

Benign Prostatic Hyperplasia

What is benign prostatic hyperplasia?

Benign prostatic hyperplasia (BPH), also known as benign prostatic hypertrophy, is a non-cancerous enlargement of the prostate, a small gland that encircles the **urethra** in males and produces a fluid that makes up part of semen. As the volume of the prostate increases, it can put pressure on the urethra, causing a slowdown in the urine stream, hesitancy in urinating, a frequent and urgent need to urinate, and sometimes dribbling of urine at the end of the flow. It can also cause urine retention, which can weaken the bladder muscle and increase the risk of developing a **urinary tract infection (UTI)** or kidney stones. In severe cases of BPH, urine may back up into and damage the kidneys. Rarely, BPH may prevent a patient from urinating at all, a situation that requires immediate medical attention.

BPH can also affect sexual functioning. It can lead to reduced sexual ability, painful orgasm, and impotence. The type and severity of symptoms experienced will vary from person to person and may vary over time. For many men, BPH never progresses beyond a minor to moderate annoyance; for others, it may represent a significant challenge to their quality of life. BPH becomes a very common condition in men as they age. According to the American Urology Association, about 50% of men will have some degree of BPH by the time they are 60 years old, and up to 90% will be affected by age 80. While BPH does not cause **prostate cancer**, both may be found together.

Testing

Evaluation for BPH involves a discussion of the patient's medical and family history, a physical examination, a **digital rectal examination (DRE)**, and an evaluation of the patient's symptoms. Laboratory tests and imaging scans may be used to determine the size of the prostate and to rule out other diseases or conditions that may be causing or exacerbating the symptoms. Occasionally, a biopsy of the prostate may be required to look at the cellular structure of a small amount of prostate tissue under the microscope for signs of prostate cancer.

Laboratory tests may include:

- **PSA (prostate specific antigen)** – to help detect prostate cancer. This test may also be somewhat elevated in those with BPH, because PSA is a protein produced by cells in the prostate. When evaluating the results, the doctor must consider both the concentration of PSA in the blood and the volume of the patient's prostate.
- **Urinalysis** – to screen for **kidney disorders**
- **Urine Culture** – to look for signs of a UTI
- **Blood Urea Nitrogen (BUN)** and **Creatinine** – blood tests to evaluate kidney function

Non-laboratory tests may include:

- Ultrasound – to help measure the size of the prostate and evaluate the volume of urine retained in the bladder
- Cystoscopy - an evaluation of the **urethra** and/or bladder using a thin flexible scope
- Urine flow and/or pressure studies - to evaluate how fast urine can travel through the urethra and how much pressure is being put on the bladder by urine retention
- Prostate biopsy – collection of one or more small samples of prostate tissue and evaluation of its cellular structure under the microscope for abnormal cells and any signs of prostate cancer

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