

Sexual Function for Men with SCI

INTRODUCTION

Many men with spinal cord injury (SCI) experience changes in their sexual function and ability to biologically father children. In addition to these physical changes, most men also experience emotional issues that often affect their overall sexuality. It is very important for men and their partners to understand and address these issues as a part of the overall adjustment to life after injury.

NORMAL SEXUAL FUNCTION

Men normally have two types of erections. The brain is the source of *psychogenic* erections. The process begins with sexual thoughts or seeing or hearing something stimulating or arousing. Signals from the brain are then sent through the nerves of the spinal cord down to the T10-L2 levels. The signals are then relayed to the penis and trigger an erection. A *reflex* erection occurs with 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 sexually stimulating thoughts. The nerves that control a man's ability to have a reflex erection are located in the sacral nerves (S2-S4) of the spinal cord.

SEXUAL FUNCTION AFTER INJURY

For men with SCI, the ability to have a psychogenic erection depends on the level and extent (complete or incomplete) of injury. Generally, men with low level incomplete injuries are more likely to have psychogenic erections than men with higher level incomplete injuries. Men with complete injuries are less likely to experience psychogenic erections. However, most men with SCI are able to have a reflex erection with physical stimulation regardless of the extent of the injury if the S2-S4 nerve pathways are not damaged. Because each SCI is different, the impact of injury on sexual function can also differ.

Although many men with SCI are capable of gaining and maintaining an erection sufficient for sexual

activity, *erectile dysfunction* (ED) is also common. ED is the inability of a man to achieve or maintain an erection sufficient for his sexual needs or the needs of his partner. ED can be a problem for men who are newly injured, or it may develop at any time after injury. Men with SCI who are experiencing ED should have a thorough physical exam by a doctor familiar with SCI.

MEDICATIONS FOR ED

The first treatment option for ED is almost always an oral medication of phosphodiesterase inhibitors such as **Viagra**® (sildenafil), **Cialis**® (tadalafil) or **Levitra**® (vardenafil HCl). These pills are self-administered by mouth and work by increasing blood flow to the penis to improve erectile function. Men will not get an erection just by taking the pill. Sexual stimulation is also required for an erection. Once a man has completed sexual activity, blood flow to his penis should decrease and his erection should go away.

Differences in study populations, primary end points, and measurement tools make comparisons of all three drugs difficult. However, studies show that all three medications appear to be equally effective in treating ED and are generally well tolerated by men in SCI.

Remember, it is essential to talk to a doctor prior to taking any medication. ED medications can be harmful if taken by men with certain medical conditions. Some men may prefer or respond better to one medication over the others. Proper dosage varies among the three medications, and men taking the same medication may respond to different dosages. Because level of injury and possible side-effects are other factors to be considered, it is probably best for men with SCI and their primary care doctors, if needed, to first talk with a doctor familiar with ED and SCI.

ALTERNATIVE TREATMENTS FOR ED

Other treatment options are available for those who do not respond to, or cannot take, oral medications. These

treatment options also have associated risks to consider, so it is important to talk to a doctor for more information.

Penile injection therapy 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. 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 SCI. Therefore, he must have assistance in getting the injection.

Medicated Urethral System Erection (MUSE), or transurethral therapy, is a medicated pellet 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.

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. A battery-operated model is an option for those with limited hand function, and another model requires 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 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.

ED TREATMENT RISK FACTORS _____

Priapism is a prolonged erection. Priapism occurs if the blood fails to drain from the penis. This can damage the penile tissue and be extremely painful. Men need to seek immediate medical attention if an erection lasts

more than 4 hours. Priapism must be treated as soon as possible or lasting damage can happen to the penis can occur, including the inability to have erections.

Autonomic Dysreflexia (AD) is a life-threatening condition for men with SCI at level T6 and above. Signs of AD include flushing in the face, headaches, nasal congestion and/or changes in vision. These symptoms are also possible side-effects of oral medications, so it is very difficult to know if the symptoms are for AD or a common side-effect of the medications. Men at risk for AD will need to consult with their doctor about what to do in the case of developing symptoms. It is usually recommended for men to stop sexual activity if they experience symptoms.

A check of blood pressure is needed to determine if symptoms of AD are occurring. Higher than normal blood pressure is associated with AD.

FERTILITY _____

The fertilization process typically begins during sexual intercourse as the sperm is ejaculated into the woman's vagina. Motile sperm then move through the cervix, uterus, and into the fallopian tubes. Pregnancy results when the man's sperm fertilizes the woman's egg.

Many men with SCI and their partners want to have children. Although there are some couples who have little or no difficulty with fertility, many men with SCI are unable to father children through sexual intercourse.

Ejaculation problems are the primary issues to be resolved for men who want to become fathers. About 90% of men with SCI experience *anejaculation*, which is an inability of men to ejaculate on their own during intercourse. Another potential problem is *retrograde* ejaculation, which is a condition wherein semen is deposited in the bladder instead of exiting the body through the urethra.

Poor semen quality can also make it very difficult for men with SCI to fertilize the egg. Men with SCI make normal numbers of sperm, but the average number of motile sperm in semen from men with SCI is 20% compared to 70% in men in the general population. It is not known why there is abnormally low sperm motility, but it does not seem to be related to level of injury, age,

years post injury, or frequency of ejaculation.

FERTILITY TREATMENTS _____

Men who experience fertility problems must rely on alternative methods to improve their ability to father children. There are potential risks that need to be considered with all treatment options, so men with SCI need to talk to a doctor experienced in fertility issues related to SCI.

Semen quality is varied, but the exact cause of poor semen quality is unknown. Some recent research has shown that normal semen can be obtained for about 6-12 days after injury. This may allow some men to have their normal semen frozen in an effort to improve fertility rates at a later date. Some men who have a large number of dead sperm (necropermia) may see improvements through repeated ejaculation. Otherwise, there is little that can be done to improve poor semen quality.

Because of problems with ejaculation, most men with SCI must rely on alternative techniques to achieve parenthood. **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 men with SCI. Estimations are that 55% of all men with SCI can expect to respond to a high amplitude vibrator, and 80% will respond if their injuries are above T10. PVS is usually recommended as a first treatment option because of the low investment of time and money. Although research suggests that the better quality semen is obtained with PVS, **Rectal Probe Electroejaculation (RPE)** is an option if PVS is not successful. With RPE, 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. Collected sperm are used in artificial insemination techniques.

SEXUAL ADJUSTMENT _____

Pre-injury life was probably routine, familiar, and

comfortable. Following injury, however, things can suddenly change. Pre- and post-injury routines are usually very different, and men who are newly injured will likely face a lot of physical and emotional changes as they adjust to life after injury. It takes some time to rebuild a life following SCI and learn about SCI and self-care issues such as bowel, bladder and skin care. Once those daily self-care issues are managed, sex usually becomes an issue of importance

Most everyone has established views of what is considered a “normal” sexual relationship prior to injury. Following injury, changes in views and established routines may be needed.

Sexual adjustment is essential to the overall adjustment to life for men following injury. It is common for men with SCI to be unsure as to whether or not they can give or receive physical pleasure. They may experience a loss of self-satisfaction, confidence, and self-worth. As time passes, many men with SCI begin to experience a greater appreciation for sexuality as a whole. Hopefully, they will regain any lost feelings of self-satisfaction, confidence, and self-worth as they become more comfortable with their bodies. They often find pleasure in holding hands, hugging and kissing in addition to sexual intercourse. Many men also experience a greater emotional closeness with loved ones.

RELATIONSHIPS _____

Men who are single may wonder about meeting potential partners. The reality is that there is no difference before and after injury. Men who put themselves in positions to meet new people have a greater opportunity for meeting potential partners. If you meet someone and ask that person on a date, the answer will be “yes” or “no.”

It is common for men to take time to become comfortable with their bodies following injury, and partners will likely need time to adjust too. Partners need to understand about SCI and health-related issues such as bowel, bladder and skin care.

Open, honest communication is essential for couples. They need to work together to manage health-related issues if needed. Couples need to talk about how each person feels about those issues. Couples can talk about,

explore and experiment with different ways to be romantic and intimate. Together, both men and their partners can discover how to best give and receive pleasure and satisfaction.

For men or couples who have difficulty with relationships, 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.

SMART SEX

The risk of sexually transmitted disease (STD) is the same both before and following SCI. Therefore, men need to take precautions to protect against STD such as gonorrhea, syphilis, herpes, and AIDS.

Men who are able to ejaculate should also protect against pregnancy if they do not want to father children. Protection is needed even if men have poor semen motility or numbers.

For men who engage in sexual intercourse and want to prevent unwanted disease and pregnancy, a male or female condom (Latex/Polyurethane) is recommended even if the partner is using another form of birth control. However, a condom is not 100 percent reliable and most reliable only when used correctly.

CONCLUSION

Men with SCI can be both romantic and intimate with their partners. This information sheet cannot address in detail all the issues related to sexuality for men with SCI. Please contact your doctor for information on sexual issues.

RESOURCES

Guide and Resource Directory to Male Fertility following Spinal Cord Injury/Dysfunction.
www.scifertility.com

Sexuality and SCI:
<http://www.pvamagazines.com/pnnews/magazine/article.php?art=232> Paraplegia News

Sexuality, Fertility, & Parenting
http://depts.washington.edu/rehab/sci/forum_reports.html#sexuality

First Times
http://www.newmobility.com/review_article.cfm?id=332&action=browse New Mobility

How Sexy is Your Brain?
http://www.newmobility.com/review_article.cfm?id=1253&action=browse New Mobility

Aging & Sexuality
<http://www.pvamagazines.com/pnnews/magazine/article.php?art=709> Paraplegia News

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