

IN FOCUS

Benign Prostatic Hyperplasia

Alexis E. Te, MD and Smrita Sinha

Weill Medical College of Cornell University

Department of Urology

New York, NY

Dr. Te is a consultant for GlaxoSmithKline, Sanofi-aventis, NIH and NIDDK. He has received research support from GlaxoSmithKline, Sanofi-aventis, American Medical Systems, Eli Lilly, Allergan, Pfizer, NIH, and NIDDK.



What is benign prostatic hyperplasia?

Benign prostatic hyperplasia (BPH) is a non-cancerous enlargement of the prostate gland that affects men as they get older. BPH is a common disorder and its prevalence increases with age; it is estimated to affect 40 to 50% of men aged 51 to 60, to over 80% of men older than age 80. BPH is rarely symptomatic in men younger than the age of 50. There is no clear association between a man's race and ethnicity and his risk for getting BPH.

The prostate is a male reproductive gland that surrounds the urethra, the tube that carries urine from the bladder to outside the body. If the prostate gets too big, or enlarges, it can obstruct the flow of urine. This can lead to urinary symptoms such as straining to void, feeling of incomplete bladder emptying, increased frequency, and nocturia – the need to wake up one or more times at night to urinate. Although relatively uncommon, some serious complications of untreated BPH include acute urinary retention (complete inability to urinate), urinary tract infection and kidney damage. Currently, there are medical and surgical options

continued on next page . . .

in this issue

The prostate is a male reproductive gland that wraps around the urethra, the tube that carries urine from the bladder through the penis. As with many parts of our bodies, this gland changes over time in many individuals. The prostate may grow in size. This is called enlarged prostate, or benign prostatic hyperplasia (BPH). In some cases, there is no health concern. In other circumstances, a change in the size of the prostate may cause complications with urination, a symptom experienced when the prostate blocks the passageway of the urethra. Still further, a change in the prostate may be caused by prostate cancer, which may cause various health issues if not diagnosed and treated early.

This issue of *Quality Care*[®] explores the prostate and its function. Our experts deliver explanations about the symptoms, diagnosis, management, and treatments options associated with changes in the prostate. You will also hear about the personal encounters a nationally recognized columnist experienced this year following his prostate cancer diagnosis. ❖

available to effectively treat BPH. These treatments aim to relieve symptoms, prevent serious complications and improve quality of life in men with BPH.

Causes

The cause of BPH appears to be multi-factorial and is related to hormones, changes in prostate cellular function and hereditary factors. One of the main causes of BPH is increased sensitivity of the prostate to dihydrotestosterone (DHT), a hormone the body makes from testosterone. DHT supports prostate growth and function. Men with BPH have normal levels of DHT and testosterone in their bodies, but their prostates are more sensitive to the growth effects of these hormones. As a result, their prostates get larger in the presence of normal levels of hormones. BPH is proposed to also have a hereditary cause. Therefore, men with family members who have BPH are more likely to get it. BPH cannot be prevented by any known treatment or changes in diet and lifestyle. Once BPH develops, however, medical and surgical interventions can relieve symptoms and stop the disease from progressing.

Common Symptoms Associated with BPH

- Slow or weak stream
- Splitting or spraying
- Intermittency – urine flow which stops and starts
- Hesitancy – difficulty initiating urination
- Straining
- Trickling or dribbling at the end of urination
- Incomplete emptying – sensation of not emptying bladder completely
- Increased daytime frequency
- Nocturia – waking one or more times at night to urinate
- Urgency – sudden compelling desire to pass urine
- Urinary Incontinence – involuntary leakage of urine

Treatment Options

Current medical and surgical treatments for BPH are aimed at alleviating urinary symptoms, preventing serious complications and improving quality of life. It is important to consult a physician prior to starting treatment, as urinary symptoms can result from disorders other than BPH. Treatment options for BPH include: watchful waiting, medications and various modes of surgery. Men who have mild symptoms can opt for watchful waiting, which involves annual physician visits to monitor progression. Men with moderate to severe symptoms can be treated medically or surgically. Medications include FDA-approved drugs that help relax and/or decrease the size of the prostate. Surgical options consist of minimally invasive procedures, such as thermal and laser therapies, which can be done in an outpatient setting. The more invasive procedures are usually reserved for men with serious disease.

continued on page 5. . .

Recovery of Sexual Function After Prostate Cancer Surgery

Judd Moul, MD, FACS

Professor and Chief
Division of Urologic Surgery
Director, Duke Prostate Center
Duke University Medical Center
Durham, North Carolina



Dr. Moul is a consultant for Astra-Zeneca and has received research support from GlaxoSmithKline. He has also received honorarium and serves on speaker's bureaus for Astra-Zeneca, Sanofi-Aventis, Pfizer and Cytogen.

Making the Connection

For readers of the NAFC newsletter, prior articles have addressed post-prostatectomy incontinence (PPI) and its management. Since prostate cancer surgery, called radical prostatectomy, may also impact a man's sexual function, the following information addresses this concern.

Prostate cancer surgery may affect a man's sexual function in several ways, but it does not prevent him from enjoying a sex life after surgery. For men, sexual function involves erection, ejaculation and orgasm. Ejaculation occurs when seminal fluid is expelled. This fluid is made and stored in the prostate and seminal vesicles. When these organs are removed only a small amount of fluid, if any, will come out during ejaculation and orgasm. The operation should not affect his ability to experience a pleasurable orgasm even if there is little ejaculation fluid.

What Occurs During and Following Surgery?

Erection occurs when the penis fills up with blood. This usually occurs in response to nerve signals. These nerve signals are carried in two nerve bundles that run along either side of the prostate gland. In a "nerve-sparing radical prostatectomy", attempts are made to not cut these nerves during surgery, but even preservation of these nerves does not guarantee the return of erections. The return of erections after surgery is usually slower than the return of urinary control. The average time until recovery of erections is six to 18 months, and it can improve for as long as two to three years after the operation.

Aiding The Process

While waiting for the return of erections that are spontaneously firm enough for vaginal penetration, several methods can be used to help induce and improve erections. These include Viagra[®], Levitra[®] or Cialis[®] pills, injection medications like Caverject[®], urethral suppositories such as MUSE and vacuum erection devices. All of these treatments, used alone or combined, are part of 'sexual function rehabilitation' (rehab) after radical prostatectomy. The best way to instruct men regarding this rehab is currently unclear. In other words, doctors are debating and researching when to start these treatments, from immediately after the operation to several months, and what combination(s) are best.

continued on next page . . .

Sexual Function Rehabilitation

Oral medications such as Viagra[®], Levitra[®] and Cialis[®] have been the main method of sexual function rehabilitation after radical prostatectomy. One randomized trial found that men who took daily bedtime doses of Viagra[®] (25mg nightly) had better return of erections than men who took a placebo (sugar pills). Clinical studies are also underway in this setting with Levitra[®] and Cialis[®], and all three pills are in popular use by urologists to help their patients recover sexually after nerve-sparing prostate cancer surgery.

Penile injection therapy is also a relatively popular option for rehab. In this treatment, doctors prescribe and teach men how to inject liquid medicines into the base of the penis using tiny diabetic needles and syringes. One brand of medicine is called Caverject[®]. Other popular choices are medicine mixtures called tri-mix and bi-mix. Directly-injected medicines are very effective in inducing erection and are helpful to many men recovering from prostatectomy.

Another medicine useful for rehab is called MUSE, a prostaglandin E1, which is in the form of a dissolvable suppository that is inserted into the penile meatus (pee hole). The suppository dissolves in the penile tissue inducing an erection in most men. Sometimes doctors will combine MUSE with other treatments such as the pill medications already mentioned or a vacuum erection device.

Penile vacuum erection devices (VED's) are external suction tubes that are placed over the penis. The tube is positioned and a negative vacuum is created which draws blood into the penis, creating an erection-like state. While this is considered an "artificial" erection, the penis does fill with blood and gets stretched out to an elongated, erect state. Many urologists feel that using VED's after radical prostatectomy can prevent penile shortening and assist in the rehab process. Like other treatments noted here, VED's can be used alone or given with pills, shots or suppositories.

In Brief

Radical prostatectomy is a common operation for prostate cancer. Nerve-sparing radical prostatectomy is now the most common type of prostate cancer surgery. Sexual function rehabilitation using oral medications, injection or suppository medications or vacuum erection devices are now common and effective. For more information about any of the rehabilitation options, consult with your healthcare provider. ❖

The Journal of the National Cancer Center Institute reports that a surgeon's level of experience is directly related to the rate of cancer recurrence. Research completed at Memorial Sloan-Kettering Cancer Center in New York City suggests that although cancer recurrences significantly decrease the more a surgeon accomplishes these procedures, the steep decline plateaus once a surgeon has completed 250 of such surgeries.

Healthcare providers at the University of Rochester are conducting research about urinary catheter use in people with spinal cord injury. Approved by the University and funded by the Wound, Ostomy, and Continence Nursing Society, the study will determine the incidence and prevalence of indwelling urinary catheter use (urethral and suprapubic) and catheter-associated problems in people with spinal cord injury as there is very little already documented on the topic.

If you or someone you know lives with spinal cord injury, please visit the following Web site and tell researchers any concerns you have about catheter use. Information collected in this study will be used to promote better care for people with long-term urinary catheters.

www.son.rochester.edu/urinarycatheters

... In Focus

The various medical and surgical treatments for BPH can be very effective in improving symptoms. The different therapies vary in success rates and side-effects that should be discussed with the physician. The best treatment option for a person depends on the severity of his symptoms, degree of impairment of his quality of life, personal choice in pursuing a certain course of therapy and current overall health. In BPH, treatment is goal-directed from the patient perspective and involves open dialogue between the patient and physician.

In Summary

BPH, a non-cancerous enlargement of the prostate gland, is a prevalent disorder in men as they age. It is associated with significant symptoms that can greatly impair quality of life. Fortunately, there are several effective medical and surgical treatments for BPH with promising outcomes. Furthermore, new medical and surgical therapies are emerging that will continue to expand treatment options for the better management of BPH. ❖

NAFC Newsletter History

Over a decade ago, the National Association For Continence decided to bring you news on a quarterly basis to ensure that you are abreast of the outreach and advocacy efforts in which our staff is involved and to give you insight regarding the latest breakthroughs in continence care. When it came time to declare a name for our monthly publication, the Centers of Disease Control and Prevention (CDC) aided in determining what to call it. The CDC and other reputable institutes acknowledge “quality care” as health services given to individuals to a particular level that increases the tendency for individuals to maintain optimum health. We are dedicated to bringing you exactly what our newsletter conveys, which is the most current, accurate healthcare information related to continence care. Due to your support, we are able to carry out that commitment.

My doctor recently diagnosed me with prostate cancer. I haven't had any problems with urinating or sexual function, but I am concerned that I may begin to experience these symptoms after my prostate is removed. Is there anything I can do to keep this from happening?

Most importantly, be open with your healthcare providers. Tell them everything you can about your health history, current symptoms and desires for life following the surgery. Don't hold back information. If you are an active person (physically and sexually) and you intend to stay that way, then let your doctor know. If you are having symptoms or an uneasy feeling about previous conversations you have had with your healthcare provider, initiate another discussion about it. That way you will have more time to digest everything that is being explained to you. If you still are not satisfied, get another opinion.

In addition to that, practice pelvic floor muscle exercises. If you do not already have a routine of doing them, start immediately. They can make a huge difference.

Unfortunately a surgeon cannot be 100% positive that the urinary system and sexual function will stay the same or return to their state prior to surgery. However, surgeons are now commonly performing more cautious procedures, known as "nerve-sparing radical prostatectomy", so that nerves crucial to sexual function during surgery are not harmed.

The National Model Consensus Code recently approved a change requested by the American Restroom Association (ARA). This new code will require signs in public areas to point to restrooms, which should go a long way to prevent, if not entirely stop, the "no restrooms" or "restrooms for employee only" signs frequently seen now. This major victory will make it easier to find toilet facilities when away from home.

Visit americanrestroom.org to learn more.

Recently we learned that my husband has an enlarged prostate. Is that the same condition as benign prostatic hyperplasia? Will he need to have surgery to remove his prostate?

Yes, enlarged prostate is also known as benign prostatic hyperplasia. In any given case, there are many factors to consider when you and your healthcare provider determine which treatment method to use. If your husband is not experiencing any changes in his urine flow or frequency of urinating, he may not need to have anything done. Sometimes a man's prostate may grow, but not to a size that is detrimental to his health. This may be the case for your spouse. If so, he may have the option to practice "watchful waiting."

continued on next page. . .

Your husband should communicate any health changes he has experienced with a healthcare professional. For example, if he is unable to completely empty his bladder, he may be going to the restroom more often than usual. Or perhaps he urinates the same number of times per day that he has for years, but he has a weak or interrupted flow or urine. These symptoms are cases where the enlarged prostate is causing obstruction to the urethra. Without prompt and proper treatment, the condition could grow worse and accelerate health concerns. Encourage your husband to pay attention to his toileting habits, even taking written notes, and schedule an appointment to visit his doctor. He should take his notes to his next doctor's visit.

Common Tests Conducted to Reach BPH Diagnosis

Digital Rectam Exam (DRE) - physician will feel the size of the prostate with a finger

Urinalysis - lab testing of urine used to determine if any infection or other problems exist

Prostate-Specific Antigen Test (PSA) - measures the levels of PSA in the blood

Urodynamics Tests - a series of tests that evaluate the lower urinary tract

Cystoscopy - a small camera is inserted to examine the urethra, prostate and bladder

A excerpt from the NAFC *Enlarged Prostate* leaflet

My friend told me that there are treatment options for enlarged prostate that do not include surgery. Is this true? If so, what are the non-surgical treatment options?

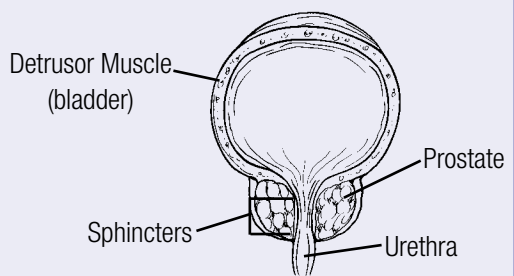
Your friend is correct. The first non-surgical treatment, as mentioned above, is known as "watchful waiting." This is used when someone is experiencing minimal BPH symptoms. With this method, an individual monitors his condition and visits his physician regularly until changes warrant intervention.

There is also drug therapy. The two main types of pharmaceuticals used to treat BPH are alpha-blockers and 5-alpha reductase inhibitors. Alpha-blockers relax the smooth muscle around the bladder neck and within the prostate to improve urine flow. 5-alpha reductase inhibitors restrict the production of the hormone DHT (responsible for prostate growth) to reduce the gland's size and blockage.

Recent research suggests that symptoms of BPH can be relieved by injecting botulinum toxin A, or Botox®, into the prostate gland. In fact, the studies not only suggest that these

injections could help individuals with BPH, but they could also relieve lower urinary tract infections (LUTS) related to BPH. There are also a number of minimally invasive procedures available. Talk to your healthcare provider about treatment options that may suit you. ❖

The Position of the Prostate



Urinary Incontinence Treatment Proves Longterm Success for Bowel Control

Sacral nerve stimulation (SNS), often compared to a cardiac pacemaker, is a treatment that has been used for urinary incontinence and other pelvic floor disorders for the past several years. It involves electrical stimulation of sacral nerves from a matchstick-size instrument, which is implanted at the base of the spine in the sacral region (see S1-S4 below). The mechanism is called a sacral neuromodulation (SNM) device. It can be used as a treatment option for individuals who have not responded to drug or behavioral therapy, including good fluid intake, regular exercise and regular bowel habits.

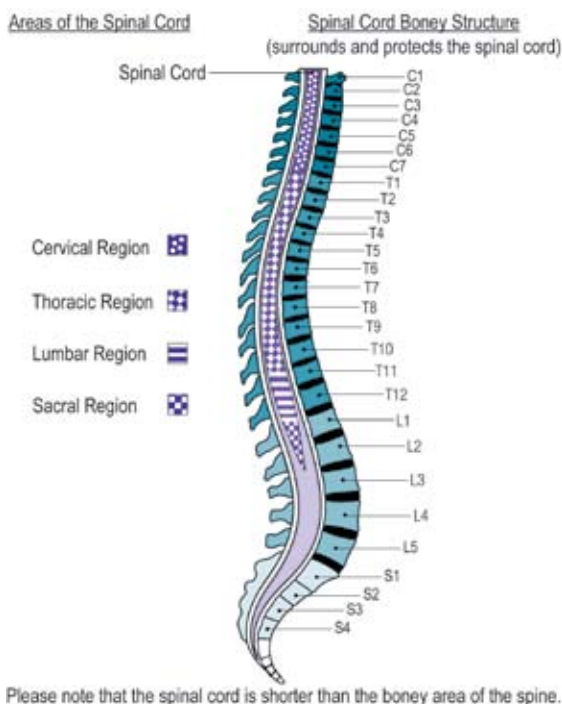


Image of spine courtesy of Medtronic, Inc.

Through past research, we know that SNS not only helps people with urinary incontinence control their bladder function shortterm, but the treatment has lasting effects over time. Soon after healthcare providers began using SNS to help individuals regain bladder control, the treatment underwent testing for people living with fecal incontinence (FI). As with urinary incontinence, a study recently concluded that SNS helps people living with FI gain control of their bowels longterm.

This study focused on people with FI who received permanent implants of the SNM device. Research lasted five years, and among those tested results show nearly 80% fewer FI episodes after implanting the device. The efficacy of this treatment is a milestone for healthcare technologists and assures all of us that more innovative treatment options are on the horizon.

PaperPak Changes Its Company Name

PaperPak Products CEO, Michael Fagan, announced a company name change. Effective August 1, 2007, Paperpak is now *Attends* Healthcare Products, Inc. At the release of the news, Mr. Fagan explained that this name more is a more accurate description of the group who began creating products for adults to manage urinary incontinence over two decades ago. Today *Attends* Healthcare Products, Inc. manufactures, sells, and distributes absorbent products to keep people living with incontinence dry.

New Prostate Cancer Vaccine Offers Hope

Hormone-refractory prostate cancer (HRPC) is an advanced stage of prostate cancer that no longer responds to hormone therapies. Recently a vaccine, called Provenge[®], was created to improve the quality of life for people who have HRPC by stopping the disease from spreading. It works by simulating an individual's immune system and thus improving survival.

Despite an endorsement from the Food and Drug Administration (FDA) advisory panel earlier this year, people living with HRPC will not have access to Provenge[®]. The FDA did not approve the use of this medication even though it was recommended by its panel. However some medical experts say that people with HRPC know what to expect from their disease, so it would be nice for them to have more options. One school of thought suggests a combination treatment which could pair this prescription with another form of treatment in an attempt to improve an individual's quality of life. Stay tuned to find out if the FDA changes its stance on the use of Provenge[®].

Experts Revise Exercise Guidelines

Due to the growing number of obese Americans, two well-respected health organizations recently collaborated with a group of clinically trained professionals to reevaluate the published daily physical exercise standards for adults and decided it was time to create new guidelines. The American Heart Association and the American College of Sports Medicine now advise adult Americans to engage in 30 minutes of moderately intense exercise five times per week or 20 minutes of vigorous exercise three days each week for optimum health. They stress the need to incorporate vigorous aerobic workouts with weight training for complete physical fitness.

The new standards also urge people 65 years and older to lift weights and work on flexibility and balance training. All of these habits will improve physical well-being and improve strength, thus preventing falls. Remaining or becoming physically active is crucial to independent living; therefore individuals should not allow injury, stroke, incontinence or any other health condition get in the way of staying fit and healthy.

Nobody Wants To Be A Urinary Invalid

Ken Burger

Sports Columnist

The Post & Courier

Charleston, SC

Mr. Burger has disclosed that he has no financial interests related to this topic.

The First Words

There's not much good news that follows the words, "you've got prostate cancer." But there is hope for a better life after surgery. Once you wrap your mind around the idea that you're not going to die next week, you start realizing what your life is going to be like in the future. Among the painful realities of having a radical prostatectomy is incontinence.

I remember thinking at the time I heard those words that I'm only 57 years and the prospect of wearing an adult diaper for the rest of my life wasn't very appealing. I live what you would probably call an active life. I am a sports columnist for The Post and Courier, the local newspaper in Charleston, SC, which means I spend a lot of time on the road going to major sporting events around the country.

Exercise, Exercise, Exercise

The idea of being a urinary invalid didn't exactly fit the image, so I did what any good journalist would do; I did my homework. What I found was the National Association for Continence just a few blocks away from my office. That's where I found the help I needed. In a word — Kegels.

Here's where I need to speak directly to the men out there who are either too afraid or too proud or too stupid to do what they need to do to take care of this problem. Would you rather take this matter into your own hands or leave it to luck? Do you really want to walk around leaking and dripping and hiding for the rest of your life? I didn't think so. So, listen to me when I tell you this isn't going to hurt and it's going to make your life better. Kegels are nothing more than pelvic floor muscle exercises that you can do anywhere, anytime and they will make a big difference down the road. I started these simple exercises more than a month before my surgery just on the hope that it might make a difference. And it did.

Believe me, I've had three children and five wives and know a little something about women. If they can do this after childbirth and into their mature years to prevent this type of embarrassment, you can too. This is very doable for men if we just put our egos on the sideline and do the job. And the job is easy.

continued on next page. . .

You can do Kegels in line at the movies, in the elevator, standing up to cheer for your favorite team or in the privacy of your bedroom. But you definitely should do them. How many? How about fifty a day? Ok, twenty-five. But do them. And do them right.

A World of Difference

Since my surgery I haven't had the first problem with incontinence, for which I thank my lucky stars and the folks at NAFC. They help thousands of people every day, and they can help you. So take my advice and do the right thing. Do your Kegel exercises. Religiously. If you do I promise they will make a difference in your quality of life in the months and years ahead. If you don't, well, the alternative isn't very attractive. ❖

LINKS

International Council on Active Aging Offers Online Program To Ensure Safe Exercise

In cooperation with the World Health Organization, the International Council on Active Aging (ICAA) is offering an Online College Certificate Program in Personal Training for Older Adults. The curriculum is designed for fitness professionals seeking advanced education in working with older adults and follows the "International Curriculum Guidelines for Preparing Physical Activity Instructors of Older Adults in Collaboration" by the World Health Organization. The program will guarantee the creation of safe, proper exercise programs for older adults.

The Web-based course conveniently offers the option of a Field Internship course, which gives students the opportunity to put their lessons in action in a fitness setting. Almost a dozen universities throughout the nation already offer this online program. To learn more or to get involved, visit www.icaa.cc/Education/educationalpartners.htm. ❖

Mental Health America Kicks Off A National Campaign

The oldest and largest mental health organization in the nation, Mental Health America, launched an awareness campaign, "Bringing Wellness Home." This effort focuses on taking steps to reduce stress and boost mental health.

With the rapid pace of our society, Americans in particular need to devote time in each busy day to make decisions that support a healthy lifestyle. It is crucial to take the initiative to eat well, exercise often, and keep a positive outlook on life. With the support of Corporate America, Mental Health America will help individuals gain cognizance of overall health, paying special attention to mental well-being. Log on to the Web to learn more.

www.nmha.org

FROM THE HEADQUARTERS

With Bladder Health Week (November 11 – 18) upon us and having just ended Prostate Health Month in September, it is entirely appropriate for this issue of *Quality Care*® to focus on related topics within the realm of NAFC's mission considered central to men's health and quality of life. While our last quarterly issue targeted its articles to the post-menopausal woman facing mixed incontinence, this newsletter aims to address voiding dysfunction associated with an enlarged but non-cancerous prostate gland, erectile dysfunction following a prostatectomy, and similar subjects.

Approximately one-third of all of our contact from consumers, by telephone and especially by internet, are from men with questions about how to prepare for prostate surgery, how to assess choices in minimally invasive procedures for treating BPH, and what outcomes they might expect from interventions for persistent leakage after surgery for cancer, among others. So many times a spouse is on the phone listening and asking questions, too. It's obvious that such healthcare choices, particularly those involving issues of intimacy and privacy, impact both parties. These calls or emails rarely end without a discussion of the value of pelvic floor muscle exercises for lifelong pelvic health and sexual vitality for both individuals.

And many times we end up not necessarily talking about surgery or medications but rather something far less concrete. Where we inevitably end up is with hope, with a sense of where to turn, with the name of an experienced and caring expert whose professional practice supports the work of NAFC, and with specific information and steps on which to act next. All of this translates into a message of hope. It's the sense of hopefulness that energizes and emboldens each of you to be your own self-advocate and advocates for each other.

For lots of reasons, we're headed towards patient-centered care in this century. While a good thing, it comes with added responsibility for you. Get equipped with all the resources you need for survival.

NAFC is there for you, each step along the way, towards maintaining or regaining your bladder and bowel control, regardless of the cause.



Nancy Muller
Executive Director

