

# Male Reproductive System

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## Fact Sheet

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## Introduction

Following a spinal cord injury (SCI), sexual function and ability in males is variable and often is determined by the level and completeness of the lesion.<sup>1</sup> Two types of erections work together to produce a firm and lasting erection: reflexogenic and psychogenic. Reflexogenic erection occur due to direct stimulation of the penis which activates sensory nerves that enter the spinal cord at sacral segments S2-S4, then return to the penis that activate an erection. Reflexogenic erections due not require input from the brain. Psychogenic erections happen when sensory inputs such as smells, sounds and sights produce erotic emotions. The brain then sends message down the spinal cord at thoracic level T10 through lumbar level L2 to stimulate an erection.<sup>2</sup>

## Achieving Erection After SCI

Many options are available to assist achieving and maintaining male erection.<sup>2</sup> The individual, their partner, and the physician should be involved in the decision-making process.

- Oral medications can be used to augment erections.<sup>3</sup> Some of these medications include Viagra, Vardenafil, and Tadalafil.
- Common surgical/nonsurgical methods for achieving an erection:
  1. Injectable Medications: These medications help blood vessels open leading to an erection.<sup>4</sup>
  2. Intraurethral Application: Medicated Urethral System for Erection (MUSE) is a medicated pellet that is inserted inside the opening of the urethra. This causes an erection to develop in about 10 minutes.
  3. Penile Implants: Surgically inserted devices to provide an erection. There are many different types available.<sup>4</sup> A pump is used to inflate the implants when an erection is desired.<sup>4</sup>
  4. Vacuum Constriction Devices: Use of a vacuum pump to draw blood into the penis to achieve an erection.<sup>4</sup> A tension ring is placed at the base to maintain an erection.<sup>4</sup>

## Male Fertility After SCI

- Although fertility is made more complicated post SCI injury, males having sustained an SCI are still able to ejaculate and produce sperm. Sperm quantity is normal in males with SCI, but sperm quality is diminished.<sup>5,6</sup> Such changes in sperm quality include decreased viability, lower motility, decreased cervical mucous penetration, and high incidence of malformation post SCI injury.<sup>1,5,6</sup> Fertilization typically requires medical assistance or procedure. Common semen retrieval methods are:
  - Penile Vibratory Stimulation (PVS): A vibrator is applied to the head of the penis to stimulate an ejaculation. There are different types of vibrators with varying amplitude levels. Two vibrators can be used if using one is unsuccessful.<sup>4</sup>
  - Electroejaculation: This is used if PVS fails. An electrical stimulation probe is inserted into the rectum to facilitate ejaculation.<sup>4</sup>
  - Surgical Sperm Retrieval: The procedure consists of extracting semen with a needle or removing a portion of the testicle.<sup>4</sup>

Banking one's sperm for later use is a viable option as well, as time alone does not impact the quality of the sperm.

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## **Sexual Positioning**

It is important to find a position that is comfortable and effective for both the person with SCI and their partner<sup>7</sup> which may mean trialing different positions. Finding an appropriate position can be impacted by spasticity, skin breakdown, level of SCI lesion, and motor function.<sup>7</sup>

1. Side lying is frequently successful for positioning during sex for people with SCI.<sup>7</sup>
  - Allows for pressure to be distributed over a greater area which will decrease the likelihood of developing pressure ulcers.<sup>7</sup>
  - Pillows and wedges can also be used to maintain a position, prevent skin breakdown, and assist with managing spasticity during sexual activities.<sup>7</sup>
  - Placing pillows or wedges in the correct locations can decrease the stretch on a spastic muscle and make the position more comfortable.<sup>6</sup>
  - Promotes a thrusting position and penetration for individuals that lack pelvic
2. Sexual activities may be performed in a wheelchair, especially if the individual has knee and hip flexion spasms.
  - Requires greater trunk balance & strength, and perhaps greater energy from the individual.<sup>7</sup>
  - Respiratory function needs to be considered for this position and an individual with severe cardiopulmonary dysfunction may need to avoid sexual intercourse in an upright sitting position.<sup>7</sup>

## **Urethral Catheter Management During Intercourse**

Intercourse is still possible with a urethral catheter in place.<sup>7</sup> Strategies to safely have intercourse with a urethral catheter include:<sup>8</sup>

- Leaving a large loop of catheter at the end of the penis. This will allow for the catheter to accommodate the length change of the penis during an erection.
- Holding the loop of the catheter in place using a condom or surgical tape.
- Having a suprapubic catheter may make intercourse easier for the individual.

## **Patient Resources**

For further information, please visit the following online resources:

1. <https://mskctc.org/sci/factsheets/sexuality>
2. [http://sci.washington.edu/info/forums/reports/report\\_subject.asp#sexuality](http://sci.washington.edu/info/forums/reports/report_subject.asp#sexuality)
3. <https://craighospital.org/spinal-cord-injury-resource-library?q=&topics=14807>

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