

CERTIFIED MEN'S HEALTH COUNSELOR ONLINE COURSE: SESSION 4

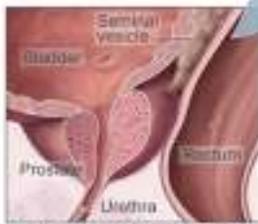
- PROSTATE PROBLEMS, PROSTATE CANCER, SCREENING PROGRAMS, AND HERBAL PROGRAMS

What is the Prostate?

The prostate is a compound tubuloalveolar exocrine gland of the male reproductive system.



This shows the prostate and nearby organs.



This shows the inside of the prostate, urethra, rectum, and bladder.

Function

The function of the prostate is to secrete a slightly acidic fluid, milky or white in appearance, that usually constitutes 20–30% of the volume of the semen along with spermatozoa and seminal vesicle fluid. Semen is made alkaline overall with the secretions from the other contributing glands, including, at least, the seminal vesicle fluid. The alkalinity of semen helps neutralize the acidity of the vaginal tract, prolonging the lifespan of sperm.

The alkalization of semen is primarily accomplished through secretion from the seminal vesicles. The prostatic fluid is expelled in the first ejaculate fractions, together with most of the spermatozoa. In comparison with the few spermatozoa expelled together with mainly seminal vesicular fluid, those expelled in prostatic fluid have better motility, longer survival and better protection of the genetic material.

The prostate also contains some smooth muscles that help expel semen during ejaculation.

Secretions

Prostatic secretions vary among species. They are generally composed of simple sugars and are often slightly acidic.

In human prostatic secretions, the protein content is less than 1% and includes proteolytic enzymes, prostatic acid phosphatase, beta-microseminoprotein, and prostate-specific antigen. The secretions also contain zinc with a concentration 500–1,000 times the concentration in blood.

Regulation

To work properly, the prostate needs male hormones (testosterones), which are responsible for male sex characteristics.

The main male hormone is testosterone, which is produced mainly by the testicles. Some male hormones are produced in small amounts by the adrenal glands. However, it is dihydrotestosterone that regulates the prostate.

Development

The prostatic part of the urethra develops from the *pelvic* (middle) part of the urogenital sinus (endodermal origin). Endodermal outgrowths arise from the prostatic part of the urethra and grow into the surrounding mesenchyme. The glandular epithelium of the prostate differentiates from these endodermal cells, and the associated mesenchyme differentiates into the dense stroma and the smooth muscle of the prostate. The prostate glands represent the modified wall of the proximal portion of the male urethra and arises by the 9th week of embryonic life in the development of the reproductive system. Condensation of mesenchyme, urethra and

Wolffian ducts gives rise to the adult prostate gland, a composite organ made up of several glandular and non-glandular components tightly fused.

Structure

A healthy human prostate is classically said to be slightly larger than a walnut. The mean weight of the "normal" prostate in adult males is about 11 grams, usually ranging between 7 and 16 grams. It surrounds the urethra just below the urinary bladder and can be felt during a rectal exam. It is the only exocrine organ located in the midline in humans and similar animals. The secretory epithelium is mainly pseudostratified, comprising tall columnar cells and basal cells which are supported by a fibroelastic stroma containing randomly orientated smooth muscle bundles. The epithelium is highly variable and areas of low cuboidal or squamous epithelium are also present, with transitional epithelium in the distal regions of the longer ducts. Within the prostate, the urethra coming from the bladder is called the prostatic urethra and merges with the two ejaculatory ducts.

The prostate does not have a capsule, rather an integral fibromuscular band surrounds it. It is sheathed in the muscles of the pelvic floor, which contract during the ejaculatory process. The prostate can be divided in two ways: by zone, or by lobe.

Prostate Problems

Benign Prostatic Hyperplasia

Benign prostatic hyperplasia (BPH) occurs in older men; the prostate often enlarges to the point where urination becomes difficult. Symptoms include needing to urinate often (frequency) or taking a while to get started (hesitancy). If the prostate grows too large, it may constrict the urethra and impede the flow of urine, making urination difficult and painful and, in extreme cases, completely impossible.



BPH can be treated with medication, a minimally invasive procedure or, in extreme cases, surgery that removes the prostate. Minimally invasive procedures include transurethral needle ablation of the prostate (TUNA) and transurethral microwave thermotherapy (TUMT). These outpatient procedures may be followed by the insertion of a temporary prostatic stent, to allow normal voluntary urination, without exacerbating irritative symptoms.

The surgery most often used in such cases is called transurethral resection of the prostate (TURP or TUR). In TURP, an instrument is inserted through the urethra to remove prostate tissue that is pressing against the upper part of the urethra and restricting the flow of urine. TURP results in the removal of mostly transitional zone tissue in a patient with BPH. Older men often have *corpora amylacea* (amyloid), dense accumulations of calcified proteinaceous material, in the ducts of their prostates. The corpora amylacea may obstruct the lumens of the prostatic ducts, and may underlie some cases of BPH.

Urinary frequency due to bladder spasm, common in older men, may be confused with prostatic hyperplasia. Statistical observations suggest that a diet low in fat and red meat and high in protein and vegetables, as well as regular alcohol consumption, could protect against BPH.

Recurrent Prostate Infection

What are the treatment options for recurrent prostate infection?

A recurring prostate infection is also known as chronic bacterial prostatitis. This type of prostate infection is caused by bacteria in the prostate gland. It's generally treated with antibiotics. A prostate infection may recur because antibiotics aren't able to get deep enough into the prostate tissue to destroy all of the bacteria, or because the antibiotic isn't effective against the type of bacterium that's causing the prostate infection.

To treat a prostate infection that doesn't get better with antibiotics or keeps coming back, you may need to:

- **Try a different antibiotic.** One type of antibiotic may work better than another.
- **Take a longer course of an antibiotic,** which may last several weeks. In some cases, a course of antibiotics may last two to three months.
- **Use medications to help relieve bothersome symptoms,** such as alpha blockers to relieve urinary symptoms and anti-inflammatory medications for pain.

If you're taking antibiotics, take them exactly as instructed, even if you feel better. Not taking the full course of antibiotics or missing doses can interfere with the antibiotic's ability to completely kill the bacteria.

If you have recurring prostate infections that don't improve with treatment, see a doctor who specializes in men's urinary and reproductive health (urologist). An urologist might obtain fluid from your prostate to determine the bacterium causing the problem and the antibiotic that is likely to work best. The urologist can also look for any prostate or urinary system problems that would make you more vulnerable to infection. Examples of conditions that increase your risk of recurrent prostate infections include kidney stones, bladder stones and trouble emptying your bladder all the way because of an enlarged prostate.

Can sexual activity make it worse? Should I avoid sex if I have prostatitis? Does sex make the condition worse?

You don't necessarily have to avoid sex if you have prostatitis — an infection or inflammation of the prostate gland. Typically, sex won't worsen prostatitis, but it won't make it better, either. While it's OK for most men with prostatitis to have sex, some men have pain during or after orgasm (ejaculation). This can interfere with the enjoyment of sex.

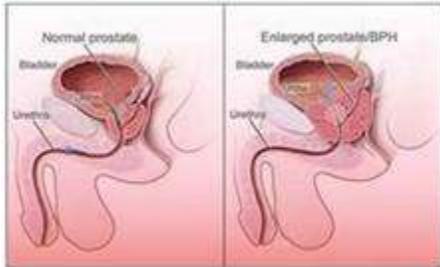
Prostatitis is frequently caused by bacterial infections, but it's usually not caused by something that can be passed on to your partner during sex. In rare cases, prostatitis is caused by a sexually transmitted infection (STI). Don't have sex until you see your doctor if you have any signs of an STI, such as sores on your genitals or abnormal discharge from your penis.

To relieve prostatitis pain, try soaking in a warm bath. Over-the-counter pain relievers, such as aspirin or ibuprofen (Advil, Motrin IB, others), also may help, unless your doctor has told you to avoid these medications. You may need prescription medication to treat the underlying cause of your prostatitis.

Prostatitis — and other conditions with similar symptoms — have a number of possible causes. Some of them can have serious consequences if they aren't treated. If you have pelvic pain, difficult or painful urination, or painful ejaculation, see your doctor.

Prostate Gland Enlargement

Prostate gland enlargement is a common condition as men get older. Also called benign prostatic hyperplasia (BPH) and prostatic hypertrophy, prostate gland enlargement can cause bothersome urinary symptoms. Untreated prostate gland enlargement can block the flow of urine out of the bladder and can cause bladder, urinary tract or kidney problems.



There are several effective treatments for prostate gland enlargement. In deciding the best option for you, you and your doctor will consider your particular symptoms, the size of your prostate, other health problems you may have and your preferences. Your choices may also depend on what

treatments are available in your area. Treatments for prostate gland enlargement include medications, lifestyle changes and surgery.

Symptoms

Prostate gland enlargement varies in severity among men and tends to gradually worsen over time. Prostate gland enlargement symptoms include:

- Weak urine stream
- Difficulty starting urination
- Stopping and starting while urinating
- Dribbling at the end of urination
- Frequent or urgent need to urinate
- Increased frequency of urination at night (nocturia)
- Straining while urinating
- Not being able to completely empty the bladder
- Urinary tract infection
- Formation of stones in the bladder
- Reduced kidney function

The size of your prostate doesn't necessarily mean your symptoms will be worse. Some men with only slightly enlarged prostates have significant symptoms. On the other hand, some men with very enlarged prostates have only minor urinary symptoms.

Only about half the men with prostate gland enlargement have symptoms that become noticeable or bothersome enough for them to seek medical treatment. In some men, symptoms eventually stabilize and may even improve over time.

When to see a doctor

If you're having urinary problems, see your doctor to check whether your symptoms are caused by an enlarged prostate and find out what tests or treatment you may need. If you're unable to pass urine at all, seek immediate medical attention.

If you don't find urinary symptoms too bothersome and they don't pose a health threat, you may not need treatment. But you should still have your symptoms checked out by a doctor to make sure they aren't caused by another problem such as prostate cancer.

Causes

The prostate gland is the male organ that produces most of the fluid in semen, the milky-colored fluid that nourishes and transports sperm out of the penis during ejaculation (orgasm). It sits beneath your bladder. The tube that transports urine from the bladder out of your penis (urethra) passes through the center of the prostate. So, when the prostate enlarges, it begins to block (obstruct) urine flow.

Most men have continued prostate growth throughout life. In many men, this continued growth enlarges the prostate enough to cause urinary symptoms or to significantly block urine flow. Doctors aren't sure exactly what causes the prostate to enlarge. It may be due to changes in the balance of sex hormones as men grow older.

Risk Factors

The main risk factors for prostate gland enlargement include:

- **Aging.** Prostate gland enlargement rarely causes signs and symptoms in men younger than 40. By 55, about 1 in 4 men have some signs and symptoms. By 75, about half of men report some symptoms.
- **Family history.** Having a blood relative such as a father or brother with prostate problems means you're more likely to have problems as well.
- **Where you're from.** Prostate enlargement is more common in American and Australian men. It's less common in Chinese, Indian and Japanese men.

Complications

Prostate gland enlargement becomes a serious problem when it severely interferes with your ability to empty your bladder. If this is the case, you'll probably need surgery. Complications of enlarged prostate include:

- **Acute urinary retention.** Acute urinary retention is a sudden, painful inability to urinate. This may occur after you've taken an over-the-counter decongestant medication for allergies or a cold. When you are unable to urinate at all, your doctor may thread a tube (catheter) through your urethra into your bladder. Or, your doctor may put in a suprapubic tube — a catheter that drains your bladder through the lower abdomen. The type of catheter you need will depend on your particular circumstances. Some men with an enlarged prostate require surgery or other procedures to relieve urinary retention.
- **Urinary tract infections (UTIs).** Some men with an enlarged prostate end up having surgery to remove part of the prostate to prevent frequent urinary tract infections.
- **Bladder stones.** These are mineral deposits that can cause infection, bladder irritation, blood in the urine and obstruction of urine flow and are generally caused by the inability to completely empty the bladder.
- **Bladder damage.** This occurs when the bladder hasn't emptied completely over a long period of time. The muscular wall of the bladder stretches and weakens and no longer contracts properly. Often, symptoms of bladder damage improve after prostate surgery or other treatment, but not always.

- **Kidney damage.** This is caused by high pressure in the bladder due to urinary retention. This high pressure can directly damage the kidneys or allow bladder infections to reach the kidneys. When an enlarged prostate causes obstruction of the kidneys, a condition called hydronephrosis — a swelling of the urine-collecting structures in one or both kidneys — may result.

Most men with an enlarged prostate don't develop these complications. However, acute urinary retention and kidney damage in particular can be serious health threats when they do occur.

Preparing for a Doctor's Appointment

You're likely to start by seeing your primary care doctor for urinary symptoms caused by an enlarged prostate. However, in some cases when you call to set up an appointment, you may be referred directly to a doctor who specializes in urinary issues (urologist).

Because appointments can be brief, it's a good idea to be well prepared for your appointment. Here's some information to help you get ready for your appointment, and know what to expect from your doctor.

What you can do

- **Write down any symptoms you're experiencing**, including any that may seem unrelated to the reason for which you scheduled the appointment.
- **Keep track** of how often and when you urinate, how much liquid you drink, and if you feel you're completely emptying the bladder when you urinate.
- **Bring a list of all medications, vitamins or supplements** that you're taking.
- **Bring a family member or friend along**, if possible. Sometimes it can be difficult to remember all of the information provided to you during an appointment. Someone who accompanies you may remember something that you missed or forgot.
- **Know what tests and treatments you've had for enlarged prostate or urinary problems.** For example, if you've had infections, how often have you had them and what medications worked in the past?
- **Bring your prostate-specific antigen (PSA) test results** if you've ever had your PSA checked.
- **Write down questions to ask** your doctor.

Your time with your doctor is limited, so preparing a list of questions can help you make the most of your time together. For an enlarged prostate evaluation, some basic questions to ask your doctor include:

- Is an enlarged prostate or something else likely causing my symptoms?
- Other than the most likely cause, what are other possible causes for my symptoms?
- What tests do I need? Are there risks to any of these tests?
- What are my treatment options?
- What are the risks with each type of treatment?
- What are the alternatives to the primary approach that you're suggesting?

- I have these other health conditions. How can I best manage these conditions together?
- Are there any restrictions on sexual activity that I need to follow?
- Do I need to see an urologist?
- Is there a generic alternative to the medicine you're prescribing me?
- Are there any brochures or other printed material that I can take home with me? What websites do you recommend visiting?

In addition to the questions that you've prepared to ask your doctor, don't hesitate to ask any additional questions that come up during your appointment.

What to expect from your doctor

Your doctor is likely to ask you a number of questions. Being ready to answer them may reserve time to go over any points you want to spend more time on. Your doctor may ask:

- When did you first begin noticing urinary symptoms?
- Have your urinary symptoms been continuous, or occasional?
- Have your symptoms gradually worsened over time, or did they come on suddenly?
- How bothersome are your symptoms?
- How often do you urinate during the day?
- How often do you need to get up at night to urinate?
- Do you start and stop when urinating, or feel like you have to strain to urinate?
- Is it difficult for you to begin urinating?
- Have you ever leaked urine? If so, when?
- Do you have a frequent or urgent need to urinate?
- Does it ever feel like you haven't completely emptied your bladder?
- Do you ever have blood in your urine?
- Have you had urinary tract infections?
- Is there any burning when you urinate?
- How do you know when you have a urinary tract infection?
- Do you have type 2 diabetes?
- Have you ever had any trouble getting and maintaining an erection (erectile dysfunction), or other sexual problems?
- Do you feel pain in your bladder area?
- Have you ever had surgery or another procedure that involved insertion of an instrument through the tip of your penis into your urethra?
- Do any of your blood relatives (such as your father or brother) have a history of enlarged prostate, or prostate cancer, or kidney stones?
- What medications do you take, including any over-the-counter medications or herbal remedies?
- Are you on any blood thinners such as aspirin, warfarin (Coumadin) or clopidogrel (Plavix)?

Tests and Diagnosis

An initial evaluation for enlarged prostate will likely include:

- **Detailed questions about your symptoms.** Your doctor will want to know about other health problems you may have, what medications you're taking and whether there's a history of prostate problems in your family. Your doctor may have you complete a questionnaire such as the American Urological Association (AUA) Symptom Index for BPH.
- **Digital rectal exam.** This exam can allow your doctor to check your prostate by inserting a finger into your rectum. With this simple test, your doctor can determine whether your prostate is enlarged and check for signs of prostate cancer.

- **Neurological exam.** This is a brief evaluation of your mental functioning and nervous system. It can help identify causes of urinary problems other than enlarged prostate. What this exam involves will depend on your specific condition.
- **Urine test (urinalysis).** Analyzing a sample of your urine in the laboratory can help rule out an infection or other conditions that can cause similar symptoms.

Your doctor may use additional tests to rule out other problems and help confirm enlarged prostate is causing your urinary symptoms. These can include:

- **Prostate-specific antigen (PSA) blood test.** It's normal for your prostate gland to produce PSA, which helps liquefy semen. When you have an enlarged prostate, PSA levels increase. However, PSA levels can also be elevated due to prostate cancer, recent tests, surgery or infection (prostatitis).
- **Urinary flow test.** This test measures the strength and amount of your urine flow. You urinate into a receptacle attached to a special machine. The results of this test over time help determine if your condition is getting better or worse.
- **Postvoid residual volume test.** This test measures whether you can empty your bladder completely. This is often done by using an ultrasound test to measure urine left in your bladder. Or, it may be done by inserting a tube (catheter) into your bladder after you urinate.
- **Transrectal ultrasound.** An ultrasound test provides measurements of your prostate and also reveals the particular anatomy of your prostate. With this procedure, an ultrasound probe about the size and shape of a large cigar is inserted into your rectum. Ultrasound waves bouncing off your prostate create an image of your prostate gland.
- **Prostate biopsy.** With this procedure, a transrectal ultrasound guides needles used to take tissue samples of the prostate. Examining tissues from a biopsy under a microscope can help diagnose or rule out prostate cancer.
- **Urodynamic studies and pressure flow studies.** With these procedures, a catheter is threaded through your urethra into your bladder. Water (or less commonly air) is slowly injected into your bladder. This allows your doctor to measure bladder pressures and to determine how well your bladder muscles are working.
- **Cystoscopy.** Also called urethrocystoscopy, this procedure allows your doctor to see inside your urethra and bladder. After you receive a local anesthetic, a lighted flexible telescope (cystoscope) is inserted into your urethra to look for signs of problems.
- **Intravenous pyelogram or CT urogram.** These tests can help detect urinary tract stones, tumors or blockages above the bladder. First, dye is injected into a vein, and X-rays or CT scans are taken of your kidneys, bladder and the tubes that connect your kidneys to your bladder (ureters). The dye helps outline the drainage systems of the kidneys.

Other possible causes of urinary symptoms

Your doctor will use these tests to make sure there isn't something else causing your problem, or if an enlarged prostate has caused or worsened another problem. Problems that can cause urinary symptoms similar to those caused by enlarged prostate include:

- Bladder stones
- Bladder and urinary tract infections
- Diabetes
- Neurological problems
- Inflammation of the prostate (prostatitis)
- Prostate cancer
- Stroke
- Muscle and nerve (neuromuscular) disorders
- Scarring or narrowing of the urethra

Prostate cancer is entirely different than prostate gland enlargement, even though they can cause some similar symptoms and may be detected by some of the same tests. Having an enlarged prostate doesn't reduce or increase the risk of prostate cancer. Even if you're being treated for an enlarged prostate gland, you still need to continue regular prostate exams to screen for cancer. Surgery for prostate gland enlargement may identify cancer in its early stages.

Treatment and Drugs

A wide variety of treatments are available for enlarged prostate. They include medications, surgery and minimally invasive surgery. The best treatment choice for you depends on several factors, including how much your symptoms bother you, the size of your prostate, other health conditions you may have, your age and your preference. If your symptoms aren't too bad, you may decide not to have treatment and wait to see whether your symptoms become more bothersome over time.

Medications

Medications are the most common treatment for moderate symptoms of prostate enlargement. Medications used to relieve symptoms of enlarged prostate include:

- **Alpha blockers.** These medications relax bladder neck muscles and muscle fibers in the prostate itself and make it easier to urinate. These medications include terazosin, doxazosin (Cardura), tamsulosin (Flomax), alfuzosin (Uroxatral) and silodosin (Rapaflo). Alpha blockers work quickly. Within a day or two, you'll probably have increased urinary flow and need to urinate less often. These may cause a harmless condition called retrograde ejaculation — semen going back into the bladder rather than out the tip of the penis.
- **5 alpha reductase inhibitors.** These medications shrink your prostate by preventing hormonal changes that cause prostate growth. They include finasteride (Proscar) and dutasteride (Avodart). They generally work best for very enlarged prostates. It may be several weeks or even months before you notice improvement. While you're taking them, these medications may cause sexual side effects including impotence (erectile dysfunction), decreased sexual desire or retrograde ejaculation.

- **Combination drug therapy.** Taking an alpha blocker and a 5 alpha reductase inhibitor at the same time is generally more effective than taking just one or the other by itself.
- **Tadalafil (Cialis).** This medication, from a class of drugs called phosphodiesterase inhibitors, is often used to treat impotence (erectile dysfunction). It also can be used as a treatment for prostate enlargement. Tadalafil can't be used in combination with alpha blockers. It also can't be taken with medications called nitrates, such as nitroglycerin.

Surgery

Your doctor may recommend surgery if medication isn't effective or if you have severe symptoms. There are several types of surgery for an enlarged prostate. They all reduce the size of the prostate gland and open the urethra by treating the enlarged prostate tissue that blocks the flow of urine. The decision about which type of surgery may be an option is based on a number of factors, including the size of your prostate, the severity of your symptoms, and what treatments are available in your area.

Any type of prostate surgery can cause side effects, such as semen flowing backward into the bladder instead of out through the penis during ejaculation (retrograde ejaculation), loss of bladder control (incontinence) and impotence (erectile dysfunction). Ask your doctor about the specific risks of each treatment you're considering.

Standard surgeries

Standard surgeries for an enlarged prostate include:

- **Transurethral resection of the prostate (TURP)** - TURP has been a common procedure for enlarged prostate for many years, and it is the surgery with which other treatments are compared. With TURP, a surgeon places a special lighted scope (resectoscope) into your urethra and uses small cutting tools to remove all but the outer part of the prostate (prostate resection). TURP generally relieves symptoms quickly, and most men have a stronger urine flow soon after the procedure. Following TURP, there is risk of bleeding and infection, and you may temporarily require a catheter to drain your bladder after the procedure. You'll be able to do only light activity until you're healed.
- **Transurethral incision of the prostate (TUIP or TIP)** - This surgery is an option if you have a moderately enlarged or small prostate gland, especially if you have health problems that make other surgeries too risky. Like TURP, TUIP involves special instruments that are inserted through the urethra. But instead of removing prostate tissue, the surgeon makes one or two small cuts in the prostate gland to open up a channel in the urethra — making it easier for urine to pass through.
- **Open prostatectomy** - This type of surgery is generally done if you have a very large prostate, bladder damage or other complicating factors, such as bladder stones. It's called open because the surgeon makes an incision in your lower abdomen to reach the prostate. Open prostatectomy is the most effective treatment for men with severe prostate enlargement, but it has a high risk of side effects and complications. It generally requires a short stay in the hospital and is associated with a higher risk of needing a blood transfusion.
- **Minimally invasive surgery** - Minimally invasive treatments are less likely to cause blood loss during surgery and require a shorter, if any, hospital stay. These treatments also typically require less pain medication. Depending on the procedure — and how well it works for you — you may need follow-up treatments.

Minimally invasive treatments include:

- **Laser surgery** - Laser surgeries (also called laser therapies) use high-energy lasers to destroy or remove overgrown prostate tissue. Laser surgeries generally relieve symptoms right away and have a lower risk of side effects than does TURP. Some laser surgeries can be used in men who shouldn't have other prostate procedures because they take blood-thinning medications. Laser surgery can be done with different types of lasers and in different ways.
- **Ablative procedures** (including vaporization) remove prostate tissue pressing on the urethra by burning it away, easing urine flow. Ablative procedures may cause irritating urinary symptoms after surgery and may need to be repeated at some point.
- **Enucleative procedures** are similar to open prostatectomy, but with fewer risks. These procedures generally remove all the prostate tissue blocking urine flow and prevent regrowth of tissue. One benefit of enucleative procedures over ablative procedures is that removed prostate tissue can be examined for prostate cancer and other conditions.

Types of laser surgery include:

- Holmium laser ablation of the prostate (HoLAP)
- Visual laser ablation of the prostate (VLAP)
- Holmium laser enucleation of the prostate (HoLEP)
- Photoselective vaporization of the prostate (PVP)

Options for laser therapy depend on prostate size, the location of the overgrown areas, your doctor's recommendation and your preferences. Choices available also depend on where you seek treatment. Not all facilities have lasers to perform prostate surgery or doctors who have the specialized skills and training to do the procedures.

- **Transurethral microwave thermotherapy (TUMT)** - With this procedure, your doctor inserts a special electrode through your urethra into your prostate area. Microwave energy from the electrode generates heat and destroys the inner portion of the enlarged prostate gland causing it to shrink and ease urine flow. This surgery has a lower risk of complications than does TURP, but is generally only used on small prostates in special circumstances, because re-treatment may be necessary.
- **Transurethral needle ablation (TUNA)** - With this outpatient procedure, a lighted scope (cystoscope) is passed into your urethra. Your doctor uses the scope to place needles into your prostate gland. When the needles are in place, radio waves pass through them, heating and destroying excess prostate tissue that's blocking urine flow. TUNA basically scars the prostate tissue, which causes it to shrink and open up, easing urine flow. This type of surgery may be a good choice if you bleed easily or you have certain other health problems. Like TUMT, TUNA may only partially relieve your symptoms and it may take some time before you notice results. The risk of erectile dysfunction with the procedure is very low.

- **Prostatic stents** - A prostatic stent is a tiny metal or plastic device that's inserted into your urethra to keep it open. Tissue grows over the metallic stent to hold it in place. The plastic stent needs to be changed every four to six weeks but keeps you from having to undergo any surgical procedure. In most cases, doctors don't consider stents a viable long-term treatment because they can cause side effects including painful urination or frequent urinary tract infections. The metal stents can be difficult to remove and are used only in special circumstances, such as for someone who can't have surgery. Sometimes, plastic stents may be used temporarily before surgery to make sure you'll be able to urinate after your surgery.

Lifestyle and Home Remedies

Making some lifestyle changes can often help control the symptoms of an enlarged prostate and prevent your condition from worsening. Try these measures:

- **Limit beverages in the evening.** Don't drink anything for an hour or two before bedtime to help you avoid wake-up trips to the bathroom at night.
- **Don't drink too much caffeine or alcohol.** These can increase urine production, irritate your bladder and worsen your symptoms.
- **If you take water pills (diuretics), talk to your doctor.** Maybe a lower dose, taking them only in the morning, or a milder diuretic or change in the time you take your medication will help ease urinary symptoms. Don't stop taking diuretics without first talking to your doctor.
- **Limit decongestants or antihistamines.** These drugs tighten the band of muscles around your urethra that control urine flow, which makes it harder to urinate.
- **Go when you feel the urge.** Try to urinate when you first feel the urge. Waiting too long to urinate may overstretch the bladder muscle and cause damage.
- **Schedule bathroom visits.** Try to urinate at regular times to "retrain" the bladder. This can be done every four to six hours during the day and can be especially useful if you have severe frequency and urgency.
- **Stay active.** Inactivity causes you to retain urine. Even a small amount of exercise can help reduce urinary problems caused by an enlarged prostate.
- **Urinate — and then urinate again a few moments later.** This is known as double voiding.
- **Keep warm.** Colder temperatures can cause urine retention and increase your urgency to urinate.

Alternative Remedies

Studies on alternative therapy for an enlarged prostate have had mixed results. Saw palmetto extract, which is made from the ripe berries of the saw palmetto shrub, were believed to help reduce the symptoms of an enlarged prostate.

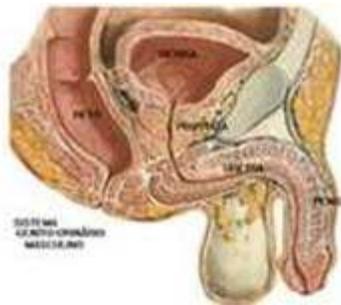
Some of the herbal treatments that have been suggested as helpful for reducing enlarged prostate symptoms include:

- **Saw palmetto extract**, made from the ripe berries of the saw palmetto shrub
- **Beta-sitosterol extracts**, made from several plants, such as certain grasses and trees
- **Pygeum**, an oil made from the bark of an African prune tree
- **Ryegrass extract**, made from ryegrass pollen
- **Stinging nettle extract**, made from the root of the stinging nettle plant

If you take any herbal remedies, be sure to tell your doctor.

Prostatitis

Prostatitis is swelling and inflammation of the prostate gland, a walnut-sized gland located directly below the bladder in men. The prostate gland produces fluid (semen) that nourishes and transports sperm. Prostatitis often causes painful or difficult urination. Other symptoms of prostatitis include pain in the groin, pelvic area or genitals, and sometimes, flu-like symptoms.



Prostatitis can be caused by a number of different things. If it's caused by a bacterial infection, it can usually be treated successfully. However, sometimes prostatitis isn't caused by a bacterial infection or a cause is never identified.

Depending on the cause, prostatitis may come on gradually or suddenly. It may get better quickly, either on its own or with treatment. Some types of prostatitis last for months or more or keep recurring (chronic prostatitis).

Symptoms

Prostatitis symptoms vary depending on the cause. They may include:

- Pain or burning sensation when urinating (dysuria)
- Difficulty urinating, such as dribbling or hesitant urination
- Frequent urination, particularly at night (nocturia)
- Urgent need to urinate
- Pain in the abdomen, groin or lower back
- Pain in the area between the scrotum and rectum (perineum)
- Pain or discomfort of the penis or testicles
- Painful orgasms (ejaculations)
- Flu-like symptoms (with bacterial prostatitis)

Based on your symptoms and laboratory tests, your doctor may conclude that you have one of the following types of prostatitis:

- **Acute bacterial prostatitis.** This type of prostatitis may cause flu-like symptoms associated with the sudden onset of infection, such as fever, chills, nausea and vomiting. It can usually be treated with antibiotics.

- **Chronic bacterial prostatitis.** This is bacterial prostatitis that lasts for at least three months due to recurring or difficult-to-treat infections. Urinary tract infections are common with this type of prostatitis. Between bouts of infection, chronic bacterial prostatitis may not cause symptoms or may cause minor symptoms that become severe when infection flares up.
- **Chronic prostatitis not caused by bacteria.** This condition is often referred to as chronic abacterial prostatitis or chronic pelvic pain syndrome. It lasts for at least three months. Most cases of prostatitis fall into this category. For some men, symptoms remain about the same over time. For others, the symptoms go through cycles of being more and less severe. Symptoms sometimes improve over time without treatment.
- **Prostatitis that doesn't cause symptoms.** This type of prostatitis is called asymptomatic inflammatory prostatitis, and it doesn't cause any symptoms that you notice. It's found only by chance when you're undergoing tests for other conditions. It doesn't require treatment.

When to see a doctor

If you experience pelvic pain, difficult or painful urination, or painful orgasms (ejaculations), see your doctor. If left untreated, some types of prostatitis can cause worsening infection or other health problems.

Causes

Acute bacterial prostatitis is often caused by common strains of bacteria. The infection may start when bacteria carried in urine leaks into your prostate.

Chronic bacterial prostatitis may be the result of small amounts of bacteria that aren't eliminated with antibiotics because they "hide" in the prostate. Some men with chronic prostatitis have pain but no evidence of an inflamed prostate.

In most cases of prostatitis, the cause is never identified. Causes other than bacterial infection can include:

- An immune system disorder
- A nervous system disorder
- Injury to the prostate or prostate area

Risk Factors

Risk factors for prostatitis include:

- Being a young or middle-aged man
- Having a past episode of prostatitis
- Having an infection in the bladder or the tube that transports semen and urine to the penis (urethra)
- Having a pelvic trauma, such as injury from bicycling or horseback riding
- Not drinking enough fluids (dehydration)
- Using a urinary catheter, a tube inserted into the urethra to drain the bladder
- Having unprotected sexual intercourse
- Having HIV/AIDS
- Being under psychological stress
- Having certain inherited traits — particular genes may make some men more susceptible to prostatitis

Complications

Complications of prostatitis can include:

- Bacterial infection of the blood (bacteremia)
- Inflammation of the coiled tube attached to the back of the testicle (epididymitis)
- Pus-filled cavity in the prostate (prostatic abscess)
- Abnormalities in semen and infertility (this can occur with chronic prostatitis)

Prostatitis, cancer and PSA levels

Prostatitis can cause elevated levels of prostate-specific antigen (PSA), a protein produced by the prostate. PSA testing is generally used to screen for prostate cancer. Cancerous cells produce more PSA than do noncancerous cells, so higher than normal levels of PSA in the blood may indicate prostate cancer. However, conditions other than prostate cancer, including prostatitis, also can increase PSA levels.

There's no direct evidence that prostatitis can lead to prostate cancer.

What to do before your doctor's appointment

If you have signs or symptoms of prostatitis, you're likely to start by seeing your family doctor or a general practitioner. Your doctor may refer you to a specialist in urinary tract and sexual disorders (urologist). Because your time with the doctor can be brief, it's a good idea to prepare ahead of time for your appointment.

What you can do

Write down information to share with your doctor. Your list should include:

- Symptoms you're experiencing, including any that may seem unrelated to prostatitis
- Key personal information, including any major stresses or recent life changes
- Medications that you're taking, including any vitamins or herbal supplements
- Questions to ask your doctor

List questions for your doctor from most important to least important in case time runs out. You may want to ask some of the following questions.

- What is likely causing my symptoms?
- What other conditions could be causing the pain I'm experiencing?
- What kinds of tests will I need?
- What type of treatment do you recommend?
- Are there other treatment options?
- Are there any brochures or other printed materials that I can take home with me? Are there any websites you recommend?

In addition to the questions that you've prepared to ask your doctor, don't hesitate to ask questions at any time during your appointment.

What to expect from your doctor

Your doctor is likely to ask you a number of questions, such as:

- When did you begin having symptoms?
- How severe are your symptoms?
- Have your symptoms been continuous or do they come and go?
- Were you recently diagnosed with a urinary tract infection?

- Have you had frequent urinary tract infections in the past?
- Have you had a recent injury to the groin area?
- Does anything, such as pain medication, seem to improve your symptoms?

Tests and Diagnosis

Diagnosing prostatitis involves ruling out other conditions that may be causing your symptoms and determining what kind of prostatitis you have. Diagnosis may include the following:

- **Questions from your doctor.** Your doctor will want to know about your medical history and your symptoms. You may be asked to fill out a questionnaire that can help your doctor make a diagnosis and see whether treatment is working.
- **Physical examination.** Your doctor will examine your abdomen and genitals and will likely perform a digital rectal examination (DRE). During a digital rectal exam, your doctor will gently insert a lubricated, gloved finger into your rectum. Your doctor will be able to feel the surface of the prostate and judge whether it is enlarged, tender or inflamed.
- **Blood culture.** This test is used to see whether there are signs of infection in your blood.
- **Urine and semen test.** Your doctor may want to examine samples of your urine or semen for signs of infection. In some cases, the doctor may take a series of samples before, during and after massaging your prostate with a lubricated, gloved finger.
- **Examination with a viewing scope (cystoscopy).** Your doctor may use an instrument called a cystoscope to examine the urethra and bladder. A cystoscope is a small tube with a light and magnifying lens or camera that's inserted through the urethra and into the bladder. This test is used to rule out other conditions that could be causing your symptoms.
- **Bladder tests (urodynamic tests).** Your doctor may order one or more of these tests, which are used to check how well you can empty your bladder. This can help your doctor understand how much prostatitis is affecting your ability to urinate.

Treatment and Drugs

Prostatitis treatments vary depending on the underlying cause. They can include:

- **Antibiotics.** This is the most commonly prescribed treatment for prostatitis. Your doctor will base the choice of medication on the type of bacteria that may be causing your infection. If you have severe symptoms, you may need intravenous (IV) antibiotics. You'll likely need to take oral antibiotics for four to six weeks, but may need longer treatment for chronic or recurring prostatitis. Take all of the prescribed drugs as directed even if you're feeling better. Otherwise, treatment may not work. Your doctor may have you try one or more antibiotics even if the cause of your prostatitis can't be identified. If antibiotics don't help, your prostatitis is most likely caused by something other than a bacterial infection.
- **Alpha blockers.** These medications help relax the bladder neck and the muscle fibers where your prostate joins your bladder. This treatment may lessen symptoms, such as painful urination. Examples include tamsulosin (Flomax), terazosin (Hytrin), alfuzosin (Uroxatral) and doxazosin (Cardura). Common side effects include headaches and a decrease in blood pressure.

- **Pain relievers.** Pain medications such as aspirin or ibuprofen (Advil, Motrin, others) may make you more comfortable. You should discuss with your doctor what doses you can safely take. Overusing these medications can cause problems.
- **Prostate massage.** This is done by your physician using a lubricated, gloved finger — a procedure similar to a digital rectal exam. It may provide some symptom relief, but doctors disagree about how effective it is.
- **Other treatments.** Other potential treatments for prostatitis are being studied. These treatments include heat therapy with a microwave device and drugs based on certain plant extracts.

Lifestyle and Home Remedies

The following lifestyle changes and home remedies may lessen some symptoms of prostatitis:

- Soak in a warm bath (sitz bath).
- Limit or avoid alcohol, caffeine, and spicy or acidic foods.
- Sit on a pillow or inflatable cushion to ease pressure on the prostate.
- Avoid bicycling, or wear padded shorts and adjust your bicycle to relieve pressure on your prostate.

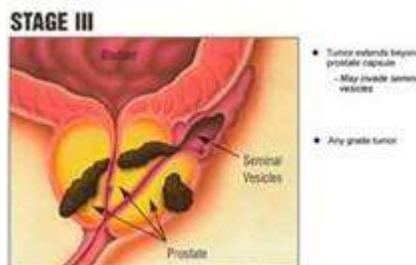
Alternative Therapies

Alternative therapies that show some promise for reducing symptoms of prostatitis include the following:

- **Biofeedback.** This is a method for teaching you to use your thoughts to control your body. A biofeedback specialist uses signals from monitoring equipment to teach you to control certain body functions and responses, including relaxing your muscles. Some small studies have suggested the benefit of this process to manage pain associated with prostatitis.
- **Acupuncture.** This type of treatment involves the insertion of very thin needles through your skin, to various depths at certain points on your body. A few small studies have shown that acupuncture may help with prostatitis symptoms.
- **Herbal remedies and supplements.** Some herbal treatments for prostatitis include cernilton (rye grass), quercetin (a chemical found in green tea, onions and other plants) and extract of the saw palmetto plant. Prostate supplements combine minerals and vitamins, particularly zinc, selenium and vitamins E and D.

Prostate Cancer

Prostate cancer is cancer that occurs in a man's prostate — a small walnut-shaped gland that produces the seminal fluid that nourishes and transports sperm.



Prostate cancer is one of the most common types of cancer in men. Prostate cancer usually grows slowly and initially remains confined to the prostate gland, where it may not cause serious harm. While some types of prostate cancer grow slowly and may need minimal or no treatment, other types are aggressive and can spread quickly.

Prostate cancer that is detected early — when it's still confined to the prostate gland — has a better chance of successful treatment.

Symptoms

Prostate cancer may not cause signs or symptoms in its early stages. Prostate cancer that is more advanced may cause signs and symptoms such as:

- Trouble urinating
- Decreased force in the stream of urine
- Blood in the urine
- Blood in the semen
- Swelling in the legs
- Discomfort in the pelvic area
- Bone pain

When to see a doctor

Make an appointment with your doctor if you have any signs or symptoms that worry you. Ask your doctor about the benefits and risks of regular prostate cancer screening. Medical organizations differ on their recommendations for prostate cancer screening, but many advise men in their 50s to discuss the issue with their doctors.

Causes

It's not clear what causes prostate cancer. Doctors know that prostate cancer begins when some cells in your prostate become abnormal. Mutations in the abnormal cells' DNA cause the cells to grow and divide more rapidly than normal cells do. The abnormal cells continue living, when other cells would die. The accumulating abnormal cells form a tumor that can grow to invade nearby tissue. Some abnormal cells can break off and spread (metastasize) to other parts of the body.

Risk Factors

Factors that can increase your risk of prostate cancer include:

- **Older age.** The risk of prostate cancer increases with age. Prostate cancer is most common in men older than 65.
- **Being black.** Black men have a greater risk of prostate cancer than do men of other races. In black men, prostate cancer is also more likely to be aggressive or advanced. It's not clear why this is.
- **Family history of prostate cancer.** If men in your family have had prostate cancer, your risk may be increased.
- **Obesity.** Obese men diagnosed with prostate cancer may be more likely to have advanced disease that's more difficult to treat.

Complications

Complications of prostate cancer and its treatments include:

- **Cancer that spreads.** Prostate cancer can spread to nearby organs or travel through your bloodstream or lymphatic system to your bones or other organs. Advanced prostate cancer can cause fatigue, weakness and weight loss. Prostate cancer can grow to block the tubes (ureters) that carry urine from the kidneys to the bladder, causing kidney problems.

Prostate cancer that spreads to the bones can cause pain and broken bones. Once prostate cancer has spread to other areas of the body, it may still respond to treatment and may be controlled, but it can no longer be cured.

- **Incontinence.** Both prostate cancer and its treatment can cause urinary incontinence. Treatment for incontinence depends on the type you have, how severe it is and the likelihood it will improve over time. Treatment options may include medications, catheters and surgery.
- **Erectile dysfunction.** Erectile dysfunction can be a result of prostate cancer or its treatment, including surgery, radiation or hormone treatments. Medications, vacuum devices that assist in achieving erection and surgery are available to treat erectile dysfunction.

Preparing for the Doctor's Appointment

If you have signs or symptoms that worry you, start by seeing your family doctor or a general practitioner. If your doctor suspects you may have a problem with your prostate, you may be referred to a urinary tract specialist (urologist). If you're diagnosed with prostate cancer, you may be referred to a cancer specialist (oncologist) or a specialist who uses radiation therapy to treat cancer (radiation oncologist).

Because appointments can be brief, and because there's often a lot of ground to cover, it's a good idea to be prepared. Here's some information to help you get ready, and what to expect from your doctor.

What you can do

- **Be aware of any pre-appointment restrictions.** At the time you make the appointment, be sure to ask if there's anything you need to do in advance, such as restrict your diet.
- **Write down any symptoms you're experiencing,** including any that may seem unrelated to the reason for which you scheduled the appointment.
- **Write down key personal information,** including any major stresses or recent life changes.
- **Make a list of all medications,** vitamins or supplements that you're taking.
- **Consider taking a family member or friend along.** Sometimes it can be difficult to remember all the information provided during an appointment. Someone who accompanies you may remember something that you missed or forgot.
- **Write down questions to ask** your doctor.

Your time with your doctor is limited, so preparing a list of questions will help you make the most of your time together. List your questions from most important to least important in case time runs out. For prostate cancer, some basic questions to ask your doctor include:

- Do I have prostate cancer?
- How large is my prostate cancer?
- Has my prostate cancer spread beyond my prostate?
- What is my Gleason score?

- What is my PSA level?
- Will I need more tests?
- What are my treatment options?
- Is there one treatment option you think is best for me?
- Do I need cancer treatment right away, or is it possible to wait and see if the cancer grows?
- What are the potential side effects of each treatment?
- What is the chance that my prostate cancer will be cured with treatment?
- If you had a friend or family member in my situation, what would you recommend?
- Should I see a specialist? What will that cost, and will my insurance cover it?
- Are there brochures or other printed material that I can take with me? What websites do you recommend?

In addition to the questions that you've prepared to ask your doctor, don't hesitate to ask other questions during your appointment.

What to expect from your doctor

Your doctor is likely to ask you a number of questions. Being ready to answer them may allow more time later to cover other points you want to address. Your doctor may ask:

- When did you first begin experiencing symptoms?
- Have your symptoms been continuous or occasional?
- How severe are your symptoms?
- What, if anything, seems to improve your symptoms?
- What, if anything, appears to worsen your symptoms?

Tests and Diagnosis

Screening for prostate cancer

Whether to test healthy men with no prostate symptoms for prostate cancer is controversial. Medical organizations don't agree on the issue of screening and whether it has benefits. Some medical organizations recommend men consider prostate cancer screening in their 40s, or sooner for men who have risk factors for prostate cancer. Other organizations advise against screening. Discuss your particular situation and the benefits and risks of screening with your doctor. Together you can decide whether prostate cancer screening is appropriate for you. Prostate screening tests might include:

- **Digital rectal exam (DRE).** During a DRE, your doctor inserts a gloved, lubricated finger into your rectum to examine your prostate, which is adjacent to the rectum. If your doctor finds any abnormalities in the texture, shape or size of your gland, you may need more tests.
- **Prostate-specific antigen (PSA) test.** A blood sample is drawn from a vein in your arm and analyzed for PSA, a substance that's naturally produced by your prostate gland. It's normal for a small amount of PSA to be in your bloodstream. However, if a higher than normal level is found, it may be an indication of prostate infection, inflammation, enlargement or cancer.



PSA testing combined with DRE helps identify prostate cancers at their earliest stages, but studies haven't proved that these tests save lives. For that reason, there is much debate surrounding prostate cancer screening.

Diagnosing prostate cancer

If an abnormality is detected on a DRE or PSA test, your doctor may recommend tests to determine whether you have prostate cancer, such as:

- **Ultrasound.** If other tests raise concerns, your doctor may use transrectal ultrasound to further evaluate your prostate. A small probe, about the size and shape of a cigar, is inserted into your rectum. The probe uses sound waves to make a picture of your prostate gland.
- **Collecting a sample of prostate tissue.** If initial test results suggest prostate cancer, your doctor may recommend a procedure to collect a sample of suspicious cells from your prostate (prostate biopsy). Prostate biopsy is often done using a thin needle that's inserted into the prostate to collect tissue. The tissue sample is analyzed in a laboratory to determine whether cancer cells are present.



Determining whether prostate cancer is aggressive

When a biopsy confirms the presence of cancer, the next step, called grading, is to determine how aggressive the cancer is. The tissue samples are studied, and the cancer cells are compared with healthy prostate cells. The more the cancer cells differ from the healthy cells, the more aggressive the cancer and the more likely it is to spread quickly. More-aggressive cancer cells have a higher grade.

The most common scale used to evaluate the grade of prostate cancer cells is called a Gleason score. Scoring combines two numbers and can range from 2 (nonaggressive cancer) to 10 (very aggressive cancer).

Determining how far the cancer has spread

Once a cancer diagnosis has been made, your doctor works to determine the extent (stage) of the cancer. Many men won't require these additional tests. But if your doctor suspects your cancer may have spread beyond your prostate, imaging tests such as these may be recommended:

- Bone scan
- Ultrasound
- Computerized tomography (CT) scan
- Magnetic resonance imaging (MRI)

Once testing is complete, your doctor assigns your cancer a stage. This helps determine your treatment options. The prostate cancer stages are:

- **Stage I.** This stage signifies very early cancer that's confined to a small area of the prostate. When viewed under a microscope, the cancer cells aren't considered aggressive.
- **Stage II.** Cancer at this stage may still be small, but may be considered aggressive when cancer cells are viewed under the microscope. Or cancer that is stage II may be larger and may have grown to involve both sides of the prostate gland.
- **Stage III.** The cancer has spread beyond the prostate to the seminal vesicles or other nearby tissues.

- **Stage IV.** The cancer has grown to invade nearby organs, such as the bladder, or spread to lymph nodes, bones, lungs or other organs.

Treatment and Drugs

Your prostate cancer treatment options depend on several factors, such as how fast your cancer is growing, how much it has spread, your overall health, as well as the benefits and the potential side effects of the treatment.

Immediate treatment may not be necessary

For men diagnosed with a very early stage of prostate cancer; treatment may not be necessary right away. Some men may never need treatment. Instead, doctors sometimes recommend watchful waiting, which is sometimes called active surveillance. In watchful waiting, regular follow-up blood tests, rectal exams and possibly biopsies may be performed to monitor progression of your cancer.

If tests show your cancer is progressing, you may opt for a prostate cancer treatment such as surgery or radiation. Watchful waiting may be an option for cancer that isn't causing symptoms, is expected to grow very slowly and is confined to a small area of the prostate. Watchful waiting may also be considered for a man who has another serious health condition or an advanced age that makes cancer treatment more difficult. Watchful waiting carries a risk that the cancer may grow and spread between checkups, making it less likely to be cured.

Radiation therapy

Radiation therapy uses high-powered energy to kill cancer cells. Prostate cancer radiation therapy can be delivered in two ways:

- **Radiation that comes from outside of your body (external beam radiation).** During external beam radiation therapy, you lie on a table while a machine moves around your body, directing high-powered energy beams to your prostate cancer. You typically undergo external beam radiation treatments five days a week for several weeks. Most external beam radiation uses X-rays to deliver the radiation, but doctors are studying whether using protons may reduce the risk of side effects.
- **Radiation placed inside your body (brachytherapy).** Brachytherapy involves placing many rice-sized radioactive seeds in your prostate tissue. The radioactive seeds deliver a low dose of radiation over a long period of time. Your doctor implants the radioactive seeds in your prostate using a needle guided by ultrasound images. The implanted seeds eventually stop giving off radiation and don't need to be removed.



Side effects of radiation therapy can include painful urination, frequent urination and urgent urination, as well as rectal symptoms, such as loose stools or pain when passing stools. Erectile dysfunction can also occur. There is a small risk of radiation causing another form of cancer, such as bladder cancer or rectal cancer, in the future.

Hormone therapy

Hormone therapy is treatment to stop your body from producing the male hormone testosterone. Prostate cancer cells rely on testosterone to help them grow. Cutting off the supply of hormones may cause cancer cells to die or to grow more slowly. Hormone therapy options include:

- **Medications that stop your body from producing testosterone.** Medications known as luteinizing hormone-releasing hormone (LH-RH) agonists prevent the testicles from receiving messages to make testosterone. Drugs typically used in this type of hormone therapy include leuprolide (Lupron, Eligard), goserelin (Zoladex), triptorelin (Trelstar) and histrelin (Vantas).



- **Medications that block testosterone from reaching cancer cells.** Medications known as anti-androgens prevent testosterone from reaching your cancer cells. Examples include bicalutamide (Casodex), flutamide and nilutamide (Nilandron). These drugs typically are given along with an LH-RH agonist or given before taking an LH-RH agonist.
- **Surgery to remove the testicles (orchiectomy).** Removing your testicles reduces testosterone levels in your body. The effectiveness of orchiectomy in lowering testosterone levels is similar to that of hormone therapy medications, but orchiectomy may lower testosterone levels more quickly.

Hormone therapy is used in men with advanced prostate cancer to shrink the cancer and slow the growth of tumors. In men with early-stage prostate cancer, hormone therapy may be used to shrink tumors before radiation therapy. This can make it more likely that radiation therapy will be successful. Hormone therapy is sometimes used after surgery or radiation therapy to slow the growth of any cancer cells left behind.

Side effects of hormone therapy may include erectile dysfunction, hot flashes, loss of bone mass, reduced sex drive and weight gain. Hormone therapy also increases the risk of heart disease and heart attack.

Surgery to remove the prostate

Surgery for prostate cancer involves removing the prostate gland (radical prostatectomy), some surrounding tissue and a few lymph nodes. Ways the radical prostatectomy procedure can be performed include:

- **Making an incision in your abdomen.** During retropubic surgery, the prostate gland is taken out through an incision in your lower abdomen. Compared with other types of prostate surgery, retropubic prostate surgery may carry a lower risk of nerve damage, which can lead to problems with bladder control and erections.
- **Making an incision between your anus and scrotum.** Perineal surgery involves making an incision between your anus and scrotum in order to access your prostate. The perineal approach to surgery may allow for quicker recovery times, but this technique makes removing the nearby lymph nodes and avoiding nerve damage more difficult.

- **Laparoscopic prostatectomy.** During a laparoscopic radical prostatectomy, several small incisions are made in the abdomen. The doctor inserts special surgical tools through the incisions, including a long, slender tube with a small camera on the end (laparoscope). The laparoscope sends images to a monitor in the operating room. The surgeon watches the monitor while guiding the instruments. Laparoscopic surgery may offer a shorter hospital stay and quicker recovery than traditional surgery.
- **Using a robot to assist with surgery.** During robotic laparoscopic surgery, the instruments are attached to a mechanical device (robot). The surgeon sits at a console and uses hand controls to guide the robot to move the instruments. Using a robot during laparoscopic surgery may allow the surgeon to make more precise movements with surgical tools than is possible with traditional laparoscopic surgery.

Discuss with your doctor which type of surgery is best for your specific situation.

Radical prostatectomy carries a risk of urinary incontinence and erectile dysfunction. Ask your doctor to explain the risks you may face based on your situation, the type of procedure you select, your age, your body type and your overall health.

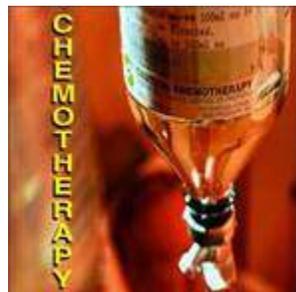
Freezing prostate tissue

Cryosurgery or cryoablation involves freezing tissue to kill cancer cells. During cryosurgery for prostate cancer, small needles are inserted in the prostate using ultrasound images as guidance. A very cold gas is placed in the needles, which causes the surrounding tissue to freeze. A second gas is then placed in the needles to reheat the tissue. The cycles of freezing and thawing kill the cancer cells and some surrounding healthy tissue. Initial attempts to use cryosurgery for prostate cancer resulted in high complication rates and unacceptable side effects. However, newer technologies have lowered complication rates, improved cancer control and made the procedure easier to tolerate. Cryosurgery may be an option for men who haven't been helped by radiation therapy.



Heating prostate tissue using ultrasound

High-intensity focused ultrasound treatment uses powerful sound waves to heat prostate tissue, causing cancer cells to die. High-intensity focused ultrasound is done by inserting a small probe in your rectum. The probe focuses ultrasound energy at precise points in your prostate. High-intensity focused ultrasound treatments are being studied in clinical trials. More study is needed to understand the benefits and risks of this treatment.



Chemotherapy

Chemotherapy uses drugs to kill rapidly growing cells, including cancer cells. Chemotherapy can be administered through a vein in your arm, in pill form or both. Chemotherapy may be a treatment option for men with prostate cancer that has spread to distant areas of their bodies. Chemotherapy may also be an option for cancers that don't respond to hormone therapy.

Alternative Medicine

The medical profession believes that no complementary or alternative treatments will cure prostate cancer. However, complementary and alternative prostate cancer treatments may help you cope with the side effects of cancer and its treatment.

Alternative prostate cancer treatments that may help you cope with the stress and anxiety you may experience after your diagnosis include:

- Art therapy
- Dance or movement therapy
- Exercise
- Meditation
- Music therapy
- Relaxation techniques, such as guided imagery or muscle relaxation
- Spirituality

Coping and Support

When you receive a diagnosis of prostate cancer, you may experience a range of feelings — including disbelief, fear, anger, anxiety and depression. With time, each man finds his own way of coping with a prostate cancer diagnosis. Until you find what works for you, try to:

- **Learn enough about prostate cancer to feel comfortable making treatment decisions.** Learn as much as you can about your cancer and its treatment. Having a better idea of what to expect from treatment and life after treatment can make you feel more in control of your cancer. Ask your doctor, nurse or other health care professional to recommend some reliable sources of information to get you started.
- **Keep your friends and family close.** Your friends and family can provide support during and after your treatment. Friends and family can help with the small tasks you won't have energy for during treatment. And having a close friend or family member to talk to can be helpful when you're feeling stressed or overwhelmed.
- **Connect with other cancer survivors.** Friends and family can't always understand what it's like to face cancer. Other cancer survivors provide a unique network of support. Ask your doctor or other member of your health care team about support groups or organizations in your community that can connect you with other cancer survivors. Organizations such as the American Cancer Society offer online chat rooms and discussion forums.
- **Take care of yourself.** Take care of yourself during cancer treatment by eating a diet full of fruits and vegetables. Try to exercise most days of the week. Get enough sleep each night so that you wake feeling rested.
- **Continue sexual expression.** If you experience erectile dysfunction, your natural reaction may be to avoid all sexual contact. But consider touching, holding, hugging and caressing as ways to continue sharing sexuality with your partner.

Prevention

You can reduce your risk of prostate cancer if you:

- **Choose a healthy diet full of fruits and vegetables.** Avoid high-fat foods and instead focus on choosing a variety of fruits, vegetables and whole grains. Fruits and vegetables contain many vitamins and nutrients that can contribute to your health. One nutrient that is consistently linked to prostate cancer prevention is lycopene, which can be found in raw or cooked tomatoes. Whether you can prevent prostate cancer through diet has yet to be conclusively proved. But eating a healthy diet with a variety of fruits and vegetables can improve your overall health.
- 
- **Choose healthy foods over supplements.** No studies have shown that supplements play a role in reducing your risk of prostate cancer risk. While there has been some interest in vitamins and minerals, such as vitamin E and selenium, to lower prostate cancer risk, studies haven't found a benefit to taking supplements to create high levels of these nutrients in your body. Instead, choose foods that are rich in vitamins and minerals so that you can maintain healthy levels of vitamins in your body.
 - **Exercise most days of the week.** Exercise improves your overall health, helps you maintain your weight and improves your mood. There is some evidence that the men who get the most exercise have a lower incidence of prostate cancer when compared with men who get little or no exercise. Try to exercise most days of the week. If you're new to exercise, start slow and work your way up to more exercise time each day.
 - **Maintain a healthy weight.** If your current weight is healthy, work to maintain it by exercising most days of the week. If you need to lose weight, add more exercise and reduce the number of calories you eat each day. Ask your doctor for help creating a plan for healthy weight loss.
 - **Talk to your doctor about increased risk of prostate cancer.** Men with a high risk of prostate cancer may consider medications or other treatments to reduce their risk. Some studies suggest that taking 5-alpha reductase inhibitors, including finasteride (Propecia, Proscar) and dutasteride (Avodart) may reduce the overall risk of developing prostate cancer in men age 55 and older. These drugs are used to control prostate gland enlargement and hair loss in men. However, some evidence indicates that men taking these medications may have an increased risk of getting a more serious form of prostate cancer (high-grade prostate cancer). If you're concerned about your risk of developing prostate cancer, talk with your doctor.

Frequent sex: Does it protect against prostate cancer? Is there research to support the theory that frequent ejaculation reduces the risk of prostate cancer?

The incidence and risk of prostate cancer has been studied in many populations. These have included men who've had vasectomies and those who may or may not be sexually active. Some studies have suggested that men with a higher frequency of ejaculations may have a slightly lower risk of prostate cancer. However, this difference appears to be very small and is very difficult to accurately study.

At this time, there is no conclusive evidence that frequent ejaculation reduces the risk of prostate cancer.

Flaxseed: Does it affect risk of prostate cancer? I take flaxseed to control my high cholesterol. But I've heard that flaxseed increases the risk of prostate cancer. Is this true?

The evidence is mixed as to whether taking flaxseed may play a role in reducing the risk of prostate cancer or limiting its spread. In addition, current data is limited to only a few studies. In one study involving men diagnosed with prostate cancer, those who took a flaxseed supplement and followed a low-fat diet saw their prostate-specific antigen (PSA) levels decline. PSA can be a measure of how fast prostate cancer is spreading.

Other preliminary studies report that a low-fat diet supplemented with flaxseed reduced PSA levels in men with enlarged prostate glands (benign prostatic hyperplasia) and in those with prostate cancer. However, those results may have been due to a reduction in dietary fats. Other studies have shown either no positive effect or a negative effect of flaxseed — and the alpha-linolenic acid contained in flaxseed — on prostate health. So overall, it remains unclear whether flaxseed or flaxseed oil has a role in the prevention or treatment of prostate cancer. Controlled clinical trials may help determine whether or not it's useful in the long term.

Vasectomy: Does it increase my risk of prostate cancer? Does vasectomy increase my risk of prostate cancer?

No, having a vasectomy doesn't increase your risk of getting prostate cancer. Many studies have been performed to see if there is a link. The best current evidence indicates no increased risk of prostate cancer after vasectomy.

If you're concerned about your prostate cancer risk, talk to your doctor about possible symptoms and screening tests. You're at increased risk of prostate cancer if you're older than age 50 or if you have a close family member with prostate cancer.

Prostate cancer: Does PSA level affect prognosis? I read that prostate cancer may grow slowly because prostate-specific antigen (PSA) keeps it in check. If so, do men with higher PSA levels have a better prognosis than men with lower PSA levels?

In most cases, a higher PSA level does not mean a better prognosis, and actually the opposite is true. PSA does not keep prostate cancer "in check," but rather it is a measure of the cancer. Only in rare cases where mutated and aggressive cancers occur are low or normal PSA levels found.

PSA is a protein made by prostate tissue. Men with prostate cancer often have elevated PSA levels because the cancer cells make excessive amounts of this protein.

At the time of initial diagnosis of prostate cancer, the PSA level helps determine how likely it is that the cancer has spread (metastasized). It also helps determine how likely the cancer will be cured with treatment such as radiation or surgery. Generally, the higher your PSA level and the faster the rate at which it increases, the more prostate cancer cells you have in your body. But this isn't always true. In some cases, the PSA level may not be elevated, despite the presence of prostate cancer. In such cases, the cancer cells often have more genetic mutations than other prostate cancer cells do, and they don't have the ability to make PSA. This type of prostate cancer is usually more aggressive and doesn't respond well to

treatment. Some scientists believe that the genetic mutations in these cancer cells may allow such cancers to grow and spread more quickly.

Prostate cancer often grows very slowly. The reasons for this aren't clear. Discuss the results of your PSA test with your doctor.

Prostate cancer: Can it spread to the pancreas? Can prostate cancer spread to the pancreas?

Prostate cancer is cancer of the walnut-shaped gland in males that produces the fluid that nourishes and transports sperm (seminal fluid). Prostate cancer usually grows slowly. If prostate cancer spreads, it tends to affect the bones and lymph nodes. Spread of prostate cancer to the pancreas is rare. However, it's possible for an advanced case of prostate cancer to spread to any organ — including the pancreas.

Treatment for prostate cancer that has spread may include hormone therapy, radiation therapy or chemotherapy.

Prostate cancer treatment: Does initial treatment preclude others later? Does my choice of initial prostate cancer treatment preclude other treatments later on?

Generally speaking, no. But first, some background information.

Selecting the right treatment for prostate cancer depends on many factors. They include your overall health, your age, the size and spread of the cancer, the aggressiveness of your cancer, and how you feel about the potential side effects of treatment. Treatment options include:

- Surgery (prostatectomy)
- Radiation therapy (either external beam radiation or radioactive seed implants, called brachytherapy)
- Chemotherapy
- Hormone therapy
- Freezing therapy (cryosurgery)
- Heating therapy (high-intensity focused ultrasound)
- Active surveillance (watchful waiting)

Talk to your doctor about the pros and cons of each option before making a decision.

Which initial treatment you choose may not affect a later treatment choice, should it be needed because of recurring cancer. However, prostatectomy after radiation therapy or cryosurgery (salvage prostatectomy) is performed in only very select cases because of the significantly increased risk of fecal and urinary incontinence. How widespread the recurring cancer is also plays a role in considering salvage prostatectomy.

Although salvage prostatectomy can be performed at specialized medical centers, it is often an option of last resort and determined on a case-by-case basis. In general, prostatectomy is not an option for men who have previously received radiation therapy or cryosurgery, and other treatments, including androgen deprivation therapy (ADT), may be tried before a salvage prostatectomy.

Prostate cancer brachytherapy: Can I pass radiation to others? My prostate cancer is being treated with radioactive seeds (brachytherapy). What precautions should I take during and after prostate cancer brachytherapy?

You may need to take some precautions, but it depends on the type of prostate cancer brachytherapy you receive. Prostate cancer brachytherapy is designed to treat prostate cancer by delivering radiation treatment to only the prostate. This is done by implanting radioactive "seeds" containing your treatment inside your prostate gland.

Prostate cancer brachytherapy can be done with different types of radioactive seeds. The amount of radiation released by the seeds and the duration of treatment depend on the type of seeds used. The lifetime radiation exposure to family members of men receiving prostate cancer brachytherapy is very low and doesn't exceed the annual limit set by the Nuclear Regulatory Commission. Although the seeds remain in the prostate for the rest of your life, the amount of radiation released by them decreases with time and eventually becomes negligible. Your radiation oncologist can provide detailed information about the specific treatment used. Recommendations for the first two months after seed implantation may include:

- Avoiding sexual intercourse for two weeks
- Using a condom during sexual intercourse in case a seed is passed during ejaculation
- Limiting close contact with children and pregnant women
- Not allowing children to sit on your lap for extended periods of time

If you travel to foreign countries, you may encounter radiation detectors at some border security checkpoints. Consider carrying a card from your radiation oncologist indicating that you have had a prostate seed implant.

Ginger for nausea: Does it work? Can taking ginger for nausea reduce or eliminate nausea and vomiting caused by chemotherapy?

There is evidence that when taken with standard anti-nausea medications, ginger can be helpful in further reducing or eliminating nausea and vomiting during and after chemotherapy treatments.



Results from two studies of adults who took ginger for nausea showed that various doses of ginger before starting chemotherapy treatments helped to reduce the severity of nausea. In these studies, participants began taking ginger orally three days prior to starting chemotherapy. The ginger was taken in addition to a standard medication prescribed to reduce nausea and vomiting. A small number of participants reported side effects including heartburn, bruising, flushing and rash. In another study, taking ginger root powder was effective in reducing the severity of chemotherapy-induced nausea in children and young adults ages 8 to 21. Ginger in this study was also given along with standard anti-nausea medications. Earlier studies had shown ginger to be of little or no benefit in reducing nausea and vomiting due to chemotherapy.

Many prescription drugs have been proved effective at controlling nausea during and after chemotherapy. Ask your doctor if combining ginger and anti-nausea medications might be right for you.

Chemotherapy and sex: Is sexual activity OK during treatment? I'm wondering about chemotherapy and sex. Is it safe for me to have sex with my husband while I'm undergoing chemotherapy?

It's best to discuss any concerns about chemotherapy and sex with your doctor, who's familiar with your individual situation. In general, however, it's usually OK to have sex while undergoing chemotherapy — as long as you're feeling up to it.

Many factors can influence decisions about chemotherapy and sex. Here are some things to consider:

- **What type of cancer do you have?** Cancers involving the genital tract may require special caution when it comes to sex. After a procedure or therapy that affects the genital tract, your doctor may recommend abstaining from sexual activity until healing is complete.
- **What type of chemotherapy are you receiving?** Some types of chemotherapy can lead to changes in the lining of the vagina, which may make vaginal injuries more likely during intercourse. Other types of chemotherapy — such as high-dose chemotherapy after a bone marrow or stem cell transplant — may weaken your immune system to the point that sex isn't a good idea. During intercourse, normal bacteria that live on the skin or in the genital tract may be introduced into your bloodstream. If your immune system is weak, your body may not be protected from these bacteria. Chemotherapy may also increase your risk of bleeding by lowering your platelets, which help with blood clotting. If your platelet count is low, intercourse could cause bleeding. If your platelet count is extremely low, severe bleeding could occur.
- **Could you become pregnant?** Pregnancy is discouraged during chemotherapy, due to the potential effects on the developing baby. If conception is possible, your doctor will likely encourage you to choose a reliable method of birth control.
- **Is your partner prepared for a possible allergic reaction?** Theoretically, it may be possible for your partner to develop an allergic reaction to the chemotherapy you've received — although this would be very rare.
- **Are you feeling up to it?** During chemotherapy, fatigue or other side effects may decrease your interest in sex. If you're not interested in intercourse, remember that there's more to an intimate relationship than sex. Look for other ways to express affection, such as kissing, cuddling or other shared activities.

Chemotherapy side effects: A cause of heart disease? Can chemotherapy side effects increase the risk of heart disease?

Chemotherapy side effects may include an increased risk of heart disease, especially weakening of the heart muscle (cardiomyopathy). Certain types of chemotherapy also increase the risk of heart attack, especially during infusion of the medication. Fortunately, heart disease associated with chemotherapy is relatively rare — and not all chemotherapy drugs carry the potential side effect of heart damage.

It's important to note that some newer anti-cancer treatments — such as trastuzumab (Herceptin) for breast cancer — may cause heart damage as well, although the effect is often temporary and reversible.

If your doctor is considering using a chemotherapy drug that may affect your heart, you may undergo heart function testing before starting treatment. During treatment, you may need periodic heart monitoring as well. If you have a pre-existing heart condition, such as cardiomyopathy, your doctor may suggest a different type of chemotherapy.

Generally, the risk of heart disease associated with certain chemotherapy drugs increases with the total lifetime amount of the drug you receive. To minimize the risk of heart damage, your doctor will carefully monitor the amount of each type of chemotherapy drug you receive. If you experience significant breathing problems such as shortness of breath with minimal exertion or chest pain during chemotherapy, report it immediately to your health care team.

In addition, some cancers require radiation therapy. If the area of your body receiving radiation includes your heart, you have an increased risk of cardiomyopathy, coronary artery disease and heart attack. The combination of radiation and chemotherapy can further increase your risk of heart damage. However, your doctor can take steps to reduce these risks as much as possible.

Curcumin: Can it slow cancer growth? Can curcumin slow cancer growth?

At this time, there isn't enough evidence to recommend curcumin for preventing or treating cancer, but research is ongoing.



Curcumin, a substance found in the spice turmeric, has long been used in Asian medicine to treat a variety of maladies. Now some research suggests that curcumin may help prevent or treat cancer.

Curcumin is thought to have antioxidant properties, which means it may decrease swelling and inflammation. It's being explored as a cancer treatment in part because inflammation appears to play a role in cancer.

Laboratory and animal research suggests that curcumin may prevent cancer, slow the spread of cancer, make chemotherapy more effective and protect healthy cells from damage by radiation therapy. Curcumin is being studied for use in many types of cancer.

Studies of curcumin in people are still in the early stages. Clinical trials are under way to investigate curcumin as a way to prevent cancer in people with precancerous conditions, as a cancer treatment, and as a remedy for signs and symptoms caused by cancer treatments. Research is ongoing, and there isn't enough evidence to recommend curcumin at this time. As always, talk with your doctor before using any herbal supplement.

High-dose vitamin C: Can it kill cancer cells? I've heard that vitamin C might be an alternative cancer treatment. What can you tell me about it?

The use of vitamin C in alternative cancer treatment isn't new. Proponents claim that large doses of vitamin C are toxic to cancer cells. However, there is no reliable evidence gathered in human studies to support this theory.

Studies in the 1970s first suggested that large doses of supplemental vitamin C might be of some benefit in the treatment of cancer. But these studies were later found to have serious flaws. Subsequent well-designed, randomized, controlled trials of vitamin C and cancer found no such treatment benefit.

More recently, vitamin C given intravenously (IV) has been touted to have different effects than vitamin C taken orally. This has prompted renewed interest in the use of IV vitamin C as a cancer therapy. However, there is still no evidence that vitamin C has any effect on cancer. Until clinical trials are completed, it's premature to determine what role, if any, IV vitamin C may play in the treatment of cancer.

Triclosan: Is it safe? Should I avoid products that contain triclosan?



There currently isn't enough evidence to recommend avoiding use of products that contain triclosan — an ingredient added to certain soaps, cosmetics, clothing, cookware, furniture and toys to reduce or prevent bacterial contamination. Recent studies, however, have raised questions about whether triclosan might be hazardous to human health. Research has shown that triclosan:

- Alters hormone regulation in animals
- Might contribute to the development of antibiotic-resistant germs
- Might be harmful to the immune system

When you use a product containing triclosan, you can absorb a small amount through your skin or mouth. A 2008 study, which was designed to assess exposure to triclosan in a representative sample of U.S. children and adults, found triclosan in the urine of nearly 75 percent of those tested.

Triclosan isn't an essential ingredient in many products. While triclosan added to toothpaste has been shown to help prevent gingivitis, there's no evidence that antibacterial soaps and body washes containing triclosan provide any extra benefits, according to the U.S. Food and Drug Administration.

If you're concerned about triclosan, look for products that don't list triclosan in their ingredients.

Cellphones and cancer: What's the risk? Is there any link between cellphones and cancer?

The possible connection between cellphones and cancer is controversial. Many years' worth of studies on cellphones and cancer have yielded conflicting results. Currently, there's no consensus about the degree of cancer risk — if any — posed by cellphone use.

The primary concern with cellphones and cancer seems to be the development of brain tumors associated with cellphone use. Some research suggests a slight increase in the rate of brain tumors since the 1970s, but cellphones weren't in use during the 1970s. Instead, the subtle increases are more likely related to other factors — such as increased access to medical care and improvements in diagnostic imaging.

So what have researchers learned about cellphones and cancer? Here's an overview of various studies:

- In one study that followed more than 420,000 cellphone users over a 20-year period, researchers found no evidence of a link between cellphones and brain tumors.
- Another study found an association between cellphones and cancer of the salivary glands. However, only a small number of study participants had malignant tumors.

- Another recent study suggested a possible increased risk of glioma — a specific type of brain tumor — for the heaviest cellphone users, but no increase in brain tumor risk overall.

After evaluating several studies on the possibility of a connection between cellphones and glioma and a noncancerous brain tumor known as acoustic neuroma, members of the International Agency for Research on Cancer — part of the World Health Organization — agreed that there's limited evidence that cellphone radiation is carcinogenic. As a result, the group classified radiofrequency electromagnetic fields as "possibly" carcinogenic to people. Still, a series of recent studies can't tell the entire story. It often takes many years between the use of a new cancer-causing agent — such as tobacco — and the observation of an increase in cancer rates. At this point, it's possible that too little time has passed to detect an increase in cancer rates directly attributable to cellphone use.

The bottom line? For now, no one knows if cellphones are capable of causing cancer. Although long-term studies are ongoing, to date there's no convincing evidence that cellphone use increases the risk of cancer. If you're concerned about the possible link between cellphones and cancer, consider limiting your use of cellphones — or use a speaker or hands-free device that places the cellphone antenna, which is typically in the cellphone itself, away from your head.

Night shift and cancer: Any connection? Does working the night shift increase the risk of cancer?

Various studies have suggested an association between night shift work and an increased risk of cancer, perhaps due to altered circadian rhythms or lower levels of melatonin in the blood. Still, these studies haven't proved that night shift work causes cancer. In fact, many of the studies linking shift work and cancer have serious limitations — including difficulty controlling for known cancer risk factors, such as smoking.

If you work the night shift, switching to the day shift isn't likely to change your overall cancer risk. However, you can take other steps to help prevent cancer. For example:

- Don't use tobacco.
- Eat a healthy diet.
- Maintain a healthy weight.
- Include physical activity in your daily routine.
- Protect yourself from the sun.
- If you choose to drink alcohol, do so only in moderation.
- Ask your doctor about vaccines for certain viral infections, such as hepatitis B and human papillomavirus (HPV).

Also remember the importance of regular self-exams and professional screening for various types of cancer. Early detection increases the odds of successful treatment.

Sitting risks: How harmful is too much sitting? What are the risks of sitting too much?

Researchers have linked sitting for long periods of time with a number of health concerns, including obesity and metabolic syndrome — a cluster of conditions that includes increased blood pressure, high blood sugar, excess body fat around the waist and abnormal cholesterol levels.

Too much sitting also seems to increase the risk of death from cardiovascular disease and cancer.

One recent study compared adults who spent less than two hours a day in front of the TV or other screen-based entertainment with those who logged more than four hours a day of recreational screen time. Those with greater screen time had:

- A nearly 50 percent increased risk of death from any cause
- About a 125 percent increased risk of events associated with cardiovascular disease, such as chest pain (angina) or heart attack

The increased risk was separate from other traditional risk factors for cardiovascular disease, such as smoking or high blood pressure.

Sitting in front of the TV isn't the only concern. Any extended sitting — such as behind a desk at work or behind the wheel — can be harmful. What's more, spending a few hours a week at the gym or otherwise engaged in moderate or vigorous activity doesn't seem to significantly offset the risk.

Rather, the solution seems to be less sitting and more moving overall. You might start by simply standing rather than sitting whenever you have the chance. For example:

- Stand while talking on the phone or eating lunch.
- If you work at a desk for long periods of time, try a standing desk — or improvise with a high table or counter.

Better yet, think about ways to walk while you work:

- Walk laps with your colleagues rather than gathering in a conference room for meetings.
- Position your work surface above a treadmill — with a computer screen and keyboard on a stand or a specialized treadmill-ready vertical desk — so that you can be in motion throughout the day.

The impact of movement — even leisurely movement — can be profound. For starters, you'll burn more calories. This might lead to weight loss and increased energy.

Even better, the muscle activity needed for standing and other movement seems to trigger important processes related to the breakdown of fats and sugars within the body. When you sit, these processes stall — and your health risks increase. When you're standing or actively moving, you kick the processes back into action.

Prostate cancer screening — a new model for the future?

In June 2012, the U.S. Preventive Services Task Force recommended against routine PSA testing to screen for prostate cancer. The recommendation doesn't apply to men diagnosed with prostate cancer and under observation for progression or recurrence.

This topic remains controversial, but is based on the fact that PSA testing hasn't been proven to decrease deaths from prostate cancer. The main concerns noted are false-positives, over diagnosis and overtreatment.

The PSA test isn't perfect, and can be elevated for other medical reasons. Researchers have also found that many low-risk (less aggressive, slow growing) prostate cancers can be simply observed for a period without needing aggressive treatment from the start.

All of this means that it's important to take the time to decide if you want to be screened or not depending on your personal history and choice. The scientific community agrees that a new way to screen and test for prostate cancer is needed. Meantime, talk with your doctor about what's best for you.

Mayo Clinic urologists recommend a personalized approach as men consider the benefits and risks of PSA screening. Prostate cancer is a leading cause of cancer in men. Therefore, it's still important to consider screening for those at high risk of developing cancer.

Mayo Clinic specialists recommend a discussion about PSA screening starting at age 40:

- If your personal or medical history places you at higher risk (strong family history of prostate cancer)
- If your ethnicity puts you at risk (African ethnicity has the highest risk)
- If you have a life expectancy of at least 10-15 years (the benefits of screening decrease with age)

Cancer prevention: 7 tips to reduce your risk

Concerned about cancer prevention? Take charge by making small changes in your daily life, from eating a healthy diet to scheduling regular cancer screenings.

You've probably heard conflicting reports about cancer prevention. Sometimes the specific cancer-prevention tip recommended in one study or news report is advised against in another. If you're concerned about cancer prevention, take comfort in the fact that small changes in your daily life can make a big difference. Consider seven real-life cancer prevention tips.

Don't use tobacco

Using any type of tobacco puts you on a collision course with cancer. Smoking has been linked to various types of cancer — including cancer of the lung, bladder, cervix and kidney — and chewing tobacco has been linked to cancer of the oral cavity and pancreas. Even if you don't use tobacco, exposure to secondhand smoke may increase your risk of lung cancer. Avoiding tobacco — or deciding to stop using it — is one of the most important health decisions you can make. It's also an important part of cancer prevention. If you need help quitting tobacco, ask your doctor about stop-smoking products and other strategies for quitting.



Eat a healthy diet

Although making healthy selections at the grocery store and at mealtime can't guarantee cancer prevention, it may help reduce your risk. Consider these guidelines:

- **Eat plenty of fruits and vegetables.** Base your diet on fruits, vegetables and other foods from plant sources — such as whole grains and beans.

- **Limit fat.** Eat lighter and leaner by choosing fewer high-fat foods, particularly those from animal sources. High-fat diets tend to be higher in calories and may increase the risk of overweight or obesity — which can, in turn, increase cancer risk.
- **If you choose to drink alcohol, do so only in moderation.** The risk of various types of cancer — including cancer of the breast, colon, lung, kidney and liver — increases with the amount of alcohol you drink and the length of time you've been drinking regularly.

Maintain a healthy weight and include physical activity in your daily routine

Maintaining a healthy weight may lower the risk of various types of cancer, including cancer of the breast, prostate, lung, colon and kidney. Physical activity counts, too. In addition to helping you control your weight, physical activity on its own may lower the risk of breast cancer and colon cancer.

As a general goal, include at least 30 minutes of physical activity in your daily routine — and if you can do more, even better. Try a fitness class, rediscover a favorite sport or meet a friend for daily brisk walks.

Protect yourself from the sun

Skin cancer is one of the most common kinds of cancer — and one of the most preventable. Try these tips:

- **Avoid midday sun.** Stay out of the sun between 10 a.m. and 4 p.m., when the sun's rays are strongest.
- **Stay in the shade.** When you're outdoors, stay in the shade as much as possible. Sunglasses and a broad-rimmed hat help, too.
- **Cover exposed areas.** Wear tightly woven, loose-fitting clothing that covers as much of your skin as possible. Opt for bright or dark colors, which reflect more ultraviolet radiation than pastels or bleached cotton.
- **Don't skimp on sunscreen.** Use generous amounts of sunscreen when you're outdoors, and reapply often.
- **Avoid tanning beds and sunlamps.** These are just as damaging as natural sunlight.

Get immunized

Cancer prevention includes protection from certain viral infections. Talk to your doctor about immunization against:

- **Hepatitis B.** Hepatitis B can increase the risk of developing liver cancer. The hepatitis B vaccine is routinely given to infants. It's also recommended for certain high-risk adults — such as adults who are sexually active but not in a mutually monogamous relationship, men who have sex with men, and health care or public safety workers who might be exposed to infected blood or body fluids.



- **Human papillomavirus (HPV).** HPV is a sexually transmitted virus that can lead to cervical cancer. The HPV vaccine is available to both men and women age 26 or younger who didn't have the vaccine as an adolescent.

Avoid risky behaviors

Another effective cancer prevention tactic is to avoid risky behaviors that can lead to infections that, in turn, may increase the risk of cancer. For example:

- **Practice safe sex.** Limit your number of sexual partners, and use a condom when you do have sex. The more sexual partners you have in your lifetime, the more likely you are to contract a sexually transmitted infection — such as HIV or HPV. People who have HIV or AIDS have a higher risk of cancer of the anus, cervix, lung and immune system. HPV is most often associated with cervical cancer, but it may also increase the risk of cancer of the anus, penis, throat, vulva and vagina.
- **Don't share needles.** Sharing needles with an infected drug user can lead to HIV, as well as hepatitis B and hepatitis C — which can increase the risk of liver cancer. If you're concerned about drug abuse or addiction, seek professional help.



Take early detection seriously

Regular self-exams and professional screening for various types of cancers — such as cancer of the skin, colon, prostate, cervix and breast — can increase your chances of discovering cancer early, when treatment is most likely to be successful. Ask your doctor about the best cancer screening schedule for you.

Take cancer prevention into your own hands, starting today. The rewards will last a lifetime.

Herbal Program for Prostate Cancer

The following program has been successful with prostate cancer along with “seeds” and radiation treatment:

1. Paw Paw Cell Reg
2. Noni
3. Silver Shield

Program for Prostate

The following information was taken from Footprints on the Path by HerbAllure.

Primary Formula:

- Men’s Formula w/Lycopene (Support and shrink Prostate)

Herbals:

- P-X or PS II + Zinc + Saw Palmetto
- X-Action for Men (Men’s Reproductive Formula)
- Herbal Pumpkin (Supplies Zinc and eliminates parasites)
- Saw Palmetto – Blocks dihydrotestosterone (DHT)
- Flax Seed Oil – For essential fatty acids
- Kidney Activator, Chinese – For infection or swelling
- IN-X (Infection) or IF-C (Chinese Anti-Inflammatory)
- Damiana (Hormone Balance) – For inflammation
- Lung Support (Weak Lung) – For swelling
- Eleuthero (Balance/Stress)
- Hydrangea – For non-specific urethritis

Vitamins, Minerals & Other Supplements

- Master Gland
- Zinc – Tissue Repair
- Vitamin E Complete w/Selenium (antioxidant/Male) – To protect against prostate cancer
- IGF-1 – For prostate problems
- Pregnenolone or DHEA-M (Hormone Precursor)
- Melatonin Extra – Usually low, decreases with age

Essential Oils

- Rosemary + Bergamot, Sandalwood, Ylang Ylang or Geranium

Prostate Cancer

- Paw Paw Cell Reg + Men’s Formula – Do not use for prevention
- CLA = Anticancer

Other

- Apply Pro-G-Yam Cream to hand to provide progesterone and shrink enlarged prostate.
- Cleanse the bowel to avoid pressure.

CERTIFIED MEN'S HEALTH COUNSELOR ONLINE COURSE - SESSION 4 QUESTION & ANSWERS

NAME: _____
ADDRESS: _____
CITY, STATE, ZIP, PC: _____
PHONE: _____
FAX: _____
E-MAIL: _____

Please be sure to fill out the information above, complete the test and e-mail or mail it back to us at iridology@netzero.net or P.O. Box 485, Weimar, CA, 95736-0485. We will grade your question & answer session and will let you know if we have any questions or concerns. **Please use a separate sheet to do this assignment.**

1. Which hormones do the prostate need to function properly?
2. Which hormone regulates the prostate?
3. What is benign prostatic hyperplasia and what are the medical treatments for it?
4. What causes bladder damage?
5. What are the risk factors for prostate gland enlargement?
6. What is transurethral incision of the prostate?
7. What does "PSA" stand for?
8. What are "5 alpha reductase inhibitors"?
9. What are the risks of an open prostatectomy?
10. What is the benefit of enucleative procedures over ablative procedures?
11. What is transurethral needle ablation?
12. What causes prostatitis?
13. What is nocturia?
14. What is curcumin?
15. What is a cystoscope?
16. What is a Gleason score?