

Sexual Function for Men with Spinal Cord Injury

A spinal cord injury (SCI) affects a man's sexuality both physically and psychologically. The type and level of injury both can play a role on the impact that the injury has on a man's sexuality. After injury, men may face changes in relationships, sexual activity, and their ability to biologically father children. Men can also experience emotional changes that can affect sexuality. All of these issues involve both the man with SCI and his partner. Therefore, it is very important to understand and confront these issues as a part of the overall adjustment to life after injury.

Physical Changes

Men normally have two types of erections. The first is a psychogenic erection, which results from sexual thoughts or seeing or hearing something stimulating or arousing. The brain sends these messages through the nerves of the spinal cord that exit at the T10-L2 levels. The messages are then relayed to the penis, resulting in an erection. For men with spinal cord injury, the ability to have a psychogenic erection depends on the level and extent of injury. Generally, men with an incomplete injury at a low level are more likely to have psychogenic erections than men with high level, incomplete injury. Men with complete injuries are less likely to experience psychogenic erections.

The second type of erection is a reflex erection. This occurs when there is direct physical contact to the penis or other erotic areas such as the ears, nipples or neck. A reflex erection is involuntary and can occur without sexual or stimulating thoughts. The nerves that control a man's ability to have a reflex erection are located in the sacral segments (S2-S4) of the spinal cord. Most men with spinal cord injury are able to have a reflex erection with physical stimulation if the S2-S4 pathway is not damaged.

Many men with SCI are capable of having an erection. However, the erection may not be hard enough or last long enough for sexual activity. This condition is called Erectile Dysfunction (ED). There are various treatments and products available for treating ED but men with SCI may have special concerns or problems with their use. It is important to see a doctor or urologist for accurate information on the various treatments and products as they relate to men with SCI.

Because each spinal cord injury is different, each man's physical response is different. Men with SCI need to rely on their own observations and experiences to fully understand the changes in their sexual functioning.

Sexual Aids & Options for Men with SCI

The most recent breakthrough in treating ED is the use of the medication Viagra® (sildenafil), a pill taken by mouth. The Food and Drug Administration (FDA) approved Viagra in 1998 for use in the treatment of erectile dysfunction. It quickly drew the interest of men because it is a noninvasive technique and can be self-administered. Research studies show that Viagra, taken as required (not more than once daily), significantly improves the quality of erections and satisfaction with sex life in men with ED due to spinal cord injury between T6 and L51. Men who have low or high blood pressure or vascular disease should not take Viagra. Some medications can not be taken with Viagra so all medications should be reviewed with the prescribing physician.

Penile injection therapy is another treatment option. It involves injecting a single drug or a combination of drugs into the side of the penis. This produces a hard erection that can last for one to two hours. These drugs must be used exactly as prescribed by the physician. If not used correctly, the result could be a prolonged erection, called priapism. When priapism occurs, the blood fails to drain from the penis. This can damage the penile tissue and be

extremely painful. Other risks from the injection are bruising, scarring or infection of the penis. This method is not recommended for use more than once a week. A penile injection is a difficult option for a man with limited hand function due to spinal cord injury. Therefore, he must have assistance in getting the injection.

Medicated Urethral System Erection (MUSE), or transurethral therapy, is a relatively new treatment option. A medicated pellet is placed into the urethra where it is absorbed into the surrounding tissue. This causes the blood vessels to relax and allows blood to fill the penis. The drug, alprostadil, is the same as used in penile injection therapy. Reported side effects include a risk of infection, a burning sensation and decreased blood pressure and fainting.

The vacuum pump is a mechanical option for producing an erection that, for most men, is sufficient for intercourse. The penis is placed in a vacuum cylinder and air is pumped out of the cylinder causing blood to be drawn into the erectile tissues. The erection is maintained by placing a constriction ring around the base of the penis. This ring also prevents urinary leakage that some men with SCI experience. It is important to remove the ring after intercourse to avoid prolonged pressure and the risk of sores. There are several models of vacuum pumps available. A battery-operated model is an option for those with limited hand function. Other models require good hand function to press the pump against the skin to create the necessary vacuum.

Surgical implantation is often the last treatment option for ED because it requires a permanent penile prosthesis. The surgical procedure involves inserting an implant directly into the erectile tissues to obtain an erection. Three types of implants are available: semi-rigid or malleable rods, fully inflatable devices, and self-contained unit implants. There are risks of mechanical breakdown and the danger that the

implant could push out through the skin. Men with SCI usually do not have good sensation in the genital area, so there may be no signs of pain to indicate that the implant is breaking through the skin. All surgical implants also carry a high risk of infection. If an infection develops, the prosthesis may need to be removed. Penile implants are the most expensive option and some health insurance plans do not cover the costs.

Talk to a doctor before any treatment. Men with spinal cord injury who are experiencing ED should have a thorough physical exam by a urologist familiar with SCI before using any medications or assistive devices. Level of injury, possible side-effects, and other medical conditions need to be considered when deciding which treatment option is best. With all treatments, men with SCI must be watchful for signs of Autonomic Dysreflexia (AD), a life-threatening condition. Signs of AD include flushing in the face, headaches, nasal congestion and/or changes in vision.

Fertility

Men with SCI also experience a change in their ability to biologically father a child. The major factor interfering with a man's fertility is primarily due to an inability to ejaculate as a result of damage to the spinal cord. In fact, 90% of men with SCI are not able to ejaculate during intercourse; this is called anejaculation(2). Another problem men with SCI may experience is retrograde ejaculation. This occurs when semen does not leave the urethra but travels back up the tube and is deposited in the bladder.

One myth is that the the number of sperm that a man produces decreases the longer the time after injury. There is no evidence that this occurs and should not be a concern for men who want to biologically father a child(3). However, the motility (movement) of the sperm is of concern. The average motility rate among men with SCI is considerably lower than for the average man without SCI. Recent research shows the average motility rate of sperm in

semen samples from men with SCI is 20% compared to 70% in able-bodied men(2).

Options are available to assist men with spinal cord injury improve their ability to father children. Men who are interested in fathering a child should get medical advice and treatment options from a fertility specialist experienced in issues of spinal cord injury. The fertility specialist needs to be aware of methods that can improve sperm quality in men with SCI, as well as complications that can occur, such as autonomic dysreflexia.

Penile vibratory stimulation (PVS) can be used to achieve an erection, but its main purpose is to produce an ejaculate for those who wish to become fathers. A variety of vibrators/massagers are available for this purpose. Some are specifically designed with the output power required to induce ejaculation in spinal cord injured men. It is important to consult a physician before using a vibrator. One danger of using a vibrator is it could cause swollen or inflamed skin. If the male does not have feeling, the vibrator must be used very carefully to avoid any bruising, bleeding or ulceration.

Rectal Probe Electroejaculation (RPE) is an option if PVS is not successful. RPE is when a doctor inserts an electrical stimulation probe into the rectum, and the controlled electrical stimulation produces an ejaculation. When sperm cannot be retrieved using PVS or RPE, minor surgery can be performed to remove sperm from the testicle. Once sperm are collected they can be used in artificial insemination.

Emotional Changes

Men with SCI can experience many emotional changes that can influence sexual functioning. Men are often concerned with maintaining their ability to perform sexually as well as how their injury might affect their relationship with a partner. Men who do not have a partner at the time of

injury may also be concerned with how to meet and attract a partner.

A man can continue both a romantic and an intimate relationship with a partner after a spinal cord injury. However, good communication with his partner is essential. Many men with spinal cord injury become angry, depressed, and/or uncertain about relationships after the injury. It is important for both partners to understand the physical changes that occur after injury, but it is equally important to talk about how each person feels about the issues. Without good communication, these emotions can be inappropriately directed at each other, which can result in more negative feelings. The couple can talk about, explore and experiment with different ways to be romantic and intimate. Together, they can then discover what is sexually stimulating and fulfilling for of them.

A professional counselor can help in processing feelings that are common after injury. This may include working through feelings of anxiety over establishing or continuing a healthy relationship after a spinal cord injury. A counselor also can work with couples on healthy ways to communicate their needs and feelings.

Safe Sex

The risk of sexually transmitted disease (STD) is the same both before and after spinal cord injury. STDs include diseases such as gonorrhea, syphilis, herpes, and the HIV virus. These STDs can cause other medical problems, such as infertility, urinary tract infections, genital warts, and AIDS.

Everyone needs to take precautions to protect against STDs. The safest, most effective way to prevent sexually transmitted diseases is to use a condom. The condom must be used correctly to be most effective in preventing both STDs and pregnancy. Even if your partner is using another form of birth control, a condom still needs to be used to

protect against STDs. To ensure that both partners are disease free, each person can be tested by a health care professional.

Conclusion

This information sheet cannot address in detail all the issues related to the sexuality. Please talk to your doctor if you have questions.