

## SEXUAL MEDICINE

## Women's Sex Life After Spinal Cord Injury

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## ABSTRACT

**Introduction:** After spinal cord injury (SCI), individuals are typically considered by the general public to be asexual. Handicapped women have more problems with socio-sexual adaptation, stemming from low self-confidence, low self-esteem, and the absence of spontaneity.

**Aims:** To determine changes in the sexual lives of women after SCI.

**Methods:** A self-constructed questionnaire was used to map sexual function after SCI. We retrospectively compared sexual function in 30 women with SCI with that in 30 without SCI who led an active sexual life. Descriptive and inductive statistics were applied using the Student paired and non-paired t-tests and the Levene test.

**Main Outcome Measures:** The main variables were presence vs absence of sexual dysfunction in a group of women after SCI and a comparison of the incidence of sexual dysfunctions in women after SCI with that of a control group.

**Results:** A significant difference was ascertained in women with SCI in sexual desire ( $P < .001$ ), lubrication ( $P < .001$ ), and reaching orgasm before and after injury ( $P = .030$ ). A comparison of the two groups showed a significant difference in the realization of coital sexual activity ( $P < .001$ ), erogenous zones of the mouth ( $P = .016$ ), nipples ( $P = .022$ ), and genitals ( $P < .001$ ), and in the ability to reach orgasm ( $P = .033$ ). The negative impact of incontinence on the sexual life of women with SCI proved significant ( $P < .001$ ). Negative factors for sexual activity in women with SCI were lower sensitivity in 16 (53%), spasms and mobility problems in 12 (40%), lower desire in 11 (36%), pain in 4 (13%), and a less accommodating partner in 3 (10%).

**Conclusion:** Intercourse was the preferred sexual activity in women with SCI. Compared with the period before injury, there was significant lowering of sexual desire, impaired lubrication, and orgasmic ability after SCI. A comparison of the two groups showed a difference in erogenous zones and in reaching orgasm. **Sramkova T, Skrivanova K, Dolan I, et al. Women's Sex Life After Spinal Cord Injury. Sex Med 2017;X:XXX–XXX.**

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**Key Words:** Spinal Cord Injury; Women; Arousal; Vaginal Lubrication; Orgasm; Satisfaction

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## INTRODUCTION

In the Czech Republic alone, 250 to 300 individuals have a spinal cord injury (SCI) every year. Women represent one third of those injured. Falls are the most frequent cause of injury, with car accidents being the second.<sup>1</sup> Transverse spinal cord lesions result in loss of mobility and sensitivity below the level of transection and in vegetative dysfunctions including impaired sexual function.<sup>2</sup> In connection with SCI, women tend to experience impairment in sexual desire, arousal (lubrication), ability to reach orgasm, and sexual satisfaction. Most women continue to be sexually active after injury and sex remains an important part of their lives.<sup>3</sup> Nevertheless, sexual activity does decrease after SCI. Jackson and Wadley<sup>4</sup> observed that 87% of women with SCI reported having sexual intercourse before injury, with only 67% having sexual intercourse after injury. Kreuter et al<sup>3</sup> found a decrease in sexual desire and frequency in 26% of women after

injury, no or very low sexual desire in 13%, and difficulties achieving orgasm in 8%. Men have SCIs more frequently than women, and men's sexual functions are more affected than women's by such injury. After such injury, women menstruate, ovulate, remain able to reproduce, and can have sexual intercourse. This is why more attention from urologists, andrologists, and sexologists is paid to men with SCI. Although sildenafil is highly effective in treating men's erectile dysfunction, its use in women has been disappointing. Flibanserin also did not meet expectations. In the treatment of women's sexual dysfunctions, we can see only the tip of the iceberg. Compared with men's sexuality, women's sexuality is more affected by their psyche than by their bodily predispositions. Women with SCI less frequently seek a doctor's help with intimate issues, which is the reason people discuss and know less about them. These are the reasons we decided to map the sexuality of women with SCI and compare the sexual function of healthy women with and without SCI.

## AIMS

Our research investigated the changes that occur in sexuality in women with SCI. This is the first study of its kind in the Czech Republic.

## METHODS

### Sample and Subjects

The subjects were 30 women with traumatic SCI who were in a wheelchair and who were treated in spinal units in Prague and Brno in the Czech Republic. The study was conducted in accordance with the principles of the Declaration of Helsinki and approved by the Ministry of Health of the Czech Republic and by the 1st Faculty of Medicine of Charles University (Prague). The survey was administered anonymously by trained researchers under the supervision of the Institute of Sexology at the 1st Faculty of Medicine of Charles University. All respondents gave informed consent to participate. Data collection took place from June until December 2015. The inclusion criteria were age older than 18 years, at least since 6 months since SCI, and an active sex life. Of the 30 women, SCI occurred 5 years previously in 23.3%, 6 to 10 years previously in 53.3%, and more than 16 years previously in 13.4%. Women in the continuing spinal health care outpatient department with a post-traumatic transverse spinal lesion from an SCI of traumatic etiology were addressed. Information on the level of injury was part of the questionnaire. Their willingness to participate in the research was verified in a telephone interview during which the women expressed their consent to being monitored. A self-constructed questionnaire was used to map sexual function after SCI. The questionnaire was created by a sexologist (T.S.) based on sexology practice and experience working with men and women after SCI. All subjects received a questionnaire by post with a return envelope with prepaid postage. The response rate was 100% ( $n = 30$  women). Bladder management consisted of

self-catheterization in all women in the SCI sample. Participants in the control group were included if they currently had an active sex life. These were employees of social and health facilities who attended a medical course and agreed to fill out the questionnaire. The women from the control group attended a lecture on sexuality in relation to SCI.

### Measures

The subjects were asked to assess their current situation and describe their state before SCI. The first part of the questionnaire included basic demographic characteristics. The second part reflected the domains of one's sexual life: frequency of sexual activity, coital or non-coital sex, erogenous zones, lubrication, orgasm, and satisfaction (Appendix 1). The total number of items was 13. Question 13 inquired about factors that have a negative influence on sexuality. A yes answer indicated the absence of sexual dysfunction, a no answer indicated its presence, and a sometimes answer indicated less than 25% of the time (SD).

### Statistical Analysis

Data analysis was conducted using an Excel (Microsoft, Redmond, WA, USA) spreadsheet and SPSS software (<https://cs.wikipedia.org/wiki/SPSS>). We performed statistical comparisons of sexual function of women with SCI before and after injury and of the sexual of the women with and without SCI. Descriptive and inductive statistics were applied using the Student paired and unpaired t-tests and the Levene test to determine homogeneity of variance. The Levene test followed by the Student t-test was used for the statistical processing of results. The results of parameters children and lubrication were interpreted results from the Levene test. Levels of statistical significance were  $P$  values less than .01 and .05. Because of the small number of tetraplegic women (4 of 30), we did not compare sexual function based on the level of the lesion.

## MAIN OUTCOME MEASURES

The main variables of the research were presence vs absence of a sexual dysfunction in a group of women after SCI and a comparison of the incidence of sexual dysfunction of women after SCI with that of a control group.

## RESULTS

### Description of Sample

The SCI sample consisted of 30 women with a mean of age 35 years (range = 19–51; Table 1). Average time since injury was 9 years (range = 4–23). The sample of women with SCI was composed of more single women; most women in the control group were married ( $P = .028$ ). Sixteen women with SCI and 21 control women had children ( $P < .001$ ). Two women in the SCI group and nine in the control group did not have a menstrual cycle, presenting a relatively significant difference ( $P < .001$ ).

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