinate into a special device that measures how quickly the urine is flowing. A reduced flow often suggests BPH.
- **Cystoscopy**

In this examination, the doctor inserts a small tube through the opening of the urethra in the penis. This procedure is done after a solution numbs the inside of the penis so all sensation is lost. The tube, called a cystoscope, contains a lens and a light system that help the doctor see the inside of the urethra and the bladder. This test allows the doctor to determine the size of the gland and identify the location and degree of the obstruction.

*Above content provided by the National Institute of Diabetes and Digestive and Kidney Diseases in partnership with Beth Israel Deaconess Medical Center. For advice about your medical care, consult your doctor.*

Posted September 2009
http://www.thebostonchannel.com/bethisrael/20478753/detail.html