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7 KEYS to Treating Prostate Cancer

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7 Keys to Treating Prostate Cancer

If you have received a diagnosis of prostate cancer, you are far from alone. Prostate cancer is the second most common form of cancer in men (after skin cancer) and the second most common cause of cancer death (after lung cancer). An American boy born today has a 16% chance of developing prostate cancer and about a 3% risk of dying from it. Prostate cancer may progress so slowly that some patients live with it for years and end up dying of something else; however, once it spreads to the bones it is often incurable. The American Cancer Society estimates that there will be about 232,090 new cases of prostate cancer in the United States in 2006, with about 30,350 men dying from the disease this year.

The good news is that reliable diagnostic tests and numerous treatment options are available for prostate cancer, and death rates from prostate cancer are on the decline. Moreover, most prostate cancer is slow growing, so usually you can give yourself time to learn about and carefully weigh all the options available to treat prostate cancer. And it's important that you take the time to do so. *Of all the cancers, cancer of the prostate is unusual in that there is no consensus among doctors about the best treatment—or even whether any type of treatment is absolutely necessary.*

Of course, you will make final decisions about your treatment with your doctor. You should talk to your doctor about the relative risks and benefits of each treatment and consider consulting physicians from different fields to get a broader spectrum of opinion. The information presented here will provide you with the crucial issues to consider in treating your prostate cancer and the important questions to ask your doctor.



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KEY 1

**Understand Your
Prostate Biopsy**



Understand Your Prostate Biopsy

When prostate cancer is suspected, either from the results of a digital rectal exam (DRE), a PSA (prostate specific antigen) test, or both, a prostate biopsy is then performed. The procedure involves taking samples of prostate tissue and having a pathologist examine them under a microscope for the presence of cancer.

A pathologist is a medical doctor who examines tissues and takes on the responsibility for the accuracy of laboratory tests for the approximately 800,000 men who have a prostate biopsy each year in this country. Do you want to know what a prostate tissue specimen looks like under the microscope to a pathologist? Imagine a splotchy work of modern art, with countless shades of gray, some black, and variations of black and white shades all swirled together. Within this mass are some normal cells and some that probably are not. From this sample, it's the pathologist's job to determine if there is cancer present and, if yes, how much.

Many patients are unaware of the position of the pathologist in the cancer-detection process, yet these medical specialists play a vital role on the patient's primary health care team. The pathologist interprets the biopsy results, sending back information that is critical for the patient's diagnosis, decision-making process, and ultimate recovery.

When looking at a prostate biopsy sample, what the pathologist is checking for are specific patterns of prostate cancer cells. Interspersed among healthy cells, prostate cancer cells grow in five recognizable patterns that allow for their identification, or Gleason grade.

By adding the number of the most common pattern to the second most common pattern, a Gleason score is determined. For example $4 + 3 = 7$, or $2 + 3 = 5$. The Gleason score is the best way that we can assess the aggressiveness of prostate cancer cells. Most men diagnosed with prostate cancer have Gleason scores of 5, 6, and 7. Only 8% of men with prostate cancer have high-grade Gleason scores of 8, 9, and 10.

Getting a Biopsy

The most common prostate biopsy method is transrectal ultrasound-guided biopsy, also known as TRUS. The procedure is typically performed in a urologist's office and takes about 20 minutes. While the patient is lying on his side, an ultrasound probe is inserted into the rectum to visualize the prostate. Fitted to the probe is a special biopsy gun that drives ultra-fine needles (usually about 1/2-inch long and 1/16-inch wide) through the wall of the rectum and into the prostate. In less than a second, the hollow needle removes a small tissue sample called a core. Usually, 8 to 12 tissue samples (cores) are taken from the right and left side of the gland and at the back of the outer peripheral zone of the prostate. It is here, extending along the sides like a shallow horseshoe, that most cancers are found.

After the procedure, the tissue samples are sent to a medical laboratory to be examined by a pathologist. The results are usually ready in three to five days. Nearly 75% of the time, no prostate cancer is detected in the samples, generally because the elevated PSA levels that prompted the biopsy were due to another

prostate condition (such as BPH or prostatitis) or a nonmedical reason (such as recent sexual activity).

Many men worry that prostate biopsy will be painful, but the exam usually causes only minor discomfort, provided they are done properly. A local anesthetic is used by many urologists to numb the area and diminish any possible pain symptoms. Antibiotics are necessary to reduce risk of sepsis. Also, it's important not to be taking aspirin or blood thinners before the biopsy to avoid risk of bleeding. Common biopsy side effects may include minor rectal bleeding; blood in the stool, urine, or semen; and soreness in the biopsied area. All of these side effects disappear over time. Sometimes bleeding can be severe and may require treatment in the immediate follow-up period, so someone who has a biopsy should be sure they have the doctor's contact number should problems develop.

Rendering a Definitive Diagnosis

Looking at and diagnosing limited prostate cancer on biopsy is one of the most difficult diagnoses in pathology. For starters, prostate cancer is often very tiny on a needle biopsy. While some other cancers in the body are obvious in terms of their malignancy and how they appear under the microscope, the findings of malignant prostate cancer tend to be extremely subtle. Put these factors together and you can end up with problems interpreting the slides, with both under-diagnosis and over-diagnosis as possible outcomes.

The problem with under-diagnosis relates to the limited cancer and subtle findings in the sample. Problems with over-diagnosis relate to a lot of mimickers of prostate cancer that are viewed under the microscope. These benign cells closely resemble prostate cancer. Add an

inexperienced pathologist to the mix and the results can be greatly skewed.

The biggest mistake made by a pathologist is calling something cancer when it's benign—and that happens anywhere from 1.3 to 1.5% of the time each year. That may not seem like a lot, but when you think that such a grave error can lead a man to undergo major surgery or radiation treatments, without reason, its rarity takes on larger proportions.

Mistakes are also made in the grade (Gleason score) of the cancer, which could ultimately influence decision making, ranging from surgery versus radiation, and the type of radiation used. About 20% of the time, there is a significant change in the grade following a second opinion of the biopsy sample.

Differences of opinion come when pathologists say they really don't know what they are seeing under the microscope. This finding is called suspicious of cancer. This diagnosis is given about 5% of the time. However, when those biopsy samples are sent to Johns Hopkins for a second opinion, the pathologist ends up agreeing with the original suspicious label about 30% of the time. The other 70% of the time the sample is called definitively cancer or definitively benign.

Your Pathology Report

It is recommended that you obtain a copy of your pathology report from your urologist. This is your medical information and you have every right to have it. Take the time to find out what the report means, and don't be scared by the findings. Currently, it's estimated that only about half of the men get a hold of their reports.

Once you have the report, confer with your doctor, and go over the salient points with him. While the urologist should tell his patient what



is on the report, some just don't take the time. Insist that your urologist explain the findings of your pathology report to you.

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Now that you know what's involved in diagnosing prostate cancer, you are ready for **Key #2** — **soliciting other opinions to help make your treatment decision.**

KEY 2 is titled:

**Get A Second
(and Third or Fourth) Opinion**



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KEY 2

**Get A Second
(and Third or Fourth)
Opinion**



Get A Second (and Third or Fourth) Opinion

In an often-cited study published in the *Journal of the American Medical Association* in 2000, researchers asked more than 1,000 specialists what treatment they would recommend for a man with early-stage prostate cancer who was expected to live at least 10 more years. Nearly all the urologists (93%)—who perform surgery—chose surgery as the preferred treatment, while most of the radiation oncologists (72%) responded that radiation therapy and surgery were equally effective treatments. The study authors' conclusion? Patients should schedule a consultation with a member of each specialty before making a decision.

If these specialists don't agree, one option is to schedule a consultation with a medical oncologist, a specialist in cancer treatment who does not perform radiation or surgery. Another option is to see a second urologist or radiation oncologist. Doctors of the same specialty often have different approaches to treatment: For example, some radiation oncologists will recommend external beam radiation therapy; others, brachytherapy; and still others, a combination.

The Importance of the Pathologist

A final but not-to-be-overlooked reason to seek a second opinion is that if done at a center that specializes in prostate cancer treatments, it involves having another pathologist review the slides from your biopsy specimen. An accurate pathology reading is essential because it forms the basis for treatment decisions.

Unfortunately, spotting cancerous cells and determining how abnormal they appear are difficult, and pathologists sometimes make errors. In one study, pathologists at Johns Hopkins reviewed biopsy samples of 535 men who had been referred for radical prostatectomy and reclassified 7 (1.3%) as benign. Upon subsequent clinical workup, 6 of 7 men were considered not to have prostate cancer, and their surgery was canceled. Getting an incorrect reading can limit your treatment options—or lead to having treatments that you don't need.

How To Get a Second Opinion

Your primary care doctor and the urologist who performed the biopsy are the best sources for referrals. Request that, if possible, they suggest a colleague affiliated with a different hospital. Although this is not necessary, the practice is prudent, because doctors who work at the same institution often share similar views and may be reluctant to contradict one another. Also, check to be certain the consultant is board certified in the appropriate specialty. The American Medical Association (www.ama-assn.org) and the American Urological Association (www.urologyhealth.org) offer referral services. Hospitals, local health departments, family, and friends are other possible resources.

Before meeting with you, the consultant will require all relevant medical records. The first doctor's office can send written reports and test results directly to the consultant. Be sure to call before your appointment to confirm their

arrival, as it will be impossible to proceed without proper documentation; you can also choose to collect the records and deliver them personally.

During the consultation, the doctor will review the information and may perform a physical examination or order more tests. Recommendations made in a written report will be sent to the referring physician—and to you if you request them.

Be sure that the specialists address all treatment options—surgery, radiation therapy, and watchful waiting—and discuss the advantages and disadvantages of each. If your doctors don't agree and you don't know what to do, one or more of the following approaches can help you reach a decision:

- Have the specialists explain to you why they came to their respective conclusions.
- Suggest that the specialists discuss the matter with each other; sometimes such conversations produce an acceptable consensus.
- Ask your general practitioner—or, if you wish, another specialist—to help you sort through the options.
- Consider seeking an opinion at a nationally recognized cancer center, such as one affiliated with the National Comprehensive Cancer Network (www.nccn.org).
- Try talking to men who have been treated for prostate cancer.

Don't panic if you're having trouble making a decision. Prostate cancer is generally a slow-growing malignancy, which means that most people can safely spend several months learning about the disease and consulting with the appropriate specialists.

Making an Appointment at Johns Hopkins

Many people facing a serious health crisis wish to get a second opinion from a leading academic medical center such as Johns Hopkins.

There are several ways to make appointments at Hopkins. The most direct way is for your physician to call the Hopkins Access Line (410-955-9444 in Baltimore and internationally or 800-765-5447 in the rest of the United States).

If you prefer to make an appointment yourself, you may call the appointment service line (410-955-5464 in Baltimore, or 410-955-8032 outside Baltimore, including international calls).

Finally, Johns Hopkins USA provides one point of contact for out-of-town patients. A representative can help you identify an appropriate physician or specialist, coordinate multiple medical appointments, arrange second opinions, and obtain general information about Johns Hopkins's many services. To talk with a representative, call 443-287-0528 weekdays, 8:30 a.m. to 5 p.m. Eastern Time.

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Deciding which form of treatment therapy for prostate cancer is best for you entails reviewing a variety of factors. **As you will discover in Key #3, you have several effective options.**

KEY 3 is titled:

Choose the Right Treatment



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KEY 3

**Choose the
Right Treatment**



Choose the Right Treatment

The standard treatment options for prostate cancer include watchful waiting, radical prostatectomy, radiation therapy, and hormonal therapy. Radiation therapy can be delivered from an external source (external beam radiation therapy) or by implantation of radioactive seeds (brachytherapy).

Radical prostatectomy and radiation therapy can potentially cure prostate cancer when the disease is detected in its early stages. Hormone therapy is not curative and is generally used to slow the progression of the disease once it has spread to other sites. Though chemotherapy is effective in treating some types of cancer, it has been less successful for advanced prostate cancer.

Here's a closer look at the various treatment options:

Watchful waiting. This is a management option in which select patients (usually older age) are closely monitored for the progression of cancer rather than undergoing immediate treatment. At Johns Hopkins, men are monitored with regular PSA measurements, digital rectal exams, and an annual biopsy. Watchful waiting also requires that a person be able to live with the cancer and not be overcome by the anxiety of careful monitoring.

Radical prostatectomy. This entails the surgical removal of the prostate gland and seminal vesicles to treat prostate cancer. The anatomical approach to radical retropubic prostatectomy, developed at Johns Hopkins, includes important modifications to reduce blood loss, preserve urinary control, and preserve delicate nerves essential for erections.

Radiation therapy. This therapy uses ionizing

radiation to destroy cancer cells by damaging DNA within the cells. With *external-beam radiation therapy*, treatment is designed to kill cancerous tissue from outside the body by focusing a high-powered X-ray beam on the affected area a few minutes at a time, usually over the course of weeks. *Intensity modulated radiation therapy* (IMRT) is the newest form of delivering external beam radiation that allows for more precise delivery of calculated radiation dosage to the selected target. *Interstitial brachytherapy* ("seed" therapy) is another form of radiation therapy in which radioactive pellets ("seeds") are implanted into the prostate to deliver radiation directly to the tumor sites.

Hormonal therapy. This therapy entails the use of hormones to treat advanced prostate cancer, with the goal of shutting down the hormones that nourish the prostate. Some prostate cells are responsive to this, while others are not.

Key Factors to Consider in Choosing a Treatment

Men eventually make their treatment decision based on a variety of factors, including the potential for side effects, perceived long-term risks, psychological ramifications, and financial costs of each of the therapies. While aggressive treatment may prolong life, it can also damage the quality of life by compromising sexual performance and, to a lesser extent, the ability to control urination.

Ultimately, however, prostate treatment depends on two factors: the clinical stage of the cancer (the extent of disease) and the age and general health of the individual. Researchers have found that, in healthy

men who have more than a 10-year life expectancy, about 80% of prostate cancers detected by PSA testing have the potential to progress and thus warrant treatment or careful monitoring. (The PSA test, which measures prostate-specific antigen—a protein produced in the prostate and released into the blood—is widely used as a tool to screen for the presence of prostate cancer.) Still, with increased use of PSA testing, some men will be diagnosed with small prostate cancers (which cannot be felt during a digital rectal exam but are suspected from PSA tests and confirmed by biopsy) that pose no immediate threat and, indeed, may never need treatment. In a small watchful waiting study conducted at Johns Hopkins, after close monitoring and testing, only 30% of the men progressed out of the study to require treatment.

Doctors use several methods to help predict the seriousness of prostate cancer, and this information is factored into the treatment decision. One method is the Gleason score, which ranges from 2 to 10. A score of 2 to 4 indicates a greater probability of an insignificant cancer—a cancer that is unlikely to grow rapidly and spread. Higher scores suggest a greater likelihood of a significant, life-threatening cancer. Men with “high-grade” disease (defined as a Gleason score of 7 to 10) are considered poor candidates for watchful waiting, since the high score indicates an aggressive cancer.

Another method helpful in determining the best treatment option is the Partin tables, named after the Johns Hopkins physician who developed them. The tables help doctors predict whether cancer is confined to the prostate or has spread to adjacent tissue, seminal vesicles, or lymph nodes. (You can view the Partin tables at the Brady Urological Institute web site: <http://urology.jhu.edu/prostate/partintables.php>).

The prediction is based on the patient’s PSA

levels, biopsy Gleason score, and TNM cancer stage, which is a system for expressing the size and degree of spread of prostate cancer by separately describing the extent of tumor at its original location (T), whether and to what extent the cancer has spread to nearby lymph nodes (N), and whether and to what extent the cancer has metastasized (M) to other sites in the body. If cancer has spread outside the prostate, surgery may not be the best treatment option.

You must also consider possible complications when deciding on a treatment option. If a man chooses surgery or radiation therapy, he risks the possibility of bowel, urinary, or sexual problems. If he chooses watchful waiting (no treatment is provided, but the patient is closely monitored for cancer growth), he may be anxious about the progress of the disease, and urinary or sexual symptoms may arise if the disease progresses.

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One of the side effects of prostate cancer surgery and radiation therapy is erectile dysfunction. **In Key #4, you’ll learn about the benefits of the three “erection drugs” approved by the FDA.**

KEY 4 is titled:

**Restore and Maintain
Erectile Performance**



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KEY 4

**Restore and Maintain
Erectile Performance**



Restore and Maintain Erectile Performance

If erectile dysfunction (ED) is something you worry about or have already experienced, whether it is occasional or more frequent, help is now available. Remember: ED has a profound affect on the lives of the people it touches. Countless marriages and long-term relationships have been broken by it; people who otherwise cared deeply for each other felt separation was a better solution; and innumerable others continued to live together sexually unfulfilled.

Sex is, of course, not the only component of a strong and lasting relationship, but it is an important one. Moreover, if ED is a problem, the variety of therapies now available will not only treat it, they will help you renew your bond with the person you care most about.

Sexual Side Effects of Prostate Cancer Surgery

Advances in early detection of prostate cancer and improved surgical procedures have greatly improved survival rates. However, removal of the prostate can also affect the ability to have an erection suitable for intercourse even when a talented surgeon performs the procedure.

Prior to the introduction in the 1980s of the nerve-sparing radical prostatectomy procedure by Dr. Patrick C. Walsh, the former Director of the Brady Urological Institute at Johns Hopkins, total ED was a given; Men were never able to have a hard erection following this surgery.

Now with Dr. Walsh's refinements of the surgery, the potency rates at Johns Hopkins are among the best in the world. Dr. Walsh has reported that in the hands of a skilled surgeon performing the nerve-sparing procedure,

potency should return in at least 80% of men in their 40s and 50s if both nerve bundles are preserved; at least 60% of men in their 60s should have a return of potency. The numbers drop to about 25% in men in their 70s, most likely because of the aging process, which may affect the function of the nerves they were born with.

Nationwide, the figures for return of erectile performance following a radical prostatectomy are not as impressive as the results at Johns Hopkins, ranging from 14% to 60%, with full erections returning only in those men with both nerve bundles preserved.

Erection Restoration Following a Radical Prostatectomy

Men are concerned about the restoration of erections following their surgery. The time varies, due in part to a man's overall health, age, and erectile hardness prior to surgery. If a man has had one or both nerve bundles preserved, the potential for an erection is certainly there. Men need to be patient, however. Erections return gradually, starting in the first few weeks following surgery. For some men, it can take up to four years to experience full recovery of potency. That's because the body has been through a surgical trauma and simply needs time to recover. In the meantime, don't be discouraged and give up on the idea of sexual intercourse. Week by week, as the nerves recover and blood flow increases to the penis, you will slowly make gains in penile axial rigidity (the scientific name for penile hardness), eventually achieving an erection suitable for intercourse.

ED Following Radiation Therapy for Prostate Cancer

While surgery has an immediate impact on the ability to have a hard erection, the devastating effects of radiation therapy (external radiation and brachytherapy) on erections are generally more gradual. Immediately after radiation therapy, erections may be normal. However, with the passage of months, penile hardness may slowly start to diminish, so much so that by two years post-procedure, achieving an erection suitable for intercourse is sometimes very difficult, if not impossible.

No one is quite certain what is specifically causing the ED following radiotherapy. Some believe that the high doses of radiation eventually damage the arteries that provide blood to the penis. Other researchers point to the damage radiation causes to the neurovascular bundles responsible for erections.

The problem with radiation-induced ED is that once the erectile nerves are destroyed by the radiation, oral erection medications will not work as well. In that case, the patient will have to resort to second-line therapy (injection therapy) or third-line therapy (penile prosthesis) in order to achieve an erection.

The Role of Medications

Some common misconceptions about the three “erection” drugs (Cialis, Levitra, Viagra) must be cleared up first. These ED drugs can play an important role in the restoration of erections, doing so by amplifying the action of important chemicals that trigger erections. However, these medicines are not libido enhancers nor do they cause instant erections after taking them. Nor will they kill you—unless you happen to take a nitrate-based medication (such as heart medications containing nitroglycerin) with them.

In rare instances, men taking these oral erectile dysfunction medicines reported a sudden decrease or loss of vision. It is not possible to determine whether these events are related directly to these medicines or to other factors. If you experience sudden decrease or loss of vision, stop taking the erection drug, and call a doctor right away.

That said, these drugs can play a very important role in the restoration of erections. If a man has had his neurovascular bundles spared during a radical prostatectomy and was performing well sexually prior to the surgery, he should be able to achieve an erection suitable for intercourse at some time after the surgery.

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The stress triggered by a diagnosis of prostate cancer is often enough to cause serious anxiety and depression. **As you’ll learn in Key #5, recently diagnosed prostate cancer patients often need treatments not just for their bodies but for their minds as well.**

KEY 5 is titled:

Seek Extra Help If Needed



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KEY 5

**Seek Extra Help
— If Needed**



Seek Extra Help—If Needed

If you were to ask any patient diagnosed with prostate cancer what was important to him, he may not mention psychological issues. However, the overwhelming apprehension triggered by the diagnosis, or the disconcerting uncertainty of what the future holds in terms of treatment and outcome, may be at the forefront of his mind. Unfortunately, these are not issues surgeons or radiation therapists typically discuss with patients.

Here are some random thoughts men typically have after their diagnosis:

- I am afraid of death.
- Why me?
- I can't believe this is really happening.
- Will I ever have sex again?
- Will my wife leave me if I can't get an erection?
- I'm so angry I don't know what to do.
- I feel alone. It's a nightmare.
- I think about cancer all the time.
- I can't articulate what I want to say about how I'm feeling right now.
- Will my life ever be "normal"?
- I'm so upset that my family has to go through this.

It's natural to feel upset and worried when faced with a cancer diagnosis. Unfortunately, while many prostate cancer patients go on to receive excellent medical attention, their psychological needs are often ignored. Studies show that a significant number of cancer patients eventually develop serious anxiety and depression that is left untreated. Doctors typically don't ask about a patient's emotional state because they're often busy taking care of the

medical issues and patients don't tell because they don't want to appear "un-manly" or seem like someone who is not coping well.

Recently diagnosed prostate cancer patients often need treatments not just for their bodies, but can benefit from treatment for their minds, and the same goes for patients whose cancer has returned. Although a person can't change the course of his illness with his mind, he can certainly improve the quality of his life by examining how he is reacting to his illness. Evidence shows that when people with cancer get the emotional support they need, they do better. Sometimes they don't do better in terms of survival, but certainly, they make great strides in terms of overall quality of life and emotional wellbeing.

Psychological Concerns Caused by Surgery

The uncertainty of the outcome following prostate cancer surgery bothers many men. Will I make it through the surgery? Will I be cured? Will I be continent? Will I be able to have a hard erection ever again? What generally happens is that before a person decides on a course of treatment, he may be quite anxious and sad. Once he opts for a radical prostatectomy, finally has the surgery, and starts to recuperate, he generally starts to feel better adjusted. That's because one of his biggest uncertainties and fears will have been answered—he has survived.

Psychological Worries Caused by Radiation Therapy

The fears may be somewhat different compared to men undergoing surgery because radiotherapy



is an eight- or nine-week process of going to the hospital every day for treatment. Some men find comfort in this routine because they feel they are being proactive and part of the healing process: every day they are doing something positive to treat their cancer. Others may feel scared: is today's treatment going to kill enough cancer cells to ensure survival? Is the radiation going to get all the cancer by the time I've finished the treatment? For these men, it may take a bit longer for them to develop an assurance that they've done everything possible to successfully treat their cancer. They will also be concerned about urinary incontinence and erectile difficulties.

Seeking Help

There is plenty of controversy surrounding prostate cancer treatment. However, a sympathetic friend who already had his cancer treated, a compassionate clergy member you can confide in, or a prostate cancer support group can help relieve feelings of anxiety and depression. A support group generally offers good, solid information covering the whole gamut, from diagnosis, treatment, and recovery to the best doctors, new study results, and clinical trial enrollment.

A psychologist, psychiatrist, or social worker can also help many prostate cancer patients. You can find these professionals through a local prostate cancer support group, a community hospital, or through your family doctor or urologist.

For recently diagnosed men, there is often a lot of distress, because they are not exactly sure what to do about their cancer. Some have seen a couple of urologists; others have consulted with a radiation oncologist. With a number of excellent practitioners recommending different treatments, it's often up to the men to now make the decision as what is the best treatment for them. A mental health professional can help provide advice to make the decision making a bit easier.

Antidepressants for Prostate Cancer Patients

Most men recently diagnosed with prostate cancer do not need any psychotropic medication. However, there are some men who are plunged into despair because of their diagnosis, or else they become extremely agitated and anxious. Medical treatment is readily available for these men. Any man who feels he needs the assistance of medication or psychotherapy, or both, should mention this to his doctor. The good news is that the anxiety and depression often responds well to these medical interventions.

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Does what you eat help prevent prostate cancer? Key #6 explains why **diet does matter and that it's a prostate cancer risk factor that can be altered by every individual.**

KEY 6 is titled:

Understand the Role of Diet



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KEY 6

**Understand the
Role of Diet**



Understand the Role of Diet

Does what you eat help prevent prostate cancer? Do certain foods slow down its progression when it recurs? If how much you eat and what you eat—and what you avoid—works so well in preventing heart disease, then will it do the same for prostate cancer? For the one in six American men diagnosed with prostate cancer in their lifetime, these are just some of the questions for which they and many other concerned men want answered.

Based on epidemiological studies, in which researchers use food diaries, diet recalls, or questionnaires to closely examine what people eat, it's now believed that diet is one of the most important lifestyle factors that can influence cancer rates of many organs. The problem is that researchers haven't been able to specifically identify which components of the diet have the most effect.

Cancer experts estimate that diet accounts for up to 90% of cancers of the prostate, large bowel, breast, and pancreas—even lung cancer may have a dietary link. And we do know that people who consume plenty of vegetables, fruits, and grains and who exercise regularly, are less likely to develop various cancers—possibly including cancer of the prostate—than those who don't.

Scientific evidence suggests that differences in diet and lifestyle may account in large part for the variability of prostate cancer rates around the world. Researchers are now hard at work examining the foods we eat to see exactly what they contain and what affect they have on the prostate.

We do know, for example, that the prostate cancer rate for Asian countries, where the diet

is primarily vegetarian, is ten times lower than it is for the United States, where meat and potatoes still rule. Looking at the mortality rates in Japan compiled by the World Health Organization (WHO) between 1990 and 1993, we see there were four deaths from prostate cancer per 100,000 men. Japanese men typically consume a diet high in soy-based foods, such as tofu, tempeh, and soymilk, and they eat plenty of fruits and vegetables. In the United States, where daily meat and fat consumption (which may affect hormones and cause chemical changes that may have the potential to make tumors grow) is much higher, the WHO death rate was more than four times higher than Japan's.

There are several possible reasons why people in Asian countries such as Japan and China are far less likely than Westerners to develop cancer of the prostate. Some believe there are important genetic differences between ethnic groups and that this difference in cancer rates could be specifically related to our genes. Interestingly, though, when people migrate from Japan to the United States, their rates of prostate cancer and the rates in subsequent generations rise markedly. Since genetic makeup is unchanged, the increase in risk is likely related to environmental factors such as diet and lifestyle.

Diet Does Matter

There is certainly a great deal of anecdotal evidence pointing to diet as a major contributing factor in predisposing some men to prostate cancer or accelerating progress of the disease in others. Whether or not diet can help in the prevention or treatment of prostate cancer is a

difficult question to answer scientifically at present. However, a lack of scientific evidence does not necessarily mean a lack of benefit but rather that not enough research has yet been completed in this area. Of all the risk factors for prostate cancer, diet certainly seems to correlate with the difference in global distribution of the disease.

Diet does matter; we just haven't been able to identify one particular component or constellation of components that scientists all agree have a preventive effect. Not one particular nutrient or food will offer the "magic bullet." What it may turn out to be is a combination of energy balance—calories consumed, calories expended—and the type of diet consumed that may provide the ultimate answers.

The good news is that diet is a risk factor that can be altered by every individual. Although eating habits are hard to change, what and how much food we eat is our choice, and under our control.

Excellent Lycopene Sources

Food	Serving Size	Lycopene (mg)
Tomato juice	1 cup	20
Vegetable juice	1 cup	20
Pasta sauce	½ cup	19
Tomato sauce	½ cup	17
Tomato soup	1 cup	12
Tomatoes, caned	½ cup	11
Tomato paste	2 tbsp	8
Watermelon	4 oz	6
Ketchup	2 tbsp	5
Tomato, fresh	4 oz	4
Pizza	3 oz slice	4
Minestrone soup	1 cup	2

compensating with increased physical activity. Fast food outlets, the huge increase in portion sizes at restaurants, and the many hours spent watching television, or using computers are all contributing to this epidemic of obesity.

The Lycopene Connection

The carotenoid lycopene (LY-ko-pene) is an antioxidant that protects against cell damage that may lead to prostate cancer. In addition to being a plant chemical (phytochemical) and a pigment that gives tomatoes their red color, lycopene also appears to offer potential health benefits.

Some studies show that eating tomato sauce—tomatoes, particularly when they are cooked in oil, have more absorbable lycopene—and tomatoes are linked to reduced prostate cancer risk. Harvard University researchers reported that men who ate at least 10 servings a week of tomato-based foods were up to 45% less likely to develop prostate cancer.

The six-year study of the dietary habits of 47,000 men found that pizza, tomato sauce, and other foods made from tomatoes, had a substantially lowered risk of prostate cancer. More research is needed, but these results are encouraging.

Food and good health

Perfect diets are no guarantee of perfect health. Even if you do everything right in terms of nutrition, some of us will still get prostate cancer. Because we know that diet and lifestyle are important for the prevention of other chronic diseases, such as heart disease, hypertension, and diabetes, a good recommendation at present is to follow the nutrition and lifestyle guidelines of the American Cancer Society. Here are the key parts to remember:

- **Choose most of the foods you consume from plant sources. Consume five or more servings of fruits and vegetables per day.** Be sure to consume a variety of brightly colored fruits and vegetables.

- **Limit your intake of high-fat foods, particularly from animal sources. Choose foods low in fat. Limit consumption of meats, especially high-fat meats.** High-fat diets have been associated with an increased risk of prostate cancer, as well as cancers of the colon and rectum.

Ongoing research increasingly suggests that consuming a mostly plant-based, lowfat diet to reduce overall cancer risk may also reduce the risk of prostate cancer. People who are described as consuming “highfat” diets are generally consuming greater amounts of fatty meats and dairy products, both of which may be linked to an increased prostate cancer risk.

- **Be physically active and maintain a healthy weight.**

- **Limit consumption of alcoholic beverages, if you drink at all.** If you drink, do so in moderation. Some studies show that limited amounts of alcohol may modestly lower the risk of heart disease, but alcohol can also lead to an increased cancer risk.

Talk to your doctor about what amount of

alcohol consumption is appropriate for you. Increasing the amount of exercise you perform and improved eating habits may be better ways to improve and preserve general health.

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The Western medical approach to cancer treatment has been aggressive attempts to kill all malignant cells. **But as you will discover in Key #7, complementary medicine can unite the body, mind, and spirit in health, while providing some relief of symptoms with few side effects.**

KEY 7 is titled:

Consider Complementary Therapies



JOHNS HOPKINS
M E D I C I N E

KEY 7

**Consider
Complementary
Therapies**



Consider Complementary Therapies

The thrust of our mainstream Western medical approach to cancer treatment has been aggressive attempts to eradicate all malignant cells, oftentimes at the expense of a person's quality of life. In the 18th century, Dr. John Hunter observed, "Surgery is like an armed savage who attempts to get back by force what a civilized man would get by stratagem." Complementary medicine, which can include yoga, acupuncture, meditation, dietary changes, and herbal remedies, may be that civilized stratagem Dr. Hunter was talking about. What complementary medicine can do so well is help to unite the body, mind, and spirit in health, even providing some relief of cancer symptoms with few, if any, side effects.

Complementary treatments offer cancer patients—especially those with advanced forms of the disease—a glimmer of hope, and with that hope, the quality of one's life improves, increasing survival in the process. When used in conjunction with conventional medicine, many prostate cancer experts believe complementary medicine has a positive role to play in the management of the prostate cancer patient.

What is Complementary Medicine?

The term "complementary medicine" covers an enormous spectrum, from non-Western practices such as Ayurveda, to South American and European folk traditions, to homeopathy and chiropractic. Some of these practices—massage, meditation, acupuncture, yoga, and laying on of hands—have existed for centuries.

Here's a brief overview of three of the more popular complementary medicine therapies:

Meditation. Meditation is an age-old practice that helps divorce the mind from life's daily problems, bringing on such potentially beneficial changes as lower blood pressure and reduced heart rate in the process. Accomplished practitioners, it's been shown, can also lower their oxygen consumption and body temperature and for that reason meditation is sometimes recommended to people with heart disease or other medical problems, as well as to anybody who's trying to control emotional stress.

The word "meditation" means many different things to different people. Most commonly it requires sitting or lying quietly in a prescribed position, usually with the eyes closed, so that attention is withdrawn from the outside world and from customary activity, and repeating a word or phrase (called a mantra) such as "Om" aloud or silently.

Meditation is not difficult to perform. Some forms of meditation involve concentrating on breathing in and out, while others repeat a word, sound, phrase, or a simple prayer aloud or silently. As you do so, gently set aside any distracting thoughts that try to push their way in. It's simple to get started: Begin with one breath. Just tune in to the feeling of it as you inhale and concentrate on the sound of your breath leaving your body. That's all. Just feeling the breath, breathing and knowing that you are breathing should keep you focused in the present, taking you away from restless, wandering thoughts, and putting you right in the here and now.

Yoga. The mind-body-spirit discipline of yoga has so much to offer. Yoga, which means “union” or “harmony” in Sanskrit, has its roots in the Hindu culture of India, where evidence of yoga practices dates back 6,000 years. Over the centuries, it developed both as a philosophy—which holds that the mind, body, and spirit are inseparable—and as a system of exercises to improve physical health. These exercises consist of more than 1,000 carefully controlled moves and poses designed to develop balance, flexibility, and increased strength. Equally important are the breathing exercises, intended to focus concentration and relieve stress. By going through a daily system of yoga postures and breathing techniques that calm the mind and boost the spirit, many people find that they’re able to relax physically and get in touch with their body and therefore their mind.

Support Groups. Whatever promotes a sense of loneliness and isolation, either from yourself or from other people predisposes you to disease or premature death. Something happens in your body when you’re feeling well loved and taken care of, as well as when you give love back in return. On the contrary, social isolation, loneliness, and alienation contribute to ill health and have long been associated with the very high risk of premature death from all causes—and there are hundreds of studies to back this up.

A very interesting study was performed at Johns Hopkins in 1940 to assess how the closeness of 1,100 healthy male medical students to their fathers would lead to enhanced health—and fewer incidences of cancer—later on in life. What the researchers found was that 50 years later those men who went on to develop cancer were more likely to have described a lack of closeness with their fathers early on in life. The researchers also found that those men

who developed malignant tumors had suffered more from loneliness years before.

Love, caring, and psychological support play important roles in men with prostate cancer, increasing survival time dramatically for married men. A 1996 study, “Marriage and Mortality in Prostate Cancer,” published in *The Journal of Urology* points to a strong mind/body/prostate link. Researchers from the University of Miami evaluated more than 143,000 men with prostate cancer diagnosed between 1973-90, looking closely not only at the stage of disease at diagnosis and type of treatment they underwent, but also at their length of survival and their marital status. Their findings: Marriage offered a strong protective effect. The median survival time for separated and widowed men was 38 months; single men died at 49 months; divorced men survived 55 months on average; and married men lived 69 months, nearly twice as long as a widower.

The impact of social support on the progression of some cancers is evident. It may take some time for society—and physicians—to accept the idea that love and relationships can heal, but there is now plenty of research to support it.

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Send for The 2007 Johns Hopkins White Paper on Prostate Disorders on 30-day Free Home Preview!

This thorough, 88-page White Paper reviews the newest information on prostate disorders, focusing on prostate cancer, benign prostatic hyperplasia, and prostatitis. Topics include:

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- The latest research on tomatoes, saw palmetto and pomegranates to relieve prostate problems.
- Botox for enlarged prostate? Surprising new experimental drug treatments under study.
- Best drugs to provide significant relief for prostate cancer pain.
- New research: Does calcium help prevent prostate cancer, or put you at greater risk?
- The Johns Hopkins prostate cancer risk-reduction program: A 2-pronged approach.
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