The Prostate Cancer Research Institute is a 501 (c)(3) charitable not-for-profit organization located in Los Angeles, California. Our mission is to help men research their options. We assist them with their research by disseminating information that educates and empowers. Our programs help them understand their type of prostate cancer and the best way to treat and manage it.

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From the Editor

Peter Scholz // PCRI Creative Director

The Prostate Cancer Research Institute is delighted to announce Prostate Digest, the new format for what was formerly Prostate Insights Magazine. Prostate Digest still contains articles from the most prestigious doctors in the field, clinical researchers, support group leaders, and PCRI’s staff. However, Prostate Digest comes in a newspaper! As before, we offer all articles online. If you prefer, you can receive Prostate Digest electronically. Enter your email at the bottom of our home page at www.pcri.org or call us at 310-743-2116. To learn more about PCRI, our Medical Review Board, and our Board of Directors, visit our website www.pcri.org.
Before discussing recovery of erectile function in men following radical prostatectomy, it is important to understand the current causes and treatments for ED. There are many causes of ED. ED is a progressive disease in which 40% of men at 40 years old, 60% of men at 60 years old, and 80% of men at 80 years old will develop ED. [1] The most common causes are associated with diabetes and prostate cancer. Diabetics are four times more likely to have ED because they tend to have poor blood flow and nerve function in their penis. Radical prostatectomy can result in nerve injury to the penis. Unfortunately, some men never recover their erections after surgery. Other causes of ED include smoking, high blood pressure, high cholesterol, and certain medications. Many patients do not realize that beta-blockers, one of the most commonly used blood pressure medications, can be a potential cause of ED. Other causes include psychological issues, such as marital guilt, new relationships, and divorce. In these cases, sex therapy is extremely effective. Peyronie’s disease, which is an abnormal curvature of the penis when it is erect, and penile trauma, can also lead to ED.

ED is a window to a man’s cardiac health and overall health. In fact, the causes of ED and cardiovascular disease are very similar. The common causes include smoking, poor diet and lack of exercise, diabetes, obesity, advanced age, and elevated cholesterol levels. ED is one of the first signs of cardiovascular disease. Studies have shown that from the day a man develops ED, he has a 15% chance of developing a heart attack or stroke within seven years. [3]

Many men believe that sildenafil (Viagra) is a good treatment for ED. However, you have to ask yourself if sildenafil, or sildenafil-like drugs, such as tadalafil (Cialis), are really addressing the cause of ED. I believe these medications generally do not cure ED, but instead allow the disease to become worse over time. There are two ways to give these medications. One way is to take these medications before sex and the other way is to take a daily dose whether you are having sex or not. These are referred to as “on-demand dosing” and “daily dosing,” respectively. In my opinion, Cialis, when used as on-demand dosing, does not cure the ED problem and actually causes it to worsen. Dr. Esposito and colleagues have shown that diet and exercise reverse ED.[4] Other studies have shown that the use of statins improves ED, and makes medications such as Viagra much more effective. Improving diabetic control and stopping smoking are also ways to reverse ED. Finally, daily dosing of Cialis and the use of testosterone have been shown to reverse ED and improve the muscles within the penile tissue. Prior to treating men with ED, I strongly encourage lifestyle modifications in order to reverse the disease process and to prevent further worsening of the disease.

There are many treatment options for men with ED. The most commonly used medications are oral medications, such as sildenafil (Viagra), vardenafil (Levitra), tadalafil (Cialis), and recently introduced avanafil (Stendra). Stendra is the only FDA approved drug in this class that has an onset as early as 15 minutes. Other treatments include testosterone therapy. Testosterone alone has been shown to improve overall erections in men. Other medications include small suppositories (MUSE) that are placed in the tip of the penis and dissolve, causing blood to enter the penis and permitting an erection. Vacuum erection devices (VEDs) have been available for many years. A VED is simply a cylinder that
is placed on the penis, functioning like a vacuum and causing an erection. The man then places a band at the base of the penis so he can maintain his erection. Another effective treatment for ED is penile injections. These injections administer a small amount of medication that is injected at the base of the penis at the 10 and 2 o’clock position. Usually within 5-10 minutes the man is able to achieve a rigid erection sufficient for sex. This is an effective form of therapy and is also one of the cheapest types of ED medication if obtained from a compounding pharmacy. However, many American men are reluctant to insert a needle into their penis. Finally, there is the penile prosthesis, which was invented in the early 1970s by Dr. Brantley Scott. The penile prosthesis has revolutionized how we treat men for ED. The penile prosthesis involves a surgical procedure where an inflatable device is placed in the penis. There is a pump in the scrotum which allows the man to inflate and deflate the prosthesis. The entire prosthesis is placed inside the body and is not noticeable if a man takes off his clothes. The benefit of the penile prosthesis is that almost every man can be treated for ED if he is willing to have the procedure. Also, a man is able to get an erection whenever he wants for as long as he wants. Many of my patients are also offered a sex therapy referral. Sex therapy is especially helpful in men who suffer from psychogenic ED. Psychogenic ED can occur frequently in men following prostate cancer surgery. One cannot underestimate the large psychological impact radical prostatectomy can have on patients. This can have a devastating psychological impact on the patient and his wife. Many men start to experience ED once they are given the diagnosis of prostate cancer. This is why sex therapy plays such an important role in the recovery of sexual function following prostate cancer treatment.

One of the best ways to improve a man’s erections is to treat his wife. There have been many studies showing that if you increase a woman’s sexual desire, her male partner’s erections also significantly improve. There are also studies showing that if you improve a man’s libido and erections, his wife’s libido and sexual function also improve. The reason for this is that sexual dysfunction is a couple’s disease. You cannot treat one person without at least addressing the other partner. I published a study several years ago demonstrating that one of the best predictors of whether a man would be compliant to a penile rehabilitation program after surgery was based on how good his partners sexual function and desire was.[5] It makes sense that men who have a willing sexual partner are more likely to be motivated to recover their erectile function. The best way to treat sexual dysfunction is to treat both partners together. By treating one partner, you are also treating the other.

As discussed earlier, following a radical prostatectomy, approximately 77% of patients have ED due to blood flow or nerve injury causes. Although the penile nerves may be preserved during a radical prostatectomy, a majority of men suffer from temporary nerve paralysis, which may last from months to years. Nerve injury can also lead to penile scarring. In the past, we gave men Viagra and had them follow-up in 1 year to assess how their erections were progressing. I disagree with this approach, as the penis is mostly composed of muscle, and should be exercised just like any other muscle in the body. For example, if I put your arm in a cast for one year and then took off the cast, you would have muscle wasting (atrophy) and the arm would be weak. The same is true for the penis. The concept of “use it or lose it” is very relevant here. Thus, we now ask patients to start exercising the penis immediately after surgery. This is called penile rehabilitation. The goal of penile rehabilitation is to increase blood flow and oxygen to the penile tissue and thus prevent scarring and permanent damage to the penis. It is important to take this proactive approach because many times the scarring that occurs in the penis after a radical prostatectomy is irreversible.

There are many exciting potential future treatments for ED following radical prostatectomy. Currently, we are working with stem cells to reverse the ED process. [6] The stem cells are harvested from the patient’s fat and then processed and injected back into the patient’s penis tissue. Our initial human studies were promising, as stem cells allow more blood to flow into the penile tissue as well as increase the muscle within the penile tissue. We are also beginning our study to deliver low intensity shockwave therapy to the penis. In this procedure, a patient undergoes 1500 penile shocks three times per week for six weeks, inducing growth factors and new blood vessels to come into the penile tissue. This technology has been used for several years in Europe, and initial results appear promising in improving overall erectile function.

References
When Men with Prostate Cancer Get Prostatitis

J. Curtis Nickel, MD, FRCSC
Professor of Urology, Queen’s University at Kingston Canada
Canada Research Chair in Urologic Pain and Inflammation

Although common, little is known about prostatitis and what its main causes are. Treatments are specific to the type of prostatitis one has; there is no one treatment. Prostatitis can affect diagnosis and accurate staging of prostate cancer since they share some of the same biological markers. In this article, Dr. Nickel gives a practical explanation of the disease, and shows how the disease interacts with prostate cancer.

Prostatitis is associated with inflammation (and or neural upregulation or sensitization), and in a few cases, infection of the prostate, causing pain in the prostate and pelvic area along with variable urinary symptoms. Acute bacterial prostatitis is rare, quite severe, relatively simple to diagnose, and quite easy to cure with antibiotics. Chronic bacterial prostatitis is a little more difficult to diagnose, but is typically associated with a chronic bacterial infection of the prostate characterized by recurrent urinary tract infections. Again, antibiotics are the primary treatment. The majority of men with prostate and pelvic pain and urinary symptoms (over 90% of prostatitis diagnoses) do not have a bacterial infection and remain somewhat of a medical enigma. Diagnosis is made by ruling out bacterial infection (and/or no benefit with antibiotics) and any other urological condition that could produce pelvic or prostate pain. This condition is now known as chronic prostatitis/chronic pelvic pain syndrome (CP/CPPS). Worldwide, approximately 6-8% of men have experienced prostatitis like symptoms, and for at least a third of these men, it is a very significant health concern. It is the most common urology diagnosis in men less than 50 years of age and the third most common urology diagnosis in men over 50 years. The impact on a patients’ quality of life is significant because of the constant chronic pain and its effect on life’s activities. The treatment is not very effective and must be individualized for each patient, usually using a multimodal treatment approach. The goal of treatment of CP/CPPS is not necessarily cure but rather relief from symptoms, increase in activities, and general improvement in quality of life.

Prostate Cancer Concerns in Men with Prostatitis

Men with a diagnosis of prostatitis appear to be diagnosed with prostate cancer more than men without prostatitis. While this might seem concerning, there is absolutely no concrete evidence that a prostatitis diagnosis actually increases the risk of developing or eventually dying from prostate cancer. It does increase the risk of being diagnosed with prostate cancer, presumably because of over utilization of urology care, higher worry about prostate disease including cancer, increased PSA testing, and thus increased likelihood of a prostate biopsy.

Inflammation of the prostate gland can have an impact on PSA screening for prostate cancer. While bacterial infection of the prostate gland (acute or chronic) can elevate the PSA levels 10 or even 100 fold, appropriate treatment usually brings down the level to baseline but takes at least 6 months after effective antibiotic treatment. Nonbacterial CP/CPPS can cause very minor increases in PSA in some individuals, however, an elevated PSA should never be attributable to CP/CPPS unless the patient and/or urologist is looking for an excuse to not perform a biopsy.

However, a diagnosis of prostatitis should be taken into account when deciding upon the treatment modality, as it can impact, not necessarily the cancer prognosis, but rather the prostatitis symptoms.

Men Who Have Both Prostatitis and Prostate Cancer

Many times, prostatitis symptoms bring patients to the urologist’s office only to be diagnosed with prostate cancer. Other times, men are referred with an elevated PSA, and the urologist determines the patient has a prostatitis syndrome. Once prostate cancer is diagnosed, it can be followed by active surveillance or treatment according to best contemporary standards. However, a diagnosis of prostatitis should be taken into account when deciding upon the treatment modality, as it can impact, not necessarily the cancer prognosis, but rather the prostatitis symptoms. Radiation therapy can significantly aggravate the pain and urinary symptoms, while it is a fact that pelvic pain can persist after radical prostatectomy. Hormone therapy either has no impact or, in some patients, the prostatitis symptoms improve.

Radiation for Prostate Cancer can Aggravate or Cause Prostatitis

As noted in the previous section, men with a diagnosis of prostatitis, particularly those with an inflammatory subtype, can experience a temporary or even long term deterioration or exacerbation of symptoms. While some men have no change in the state of their prostatitis symptoms during or following radiation, it is impossible to predict the symptomatic outcome.
Men with no history of prostatitis can develop a radiation prostatitis, indistinguishable from CP/CPPS. This can occur with external beam radiotherapy or brachytherapy (radioactive seeds implanted into the prostate). The symptoms could include dysuria (burning during urination), poor, intermittent, obstructive stream, pain on ejaculation, and pain in the prostate, pelvic and/or bladder area. It can be quite severe, with poor bladder emptying (even urinary retention), inflammation of the prostate and bladder neck, and even dystropic (abnormal) calcification of the prostate gland. While it can be temporary (typically at least several months), the severe symptoms can become a chronic condition. Antibiotics rarely help and treatment is only supportive (alpha blockers, anti-inflammatory agents) and not curative.

**Prostatitis in Men with No Prostate**
Many men with severe prostatitis insist on having a prostatectomy, even when they do not have cancer, in a desperate attempt to alleviate symptoms. In many cases, the surgery is futile and symptoms persist after the prostate is removed. For those patients with both prostatitis and prostate cancer, a radical prostatectomy cannot be guaranteed to cure the prostatitis symptoms. The pelvic pain, in many cases, persists. If one is lucky enough and the prostatitis pain resolves, it unfortunately can return once the local pelvic nerve “shock” stage has passed. Although difficult to predict, about one third of patients with prostatitis symptoms undergoing a radical prostatectomy for prostate cancer will see some resolution of their prostatitis symptoms. One of the most difficult aspects of CP/CPPS, or rather just CPPS, since we are discussing men who do not have a prostate, are those men who have never had prostatitis but develop symptoms of severe prostatitis following a radical prostatectomy. Patients report a pelvic pain described as burning, stabbing, sharp, knife-like and/or spasm-like. It is likely caused by some form of pelvic nerve damage during surgery, such that the nervous system (even beyond the pelvic area) becomes sensitized, resulting in a neuropathic pelvic pain syndrome. The treatment is both conservative (physiotherapy, heat treatment, muscle relaxants) and targeted stimulus. While this condition can persist in men for months and even years, it usually slowly improves with time.

**Prostatitis and Prostate Cancer**
The lesson for men with prostate cancer is that prostatitis can occur and impact their prostate cancer journey. Less is known about prostatitis than is known about prostate cancer, but it can significantly change a prostate cancer survivor's life. Treatment of prostatitis symptoms in men with prostate cancer can be difficult, and is usually supportive rather than curative. But directed management is beneficial in improving symptoms when the correct diagnosis is established.

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**Now Available! PROSTATE CANCER STAGING GUIDE**

The Prostate Cancer Staging Guide is a game-changing educational resource for the prostate cancer community. This handbook, which is also available online, gives an overview of prostate cancer, every available treatment, and side effects. It succinctly explains which treatments are applicable to each stage. This overview and context will provide you with strong prostate cancer knowledge and help you communicate effectively with your medical professionals.

The most pivotal aspect of the Guide is the Staging Quiz, which can be found online at www.prostatecancerstaging.org. You answer the questions with information easily found in your medical records, and are subsequently assigned a stage based on staging systems used by the medical community. Armed with valuable information and treatment options for your specific case, you can compare the effectiveness and the side effects of each treatment. This provides knowledge to help you understand your case the way that your medical professional sees it, so you can have thorough discussions with your medical team. It also allows you to avoid reading unnecessary information, so you don’t become inundated with information that does not apply to your stage. These factors mean you can make the best decisions for your case.

Go to [www.prostatecancerstaging.org](http://www.prostatecancerstaging.org) to take the quiz and learn more about your stage!
A No-Nonsense Look at Prostate Cancer Surgery

Alexandra “Xan” Oakley, PCRI Educational Writer

Surgery and radiation are the most commonly administered prostate cancer treatments. There are many factors to consider before making a treatment choice. Every man’s prostate cancer case is different, so the same treatment(s) can lead to different outcomes, especially when it comes to side effects. Often, men undergo surgery or radiation (or both) without being fully informed of the long-term implications. Many men are under the impression that recovery will be like other types of operations. The problem is that one’s busy medical team may fail to fully convey a realistic outlook on the possible (and likely) outcomes. We have said it before and we continue to say it: Prostate cancer is the slowest growing cancer, and thus, there is plenty of time to weigh the options, the outcomes, and the side effects. The survival rate for men with non-metastatic prostate cancer receiving standard therapy is 96% at 15 years!

What You Need to Know About Surgery

The radical prostatectomy is removal of the entire prostate gland. Due to the location of the prostate, beneath the bladder and in front of the rectum, and with the urethra and ejaculatory ducts running through the center, as well as the bilateral nerve endings, removing it is a delicate process. The bilateral nerve-sparing radical prostatectomy is an attempt to remove the prostate while preserving as much of the surrounding nerve structures responsible for penile erections. The robotic approach reduces the recovery time after surgery compared to the older open surgical approach. Unfortunately, the risk of incontinence and sexual dysfunction is the same. For the procedure, the patient is placed under anesthesia. After the surgeon removes the prostate, a catheter is placed in the penis to help drain the bladder. The catheter usually stays in for 1-2 weeks while the patient heals. The patient may stay in the hospital for several days after the procedure. One fairly frequent problem with surgery is the possibility of leaving cancer behind (called a positive margin). Top surgeons (urologists) leave cancer behind 10% of the time. However, others, even at reputable centers, can leave cancer behind up to 50% of the time.

Prostate cancer is the only cancer primarily managed by surgeons. Since surgery is their specialty, there can be some bias in treatment recommendation. Combined with the fact that the “c” word is terrifying, a patient’s very first and very natural reaction to a diagnosis of prostate cancer is to cut it out! However, all of the complications need to be considered. Due to the challenging nature of the operation, at least half the men are rendered impotent.

All men are at least temporarily impotent after surgery, with perhaps 50% recovering some degree of function eventually. Even this recovery does not mean a man will be able to get or even keep a full erection. Shrinkage and shortening of the penis can also occur. Ultimately, many men who are candidates and who desire full functionality will need to be taught how to self-inject themselves with prostaglandins.

Other Problems with Surgery

A quarter of men leak urine after surgery. Loss of bladder control (urinary incontinence) can be expected for the first few months following radical prostatectomy. Unfortunately, in some men, incontinence persists beyond the usual three to six-month recovery period. Also, since there is no ejaculatory apparatus to produce or deliver semen, men experience dry ejaculations. The muscles surrounding the urethra still contract at the time of orgasm, so the genital sensation that men experience at orgasm should remain.

However, after surgery, some men may ejaculate urine, termed “climacturia” by Dr. John P. Mulhall, author of the excellent book, Saving Your Sex Life: A Guide for Men with Prostate Cancer. Although the exact number of cases of climacturia after radical prostatectomy is unknown, estimates indicate that it occurs in more than 20 percent of men. As a result, many men suffer from decreased libido and decreased sexual satisfaction. Treatment suggestions for climacturia include behavior modification (urinating and refraining from drinking water before sexual activity) and the use of condoms. Although the results of these various treatments have not been well studied, patients should be informed that ejaculating urine is a rather common post-treatment complication of radical prostatectomy.

Conclusion

In the wake of a prostate cancer diagnosis patients feel pressure to act quickly. Prostate surgery is a life changing event, so decisions should be made carefully. It is more important to act decisively, taking the time to research all the unexpected side effects that may have been glossed over by one’s physician. When choosing surgery it is important to be prepared for the life changes that will inevitably occur, and weigh these against the different options that are available.

PCRI is here to help!

The Helpline is a free resource for patients and caregivers. Our Helpline staff has both first-hand experience and unrivaled knowledge learned from medical experts, about all things prostate cancer. The staff can help you find the most relevant information for your personal case, and answer any questions you may have. Give them a call today!
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Your support places vital resources in the hands of patients and caregivers and gives them the information they need to overcome the disease.

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