Living a Better Life After Prostate Cancer
A Survivor’s Guide to Cryotherapy

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Living a Better Life After Prostate Cancer

A Survivor's Guide to Cryotherapy

by Aaron E. Katz, M.D. and Philippa J. Cheetham, M.D.
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The normal prostate is a small gland about the size of a walnut. It is a key part of the male reproductive system and is linked closely with the urinary system. The prostate secretes much of the liquid portion of semen, the milky fluid that transports sperm through the penis during ejaculation. The prostate is located just below the bladder and in front of the rectum (figure 1). Like a donut the prostate encircles a tube called the urethra, which carries urine from the bladder out through the penis. The urethra also carries semen during ejaculation, which is secreted by the

Figure 1  The prostate in relation to the bladder and urinary tract

The urinary system  The prostate in relation to the bladder and urethra
prostate through small pores of the urethral walls. Semen is a combination of sperm plus fluid that the prostate adds.

The prostate is made up of a number of lobes encased in an outer covering or capsule (figure 2). It is flanked on either side by the seminal vesicles, a pair of pouch-like glands that contribute secretions to the semen. Next to the seminal vesicles run the two vas deferens tubes (one from each side) that carry sperm from the testicles. The testicles, in addition to manufacturing sperm, produce the male sex hormone testosterone that controls the prostate’s growth and function. As one of a man’s sex glands the prostate is affected by testosterone, which stimulates the activity of the prostate for its growth and development.

WHAT ARE PROSTATE PROBLEMS?

For men under 50, the most common prostate problem is prostatitis. For men over 50, the most common prostate problem is prostate enlargement. This condition is also called benign prostatic hyperplasia or BPH. Prostate cancer is the most common solid organ malignancy diagnosed in men. However it is much less common than BPH.
What Is Prostatitis?
Prostatitis means that the prostate is inflamed. Some kinds of prostatitis are caused by bacteria. If you have bacterial prostatitis, your doctor can look through a microscope and find bacteria in a sample of your urine. Your doctor can then give you an antibiotic to fight the bacteria. Most of the time, doctors do not find any bacteria in men with prostatitis. If no other causes are found, the doctor may decide that you have a condition called nonbacterial prostatitis. Antibiotics will not help non-bacterial prostatitis and no single solution works for everyone with this condition. All of these forms of prostatitis may elevate your prostate specific antigen (PSA) level.

What Is Prostate Enlargement Or BPH?
If you are a man over 50 and have started having problems urinating, the reason could be an enlarged prostate or BPH. As men get older, their prostate (which encircles the urethra) keeps growing and it squeezes the urethra, causing compression of the lumen (figure 3a). Since urine travels from the bladder through the urethra, the pressure from the enlarged prostate may affect bladder control.

Figure 3a  A normal prostate compared to an enlarged prostate (BPH)
If You Have BPH, You May Have One Or More of These Problems:

1. A frequent and urgent need to urinate. You may get up several times a night to go to the bathroom.
2. Trouble starting a urine stream. Even though you feel you have to rush to get to the bathroom, you find it hard to start urinating.
3. A weak stream of urine.
4. A small amount of urine each time you go.
5. The feeling that you still have to go, even when you have just finished urinating.
6. Leaking or dribbling.
7. Small amounts of blood in your urine.

You may barely notice that you have one or more of these symptoms, or you may feel as though urination problems have taken over your life.

Is BPH a Sign of Cancer?

No, BPH is not a sign of cancer. It is true that some men with prostate cancer also have BPH, but that does not mean that the two conditions are always linked. Most men with BPH do not develop prostate cancer. However, because the early symptoms are the same for both conditions, you should see a doctor to evaluate these symptoms.

Is BPH a Serious Disease?

By itself, BPH is not a serious condition unless the symptoms are so bothersome that you cannot enjoy life. BPH can lead to serious problems. One problem is urinary tract infections and if recurrent, can result in bladder stones. If you can’t urinate at all you should get medical help right away as you may need to have a catheter inserted to drain the bladder. In rare cases, BPH and its constant urination problems can lead to kidney damage, due to back pressure on the kidneys from a bladder that is unable to drain.
TESTS YOUR DOCTOR MAY ORDER TO IDENTIFY PROSTATE PROBLEMS

Several tests help the doctor identify the problem and decide on the best treatment;

1. **Digital Rectal Exam (DRE)**

   This exam is usually the first test done. The doctor inserts a gloved finger into the rectum and feels the part of the prostate that sits next to it (figure 3b). This exam (done with the patient lying on their side on the examination couch or standing up leaning forward) gives the doctor a general idea of the size and condition of the prostate.

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**Figure 3b**  The digital rectal exam
2. **PSA Blood Test**
   The doctor may want to test a sample of your blood to look for the level of prostate-specific antigen or PSA. If your PSA is high, it may be a sign that you have prostate cancer. But this test is not perfect. Many men with high PSA scores do not have prostate cancer. The converse is also true, in that it is also possible to have prostate cancer and have a normal PSA blood test reading (see chapter 3 for more information).

3. **Urine Flow Study**
   You may be asked to urinate into a special device that measures how quickly urine is flowing. A reduced flow may mean that you have BPH.

4. **Urinalysis and Culture**
   This simple urine test can identify if bacteria and/or blood is present. If blood is found in the urine (either clearly visible to the naked eye or on inspection under the microscope) this should be investigated with further tests as there are many different causes to account for this condition. Sometimes the urine can be contaminated by bacteria. This may be harmless and does not mean infection is present. However if the patient has symptoms of infection and the urine culture identifies bacteria, we can then determine which antibiotic would be most suitable to treat the infection.

5. **Imaging**
   The doctor may want to get a picture of your prostate using ultrasound (figure 4). A rectal ultrasound or sonogram uses a probe, inserted into the rectum, to bounce sound waves off the prostate. It is also used to assist in taking a prostate biopsy, discussed in further detail in the next chapter 3.

6. **Cystoscopy**
   Another way to see a problem from the inside is with a cystoscope, which is a thin tube with lenses like a microscope. The tube is inserted into the bladder through the urethra while the doctor looks through the cystoscope (figure 5).
Is TURP the Same as Removing the Prostate?

No. TURP stands for transurethral resection of the prostate. A TURP (a “core out” or “bore out” of the prostate) and other procedures for BPH remove only enough tissue to relieve urine blockage. The prostate tissue is removed using an instrument called a resectoscope (figure 6). In a few cases the prostate may continue to grow and urinary problems return. You should continue to have your prostate checked once a year even after surgery to make sure that BPH or prostate cancer has not developed. A total prostate removal or what
is medically termed a radical prostatectomy is usually done only to stop prostate cancer from spreading. This is major pelvic surgery and is a very different operation to a TURP. At present, there are three different approaches for radical prostatectomy; an open operation, laparoscopic key hole procedure and robotic assisted surgery. This is discussed in more detail later.