

Prostate Disease

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What are they?

The prostate is a walnut-sized gland in the male located just below the bladder, in front of the rectum, and surrounding the *urethra*, the tube that carries urine from the bladder out through the penis. The prostate function is to make fluid called *semen* to carry sperm during male ejaculation.

Prostatitis is an inflammation of the prostate gland. *Benign prostatic hyperplasia* (BPH) is an enlargement of the prostate that may cause difficulty with urination. BPH is not cancer and does not turn into cancer.

Prostate cancer is a potentially serious disease characterized by the uncontrolled growth and spread of abnormal prostate cells. Prostate cancer is the most common cancer in American men following skin cancer and the third leading cause of cancer deaths in men.

What causes them?

There are three types of prostatitis, including acute and chronic infectious prostatitis, as well as non-infectious prostatitis. Infectious prostatitis is caused by a bacteria, but it is not contagious. It is not known what causes non-infectious prostatitis.

Hormones are generally thought to be involved in benign prostatic hyperplasia which can enlarge the prostate and can "pinch" the urethra. This narrows the tube and causes problems with urination.

The cause of prostate cancer is not known.

Who gets them?

Prostatitis can affect men of all ages. There are no known risk factors. Benign prostatic hyperplasia is common in men over age 45. By age 80 about eight out of ten men have it. BPH does not always cause problems. Fewer than half of all men with BPH ever show any symptoms of the disease and only some men with symptoms will need treatment.

While prostate cancer can occur in men of all ages, it is most commonly found in men older than 50 years of age. Approximately one out of every ten American men develops symptomatic prostate cancer.

What are the symptoms?

The symptoms commonly associated with BPH are frequent urination, especially at night, with a sudden, almost uncontrollable urge to urinate. Other symptoms include a weak, interrupted urine stream, a sense of incomplete bladder emptying, leakage, and difficulty in starting and stopping urination.

Some of the symptoms of prostatitis are similar to those caused by an enlarged prostate, but prostatitis can also be accompanied by fever and chills (in acute infections) and by pain or burning during urination.

Early prostate cancer often does not cause symptoms. In later stages, prostate cancer can cause symptoms similar to BPH and in addition may include painful ejaculation, or blood in the urine.

How do you prevent them?

None of the prostate diseases discussed are preventable. However, there has been considerable debate regarding the use of the blood test called PSA (Prostate Specific Antigen) to screen for prostate cancer. One of the reasons doctors don't agree about screening is that 75% of prostate cancers are slow growing and rarely cause health problems or shorten life. On the other hand, sometimes prostate cancer grows quickly and spreads to other parts of the body. PSA testing has the potential to catch fast growing cancer at a point that treatment can be life saving, but also may identify non cancerous BPH or prostatitis. The US Preventive Services Task Force concludes that the evidence is insufficient to recommend for or against routine screening for prostate cancer for average risk men using PSA or digital rectal exam. The Task Force found good evidence that PSA screening can detect early-stage prostate cancer, but mixed and inconclusive evidence that early detection improves health. Screening is associated with important harms, including frequent false-positive results and unnecessary anxiety, tests, and potential complications of treatment of cancer that may never have affected a patient's health. The Task Force concludes that evidence is unclear whether the benefit outweighs the harm. Most major US medical organizations recommend that doctors discuss with patients the potential benefits and possible harms of PSA screening and consider patient preferences when deciding if and when to screen for prostate cancer.

For those men with BPH, an International Prostate Symptoms Score can rate the “bothersomeness” based on answers to seven questions concerning urinary symptoms. Circle your numerical score for each question below.

	Not at all	Less than 1 time in 5	Less than half the time	About half the time	More than half the time	Almost always
1. Over the past month, how often have you had a sensation of not emptying your bladder completely after you finished urinating?	0	1	2	3	4	5
2. Over the past month, how often have you had to urinate again less than 2 hours after you finished urinating?	0	1	2	3	4	5
3. Over the past month, how often have you found you stopped and started again several times when you urinated?	0	1	2	3	4	5
4. Over the past month, how often have you found it difficult to postpone urination?	0	1	2	3	4	5
5. Over the past month, how often have you had a weak urinary stream?	0	1	2	3	4	5
6. Over the past month, how often have you had to push or strain to begin urination?	0	1	2	3	4	5
7. Over the past month, how many times did you most typically get up to urinate from the time you went to bed at night until the time you got up in the morning (circle number of times)?	0	1	2	3	4	5

The scores are added together. Patients with symptoms score less than or equal to 7 are considered to be mild. Symptom scores ranging from 8 to 19 are considered moderate, and scores ranging from 20-35 are considered severe. Treatment can be based on the symptoms score and the perceived quality of life.

Can it be treated?

Infectious prostatitis is treated with an antibiotic medication. Anti-inflammatories and muscle relaxants are sometimes helpful for non-infectious prostatitis.

Currently, the four ways of treating benign prostatic hyperplasia include the following:

- **Watchful waiting** can be a very reasonable approach, especially if your symptoms score is considered mild. Watchful waiting is not an active treatment like taking medicine or having surgery, but it does mean getting regular yearly exams to see if your BPH is getting worse or causing problems.

- **Alpha blocker** drug treatment helps to relax muscles in the prostate. These medications usually will improve symptoms in 60 to 80% of men. Examples of alpha blockers include doxazosin, terazosin, tamsulosin and alfuzosin.

- **Enzyme inhibitors** are taken daily. They cause the prostate to shrink, but can take six months or more before you notice the full benefit. Side effects include decreased interest in sex, problems with erection and problems with ejaculation. Examples are finasteride and dutasteride.

- **Surgery** has been used for many years to treat BPH and has the best chance for success. Surgery is especially useful for men who are unable to urinate at all, have damage to the kidneys because of urinary blockage, or have frequent urinary infections.

Unfortunately, surgery has the highest risk for major complications of all the treatments discussed.

Treatment for prostate cancer depends on many factors. Essentially, the options include surgery, radiation therapy, or hormone therapy. There is still no good data to show that survival is improved by surgery for cancer limited to the prostate. Adverse effects of prostate surgery include partial incontinence in 25% and at least partial impotence in up to 85% of men.

In summary

- Treatment of BPH depends upon the degree of symptoms and the perceived quality of life. Many men elect no therapy.
- If you're age fifty or older (age forty or older with a family history of prostate cancer), you should consider asking your doctor about prostate screening.
- For more information contact the Cancer Information Service of the National Cancer Institute at cis.nci.nih.gov or 800-422-6237; or the American Cancer Society at www.cancer.org or 800-227-2345.