



Sexuality for the Man With Cancer

Cancer, sex, and sexuality

When you first learned you had cancer, you probably thought mostly about survival. But after a while, other questions might have started coming up. You might be wondering “How ‘normal’ can my life be, even if my cancer is under control?” Or even “How will cancer affect my sex life?” It’s important to know that you can get help if you are having sexual problems after cancer treatment.

Sex and sexuality are important parts of everyday life. The difference between sex and sexuality is that sex is thought of as an activity – something you do with a partner. Sexuality is more about the way you feel about yourself as a man and is linked to intimacy or your need for closeness and touch.

Feelings about sexuality affect our zest for living, our self-image, and our relationships with others. Yet patients and doctors often do not talk about the effects of cancer treatment on a man’s sex life or how he can address problems he’s having. Why? A person may feel uneasy talking about sex with a professional like a doctor or even with a close sex partner. Many people feel awkward and exposed when talking about sex.

The information here is for all men who have or have had cancer – regardless of their sexual orientation. We cannot answer every question, but we’ll try to give you enough information for you and your partner to have open, honest talks about intimacy and sex. We’ll discuss how cancer and cancer treatment can affect a man’s sexual functioning and discuss how to cope with changes, if they occur. We’ll also share some ideas about talking with your doctor and your cancer care team. Last, we’ll give you a list of other places to get help in the “To learn more” section. These are other good sources of information.

Keep in mind that sensual/sexual touching between you and your partner is always possible, no matter what kinds of cancer treatment you’ve had. This may surprise you, especially if you’re feeling down or have not had any sexual touching or activity for a while. But it’s true. The ability to feel pleasure from touching almost always remains.

The first step is to bring up the topic of your sex life with your doctor or another member of your health care team. You have a right to know how your treatment will affect

nutrition, pain, and your ability to return to work. You also have the right to know how treatment may affect your sexual function.

What is a normal sex life?

People vary a great deal in their sexual attitudes and practices. This makes it hard to define “normal.” Some couples like to have sex every day. For others, once a month is enough. Many people see oral sex (using the mouth or tongue) as a normal part of sex, but some believe it is not OK. “Normal” for you and your partner is whatever gives you pleasure together. Both partners should agree on what makes their sex life enjoyable.

It’s common for people coping with cancer to lose interest in or desire for sexual activity at times. Doubts and fears, along with cancer and cancer treatment effects, can make you feel less than your best. Sometimes, concern about your health may be much greater than your interest in sex. But as you get back to your usual routines, your interest in sex may begin to return.

There are some who think sex is only for the young, and that older people lose both their desire for sex and/or their ability to “perform.” These beliefs are largely myths. Many men and women can and do stay sexually active until the end of life. (See the “To learn more” section for more on sex and aging.) Still, it is true that sexual response and function may change over time with age. For example, women may notice changes as they get older, sometimes even before menopause begins. A decrease in sexual desire and problems with vaginal dryness may increase during and after menopause. Men also have changes that come with age. More than half of men over age 40 have at least a little trouble with erections. The problem often worsens as men get older. For instance, among men who are 40 to 49, about 3 in 10 have some problem with erections (*erectile dysfunction* or ED). In groups of men 70 and older, nearly 9 in 10 are having some problem with erections.

Sometimes, sexual problems center around anxiety, tension, or other problems in a relationship. Other times, they may be the result of a physical condition, a medical condition, or medicines that cause or worsen sexual problems.

Besides age, there are some other risk factors for erectile dysfunction or other sexual problems, including:

- Smoking
- Diabetes
- Heart and blood vessel disease
- High blood pressure
- High cholesterol
- Certain blood pressure medicines and anti-depressant medicines

But most sexual problems can be treated. There are medicines, therapy, surgery, and other treatments to help people deal with most kinds problems they may have. If you want to keep your sex life active, you can very likely do so. Still, sex may not be quite the same for older men as it was when they were younger. But keep in mind that the best measure of your worth as a sexual partner is the pleasure you and your partner find together.

If you're in a relationship and one of you has a sexual difficulty, it affects both of you. If you're dealing with sexual problems, it works best when your partner can be part of the solution.

What is a healthy sexual response?

The sexual response of men and women has 4 phases:

- Desire
- Excitement
- Orgasm
- Resolution

A person usually goes through the phases in the same order. But the sexual response can be stopped at any phase. For instance, you don't have to reach orgasm each time you feel a desire for sex.

Desire is an interest in sexual activity. You may just think about sex, feel attracted to someone, or be frustrated because of a lack of sex. Sexual desire is a natural part of life from the teenage years on.

Excitement is the phase when you feel aroused or "turned on." Touching and stroking feels much more pleasurable and intense when a person is excited. Excitement also results from sexual fantasies and sensual sights, sounds, scents, and tastes. Physically, excitement means that:

- The heart beats faster.
- Blood pressure goes up.
- Breathing gets heavy.
- Blood is sent to the genital (or "private") area. The surge of blood creates an erection, or a stiff penis. (In a woman, the surge of blood makes the genital area and the clitoris swell. The vagina becomes moist and gets longer and wider, opening up like a balloon.)
- The skin of the genitals ("private parts") turns a deeper color of red or purple.
- The body may sweat or get warmer.

Orgasm is the sexual climax. In both men and women, the nervous system creates intense pleasure in the genitals. The muscles around the genitals contract in rhythm, sending waves of feeling through the body. In men, these muscle contractions cause ejaculation (or release) of semen.

Resolution occurs within a few minutes after an orgasm. The body returns to its unexcited state. Heartbeat and breathing slow down. The extra blood drains out of the genital area. Mental excitement subsides.

If a person becomes excited but does not reach orgasm, resolution still takes place, but more slowly. It's not harmful to become excited without reaching orgasm, though it may feel frustrating. Some men and women may feel a mild ache until the extra blood leaves the genital area.

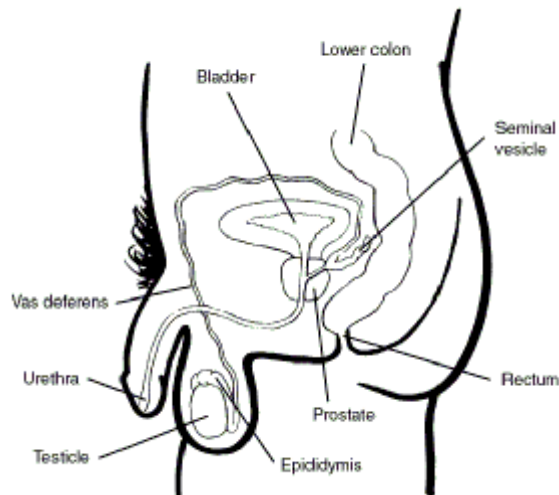
Refractory period: Men have a certain amount of time after orgasm in which they are physically unable to have another orgasm. This time, called the refractory period, tends to get longer as a man ages. A man in his 70s may need to wait several days between orgasms. Women do not have a refractory period. Many can have multiple orgasms, one after another, with little time in between.

How the male body works sexually

The natural cycles of the mature male body

During the teenage years and afterward, the testes (testicles) produce a steady supply of hormones – mostly testosterone. The testes also make millions of sperm each day. It takes about 74 days for the sperm to grow and mature. As part of this process, the newly made sperm must travel through a 20-foot-long tube called the *epididymus* to ripen. This tube forms a coiled structure that sits on top of and behind each testicle.

Just before ejaculation, another tube called the *vas deferens* takes the mature sperm from the epididymus into the body toward the prostate gland. There the sperm is mixed with special fluids from the prostate and the seminal vesicles, which sit on either side of the prostate. These whitish, protein-rich fluids help to support and nourish the sperm so that they can live for some time after ejaculation. During orgasm this mixture of fluid and sperm, called *semen*, is moved through the urethra and out of the tip of the penis. The drawing below shows the male sex organs.



The role of testosterone

Testosterone is the main male hormone. It causes the reproductive organs to develop, and promotes erections and sexual behavior. Testosterone also causes secondary sexual characteristics at puberty, such as a deeper voice and hair growth on the body and face. The testes make most of this hormone. The adrenal glands, which sit on top of the kidneys, also make small amounts of the hormone in both men and women.

The hypothalamus region of the brain controls the amount of hormone the body makes. When the testosterone level gets low, the hypothalamus signals the pituitary gland at the base of the brain. The pituitary sends a hormone messenger through the bloodstream to tell the testicles to speed up production.

Men's hormone levels vary widely, but most men have more testosterone in the bloodstream than they need. A man with a low level of testosterone may have trouble getting or keeping erections and may lose his desire for sex. In the healthy younger man, hormone problems are rare and anxiety is the main cause of erection problems. (Common medical causes for erection problems include medicines and problems with the blood vessels or nerves in the pelvic area.)

The normal pattern of arousal and erection

An erection begins when the brain sends a signal down the spinal cord and through the nerves that sweep down into the pelvis. Some of the important nerves that produce an erection run close to the rectum and along both sides of the prostate gland.

When this signal is received, the spongy tissue inside the shaft of the penis relaxes and the arteries (blood vessels) that carry blood into the penis expand. As the walls of these blood vessels stretch, blood races into the penis at up to 50 times its usual speed. The blood fills 2 spongy tubes of tissue inside the shaft of the penis. The veins in the penis, which normally drain blood out of the penis, squeeze shut so that more blood stays

inside. This causes a great increase in blood pressure inside the penis, which produces a firm erection.

The nerves that allow a man to feel pleasure when the penis is touched run in a different path from the nerves that control blood flow and produce an erection. Even if nerve damage or blocked blood vessels keep a man from getting erections, he can almost always feel pleasure from being touched. He can also still reach orgasm.

A third set of nerves, which run higher up in a man's body, controls ejaculation of semen.

How male orgasm happens

A man's orgasm has 2 stages. The first stage is called *emission*. This is when the prostate, seminal vesicles, and vas deferens (the tubes joining the testicles with the seminal vesicles) contract. During emission, the semen is deposited near the top of the urethra (the tube running through the penis), so that it's ready to be pushed out (ejaculated). At this time, a small valve at the top of the tube shuts to keep the semen from going upward and into the bladder. A man feels emission as "the point of no return," when he knows he's about to have an orgasm. Emission is controlled by the sympathetic or involuntary nervous system.

Ejaculation is the second stage of orgasm. It's controlled by the same nerves that carry pleasure signals when the genital area is caressed. Those nerves cause the muscles around the base of the penis to squeeze in rhythm, pushing the semen through the urethra and out of the penis. At the same time, messages of pleasure are sent to the man's brain. This sensation is known as orgasm or climax.

How pelvic surgery to treat cancer can affect erections

Surgery types

Some types of cancer surgery can interfere with erections. These include:

- **Radical prostatectomy** – the removal of the prostate and seminal vesicles for prostate cancer
- **Radical cystectomy** – the removal of the bladder, prostate, upper urethra, and seminal vesicles for bladder cancer. Removal of the bladder requires a new way of collecting urine, either through an opening into a pouch on the belly (abdomen) or by building a new "bladder" inside the body. (See "Urostomy, colostomy, and ileostomy" in the "Special concerns linked to certain cancers and their treatment" section to learn more about the opening and the pouch.)
- **Abdominoperineal (AP) resection** – the removal of the lower colon and rectum for colon cancer. This surgery may require an opening in the belly (abdomen) where

solid waste can leave the body. (See “Urostomy, colostomy, or ileostomy” in the “Special concerns linked to certain cancers and their treatment” section.)

- **Total pelvic exenteration** – the removal of the bladder, prostate, seminal vesicles, and rectum, usually for a large tumor of the colon, requiring openings for both urine and solid waste to leave the body. (See “Urostomy, colostomy, or ileostomy” in the “Special concerns linked to certain cancers and their treatment” section for more on this.)

These operations can interfere with erections in different ways, mainly by damaging nerves or blood vessels. We will go into more detail about this below, and also talk about other factors that can affect erections after surgery.

Most men who have these types of surgeries will have some difficulty with erections (called *erectile dysfunction* or *ED*). Some men will be able to have erections firm enough for penetration, but probably not as firm as they were before. The good news is that today there are many different treatments for ED that can help most men get their erections back. It might take some time, but if you are willing to try the different options, you’ll most likely find one that will work.

Damage to the nerve bundles that cause erections

The most common way surgery affects erections is by removing or injuring the nerves that help cause an erection. All of the operations listed above can damage these nerves. Damaging the nerves is like fraying a telephone wire – the message to start an erection is either weakened or completely lost. The nerves surround the back and sides of the prostate gland between the prostate and the rectum, and fan out like a cobweb around the prostate. During surgery the doctor may not be able to see the nerves, which makes it easy to damage them.

When possible, “nerve-sparing” methods are used in radical prostatectomy, radical cystectomy, or AP resection. In nerve-sparing surgery doctors remove the prostate or rectum while carefully avoiding the nerves around it. When the size and location of a tumor allow for nerve-sparing surgery, more men recover erections than with other techniques. But even if the surgeon is able to spare these nerves, they are still injured during the operation and need time to heal.

Some men do regain erections after surgery, but it can take up to 2 years. Even when the nerves are spared, research has shown that the healing process takes about 2 years for most men. We don’t know all the reasons some men regain full erections and others do not. We do know that men are more likely to recover erections when nerves on both the left and right sides of the prostate are spared. The healing and growth of new blood vessels may also help restore blood flow to the penis. This healing takes time, which could help explain the delay in the return of erections.

Other things that affect erections after surgery

Age: For the most part, the younger a man is, the more likely he is to regain full erections after surgery. A wide range of ED rates have been reported even in men who haven't had surgery, from as low as about 1 in 4 men under age 60 to as high as about 3 in 4 men over age 70. Men under 60, and especially those under 50, are more likely to recover their erections than older men.

Erections before surgery: Men who had good erections before cancer surgery are far more likely to recover their erections than are men who had erection problems.

Other conditions, such as Peyronie's disease: In some men, the penis can develop a painful curve or "knot" when they have an erection. This condition is called Peyronie's disease. It's most often due to scar tissue forming inside the penis, and has been linked to some cancer surgeries, such as surgery to remove the prostate (prostatectomy). Still, Peyronie's disease is rarely linked to cancer treatment and it can be treated with injections of certain drugs or with surgery. If you have painful erections, ask your doctor for help finding a urologist with experience treating this disease.

Early sexual rehabilitation after surgery

Studies have been done in which doctors tested different methods to promote erections starting just weeks after surgery. The results of these studies suggest that these methods can help some men. You may hear this called *penile rehabilitation*, or *erectile rehabilitation*.

Penile rehabilitation

The idea is that producing erections within weeks or months of surgery can help men recover sexual function. Any kind of erection is thought to be helpful. An erection pulls oxygen-rich blood into the tissues of the penis, helping keep this tissue healthy. As mentioned before, the recovery time for erections after surgery is about 2 years. If a man does not have an erection during this time period, the tissues in his penis may weaken. Once this happens, he will not be able to get an erection naturally. The idea of penile rehabilitation is to use some type of medicine to be sure that a man is getting regular erections while his nerves are healing. This helps keep the tissue in the penis healthy. Most studies have suggested using medicine to get an erection hard enough for penetration about 2 to 3 times a week. The erections do not need to be used for sexual activity, the goal is to keep the tissue in the penis healthy.

In penile rehabilitation, medicines to cause erections – pills such as sildenafil (Viagra[®]), tadalafil (Cialis[®]), or vardenafil (Levitra[®]) – are tried first. But these drugs may not produce an erection because they need the nerves responsible for erections to be healthy. In fact, the pills only work in about 10% of men in the first few months following surgery. If the pills don't work, penile injections or vacuum constriction devices are tried. Most sexual medicine specialists suggest using penile injections before the vacuum

devices. (You can read more about these treatments in the section called “What treatments are available to help with erections?”)

The other part of penile rehabilitation is taking a pill (again, usually sildenafil [Viagra], tadalafil [Cialis], or vardenafil [Levitra]) at a low dose (about a quarter of tablet) on the days you are not getting an erection. This low-dose pill will not be strong enough to help you get an erection, but it will help increase the blood flow around the nerves that help cause erections. This increased blood flow helps the nerves heal.

Putting this all together, penile rehabilitation has 2 components:

- First, making sure you are getting regular erections that are hard enough for penetration. It’s best if you can have an erection 2 to 3 times a week. This will help keep the tissue in your penis healthy.
- Second, using a low-dose pill to help the blood flow around the nerves and help the nerves heal.

Talk to your doctor about how your nerves were affected by surgery and whether penile rehabilitation is right for you.

How pelvic radiation therapy can affect erections

Prostate, bladder, and colon cancer are often treated with radiation to the pelvis. This can cause problems with erections. The higher the total dose of radiation and the wider the section of the pelvis treated, the greater the chance of an erection problem later.

One way that radiation affects erection is by damaging the arteries that carry blood to the penis. As the treated area heals, the blood vessels lose their ability to stretch due to scar tissue in and around the vessels. They can no longer expand enough to let blood speed in and create a firm erection. Radiation can also speed up hardening (arteriosclerosis), narrowing, or even blockage of the pelvic arteries. Radiation may affect the nerves that control a man’s ability to have an erection, too.

A reasonable estimate is that 1 out of every 3 to 4 men who get radiation will notice that their erections change for the worse over the first year or so after treatment. This change most often develops slowly. Some men will still have full erections but lose them before reaching climax. Others no longer get firm erections at all.

As with surgery, the older you are, the more likely it is you will have problems with erections. And men with heart or blood vessel disease, diabetes, or who have been heavy smokers seem to be at greater risk for erection problems. This is because their arteries may already be damaged before radiation treatment. Doctors are looking at whether early penile rehabilitation could help after radiation therapy, too. (Penile rehabilitation is discussed under “Early sexual rehabilitation after surgery” in the “How pelvic surgery to treat cancer can affect erections” section.)

In a few men, testosterone production will slow after pelvic radiation. The testicles may be affected either by a mild dose of scattered radiation or by the general stress of cancer treatment. If a man notices erection problems or a loss of desire after cancer treatment, his first thought may be that he needs to have a blood test for testosterone. But testosterone levels usually get back to normal within 6 months after radiation therapy, so extra hormones may not be needed. And men with prostate cancer should not take testosterone, since it can speed up the growth of prostate cancer cells.

For men with prostate cancer treated with radiation

Most men will report difficulty with erections (erectile dysfunction or ED) within 4 years of getting external beam radiation for prostate cancer. Some of these men may have erections that allow penetration, but only about 15% will report their erections are as good as they were before treatment. Many men with early stage prostate cancer have a choice between radiation and surgery to treat their cancer. When looking at how men's erections are affected by these treatments, ultimately there really is not much difference between the two. Men who have had radiation may see a general decrease in the firmness of their erections over time (up to 5 years after radiation). In contrast, after surgery most men have poor erections right away and then have a chance to recover erections in the first 2 years following the surgery. About 4 years after either treatment, the percentage of men reporting ED is about the same. Treatments can help these men get their erections back, and these treatments usually work for men who have had either surgery or radiation.

How chemotherapy can affect erections

Most men getting chemotherapy (often called *chemo*) still have normal erections. But a few do develop problems. Erections and sexual desire often decrease right after getting chemo but return in a week or so.

Chemo can sometimes affect sexual desire and erections by slowing testosterone output. Some of the medicines used to prevent nausea during chemo can also upset a man's hormone balance. But hormone levels should return to normal after treatments end.

A few cancer treatment drugs like cisplatin, vincristine, bortezomib, and thalidomide can cause lifelong damage to parts of the nervous system, usually the small nerves of the hands and feet. (This damage may be called *peripheral neuropathy*.) For now, there are no studies showing that these drugs directly injure the large nerve bundles that allow erection. But some people have concerns because the drugs are known to affect nerve tissue, and there are many nerves involved in sexual function.

Chemo can also cause a flare-up of genital herpes or genital wart infections if a man has had them in the past. Some types of chemo can cause short-term and life-long infertility. (See the "How cancer treatment can affect fertility" section.)

For men who have had a stem cell transplant

Men who have had graft-versus-host disease after a transplant are more likely to have a long-lasting loss of testosterone. In some cases, these men may need testosterone replacement therapy to regain sexual desire and erections.

The psychological effects of cancer treatment on erections

Many men report disappointment, fear, and distress when they have difficulty with erections. They report that they don't feel "like a man" and that something important is missing. Men may report a general unhappiness with life and depression when they have problems with erections. These feelings are a natural part of coping with erection problems. And most men, if they are able find effective treatments to help with their erections, will start to feel better. If these feelings are severe or persist, most men find it very helpful to see a mental health professional who specializes in sexual issues or a psychiatrist who can help address these feelings.

Worries about self-image and performance can sometimes lead to erection problems, too. Instead of letting go and feeling excited, a man may focus on whether he will be able to function – his fear of failure can make it happen. He may blame the resulting problem on his medical condition, even though he might be able to have an erection if he were able to relax.

A therapist who specializes in helping patients with sexual issues often assists in the treatment of erection problems caused by anxiety and stress. Any treatment for an erection problem should be based on the results of a thorough exam, which should include both medical questions (history) and certain medical tests. (See the "Professional help" section for more information.)

How cancer treatment can affect ejaculation

Cancer treatment can interfere with ejaculation by damaging the nerves that control the prostate, seminal vesicles, and the opening to the bladder. It can also stop semen from being made in the prostate and seminal vesicles. Despite this damage, a man can still feel the sensation of pleasure that makes an orgasm. The difference is that, at the moment of orgasm, little or no semen comes out.

Over time, most men say an orgasm without semen feels normal. Some others say the orgasm does not feel as strong, while others report that the orgasm is stronger and feels more pleasurable. Men often worry that their partners will miss the semen. Most of the time, their partners cannot feel the actual fluid release, so this is generally not true.

Some men's chief concern is that orgasm is less satisfying than before. Others are upset by "dry" orgasms because they want to father a child. If a man knows before treatment that he may want to have a child after treatment, he may be able to bank (save and

preserve) sperm for future use. (See the “How cancer treatment can affect fertility” section for more on this.)

Some men feel that their orgasm is weaker than before. A mild decrease in the intensity of orgasm is normal with aging, but it can be more severe in men whose cancer treatments interfere with ejaculation of semen. See “Is there a way to make orgasms as intense as they used to be?” in the “Dealing with sexual problems” section.

Surgery

Surgery can affect ejaculation in 2 different ways. The first is when surgery removes the prostate and seminal vesicles, so that a man can no longer make semen. The other is surgery that damages the nerves that come from the spine and control emission (when sperm and fluid mix to make semen). Note that these are not the same nerve bundles that pass next to the prostate and control erections (which are discussed in the section “How pelvic surgery to treat cancer can affect erections”). The surgeries that cause ejaculation problems are discussed in more detail here.

Dry orgasm

After radical prostatectomy (removal of the prostate) and cystectomy (removal of the bladder), a man will no longer produce any semen. The sperm cells made in his testicles ripen, but then the body simply reabsorbs them. This is not harmful. After these cancer surgeries, a man will have a dry orgasm or an orgasm without semen.

Sometimes the semen is there, but doesn’t come out

There are other operations that cause ejaculation to go back inside the body rather than come out (this is called *retrograde ejaculation*). At the moment of orgasm, the semen shoots backward into the bladder rather than out through the penis. This is because the valve between the bladder and urethra stays open after some surgical procedures. This valve normally shuts tightly during ejaculation. When it’s open, the path of least resistance for the semen becomes the backward path into the bladder. This is not painful or harmful to the man. When a man urinates after this type of dry orgasm, his urine looks cloudy because the semen mixes in with it during the orgasm.

A transurethral resection is an example of an operation that usually causes retrograde ejaculation. This surgery cores out the prostate by passing a special scope into it through the urethra; this often damages the bladder valve.

Nerve damage

We have already discussed the nerve bundles that sit on both sides of the prostate and help cause erections. Now, we are talking about the nerves that come from the spine and control ejaculation. The cancer operations that can cause dry orgasm by damaging the nerves that control emission (the mixing of the sperm and fluid to make semen) are:

- Abdominoperineal (AP) resection, which removes the rectum and lower colon
- Retroperitoneal lymph node dissection, which removes lymph nodes in the belly (abdomen), usually in men who have testicular cancer

Some of the nerves that control emission run close to the lower colon and are damaged by AP resection. Lymph node removal (dissection) damages the nerves higher up, where they surround the aorta (the large main artery in the abdomen).

The effects of the 2 operations are probably very much alike, but more is known about sexual function after lymph node surgery. Sometimes the node dissection only causes retrograde ejaculation. But it usually paralyzes emission. When this happens, the prostate and seminal vesicles cannot contract to mix the semen with the sperm cells. In either case the result is a dry orgasm. The difference between no emission at all and retrograde ejaculation is important if a man wants to father a child. Retrograde ejaculation is better for would-be fathers because sperm cells may be taken from a man's urine and used to make a woman pregnant.

Sometimes the nerves that control emission recover from the damage caused by retroperitoneal lymph node dissection. But if ejaculation of semen does resume, it can take up to 3 years for it to happen. Because men with testicular cancer are often young and have not finished having children, surgeons have nerve-sparing methods that often allow normal ejaculation after retroperitoneal node dissection.

In experienced hands, these techniques have a very high rate of preserving the nerves and normal ejaculation. (See our document called *Testicular Cancer* for more information.) Some medicines can also restore ejaculation of semen just long enough to collect sperm for conception. If sperm cells cannot be recovered from a man's semen or urine, infertility specialists may be able to retrieve them directly from the testicle by minor surgery, then use them to fertilize a woman's egg to produce a pregnancy.

Retroperitoneal node dissection does not stop a man's erections or ability to reach orgasm. But it may mean that his pleasure at orgasm will be less intense.

Urine leakage during ejaculation

Climacturia is the term used to describe the leakage of urine during orgasm. This is fairly common after prostate surgery, but might not even be noticed. The amount of urine varies widely – anywhere from a few drops to more than an ounce. It's more common in men who also have stress incontinence. (Men with stress incontinence leak urine when they cough, laugh, sneeze, or exercise. It's caused by weakness in the muscles that control urine flow.)

Urine is not dangerous to the sexual partner, though it may be a bother during sex. The leakage tends to get better over time, and condoms and constriction bands can help. (Constriction bands are tightened at the base of the erect penis and squeeze the urethra to keep urine from leaking out.) If you or your partner is bothered by climacturia, talk to your doctor to learn what you can do about it.

Other cancer treatments

Some cancer treatments reduce the amount of semen that's produced. After radiation to the prostate, some men ejaculate only a few drops of semen. Toward the end of radiation treatments, men often feel a sharp pain as they ejaculate. The pain is caused by irritation in the urethra (the tube that carries urine and semen through the penis). It should go away over time after treatment ends.

In most cases, men who have hormone therapy for prostate cancer also produce less semen than before.

Chemotherapy very rarely affects ejaculation. But there are some drugs that may cause retrograde ejaculation by damaging the nerves that control emission.

How cancer treatment can affect fertility

Some cancer treatments make men infertile (unable to father a child). Total body irradiation (as used in stem cell or bone marrow transplant) and radiation treatment to an area that includes the testes can reduce both the number of sperm and their ability to function. This doesn't mean that pregnancy can't happen, but it becomes far less likely.

Some types of chemo can damage the sperm over the short term, while others can cause life-long infertility. It depends on the types and doses of the drugs used. The short-term changes have been shown to last about 3 months after the last treatment. Because the risk of birth defects due to sperm damage is hard to study, there's not much information about this link. To reduce this possible risk, doctors often recommend that a man use careful birth control during chemo and for some months' time after treatment ends. So far, no studies have reported increased birth defects or cancers in children naturally conceived from fathers who had cancer treatment in the past.

Several types of surgery to the pelvic and genital area can cause infertility. If both testicles are removed, for example, sperm cells are no longer made and a man becomes infertile (or sterile). See the sections called "How pelvic surgery to treat cancer can affect erections" and "How cancer treatment can affect ejaculation" for information on the types of surgery that can cause infertility.

If you want to father a child and are concerned about fertility, talk to your doctor **before** starting treatment. One option may be to bank (save and preserve) your sperm. (See our document called *Fertility and Men With Cancer* for more on this.) If you aren't sure about your wishes to be a father in the future, you may want to work with a sperm bank to learn more about the procedure and its costs.

How cancer treatment can affect sexual desire and response

These are some general changes in sexual desire and response that may be linked to cancer and cancer treatment. Specific changes linked to certain types of treatment are covered in more detail in the next sections.

Both men and women often lose interest in sexual activity during cancer treatment, at least for a time. At first, concern for survival is so great that sex may not be a priority. This is OK. Few people are interested in sex when they feel their lives are in danger. When people are in treatment, worry, depression, nausea, pain, or fatigue may cause loss of desire. Cancer treatments that disturb the normal hormone balance can also lessen sexual desire.

If there's a conflict in the relationship, one partner or both might lose interest in sex. Many people who have cancer worry that a partner will be turned off by changes in their bodies or by the very word "cancer."

Keep in mind that each part of a man's sexual cycle is somewhat independent from other parts of the cycle. That's why, after some types of cancer treatment, a man may still desire sex and be able to ejaculate but not have an erection. Other men may have the feeling of orgasm along with the muscles contracting in rhythm, even though semen no longer comes out.

Physical problems can affect desire and response

Premature ejaculation

Premature ejaculation means reaching a climax too quickly. Men who are having erection problems often lose the ability to delay orgasm, so they ejaculate quickly.

Premature ejaculation is a very common problem, even for healthy men. It can be overcome with some practice in slowing down excitement. A few of the newer antidepressant drugs have the side effect of delaying orgasm. This side effect can be used to help men with premature ejaculation. Some men can also use creams that decrease the sensation in the penis. Talk to your doctor about what kind of help might be right for you.

Pain

Men sometimes feel pain in the genitals during sex. If the prostate gland or urethra is irritated from cancer treatment, ejaculation may be painful. Scar tissue that forms in the abdomen (belly) and pelvis after surgery (such as for colon cancer) can cause pain during orgasm, too. Pain in the penis as it becomes erect is less common. Tell your doctor right away if you have any pain in your genital area.

Hormone therapy can affect desire

Treatment for prostate cancer that has spread beyond the gland often includes changing a man's hormone balance. This can be done in one or more of these ways:

- Using drugs to keep testosterone from being made
- Using drugs that block cells from using testosterone
- Removing a man's testicles (called orchiectomy)

The goal of hormone therapy is to starve the prostate cancer cells of testosterone. This slows the growth of the cancer. All of these treatments have many of the same kinds of sexual side effects, because they all affect testosterone.

The most common sexual problem with hormone treatment is a decrease in desire for sex (libido). Hormone therapy may also cause changes in how you look, such as loss of muscle mass, weight gain, or some growth in breast tissue. Be sure you understand the side effects and what you can do to help manage them. For instance, a program of exercise may help you limit muscle loss, weight gain, and tiredness. Talk with your doctor about any exercise program you may have in mind, or ask to be referred to a physical therapist, who can help you decide where to start and what to do.

Psychological effects of hormone therapy

Men who are on hormone therapy drugs to lower testosterone often feel like "less of a man." They fear they may start to look and act like a woman. This is a myth. Manhood does not just depend on hormones but on a lifetime of being male. Hormone therapy for prostate cancer may decrease a man's desire for sex, but it cannot change the target of his sexual desires. For example, a man who has always been attracted only to women will not find himself attracted to men because of this kind of hormone treatment.

Hormone therapy in men has been linked to depression. Talk to your doctor about this because it can be treated with anti-depressant drugs and/or counseling. There's also growing concern that hormone therapy for prostate cancer may lead to problems with thinking, concentration, and/or memory. This hasn't been well studied, but hormone therapy does seem to lead to memory problems in some men. These problems are rarely severe, and most often affect only some types of memory. More studies are being done to look at this.

How cancer treatments can affect sexuality and fertility

Treatment	Low sexual desire	Erection problems	No orgasm	Dry orgasm	Weaker orgasm	Infertility
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<i>Chemotherapy</i>	Sometimes	Rarely	Rarely	Rarely	Rarely	Often
<i>Pelvic radiation therapy</i>	Rarely	Sometimes	Rarely	Rarely	Sometimes	Often
<i>Retroperitoneal lymph node dissection</i>	Rarely	Rarely	Rarely	Often	Sometimes	Often
<i>Abdominoperineal (AP) resection</i>	Rarely	Often	Rarely	Often	Sometimes	Sometimes*
<i>Radical prostatectomy</i>	Rarely	Often	Rarely	Always	Sometimes	Always
<i>Radical cystectomy</i>	Rarely	Often	Rarely	Always	Sometimes	Always
<i>Total pelvic exenteration</i>	Never	Often	Rarely	Always	Sometimes	Always
<i>Partial penectomy</i>	Rarely	Rarely	Rarely	Never	Rarely	Never
<i>Total penectomy</i>	Rarely	Always	Sometimes	Never	Sometimes	Usually*
<i>Orchiectomy (removal of one testicle)</i>	Rarely	Rarely	Never	Never	Never	Rarely**
<i>Orchiectomy (removal of both testicles)</i>	Often	Often	Sometimes	Sometimes	Sometimes	Always
<i>Hormone therapy for prostate cancer</i>	Often	Often	Sometimes	Sometimes	Sometimes	Always

*Artificial insemination of a woman with the man's semen may be possible.

**Infertility happens only if the remaining testicle is not normal

Dealing with sexual problems

What to expect

It's hard to know what will happen to any one person. For example, one man's erections may come back after radical prostatectomy while another man's may not. But if you do have a sexual problem, your health care team can often find the cause and give you an idea of your chance for recovery.

One clue that a problem is a medical one and one that may not go away is if it happens in all situations. Otherwise, it may be psychological and short-term. For example, if you have trouble getting or keeping an erection, does it happen every time you have sex? Are your erections better when you relax, when you stimulate your own penis, or when you

unexpectedly see someone attractive? If you have a few partners, are your erections better with one of them than with the others?

Dealing with short-term problems

As men age or go through health changes, it's common that feelings of sexual excitement no longer lead to an instant erection. You may just need more time and stroking to get aroused.

If you have trouble reaching orgasm during sex, you may not have found the right kind of touching. You might even think about buying a hand-held electric vibrator. A vibrator can give very intense stimulation. Try having a sexual fantasy or looking at erotic stories or pictures. The more excited you are, the easier it is to reach orgasm.

A number of men have their first orgasms after cancer treatment while asleep, during a sexual dream. If this happens to you, it's proof that you are physically able to have an orgasm. It's also helpful if your partner notices that you have erections during sleep. Because sleep erections aren't affected by mood or state of mind, they give you an idea of the best erection your body can produce. Now it's up to you to set things in motion when you are awake.

Finding the cause of problems that appear to be permanent

The best time to talk with your doctor or cancer team about side effects or long-term changes in your sex life is before treatment, so that you know what to expect and can learn about the usual recovery and how long it takes. But you can bring up the subject any time during and after treatment, too. If you did not discuss sexual side effects before treatment, it's best to do so soon after your treatment. This way your doctor can help you find the cause of the problem and develop a plan to help you deal with it.

What treatments are available to help with erections?

The success rates of these treatments vary greatly, and you may have to try a few to find the one that works best for you. In many cases, some sexual counseling can help a couple discuss their options and plan how to make the new treatment a comfortable part of their sex life.

Pills

Sildenafil (Viagra), vardenafil (Levitra), and tadalafil (Cialis) are drugs that come in a pill form and are used to treat erectile dysfunction (ED). All of these drugs help a man get and keep an erection by causing more blood to flow to the penis. If you are having difficulty with erections, these pills are often the first type of treatment that's tried.

For men who have had certain operations that involve the nerves that help cause erections, using these pills at full strength may not be helpful in getting an erection in the year or so following the operation. These pills work with the nerves responsible for erections. And even with nerve-sparing surgery (saving the nerves responsible for erections that run close to the rectum and along the prostate), the nerves are still damaged and need time to heal. This healing process usually takes up to 2 years. While the nerves are healing, the pills may not work. In fact, men may find the pills don't work at all the first few months after surgery. Often by about 6 months after surgery, the pills may work a little bit and cause a little swelling in the penis but not nearly enough for an erection. A year after surgery, the pills may be more effective, but still may not produce an erection hard enough for penetration. At 18 to 24 months after surgery, the pills may be very helpful in getting a firm erection. If these pills are not producing a firm erection in the first months after surgery, it's important to try another treatment to help restore the blood flow to the penis. (See "Early sexual rehabilitation after surgery" in the "How pelvic surgery to treat cancer can affect erections" section for more on this.)

Many drugs are known to interact with pills that help ED. For example, nitrates (like nitroglycerin and other drugs used to treat heart disease) may interact to cause very low blood pressure – this can be fatal. Be sure your doctor knows about all medicines you take, even those you take rarely. You should only take these pills if they are prescribed by your doctor and come from a legitimate pharmacy. There's a large counterfeit market for pills for ED, so make sure you are buying them from a pharmacy you know and trust.

The most common side effects of ED drugs are headache, flushing (skin becomes red and feels warm), upset stomach, sensitivity to light, and runny or stuffy nose. In rare cases, these drugs may block blood flow to the optic nerve in the back of the eye. This could lead to blindness. Men who have had this problem were more likely to have been smokers or had problems with high blood pressure, diabetes, or high levels of cholesterol or fat in their blood.

Other medicines to treat ED are being studied. You might want to ask your doctor about any new medicines or treatments that might work for you.

Penile injections

Many urologists (doctors who specialize in conditions and diseases of the genitals and urinary tract) teach men to inject their penises with medicines that cause erections. A very thin needle is used to put the drug into the side of the shaft of the penis a few minutes before starting sexual activity. The combination of sexual excitement and medicine helps to produce a firmer and longer-lasting erection.

Penile injections are the most reliable treatment for erectile dysfunction (ED), and work in about 80 to 90% of men who try them. Many men are hesitant to try the injections because they're afraid they will be painful. But when men are asked to rate the pain of the injection on a 0 to 10 scale, where 0 means no pain and 10 means the worst pain you can imagine, the majority of men rate the pain as a 2 or less.

Penile injections work, but they can have side effects. Because of this, the first injection is usually done in the doctor's office. Rarely, a man may get an erection that will not go down. If this happens, he needs to go to an emergency room right away for treatment. Some men may develop scarring in the spongy tissue of the penis after repeated injections.

Vacuum constriction devices

Another treatment, the vacuum constriction device (VCD) works well for some men. With a VCD, the man places a plastic cylinder over his penis and pumps out air to produce a vacuum around the outside of the penis. The suction draws blood into the penis, filling up the spongy tissue. When the penis is firm, the man takes the pump off and slips a stretchy band onto the base of his penis to help it stay erect. The band can be left on the penis for up to half an hour.

Some men use the pump before starting sexual touching, but others find it works better after some foreplay has produced a partial erection. The erection from a vacuum device is usually firm, but may swivel at the base of the penis, which can limit comfortable positions for sex. It may take some practice to learn how to use a VCD. Most vacuum devices are prescribed by doctors, but some are available over the counter.

Urethral pellets

Another way to help with erections is a urethral pellet. A man uses an applicator to put a tiny pellet or microsuppository of medicine into his urethra (the opening at the tip of the penis). As the pellet melts, the drug is absorbed through the lining of the urethra and enters the spongy tissue of the penis. The man must urinate before putting in the pellet so that the urethral lining is moist. After the pellet is put in, the penis must be massaged to help absorb the medicine. This system may be easier than injections, but it doesn't always work as well and can cause the same kinds of side effects. Because the pellet may make some men dizzy, a test dose in the doctor's office may be needed. It can cause some burning in the urethra, too. Bits of the pellet may also enter the partner during sex and cause burning, itching, or other discomfort.

Penile prostheses or implants

Surgery to implant a prosthesis in the penis was the first really successful treatment for medical erection problems. Over the past 40 years, many of these operations have been done, and they work quite well to treat permanent erection problems. For men who have tried all the treatments listed above, and have not found one that works well, an implant may be an option to consider. Most men who have implant surgery are very satisfied with the results.

The penile prosthesis generally offers the choice of a soft or hard penis. It's a pump system placed entirely inside a man's body. Two tough inflatable silicone cylinders are put inside the penis. A balloon-shaped reservoir (storage tank) that contains a mixture of salt water and x-ray dye is tucked behind the groin muscles. (The x-ray dye is used so

that the system can easily be checked for problems after it's in place.) A pump is placed inside the loose skin of the scrotal sac. All the parts are connected with tubing.

Usually, the salt water stays in the reservoir, leaving the cylinders in the penis empty. From the outside, the penis looks the same as it does when not erect, except that it's always a little fuller. When you are ready for sex, you stiffen the penis by squeezing the pump under the skin of the scrotum several times. This pumps the salt water into the cylinders and inflates the penis just like blood does in a natural erection. When you have finished sexual activity and no longer want an erection, you press a release valve on the bottom of the pump to deflate the cylinders. The salt water then returns to the reservoir, and your penis becomes soft.

If you are seriously thinking about prosthesis surgery, you might want to read the chapters on medical and surgical treatments in the books listed in the "To learn more" section. Implants carry some risk of complications, such as infection. Also, the devices with more parts are more prone to failure, which then requires a second surgery.

Learn as much as you can and ask your urologist questions about possible complications before making your decision. A man who is married or in a committed relationship should include his partner in any decision about implants. Your partner needs to understand the procedure and have a chance to discuss any fears or questions with you and the doctor. You also must be realistic about what a prosthesis can and can't do for you. Any penile prosthesis is just a mechanical stiffener for the penis. Having a penile implant can't solve any other problems, such as low sexual desire, lack of sensation on the skin of the penis, or trouble reaching orgasm. It can't turn a poor sexual relationship into a great one.

A couple needs to talk openly before they have sex after implant surgery. You may need to experiment with different kinds of touching or with different positions. Make sure you are truly excited before trying to have sex, rather than starting sex just because your penis is erect. Couples who have maintained mutual touching, even if an erection problem prevented penetration, tend to adjust more easily to the prosthesis.

When is sexual counseling helpful?

Any sexual problem caused or worsened by anxiety can be helped through counseling with a mental health therapist who specializes in dealing with sexual issues. For men, problems caused by anxiety can include:

- Loss of sexual desire
- Erection problems without a medical cause
- Trouble reaching orgasm
- Premature (early) ejaculation

When a medical problem limits a man's sexual function, speaking with a therapist can be helpful. Most counseling lasts about 2 or 3 sessions. Sex therapists may also be able to

help you and your partner decide whether to have medical or surgical treatments for erection problems. (See the “Professional help” section.)

Can testosterone restore sexual functioning?

If a man has a hormone imbalance, testosterone may restore his desire and erections. Most men have enough testosterone, even after age 50 or 60. But low testosterone can lead to low sexual desire and trouble with erections. It can also lead to a loss of energy. If you think you might have low testosterone, it’s important to talk to your doctor. Tests can be done to determine your testosterone level, and you can discuss possible treatment options. Testosterone is not given to men who have had prostate cancer, since it can cause the cancer to grow.

What about herbs or natural cures for erection problems?

Many supplements are sold over the counter as “natural” cures for erection problems. These herbs and supplements have not been proven to help men regain erections. And in the past, many supplements have not been found to contain the ingredients listed on their labels.

Another problem is that some of the supplements contain ingredients that are not listed on their labels. Even though they are sold as “natural supplements” to help erections, some have been found to contain sildenafil (Viagra) or drugs much like it. As these are discovered by the FDA, the pills are recalled, but usually not until many men have already taken them. These supplements can be very risky because the contents are not labeled correctly and the man doesn’t know what he’s getting. One danger is that he may take other medicines that interact with the drug in a harmful or even fatal way. Or he may take too much of a substance that’s said to be harmless and without side effects, not knowing what to expect. Talk to your doctor about any over-the-counter treatment you are thinking about trying.

Is there a way to make orgasms as intense as they used to be?

Some men treated for cancer notice that their orgasms become weaker or last a shorter time than before. Sometimes, a mildly weaker orgasm is just part of normal aging. As men age, the muscle contractions at climax are no longer as strong. More severe weakening of orgasm often goes along with erection problems. In these cases, treating the erection problem may not improve a man’s orgasms. Men who have dry orgasms after cancer treatment also say they sometimes have reduced sensation.

Few medicines can make a man’s climax stronger. Most of these medicines have dangerous side effects or could stop working after a few doses. Some common-sense advice is to make sure you are as excited as possible during sex. Focus on your feelings of pleasure or on an arousing fantasy and take a long time for foreplay. If you find yourself getting close to orgasm, ask your partner to tease you a little by slowing down

the caresses. Let your excitement die down and rebuild several times before you actually climax.

You can practice this teasing technique during your own self-stimulation, too. When you feel your excitement is high, stop touching your penis, even if you lose part of your erection. Then caress yourself again, stopping and starting several times before you ejaculate. Whether by yourself or with a partner, make sure your erection is as full as can be before you use the strong, rhythmic caresses that bring on your orgasm. Some men learn to ejaculate with a soft penis. But many find they have stronger orgasms if they can delay orgasm until their erection is as firm as possible.

Special concerns linked to certain cancers and their treatment

Urostomy, colostomy, or ileostomy

An ostomy is a surgical opening created to help with a body function. A urostomy takes urine through a new passage and sends it out through an opening on the belly (abdomen) called a stoma. A colostomy and ileostomy are both openings on the abdomen for getting rid of body waste (stool) from the intestines or bowels. In an ileostomy, the opening is made with the part of the small intestine called the ileum. A colostomy is made with a part of the colon (the large intestine).

You can reduce the effect these ostomies have on your sex life if you take some common-sense steps. First, make sure your appliance (pouch system) fits well. Check the seal and empty your ostomy bag before sex. This will reduce the chance of a major leak. If it does leak, be ready to jump into the shower with your partner and then try again.

A nice pouch cover can make an appliance look less “medical.” You can get covers or patterns to make your own from your enterostomal therapist or ostomy supply dealer.

Another choice is to wear a special small-sized ostomy pouch during sex. Or if you have a 2-piece system, turn the pouch on the faceplate so the emptying valve is to the side. If you wear an elastic support belt on your faceplate, tuck the empty pouch into the belt during sex. You can also wear a wide sash around your waist to keep the pouch out of the way. Another way of keeping the pouch from flapping is to tape it to your body. Some men feel more comfortable wearing T-shirts to cover their appliances.

To reduce rubbing against the appliance, choose positions for sex that keep your partner’s weight off the ostomy. If you have an ostomy but like to be on the bottom during sex, try putting a small pillow above your ostomy faceplate. Then, your partner can lie on the pillow rather than on the appliance.

You can get more detailed information based on your type of ostomy in our separate documents called *Urostomy: A Guide*, *Ileostomy: A Guide*, and *Colostomy: A Guide*. (See the “To learn more” section.)

Laryngectomy

Laryngectomy is surgery that removes the voice box. It leaves you unable to talk the normal way, and you breathe through a stoma (opening or hole) in your neck. Since the air you breathe can't be purified by the nose's natural filter, a special type of stoma cover is needed. Besides catching dust and particles, the stoma cover hides the mucus that leaks out of the stoma. A scarf, ascot tie, or turtleneck can look nice and hide the stoma cover. Even during sex, a cover may look more appealing than a bare stoma.

During sex, a partner may at first be startled by breath that hits at a strange spot. On the positive side, one patient quipped, "Now when I kiss, I never have to come up for air!"

You can lessen odors from the stoma by avoiding garlic or spicy foods and by wearing cologne or after-shave lotion.

Sometimes problems in speaking interfere with communication between couples. If you have learned to speak using your esophagus, talking during sex is not a big problem. But it does take more effort, and you lose some of the emotional nuances. A speech aid built into the stoma might also work well. But neither method lets you whisper in your partner's ear. If you use a hand-held speech aid, communication during sex is likely to be awkward and distracting. Still, you can say a great deal without words by guiding your partner's hand or using body language.

Talking is not needed in many sexual situations. But with a new partner, you may want to talk about the kinds of touching and positions you like before you start making love. You may also want to pre-select ways of signaling important messages you may want to share during sex.

Treatment for head and neck cancer

Some cancers of the head and neck are treated by operations that remove part of the bone structure of the face. Because these scars are so public, they can be devastating to your self-image. Surgery on the jaw, palate, or tongue can also change the way you talk. Recent advances in facial replacement devices, tissue grafting, and plastic surgery give many people a more normal look and clearer speech. Even ears and noses can be made out of plastic, tinted to match the skin, and attached to the face. All of these things can be a great help to a person's appearance and self-esteem.

Limb amputation

Treatment for some cancers can include surgically removing (amputating) a limb. Amputations may call for some changes in lovemaking. For example, a patient who has lost an arm or leg may wonder whether to wear his artificial limb during sex.

The answer depends on the couple. Sometimes the prosthesis (or artificial part) helps with positioning and ease of movement. But the straps that attach it can get in the way. Without the prosthesis, the partner with an amputation may have trouble staying level during sex. Pillows can be used for support.

Amputations may create ongoing pain or pain where the limb used to be (this is called phantom limb pain). These side effects can interfere with sexual desire and distract a person during sex. If this is a problem, talk to your doctor about how to better control your pain.

Loss of one or both testicles

Testicles are as symbolic of manhood as breasts are of womanhood. Although some men are not upset about the new way they look, others may fear a partner's reaction. This is often more true of men who are not in a long-term relationship.

Testicle removal for prostate cancer

Men treated for prostate cancer that has spread beyond the local area may have both testicles removed so that they stop making the hormone testosterone, which feeds the cancer. But the structure at the top and back side of the testicles (the epididymis) is still there, so the scrotum (sac that holds the testicles) doesn't look completely empty.

Testicular cancer

In men with testicular cancer, the surgeon usually removes the testicle with cancer and leaves the normal one. Very few men ever develop a second tumor in the other testicle. Since this operation also removes the epididymis above the testicle, that side of the scrotum looks and feels empty.

Men with testicular cancer are usually young. They may be single and dating. They may be athletic and feel embarrassed by the missing testicle when showering or in locker rooms. To get a more natural look, a man can have a testicular prosthesis put in his scrotum during surgery. The prosthesis approved for use in the US is filled with saline (salt water), and can be sized to match the remaining testicle. When seen in an intact scrotum, it can look like a normal testicle. The only evidence left of the operation is the scar, which is often partly hidden by pubic hair. When part of the scrotal skin must be removed, a testicular prosthesis might not be able to make the scrotum look natural.

Penile shrinkage

After prostate surgery, a man may be shocked to find that his penis is shorter than before. For up to about 6 months after surgery, it may even seem to have shrunk inside the body, much like when a man is in cold water. Penile shrinkage is common after surgery, and it's often not something a man is told about beforehand.

The cause of penile shrinkage is unknown. There's some thought that it may be less of a problem if nerve-sparing surgery is done. While the nerves that control erection are recovering they are more active, and it's these same nerves that pull the penis back into the body. But studies have shown that the penis can keep getting shorter for up to a year

after surgery, so there are probably other causes, too. For instance, blood flow changes, scarring, and changes in penile tissue that result from loss of erections may play a role.

There's no way to prevent or treat penile shrinkage at this time. Some studies have suggested that early penile rehabilitation (discussed in the "How pelvic surgery to treat cancer can affect erections" section) can help decrease shortening, especially when vacuum devices are used. (Vacuum devices are discussed in the "Dealing with sexual problems" section.) But more research is needed.

Cancer of the penis

When a man has cancer of the penis or of the bottom end of the urethra, the best treatment may be removing (amputating) part or all of the penis. These operations are rare, but they can have a devastating effect on a man's self-image and his sex life. If cancer of the penis is found early, local radiation or chemotherapy creams can sometimes be used to treat it. These treatments often have little effect on sexual pleasure and function. But in most cases, the only way to stop the cancer is to remove the affected part of the penis.

Partial penectomy removes only the end of the penis. The surgeon leaves enough of the shaft to allow the man to direct his stream of urine away from his body.

Men are usually surprised to learn that a satisfying sex life is possible after partial penectomy. The remaining shaft of the penis still becomes erect with excitement. It usually gets long enough to allow penetration. Although the most sensitive area of the penis (the glans or head) is gone, a man can still reach orgasm and have normal ejaculation. His partner also can still enjoy sex and may reach orgasm in the same way as before the surgery.

Still, surgeons recognize how devastating the loss of a man's penis is. In general, they try to do surgery that preserves as much of the penis as possible. But it's important that all the cancer be removed, and this can limit how much a surgeon can safely leave.

If the shaft and glans can't be saved, the man must have a total penectomy. This operation removes the entire penis, including the base that extends into the pelvis. The surgeon creates a new opening for the urethra (the tube from the bladder) between the man's scrotum and his anus (the outside opening of the rectum). The man can still control his urination because the "on-off" valve in the urethra is above the level of the penis.

Some men give up on sex after total penectomy. Since cancer of the penis is most common in elderly men, some have already stopped sexual activity because of other health problems. But if a man is willing to put some effort into his sex life, pleasure is possible after a total penectomy.

A man can learn to reach orgasm when sensitive areas, such as the scrotum, skin behind the scrotum, and the area around the surgical scars, are caressed. He or his partner may try placing a finger 1 or 2 inches inside the anus to caress the prostate. (See the picture in the "How the male body works sexually" section.) Some people prefer to use plastic or latex gloves with a water-based lubricant to touch this area, and short fingernails are a

must. As long as the rectum or prostate is healthy and has not been injured by surgery, trauma, or cancer, many men find that this feels good. It does take some practice, since at first it may feel strange or cause the man to feel like he has to urinate.

Having a sexual fantasy or looking at erotic pictures or stories can also increase excitement. You can help your partner reach orgasm by genital caressing with your fingers, by oral sex, or by using a vibrator.

Another option may be available in the future. Even though it's very rare in the US, there are a few surgeons who will work to rebuild the penis after total penectomy if the man wants to try it. This is a complex procedure that requires microsurgery to attach nerves and blood vessels. Grafts must be taken from other parts of the body, such as the arm, leg, chest, back, or groin. Sometimes bone from a graft site is used to allow erection after surgery. In other cases, implants may be used. If you are looking into this option, you will want to find out about the surgeon's experience with this procedure. You will also want to ask about success rates, scarring, and complications the surgeon has seen. Find out about sensation in the penis, and how many of the men are able to have sex after surgery. Keep in mind that there's very little in the available medical research about success rates at this time.

Feeling good about yourself and feeling good about sex

In the US, especially in the media, sex is all too often viewed as something only for the young and healthy. Sex appeal is judged by some as a skin-deep sort of beauty rather than something based on love, kindness, maturity, or a sense of humor. Based on looks alone, most people may not feel all that attractive to start with. And after being treated for cancer, their self-esteem can often fall even further.

After cancer treatment, it's very easy to focus only on the part of the body that has been affected. For example, a man who has had a laryngectomy may fear he will not be able to find another partner because he has lost his voice.

Sometimes friends and lovers do withdraw emotionally from a person with cancer. This may not be because of how the person looks, but be caused by some feelings or thoughts in the person who's doing the looking. When one partner can't bear to look at the other's ostomy bag, for instance, it may be a sign of much deeper feelings. Maybe they're angry because they have to take over their partner's usual tasks of paying bills and doing household repairs. Or the ostomy may remind one partner of how sad they would feel if the other person died. It may be easier not to love that person so much. A partner may even be more aware of their own mortality, which can be upsetting, too. Yet all these feelings get blamed on a stoma that mars a small part of one partner's body. The "well" partner also may feel like a failure and know that they're letting down the partner who's had cancer at a time when they are most needed.

Don't give up on each other. It may take time and effort, but keep in mind that sexual touching between a man and his partner is always possible. It may be easy to forget this,

especially if you're both feeling down or have not had sex for a while. Review the "Keeping your sex life going despite cancer treatment" section for some tips to help you and your partner through this time. Also try the suggestions we make here to help you through some of the changes that cancer may have brought to your life, your self-esteem, and your relationships. And keep in mind that you may need extra help with the changes caused by cancer that can turn your and your partner's lives upside down. See the "Professional help" section for more information.

Chemotherapy also changes the way you look

The most obvious change caused by chemo will likely be hair loss. You may expect to lose the hair on your head, but other body hair, such as eyebrows, eyelashes, and pubic hair are often affected, too. You may also lose weight and muscle mass if you have trouble eating. Your skin may get darker, become dry and flaky, or you may be very pale. Your nails may become discolored or ridged. And you may also have an infusion (IV) catheter or port placed in your chest or arm.

Some physical changes caused by chemo can be covered up or made less obvious. If you are just starting chemo, you may want to shop for a hairpiece before your hair begins to fall out. Toupees are warm and not really comfortable, so you may decide to save it to wear outside the home or hospital. You may decide to wear a hat or cap instead of a hairpiece in public. Many men feel a hairpiece is just too much trouble, especially since it's not easy to find one that looks natural. Some men decide to just shave their heads. But other men may feel ashamed for even caring about being bald. It can be just as upsetting for a man to lose his hair during cancer treatment as it is for a woman.

It's a good idea for a couple to discuss how each of them feels about wearing a hairpiece or head covering during lovemaking. There's no right or wrong decision.

Disguising weight loss, skin color and nail changes, and infusion catheters is a bigger problem. For the most part, clothes that fit well look better. Wearing something too tight or too baggy will just draw attention to any weight change. High necks and long sleeves can hide a catheter, but may be too hot in warm weather. Look for thin fabrics that will be cool while covering you.

Sometimes the changes in your body are so upsetting that you can't relax or think positively. Rather than feel like a failure, take this as a clue that some counseling from a health care professional would be helpful. (See the "Professional help" section.)

Overcoming depression

Staying active is a good way to reduce stress and your risk of depression. Talk to your doctor about the kinds of exercise that are right for you. As long as you don't overdo it, exercise can help you feel better and have more energy during and after treatment. You can also reduce the pain and nausea that some cancer treatments cause by learning skills to help you relax. Many relaxation methods can be learned from DVDs, videos, CDs, or books, but training by a mental health professional often works best.

If depression lasts more than a couple of weeks, talk to your doctor. What doctors call clinical depression has a number of symptoms. These include:

- Lack of interest in sex or other things that usually give you pleasure
- Being unable to feel pleasure at all
- Trouble sleeping
- Changes in eating habits (don't count those that are due to chemo or cancer treatment)
- Fatigue or tiredness (don't count tiredness from your cancer treatment)
- Trouble focusing your thoughts
- Feeling worthless and hopeless

Depression can be treated with medicine and sometimes other methods that may improve your sleep, appetite, energy, and ability to feel pleasure. In turn, this can help your self-esteem and desire for sex. Talk with your doctor if you think you might be depressed.

Keep in mind that some of the newer anti-depressants, such as selective serotonin reuptake inhibitors (SSRIs), may cause trouble reaching orgasm. There are measures that can be taken to improve this possible side effect. If this is something that's a problem for you, talk to your doctor about it. There are other anti-depressants that may not have that effect on you.

Dealing with grief and loss

It's common to feel grief over the losses linked to cancer diagnosis and treatment. You may also notice sadness, anger, and even hostility toward those close to you. Cancer changes your sense of self, that is, how you think of your body and yourself. This can disturb your well-being and affect how you see yourself sexually. It can also affect your ability to maintain relationships.

Grief is a normal response as you give up your old ideas of yourself and begin to find new ways to cope with the changes in your life. It may take time for you to recognize some of these losses and changes. This means new losses may come up even after you think you are finished grieving. This, too, is normal. It can help if you can share your grief with someone close to you. If there's no one near you that you want to confide in, you might prefer to see a mental health professional. Just as it's important to take care of pain in your body, painful feelings also need to be dealt with.

Good communication: The key to building a successful sexual relationship

The most important part in keeping a healthy sexual relationship with a partner is good communication. Men often react to cancer by withdrawing. They think their partner will feel burdened if they share their fears or sadness. But when you try to protect each other,

each suffers in silence. No couple gets through cancer diagnosis and treatment without some anxiety and grief. Why not discuss those fears with one another so that you shoulder the load together rather than alone?

Sexual sharing is one way for a couple to feel close during the stress of an illness. But if your partner has been depressed and distant, you may fear that a sexual advance might come across as a demand. You can bring up the topic of sex in a healthy, assertive way. It's usually not helpful to accuse ("You never touch me anymore!") or demand ("We have to have sex soon. I can't stand the frustration!"). Instead, try to state your feelings positively ("I really miss our sex life. Let's talk about what's getting in the way of our being close.").

Overcoming anxiety about sex

Many couples believe that sex should always happen on the spur of the moment, with little or no advance planning. But sometimes you're dealing with a cancer-related symptom or treatment side effect that makes it impossible to be as spontaneous as you may have been in the past. The most important thing is to open up the topic for discussion and begin scheduling some relaxed time together. Couples need to restart their lovemaking slowly.

Part of the anxiety about resuming sex is caused by the pressure to satisfy your partner. One way to explore your own capacity to enjoy sex is to start by touching yourself. Masturbation is not a required step in resuming your sex life, but it can help. By touching your own genitals and even bringing yourself to orgasm, you can find out if cancer treatment has changed your sexual response without having to worry about frustrating yourself or your partner. It can also help you find out where you might be tender or sore, so that you can let your partner know what to avoid.

Many of us may have learned as children that masturbation was wrong or shameful. But it's a normal and positive experience for most people. Most men and women have tried touching their own genitals at some time in their lives. Many people who enjoy good sex lives with their partners still masturbate at times. Men and women in their 70s, 80s, and 90s often still enjoy self-stimulation.

If you feel at ease with the idea, try stroking not just your genitals, but all of the sensitive parts of your body. Notice the different feelings of pleasure that you can have.

The self-help books listed in the "To learn more" section can help you feel more relaxed about masturbation. Later you can teach your partner any new discoveries you make about your body's sensitive zones. Even if cancer treatment has not changed your sexual responses, you may find some new caresses to enhance your sexual routine.

Rekindling sexual interest

Every now and then we all have sexual thoughts or feelings, but sometimes we ignore or forget about them. Your sexual thoughts can be used to improve your sex life. Try keeping a "Desire Diary." Here's how:

- Every day for a week prepare a sheet of paper that will become your Desire Diary. Take it with you wherever you go. When you have a sexual thought or feeling, write it down. Note the time of day and whether you were alone or with someone. Also note what you did about the thought.
- Look at your Desire Diary to see if there are any patterns, such as certain settings, people, or times of the day that help you feel more sexual.
- Once you have noted some patterns, you can begin putting yourself in the situations that spark a sexual mood, such as exercising, planning a relaxed evening out with your partner, making a special effort to look and feel sexy, reading a steamy story with sex, watching a movie with a romantic or sexual plot, or fantasizing about a sexual encounter.
- Get your partner's help at some point. Discuss any fears either of you has about your sexual relationship. If you have questions about medical risks, you and your partner should discuss them with your doctor.

An example of one man's Desire Diary is shown below. Although the man did not have any sexual activity, he felt desire a few times during the day. Sometimes just keeping track of your desire will increase the number of sexual thoughts and feelings that you notice.

Monday			
Time	Who was with me?	Sexual thought or feeling	Action taken
7:30 a.m.	Wife	Wanted to caress my wife's breasts while she was making breakfast.	None, because I knew she'd be annoyed
1:30 p.m.	Alone	Noticed a good-looking woman by the coffee machine at work. Wondered what she'd look like without her clothes.	None
3:15 p.m.	Alone	Thought about making love tonight	None
10:00 p.m.	Wife	Felt turned on when I got in bed	Asked her if she wanted to have sex. She said she was too tired, but maybe in the morning.

If these efforts fail to spark your sexual interest, think about getting some sexual counseling. The "Professional help" section offers some ideas.

Sexual activity with your partner

When you feel ready to try sexual touching with your partner, start with plenty of time and privacy. Plan for a time when you aren't too tired and when any pain is well-controlled. You may want to set the scene to be especially relaxed. For example, you could light the room with candles or put on some soft, romantic music. Although you may feel a little shy, let your partner know, as clearly and directly as you can, that you would like to have some time to be physically close.

You could even make a date for this purpose. You might say, "I feel ready for sex again, but I'd like to take things slowly. Would you be in the mood tonight to try a little touching? I can't promise how well it will go, but we can have fun trying."

It's a good idea for couples to put some limits on their touching the first few times they try sexual activity after cancer treatment. A good way to start is with a special session devoted to all-over body touching. This is the way body touching works:

- Each partner takes a turn touching and being touched. One partner lies face down on the bed, allowing the other partner to touch the entire back, from toes to scalp. After about 15 minutes, the partner lying down turns over so the front of the body can be touched.
- The first time you try a touching session, avoid the breasts and genitals. Your goals are to feel relaxed and to experience sensual pleasure. It's not important to get sexually excited. If you agree on these goals prior to starting, the touching should not be frustrating. This type of session takes the nervousness and pressure out of being close again.
- While being touched, your job is to be self-centered and tuned in to your own feelings. Don't worry about your partner's thoughts or feelings. When you are doing the touching, enjoy the shape and texture of your partner's body. Try many types of touching, varying light stroking and a firmer touch, much like a massage.
- If you both feel relaxed during the first touching session, you can add some genital touching the next time. Over a few sessions, partners can slowly spend more time on genital caresses, until each one can reach an orgasm through stroking with a hand or through oral sex, if that's comfortable for both of you.

Talking really helps: Many couples don't talk much about sex. But after cancer treatment, your sexual routine may need to change. This calls for clear communication. This is not the time to let embarrassment silence you. Be sure to let your partner know, either in words or by guiding with your hand, the kinds of touches you like best. Try to express your desires in a positive way. For example, "You have the right place, but I'd like you to use a light touch," rather than, "Ouch! That's too rough!" Save sex until both partners really feel ready for it.

If cancer treatment has caused an erection problem, penetration may no longer be possible. Yet a couple can enjoy all the other parts of sex. Don't give up touching and caressing, just because one aspect of lovemaking has changed.

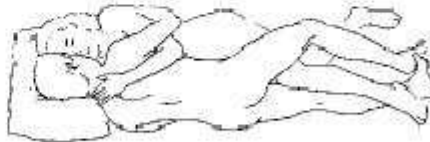
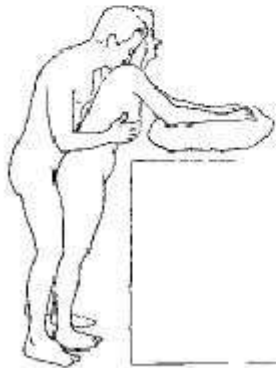
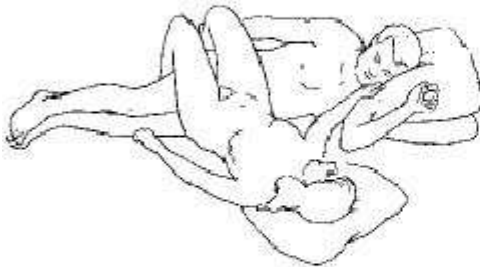
Making sex more comfortable

If you still have some pain or feel weak from cancer treatment, you may want to try new positions. Many couples have found one favorite position and rarely try another.

The best-known way to have sex is in the “missionary position,” with the man lying on top of the woman. But if you are feeling weak or out of breath, this kind of position may take too much effort. You may be able to enjoy sex more if both of you lie side by side, either facing each other or with your partner’s back next to your front side. Or your partner can be on top.

Another position that may work well for some couples is for your partner to sit or kneel astride you. This allows your partner to move more freely while you relax or touch them.

You can look at this as a good chance to learn other ways to enjoy sex with your partner. The drawings below are some ideas for positions that may help in resuming sex.



There's no magic position that's right for everyone. You and your partner need to find the one that's best for you. Small and large pillows can help as supports. Keeping a sense of humor can always lighten up your efforts.

Keeping your sex life going despite cancer treatment

Here are some points to help your sex life during or after cancer treatment.

Learn as much as you can about the possible effects your cancer treatment may have on your sexuality. Talk with your doctor, nurse, or any other member of your health care team. When you know what to expect, you can plan how you might handle those issues.

Keep in mind that, no matter what kind of cancer treatment you have, you'll still be able to feel pleasure from touching. Few cancer treatments (other than those affecting some areas of the brain or spinal cord) damage the nerves and muscles involved in feeling pleasure from touch and reaching orgasm. For example, some types of treatment can damage a man's ability to have erections. But most men who cannot have erections or produce semen can still have the feeling of orgasm with the right kind of touching. This makes it worthwhile for people with cancer to try sexual touching. Pleasure and satisfaction are possible, even if some aspects of sexuality have changed.

Try to keep an open mind about ways to feel sexual pleasure. Some couples have a narrow view of what sexual activity means to them. If both partners can't reach orgasm through or during penetration, some may feel disappointed. But for people treated for cancer, there may be times when intercourse is not possible. Those times can be a chance to learn new ways to give and receive sexual pleasure. You and your partner can help each other reach orgasm through touching and stroking. At times, just cuddling can be pleasurable. You can also continue to enjoy touching yourself. Do not stop sexual pleasure just because your usual routine has been changed.

Try to have clear, 2-way talks about sex with your partner and with your doctor, too. The worst enemy of sexual health is silence. If you are too embarrassed to ask your doctor whether sexual activity is OK, you may never find out. Talk to your doctor and tell your partner what you learn. Otherwise, your partner may be afraid that sex might hurt you. Good communication is the key to adjusting your sexual routine when cancer changes your body. If you feel weak or tired and want your partner to take a more active role in touching you, say so. If some part of your body is tender or sore, you can guide your partner's touches to create the most pleasure and avoid discomfort.

Boost your confidence. Remind yourself about your good qualities. If you lose your hair, help yourself to look and feel better by shaving your head with an electric razor. Or try out different kinds of hats to find one you feel comfortable wearing. Eating right and exercising can help keep your body strong and your spirits up. Talk to your doctor or cancer care team about the type of exercise you are planning before you start, or ask to be referred to a physical therapist. Find something that helps you relax – movies, hobbies, or

getting outdoors. Get professional help if you think you are depressed or struggling, or if anxiety is causing problems.

The single man and cancer

Getting through cancer treatment can be really tough for a man who's not in a long-term relationship. You may not have a friend or family member who can be there for you like a partner could be. You may also worry how a current or future partner will react when they learn you've had cancer. Many men feel nervous or anxious about dating after going through cancer treatments and having to use medicines to help with erections. This anxiety can cause them to avoid dating. This avoidance then leads to more anxiety, and this becomes a vicious cycle that leads to more avoidance. Many single men who start to date after cancer treatment have found their romantic partners to be very understanding about their cancer and sexual situation. These single men who started to date have been successful, and many have started lasting romantic relationships.

Some of the scars left by cancer are public. These include the lost hair during chemo, a lost limb, or disfigured face. Others can't be seen by a casual onlooker. For example, there's no way to know that a man walking down the street has a colostomy or only one testicle. These private scars can be just as painful, though, since the few people who do see them are often the ones whose acceptance matters most.

Perhaps the most private scar left by cancer is the damage done to how you see yourself. You may wonder about how active you can be and even how long you will live. If you had hoped to marry or remarry, you may not want to involve a partner in an uncertain future. Homosexual men who are not in committed relationships have the same worries.

Concerns about having children can also affect your new relationships. You might be sterile because of cancer treatment. Maybe you can still have children but are afraid that cancer will not give you time to see your child grow up. Maybe you are worried about your children's future.

When dating, people who have had cancer often avoid talking about their illness. At a time when closeness is so important, it can seem risky to draw a potential lover's attention to your problems. During treatment, you may want to be brave and not complain. And after the cancer has been controlled, you might want to forget that it ever happened.

Sometimes you can ignore the cancer. But when a relationship becomes serious, silence is not the best plan. Before you and your partner decide to make a strong commitment, you should talk about cancer. This is especially true if the length of your life or your fertility has been affected. Otherwise, cancer may become a secret that's hard to keep and will limit your ability to confide in your partner. A loving partner needs to accept you as you are.

When to talk about your cancer

It's always a delicate choice when deciding to tell a new or prospective lover about your cancer. Ideally, a couple should discuss cancer when a relationship begins to get serious.

How to bring it up

Try having "the cancer talk" when you and your partner are relaxed and in an intimate mood. Ask your partner a question that leaves room for many answers. The question gives them a chance to consider the new information and respond. It also helps you see how your partner takes this news.

One way is just to mention it, followed with your question. "I really like where our relationship is going, and I need you to know that I had _____ cancer many years ago. How do you think that might affect our relationship?"

You can also reveal your own feelings: "I had _____ cancer ____ years ago. I guess I don't want to bring it up because I'm afraid you'd rather be with someone who hasn't had it. It also scares me to remember that time in my life, but I need you to know about it. What are your thoughts or feelings about my having had cancer?"

You can even rehearse how to tell someone you're dating about your experience with cancer. What message do you want to give? Try some different ways of saying it, and ask a friend for feedback. Did you come across the way you wanted to? Ask your friend to take the role of a new partner who rejects you because you have had cancer. Have your friend tell you what you dread hearing the most, and practice your response. Can you express your feelings in a dignified and satisfying way?

If you have an ostomy, genital scars, or a sexual problem, you may be concerned about when to tell a new dating partner. There are no hard-and-fast rules. It's often better to wait until you feel a sense of trust and friendship with your partner – a feeling that you are liked as a total person – before sharing such personal information.

The possibility of rejection

The reality is that some potential lovers may reject you because of your cancer or cancer treatment. Of course, almost everyone gets rejected at some time. Even without cancer, people reject each other because of looks, beliefs, personality, or their own issues. But the sad truth is that some single people who have cancer or have had it in the past limit themselves by not even trying to date. Instead of focusing on their good points, they convince themselves that no partner would accept them because of the cancer and the effects of treatment. You can avoid being rejected by staying at home, but you also miss the chance to build a happy, healthy relationship.

Here are some ways to help you make decisions about talking about your cancer:

- Tell a potential partner about genital scars, an ostomy, or sexual problems when you feel that the person already accepts you and likes you for who you are.

- Discuss your cancer in depth when a new relationship starts to deepen, especially if you have life expectancy or fertility issues.
- Prepare for the possibility of rejection: imagine the worst possible reaction of a new potential partner, and how you would respond. But don't let fear of that reaction keep you from going after a relationship that might work.

When you feel some confidence in your self-worth and your ability to handle rejection, you are ready for the real world. Then, when you start to meet people or to date, think of it as part of a learning process rather than something you must do well on your first try.

Improving your social life

Try working on areas of your social life, too. Single people can avoid feeling alone by building a network of close friends, casual friends, and family. Make the effort to call friends, plan visits, and share activities. Get involved in a hobby, special interest group, or classes that will increase your social circle.

Some volunteer and support groups are geared for people who have faced cancer. You may also want to try some one-on-one or group counseling with a mental health counselor. You can form a more positive view of yourself when you get objective feedback about your strengths from others. Make a list of your good points. What do you like about your looks? What are your talents and skills? What can you give to your partner in a relationship? What makes you a good sex partner? Whenever you catch yourself using cancer as an excuse not to meet new people or date, remind yourself of your assets.

If you feel shy about meeting new people, practice how to handle it. Talk to yourself in the mirror, or ask a close friend or family member to play the part with you.

Men who have sex with men

There are special health guidelines for men who have sex with men, so you should seek care from doctors and nurses who are sensitive to your social situation and respect your privacy. They should also be aware of the extra care you may need. If you are in a relationship, you will want to find health care providers who understand and encourage your partner to be involved in your health care. Check the “To learn more” section for information on getting referrals to doctors and nurses who are sensitive to health care and sexuality concerns for men who have sex with men.

Health care providers need to know, for instance, that men who have sex with men are at higher risk of becoming infected with hepatitis and human immunodeficiency virus (HIV, the virus that causes AIDS). They need to know how to test for and manage these kinds of problems. Often, men who have sex with men will need extra tests and vaccines, too. (See the “Frequently asked questions” section for more information on HIV.)

All men, regardless of sexual orientation, have relationship and self-esteem concerns – with or without a cancer diagnosis. But relationship issues are different for men who are

already in a long-term relationship than they are for men who are not. Men who are in committed relationships often share communication issues that are much like those of many other couples as they go through cancer. But they often must deal with discrimination, too – sometimes even from family members and friends. This can cause emotional pain and greatly complicate their lives when one member of the couple has cancer.

If your long-term partner is more likely to know your health wishes than your family, it's important to write advance directives. That way, everyone knows who's to make decisions for you if you become unable to do so. Make sure your doctors, your partner, and your family know what you want and give them copies of your advance directives. Otherwise, family members who don't know what you want may be the ones legally expected to make decisions for you in the event that you become unable to speak for yourself. (See our document called *Advance Directives* for more on this.)

Frequently asked questions

Can sex cause cancer?

For most cancers, there's no link between a person's sex life and the risk of cancer. Nor does having sex after cancer treatment increase the chances of cancer coming back or getting out of control. But viruses passed from one person to another through sexual contact have been linked to some cancers, including squamous cell carcinoma of the cervix, vulva, vagina, penis, mouth and throat, rectum or anus, and Kaposi sarcoma. Hepatitis B and hepatitis C viruses, which can be passed from one person to another during sex, can increase the risk for liver cancer. Epstein-Barr virus, which causes mononucleosis (also called mono or the "kissing disease"), seems to increase the risk of certain other types of cancer, too.

These cancers are not caused by having sex itself, but by viruses that can be picked up during sexual activity with someone who already has the virus. News stories about viruses and cancer can be confusing. The roles of these viruses are not fully understood, but some can cause changes in the DNA of the cell. Keep in mind that most people who get these viruses never develop cancer. You can get more information about viruses and cancer in our document called *Infections That Can Lead to Cancer*. (See the "To learn more" section.)

Human papilloma virus

Nearly all women with cervical cancer have been infected with human papilloma virus (HPV), which is recognized as the main cause of cervical cancer. HPV can also cause cancers of the mouth and throat, anus, penis, vulva, and vagina. HPV is the most common sexually transmitted infection in the United States. HPV is passed from one person to another during skin-to-skin contact. It can be spread during sex – including vaginal sex, anal sex (entering or being entered through the anus), and even during oral (mouth) sex. Most adults who have had sex will at some point get HPV. But HPV does not cause

cancer in most people who get it. Some people with HPV may be more at risk of getting cancer because of their age, poor health, family history, or past experience with other cancer-causing agents. For example, women who smoke cigarettes have an increased risk of cervical cancer. Men who are not circumcised are more likely to develop cancer of the penis.

Many patients and their partners worry that cancer is contagious – that cancer itself can be passed from one person to another during sex. Despite this myth, a cancer cell from one person's body simply can't be transmitted to another during sex, then take root and grow in their body. Cancer is not contagious.

Can AIDS be picked up from sex?

The virus that causes AIDS is called the human immunodeficiency virus (HIV). It can be passed to someone else when blood, semen, or vaginal fluids from an infected person get into the body of an uninfected person. This can happen during oral (mouth), vaginal, and anal sex (entering or being entered through the anus). Nearly everyone with HIV got it in 1 of 3 ways:

- Unprotected sex with an infected person
- Sharing an infected person's needle or equipment during drug or steroid use
- From a mother to her baby during pregnancy or breast-feeding

Most people with HIV don't look sick until they have had the virus for many years. During that time, the only way to find out whether a person has the virus is to take an HIV test. Unless you know for sure that neither you nor your partner has the virus, and that both of you are careful to avoid infection, you should practice safer sex. If you are in a trusting relationship, and both of you have been tested and don't have the virus, unprotected sex may be safe. But both partners must stay faithful in order to protect themselves from HIV.

Examples of safer sex include:

- Touching each other's genitals with the hands.
- Oral sex with a woman if a "dental dam" is used. A dental dam is a rubber sheet that is used to cover the woman's vulva during oral sex. Or a sheet of plastic kitchen wrap that keeps the woman's sexual fluids contained can be used instead. Do not taste vaginal secretions without knowing the woman's HIV status first.
- Oral sex with a man if he wears a latex or plastic condom from start to finish. Never taste or swallow a man's semen if you suspect he might have HIV.
- Vaginal or anal sex using a latex or plastic condom. Condoms only work if they are used correctly, every time, from start to finish. Lots of water-based lubricant can help reduce the risk of the condom breaking. Never use lotion, oils, or petroleum jelly, which weakens latex condoms.

Spermicides (sperm-killing chemicals often used to prevent pregnancy) are not a good idea if you are trying to protect yourself from HIV. The sperm-killing chemicals in contraceptives were once thought helpful in fighting bacteria and some viruses. But some studies have suggested a higher risk of getting HIV infection in people who used nonoxynol-9 (N-9), a popular ingredient in foam, film, and gel contraceptives. N-9 can harm both vaginal and rectal tissues. Some lubricated condoms also have N-9, so you may want to check the label before you use them. Talk with your doctor about what methods might best meet your needs for preventing sexually transmitted infections or pregnancy.

Talk to an HIV counselor at your local health department if you have questions about HIV transmission, or see the “To learn more” section for more information.

What if I already have HIV?

If you have HIV, safer sex is important to avoid sexually transmitted infections. You will also want to protect your sex partner from HIV. Even if your partner has HIV too, either of you could become infected with a second strain of the virus. Researchers have discovered, for example, that people who were first infected with a type of HIV that could be treated with anti-viral drugs have gotten drug-resistant HIV through unprotected sex. If properly used, latex condoms can keep HIV from being transmitted through sex. (See our document called *HIV Infection, AIDS, and Cancer* for more information.)

Can sex during treatment be harmful to a patient or partner?

A few chemo drugs can be present in small amounts in semen. You may want to use condoms while you are getting chemo and for about 2 weeks afterward. Some types of radiation treatment require special precautions for a certain amount of time, too. For instance, a man who is having “seed implants” (brachytherapy) for prostate cancer should check with his doctor about safety precautions, like using condoms, because sometimes the seeds can move.

Men who are getting chemo also should avoid causing pregnancy during and for some time after treatment because chemo may damage the DNA in sperm cells. This could lead to birth defects. Ask your doctor about birth control if your partner might get pregnant. You will also want to know when you can stop using birth control for this reason.

Although sexual activity is usually safe for your partner during your cancer treatment, some couples just stop having sex, without checking out their fears with the health care team. If you have been cleared medically to resume sex, but are still unsure, you may just need more time. Think about your feelings. Are there times when you feel a stirring of sexual desire?

Be sure to let your partner know that you’ll want to have sex as soon as you feel better. Give your partner some ideas on helping you feel more sexual again, such as, “Let’s try being affectionate in a relaxed way,” or “I’d like to know that you still find me attractive.”

You may also need to reassure your partner that your cancer treatment does not make sex dangerous. Cancer can't be caught from another person. If you have external radiation treatments, having sex with you does not expose your partner to radiation.

When should a person with cancer not have sex?

Ask your doctor if sex may be a problem at any time during or after your treatment. Here are some general guidelines to think about:

- When recovering from surgery, sex can cause bleeding or strain the incision (cut). Sex may also increase your chance of an infection. The time between surgery and when it's safe to have sex varies. It depends on the type of operation and how well you are healing. Your surgeon can tell you when it's safe to try sex again.
- Some types of cancer, like cancer of the bladder, may cause bleeding in the genital area or urinary tract. If this bleeding is worse after sex, talk with your doctor about it. You may need to stop having sex until the bleeding has stopped and the area has healed.
- During chemo, a person with an infusion catheter sometimes worries that sexual activity will harm it. As long as you take care not to rub against it, sex should not cause any problems.
- When you're being treated for cancer, there are often times when your immune system isn't working as well as it should. This may happen during radiation or chemo. At such times, it may be easier for you to get all kinds of infections. Again, ask your doctor if sexual contact puts you at too much risk for infection. Most doctors say that if you're well enough to be out in public, you're well enough to have sex. If you're in the hospital because of weak immunity, ask your doctor's advice on kissing, cuddling, or sexual touching.
- There are things you can do to try to prevent urinary tract infections. Some of the bacteria that can start infections in the urinary tract or genital area may wash away if you urinate a few minutes after sex. You might even want to drink a glass of water before you make love, so it will be easier to urinate afterward.
- If you notice any sores, bumps, or warts on your partner's genitals, or any unusual fluids or discharge, you should ask for an explanation of the symptom and decide whether it's safe to have sex. But you should not expect to be able to screen your partner for sexually transmitted infections (STIs) before having sex. Remember that most STIs never cause signs or symptoms you can see. The only way to detect most of them is to go to the doctor and ask to be tested for them. And often the person with an STI doesn't even know they have it. You can reduce your chances of getting an STI if you wear a latex or plastic condom for oral, vaginal, or anal sex.

Do other people with cancer feel shame or guilt?

Even if a cancer treatment hasn't left obvious scars, many people still feel ashamed of having cancer. Some people feel that the person with cancer may be unclean or somehow to blame for the disease. These ideas are not true. Feelings of guilt or blame can only take away from the efforts you make toward solving sexual problems.

My partner is acting different since we talked about my cancer. How do I handle that?

Many people think that cancer is always fatal. But in a nation where 1 out of every 2 to 3 people will have cancer in their lifetime, and where survival rates are steadily going up for those with cancer, this belief is unfounded and harmful. Still, it can affect the way others relate to you.

Talking to your partner about your diagnosis and treatment as it unfolds may help both of you. Fear of the unknown can interfere with intimacy. Your partner may be afraid of losing you but afraid to say so, and sometimes it helps if you can bring that up. You may have some other concerns you would like to share, too.

Sit down in a quiet, private place. Offer a chance to talk, but don't force the issue if your partner is unable to open up with you at first. Try to be available if your partner wants to talk later. If that doesn't happen, you may want to try again. If it continues to be a problem, you may want to think about counseling. If your partner doesn't want to seek help, it's OK to go by yourself. (See the "Professional help" section.)

What about sex and advanced cancer or at the end of life?

A very ill person is not often seen as a sexual person, but sexual feelings exist in everyone, even in times of very poor health. Touching, caressing, sharing, and emotional intimacy are always important – even at the end of life.

When cancer is far advanced, a person's needs for affection, sharing of feelings, and touch may become even stronger. Partners of patients can help by remembering how important physical closeness is, even when sex might be too much for the person with cancer.

Other questions

You probably have many other questions that haven't been addressed here. Don't be afraid or embarrassed to discuss them with your doctor or other members of your health care team. Write them down now so you'll remember to ask them at your next visit.

Professional help

The first step in finding help for a sexual problem is to talk to your doctor. Many health care professionals, including doctors, have little training in sexuality issues. They may not be at ease even talking about sex. Many doctors also fail to mention the sexual side effects of cancer and medical treatments. If they do talk about it, they might give you such an unclear picture that you may think that your sex life is over. If your cancer specialist can't help you, we suggest you ask your family doctor or another member of your health care team. If your doctors are not able to help you, they should be able and willing to refer you for help. There are many different programs and specialists that can help you find the answers you need.

Sexual rehabilitation programs in cancer centers

A center that specializes in treating cancer may have experts on its staff that can assess and treat sexual problems. But these specialists may see only the patients who are being treated at their hospital. If you're being treated at a cancer center, check to see what programs are offered.

Sexual medicine clinics

In recent years, medical schools and even private practice groups have been opening to treat sexual problems or promote sexual health. Such clinics provide psychological and medical exams through many different types of health care providers. Some clinics require both sexual partners to take part, but you may be seen alone if you're not in a committed relationship. You can try calling a nearby medical school and ask if they have a sexual medicine clinic or sexual health program.

Sex therapists

Sex therapy is a brief type of psychotherapy or counseling (up to 10 or 20 sessions) focused on solving a sexual problem. Sex therapists believe that lovemaking skills are learned and that bad habits can be corrected by learning different sexual techniques. In between meetings with the therapist, a couple (or sometimes just one partner) is given homework assignments. The homework includes exercises to help you communicate and enjoy touching more. They also help reduce anxiety that often interferes with good sex.

Sex therapists may practice in a clinic or alone. Because most states have no laws regulating the title "sex therapist," people with no formal training can call themselves sex therapists. But a sex therapist should be a mental health professional (a psychiatrist, social worker, psychiatric clinical nurse specialist or nurse practitioner, or psychologist) with special training in treating sexual problems. Some counselors may provide sexual counseling if a licensed professional supervises them.

It's not always easy to find a well-trained sex therapist. It's even harder if you live far from a city. A professional society, such as the American Association of Sex Educators,

Counselors, and Therapists (AASECT), can give you information about their members who have special training in sex therapy. You can also get a listing of professionals in your area by contacting your state's psychological association, a chapter of the National Association of Social Workers (NASW), or a state association for licensed marriage and family therapists. (See the "To learn more" section for contact information.)

Other kinds of counseling

Sex therapy is not the only kind of counseling that can help a person with cancer. Psychotherapy can help you feel better about the changes in your body, help you and your partner communicate more clearly, and give you skills to better cope with the cancer and cancer treatment.

The stress of being diagnosed and treated for cancer can worsen problems that already existed in your relationship. Poor or strained communication with your partner can be discouraging and frustrating. In this case, couples counseling may be helpful if your partner is willing to work with you. Individual therapy can also help you decide how to best deal with the problem.

Finding a well-qualified mental health professional is important. These are some of the different types of mental health professionals out there:

Psychiatrist: This person has a medical degree with a specialty in psychiatry. They should also be certified by the American Board of Psychiatry and Neurology.

Psychologist: Most who are practicing alone have a doctorate in psychology (PhD or PsyD) or in education (EdD). Psychologists do not have medical degrees and don't write prescriptions. Psychologists with a master's degree are most often supervised by one with a doctorate. In most states a psychologist must be licensed. Those who practice usually have degrees in clinical or counseling psychology.

Social worker: A social worker usually has master's degree in social work (MSW). Licensing laws vary from state to state. Some states have a category for licensed psychotherapists called "marriage and family counselors." They usually have a master's degree in psychology or a related field, plus training in counseling.

Psychiatric clinical nurse specialists or psychiatric nurse practitioners: These nurses have a master's degree in psychiatric nursing. They are licensed professionally, although their ability to prescribe medicines varies from state to state.

The cost of counseling varies with the professional's training and experience, and your health insurance companies reimburse at different rates. One way to get quality treatment for a lower fee is to find a nearby medical school with a psychiatry clinic. You can also go to a university that trains clinical psychologists and has a psychology clinic. A student in advanced training will see you, but they will be supervised by a senior professional.

You may want to check with your insurance company to find out if it will pay (and how much it will cover) for counseling or therapy.

Other medical specialists

A man with sexual problems may choose to consult a urologist with a specialty in sexual medicine. This is a medical doctor trained in diseases of the urinary tract and male genitals, and extra training in how to treat sexual problems. Many urologists perform surgery or prescribe medical treatments for erection problems. They also have the special equipment that may be needed to find the cause of an erection problem.

When the most likely cause of a sexual problem is a hormone imbalance, an endocrinologist should be consulted. Endocrinologists are expert in the complex cycles and systems that control hormone levels. Usually your primary doctor is best able to decide if you need the special knowledge of an endocrinologist to solve your problem.

What to avoid

Men and women often seek help for a sexual problem by going to someone who's not really a health care professional. Sexual problems are common and upsetting, and many people will try unproven remedies or cures. Television, magazines, radio, and the Internet abound with ads for natural enhancers that promise to give you better erections and longer sexual endurance. These heavily marketed and unproven herbs, creams, pills, and supplements have not been studied and are not the answer. There's no evidence that any of them work: not the herbal potency pills like "poppers" or "Spanish fly," oysters, splints around the outside of the penis to stiffen it, muscle exercises that claim to make a man's penis bigger, hypnotism by someone not trained as a mental health professional, or visits to an independent "sexual surrogate." These treatments do not work and can sometimes be harmful.

American Cancer Society programs

The American Cancer Society is here for you – before, during, and after a cancer diagnosis. We help people by giving them up-to-date cancer information, programs, and referrals. Check your local phone book for an American Cancer Society office near you or reach us anytime, day or night, at 1-800-227-2345 or online at www.cancer.org to learn more about our programs and what we can do to help you get well and stay well.

To learn more

More information from your American Cancer Society

We have selected some related information that may also be helpful to you. These materials may be ordered from our toll-free number at 1-800-227-2345.

Cancer and its treatment

Understanding Radiation Therapy: A Guide for Patients and Families (also in Spanish)

A Guide to Chemotherapy (also in Spanish)

A Guide to Cancer Surgery (also in Spanish)

Fertility and Men With Cancer

Infections That Can Lead to Cancer

Colostomy: A Guide (also in Spanish)

Ileostomy: A Guide (also in Spanish)

Urostomy: A Guide (also in Spanish)

Coping with cancer

After Diagnosis: A Guide for Patients and Families (also in Spanish)

Coping With Cancer in Everyday Life (also in Spanish)

Listen With Your Heart (also in Spanish)

Anxiety, Fear, and Depression (also in Spanish)

Guide to Controlling Cancer Pain (also in Spanish)

Managing side effects

Anemia in People With Cancer

Fatigue in People With Cancer

Managing Incontinence for Men With Cancer

Books

These and many other books are available from the American Cancer Society. Call us to ask about costs or to place your order.

Couples Confronting Cancer: Keeping Your Relationship Strong

What Helped Me Get Through: Cancer Survivors Share Wisdom and Hope

National organizations and Web sites*

American Association of Sexuality Educators, Counselors and Therapists (AASECT)

Telephone number: 202-449-1099

Web site: www.aasect.org

The Web site has a listing of AASECT-certified counselors and/or therapists.

SexHealthMatters

Web site: www.sexhealthmatters.org

For up-to-date news and information about sexual health. Also has “Find A Provider” – a tool to find a medical provider who specializes in sexual health near you.

American Sexual Health Association (ASHA)

Telephone number: 919-361-8400

Telephone for STI (sexually transmitted infections) Resource Center: 919-361-8488

Web site: www.ashastd.org

Web site on teen sexual health: www.iwannaknow.org

Web site on teen sexual health in Spanish: www.quierosaber.org

For information and print materials on STIs and how to prevent and treat them

American Society for Reproductive Medicine (ASRM)

Telephone number: 205-978-5000

Web site: www.asrm.org

For fact sheets and booklets about adoption, genetic screening for birth defects, infertility, in vitro fertilization, sexual dysfunction, reproduction information for cancer patients, and other topics related to reproduction

Fertile Hope (a LIVESTRONG initiative)

Toll-free number: 1-855-220-7777

Web site: www.fertilehope.org

Offers reproductive information and support to cancer patients whose treatments can cause infertility. Has information on fertility risks and options; financial aid for newly diagnosed cancer patients wishing to preserve fertility through egg freezing, embryo freezing, or sperm banking (must meet eligibility criteria); referrals to doctors who specialize in fertility; and more on current research studies and trials. Also has a kit you can buy to collect sperm at home and mail to a sperm bank.

The International Association of Laryngectomees (IAL)

Toll-free number: 1-866-425-3678 (1-866-IAL-FORU)

Web site: www.theial.com

Offers programs to learn to manage a laryngectomy; a directory of vendors for laryngectomy supplies, including communication devices, stoma covers, “neck breather” bracelets, and more; laryngectomee clubs in more than 11 countries and online; a registry of alaryngeal (post-laryngectomy) speech instructors; newsletters; and educational materials

National Association of Social Workers (NASW)

Toll-free number: 1-800-638-8799

Web site: www.helpstartshere.org

Provides a directory of clinical social workers, as well as information and tip sheets on dealing with a wide variety of issues, including cancer

United Ostomy Associations of America, Inc. (UOAA)

Toll-free number: 1-800-826-0826

Web site: www.uoaa.org

Provides information, online support groups, discussion boards, and conferences to people with intestinal or urinary diversions (ostomies)

WebWhispers Nu-Voice Club (for people with cancer of the larynx)

Telephone number: 301-588-2352

Web site: www.webwhispers.org

Provides information about larynx cancer treatments, surgery, recovery, and what life is like after a laryngectomy. Also has a complete listing of laryngectomee suppliers, an online newsletter, and online support groups and discussion boards.

Health care resources for men who have sex with men*

Gay and Lesbian Medical Association (GLMA)

Web site: www.glma.org

Has an online Provider Directory, which allows you to search for primary care providers, specialists, therapists, dentists, and other health professionals by geographic area; fact sheets specific to gay, lesbian, and transgender people; and information on transgender health resources

**Inclusion on this list does not imply endorsement by the American Cancer Society.*

Other publications*

Books on sexuality for men and women

Katz, Anne. *Man Cancer Sex*. Pittsburgh: Hygeia Media, 2010.

Korda M. *Man to Man: Surviving Prostate Cancer*. New York: Vintage Books, 1997.

Mulhall, John P. *Saving Your Sex Life: A Guide for Men with Prostate Cancer*. Hilton Publishing, 2008.

Schover, Leslie R. *Sexuality and Fertility After Cancer*. New York: John Wiley & Sons, Inc., 1997.

Schover, Leslie R and Anthony Thomas. *Overcoming Male Infertility: Understanding Its Causes and Treatments*. New York: John Wiley & Sons, 2000.

Zilbergeld B. *The New Male Sexuality: The Truth About Men, Sex and Pleasure*. New York: Bantam Books, 1999.

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No matter who you are, we can help. Contact us anytime, day or night, for information and support. Call us at **1-800-227-2345** or visit www.cancer.org. We want to help you get well and stay well.

References

American Association of Clinical Endocrinologists. American Association of Clinical Endocrinologists Medical Guidelines for Clinical Practice for the Evaluation and Treatment of Male Sexual Dysfunction: A couple's problem – 2003. *Update Endocr Pract*. 2003;9(No. 1).

American Urological Association. 2006 Annual Meeting Highlights: Erectile dysfunction. *AUA News*, 2006. Accessed at www.auanet.org/content/education-and-meetings/on-line-education/amhighlights/ed.pdf on January 7, 2013.

American Urological Association. Clinical Guidelines: Management of Erectile Dysfunction. Accessed at www.auanet.org/content/guidelines-and-quality-care/clinical-guidelines.cfm?sub=ed on January 7, 2013.

American Urological Association. *Guideline on the Pharmacologic Management of Premature Ejaculation*. Accessed at www.auanet.org/content/guidelines-and-quality-care/clinical-guidelines.cfm?sub=pme on January 7, 2013.

Benson JS, Abern MR, Levine LA. Penile shortening after radical prostatectomy and Peyronie's surgery. *Curr Urol Rep*. 2009;10(6):468-474.

Bissada NK, Yakout HH, Fahmy WE, et al. Multi-institutional long-term experience with conservative surgery for invasive penile carcinoma. *J Urol*. 2003;169:500-502.

Choi JM, Nelson CJ, Stasi J, Mulhall JP. Orgasm associated incontinence (climacturia) following radical pelvic surgery: rates of occurrence and predictors. *J Urol*. 2007;177(6):2223-2226.

Choo R, Long J, Gray R, et al. Prospective survey of sexual function among patients with clinically localized prostate cancer referred for definitive radiotherapy and the impact of radiotherapy on sexual function. *Support Care Cancer*. Published online: 09 June 2009.

Clifford D. Caring for sexuality in loss. In Wells, D. (Ed.) *Caring for Sexuality in Health and Illness*. Philadelphia, PA; Churchill Livingstone. 2000:85-105.

Dohle GR. Male infertility in cancer patients: Review of the literature. *Int J Urol*. 2010 Jan:1-5

- Feldman HA, Goldstein I, Hatzichristou DG, et al. Impotence and its medical and psychosocial correlates: results of the Massachusetts Male Aging Study. *J Urol*. 1994;151:54-61
- Grover SA, Lowensteyn I, Kaouache M, et al. The prevalence of erectile dysfunction in the primary care setting: importance of risk factors for diabetes and vascular disease. *Arch Intern Med*. 2006;166:213-219.
- Hellstrom WJ, Montague DK, Moncada I, et al. Implants, mechanical devices, and vascular surgery for erectile dysfunction. *J Sex Med*. 2010;7(1 Pt 2):501-523.
- Katz, A. *Man Cancer Sex*. Pittsburgh: Hygeia Media, 2010.
- Katz A. The Sounds of Silence: sexuality information for cancer patients. *J Clin Onc*. 2005;23:238-241.
- Kendirci M, Hellstrom WJ. Current concepts in the management of erectile dysfunction in men with prostate cancer. *Clin Prostate Cancer*. 2004;3:87-92.
- Knight D. Health Care Screening for Men Who Have Sex with Men. *Am Fam Physician*. 2004;69:2149-2156.
- Lee J, Hersey K, Lee CT, Fleshner N. Climacturia following radical prostatectomy: prevalence and risk factors. *J Urol*. 2006;176(6 Pt 1):2562-2565
- Markowitz LE, Dunne EF, Saraiya M, et al. Quadrivalent Human Papillomavirus Vaccine: Recommendations of the Advisory Committee on Immunization Practices (ACIP). *Morb Mort Wkly Rep*. 2007;56(RR-2):1-24.
- Martins FE, Rodrigues RN, Lopes TM. Organ-preserving surgery for penile carcinoma. *Adv Urol*. 2008.
- Mulhall J, Land S, Parker M, et al. The use of an erectogenic pharmacotherapy regimen following radical prostatectomy improves recovery of spontaneous erectile function. *The Journal of Sexual Medicine*. 2005;2:540-542.
- National Cancer Institute. Sexuality and Reproductive Issues (PDQ). Accessed at www.cancer.gov/cancertopics/pdq/supportivecare/sexuality/HealthProfessional on January 7, 2013.
- Nelson CJ, Mulhall JP, Roth AJ. The association between erectile dysfunction and depressive symptoms in men treated for prostate cancer. *J Sex Med*. 2011;8(2):560-566.
- Ofmna US, Kingsberg SA, Nelson CJ. Sexual Problems. In DeVita VT, Hellman S, Rosenberg SA (Eds). *Cancer: Principles & Practice of Oncology*, 8th ed. 2008: Lippincott Williams & Wilkins, New York. 2804-2817.
- Potosky AL, Davis WW, Hoffman RM, et al. Five-year outcomes after prostatectomy or radiotherapy for prostate cancer: the prostate cancer outcomes study. *J Natl Cancer Inst*. 2004;96:1358-1367.

Riscoll L. Bigger, harder, better: natural sex enhancers or Viagra-era snake oil? Contemporary Sexuality. Accessed at <http://aasect.org/NEWS/may2003.asp> on January 2005.

Tal R, Heck H, Teloken P, et al. Peyronie's disease following radical prostatectomy: incidence and predictors. *J Sex Med.* 2010;7(3): 1254-1261.

Wespes E, Amar E, Eardley I, et al. Guidelines on Male Sexual Dysfunction: Erectile dysfunction and premature ejaculation. European Association of Urology 2009. Update March 2009. Accessed at www.uroweb.org/fileadmin/tx_eauguidelines/2009/Full/Male_Sexual_Dysf.pdf on January 7, 2013.

Last Medical Review: 8/19/2013

Last Revised: 8/19/2013

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