

Sexual and Reproductive Health Following Spinal Cord Injury

1.0 Executive Summary

After an SCI it is still possible to have and enjoy sex. Sexual health is a significant component of a person's overall health and wellbeing.¹ SCI can have direct or indirect effects on sexual functioning; ability to engage in sexual activities; sexual intimacy and relationships; sexual self-view, and fertility and reproductive health.

Both men and women typically retain some sexual function after SCI depending on the level and completeness of injury (e.g. genital arousal, erection, ejaculation). The degree of sexual dysfunction varies significantly among people with SCI and depends on the level and the severity of injury.^{2,3,4} People with lesions at T6 and above must be aware that sexual stimulation, especially orgasm and ejaculation, as well as childbirth and lactation increases the risk of developing Autonomic Dysreflexia (AD).

Assessment

There is no one measurement tool that adequately assesses the complex issue of sexual health and satisfaction after SCI.⁹ For an assessment to be comprehensive, neurological bases for sexual health dysfunction are necessary. (For a list of Outcome Measures validated for SCI in Sexual Health, visit: <https://scireproject.com/outcome-measures/list-sci/>).

The international community of SCI experts have collaborated to develop a number of 'gold standard' resources/assessments in order to facilitate better care in SCI. Three of the most important with regards to Sexual Health include:

- 1) [The International Standards of Neurological Classification of Spinal Cord Injury \(ISNCSCI\)](#) is a comprehensive assessment of motor function and sensation to determine the level and completeness of injury (an estimation of sexual functioning can be based on these findings).
- 2) [The International Standards to Document Remaining Autonomic Function after SCI \(ISAFSCI\)](#)¹⁰ was designed to describe the diagnosis (supraconal, conal or cauda equina) of the spinal cord lesion and to document the impact of the injury on the components of autonomic response, including sexual response.
- 3) [The International SCI Data Sets on Male Sexual Function and Female Sexual and Reproductive Function](#) - These data sets are agreed upon as measures/indicators that both clinicians and researchers would need regarding SCI and Sexual Health. They are meant to establish a standard of data collection/clinical intake that is valid anywhere in the world.

Sexual and Reproductive Health in Men with SCI

In general, the majority of men can attain an erection after SCI either through the psychogenic (T11-L2) or reflexogenic (S2-S4) pathways, depending on the level and completeness of injury. However, these erections are often unreliable or inadequate for sexual intercourse with difficulties experienced in maintaining an erection.^{5,6} Phosphodiesterase Type 5 Inhibitors (PDE5i – e.g., Viagra®, Cialis®) can be used safely and effectively for treatment of erectile dysfunction (ED) in men with SCI and are recommended as first-line treatment.

Intracavernosal (penile) injectable medications (ICI) are very effective for the treatment of ED in men with SCI and may be used with careful dose titration and some precautions. Medically sanctioned vacuum erection devices (VED), penile rings, perineal training, and mechanical devices all may be effective in enhancing erectile function in men with SCI. Surgical options such as penile prosthesis should be reserved for cases where other ED treatments fail. Intraurethral and topical agents are not effective for treatment of erectile dysfunction in men with SCI.

Ejaculation is rare after SCI, but more common with incomplete than complete SCI. Orgasm (poorly defined in the literature), is self reported to occur less than 50% of the time for men after SCI. Orgasm is most likely to occur with ejaculation than without ejaculation, and in men with incomplete versus complete lesions. Attempts to improve the chance of ejaculation and orgasm include using PVS, mididrone, and sensory substitution or microsurgery of the sensory nerves in men with low lesions.

Sperm retrieval can be problematic after SCI. Semen quality in men with chronic SCI is reported to have decreased motility and viability, although total numbers of sperm tend to remain high.^{7,8} Prostatic massage alone is a safe and easy alternative way to retrieve semen in some men with SCI above T10. The least invasive sperm retrieval method should be tried first (i.e. penile vibrostimulatory stimulation (PVS) in the clinic setting to monitor for autonomic dysreflexia) followed by the more invasive of electroejaculation procedure (EEP). PVS is most successful in men with SCI above T10. The use of oral midrodrine to encourage ejaculation may also improve chance of orgasm and/or sperm retrieval.

Sexual and Reproductive Health in Women with SCI

Multiple laboratory-based studies have documented the presence of sexual arousal and orgasm in women with SCI.¹¹⁻¹⁶ Women with SCI are less likely to achieve orgasm than able-bodied women, and time to orgasm is significantly increased compared to able-bodied controls.¹⁷ The ability to achieve orgasm, however, seems unrelated to the pattern or degree of neurological impairment in women with lesions down to T5 level.¹³ On the other hand, women with LMN lesions affecting S2 –S5 segments were less likely to achieve orgasm compared with women who had other types of SCI lesion.¹⁷

Amenorrhea may occur immediately following injury, lasting 4-5 months on average, but fertility is generally not affected once regular menstrual cycle resumes.^{18,19} Few studies exist that specifically address women's health and pregnancy after SCI, but they show that women with SCI are able to conceive, carry and deliver a baby despite an increased frequency of complications during pregnancy, labour and delivery.^{18,20-23}

Women with SCI are able to conceive, carry and deliver a baby; however, there is an increased frequency of complications during pregnancy, labour and delivery, including AD.^{3,18,20,21,24} Bladder problems, spasticity, pressure sores, autonomic dysreflexia and problems with mobility can pose a threat to the pregnant woman with SCI.^{18,25,26}

Sexual Behaviour/Activity/Satisfaction after SCI

Frequency of sexual activity, desire for sexual activity and sexual satisfaction all tend to decrease after SCI in both men and women.^{6,18,27-32}

A 2004 survey of 681 people with SCI found that regaining sexual function was rated the highest priority for the majority of people with paraplegia, and the 2nd highest priority for those with tetraplegia, after restoration of hand and arm function.³³

Bladder and bowel management problems (incontinence/UTI's) have a negative impact on sexual activity and satisfaction in both men and women after SCI.^{18,27,34-44} Continent urinary diversion in women with tetraplegia may result in improved self-image, quality of life, and greater sexual satisfaction.

For both men and women with SCI, psychological barriers to engaging in sexual activity include: feeling unattractive, low self-esteem, low sexual desire, lack of confidence in sexual ability and ability to satisfy a partner, lowered body image, and difficulty meeting a partner.^{31,32,34,42,45-49}

Population-based studies have shown that the prevalence and predictors of sexual difficulties are closely associated with diminished quality of life (QOL).⁵⁰

Education and Counselling

Surveys of people who have completed rehabilitation after SCI have expressed a need for more education and counselling on sexual health concerns. Some recent research reported that few people with SCI receive information, are satisfied with the levels of education about pregnancy or sexual health, and that most expect medical staff to start the conversation about sexuality rather than having to initiate it.^{51,52}

A variety of health professionals (e.g., psychologists, physical therapists, nurse, physician, sexual health clinician) may be involved in treating these domains, as well as discussing the impact of SCI on aspects of sexual function. In fact, research shows that patients expect their health care professionals to bring up sexuality and sexual health, but health care professionals can be reluctant to do so because of their lack of knowledge, fear of offending the patient, or discomfort in asking questions that address sexual concerns.⁵³

People with disabilities often express their sexual health concerns to the people they feel most comfortable with, so it is recommended that all persons working in SCI understand its effects on sexual function.⁵⁴ A number of studies in this area show that training in sexual health can make a positive difference in knowledge, attitudes, and willingness to bring up sexual health issues in health care professionals.⁵⁵⁻⁵⁹

As sexual health can be complex and multi-faceted, the authors present a [Sexual and Fertility Rehabilitation Framework – a multidisciplinary approach to addressing the multi-faceted needs of people after SCI](#).

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