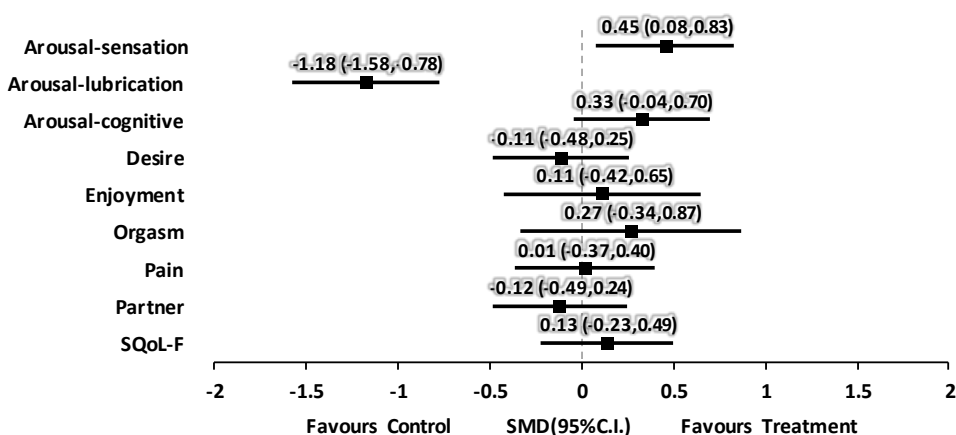


Author Year; Country Score Research Design Total Sample Size	Methods	Outcome
<p>Alexander et al. 2018 RCT Level 1 PEDro = N = 23 (11 w/SCI)</p>	<p>Population: 23 women (18 MS, 5 SCI) completed the study including 13 of 16 and 10 of 15 randomized to the 2 conditions.</p> <p>Treatment: A 12-week trial of the use of a clitoral vacuum suction device (CVSD) versus vibratory stimulation (V) to treat orgasmic dysfunction in women with multiple sclerosis (MS) or spinal cord injury (SCI).</p> <p>Outcome Measures: Female Sexual Function Inventory (FSFI) and Female Sexual Distress Scale (FSDS) including subscales.</p>	<ol style="list-style-type: none"> 1. There were statistically significant increases in total FSFI score (p=.011), desire (p=.009), arousal (p=.009), lubrication (p=.008), orgasm (p=.012), and satisfaction (p=.049), and a significant decrease in distress as measured by FSDS (p=.020) in subjects using the CVSD. 2. In participants who used V, there was a statistically significant increase in the orgasm subscale of the FSFI (p=.028). 3. Participants using the CVSD maintained improvements 4 weeks after treatment, but participants using V did not have significant differences between baseline and follow-up on any measures. 4. CVSD is safe and efficacious to treat female neurogenic sexual dysfunction related to MS and SCI. V is also safe and efficacious for female neurogenic orgasmic dysfunction; however, results were limited to the active treatment period.
<p>Alexander et al. 2011; Sweden PEDro=9 RCT Level 1 N=129</p>	<p>Population: 129 females (mean age=37 years, range=19-62 years); 86 (67%) with female sexual arousal disorder (FSAD) resulting from paraplegia/tetraplegia for >12months. Patients from clinical practice sites in North America, Europe, Australia, and South Africa. Mean sensory score was 133 and the mean motor score was 59.</p> <p>Treatment: Double-blind, placebo-controlled, flexible-dose design; after 4 week, treatment free, run-in period (baseline) patients randomized to receive either oral sildenafil 50mg as needed or a matching placebo for 12 weeks. Dose adjustments were allowed once, either increasing to 100 mg or decreasing to 25 mg.</p> <p>Outcome measures: event log for sexual activity, study dosing, and sexual satisfaction; Sexual Function Questionnaire (SFQ); Sexual Quality of Life Questionnaire-Female (SQoL-F); global efficacy question (GEQ); Sexual Distress Question.</p>	<ol style="list-style-type: none"> 1. There is no statistically significant difference in satisfactory sexual activities between baseline and end of treatment (EOT). 2. No statistically significant difference between sildenafil and placebo in questionnaire data, Total score on the SQoL-F increased for both groups, but the difference was not statistically significant. 3. GEQ and SDQ results favoured sildenafil but were not statistically significant. 55% of the sildenafil group compared with 38% of the placebo group report improvement in GEQ.
	<p>Effect Sizes: Forest plot of standardized mean differences (SMD ± 95% C.I.) as calculated from pre- and post-intervention data</p>	

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	<p style="text-align: center;">Alexander et al. 2011; Sildenafil</p>  <table border="1"><thead><tr><th>Outcome</th><th>SMD (95% C.I.)</th></tr></thead><tbody><tr><td>Arousal-sensation</td><td>-1.18 (-1.58, 0.78)</td></tr><tr><td>Arousal-lubrication</td><td>0.45 (0.08, 0.83)</td></tr><tr><td>Arousal-cognitive</td><td>0.33 (-0.04, 0.70)</td></tr><tr><td>Desire</td><td>-0.11 (-0.48, 0.25)</td></tr><tr><td>Enjoyment</td><td>0.11 (-0.42, 0.65)</td></tr><tr><td>Orgasm</td><td>0.27 (-0.34, 0.87)</td></tr><tr><td>Pain</td><td>0.01 (-0.37, 0.40)</td></tr><tr><td>Partner</td><td>-0.12 (-0.49, 0.24)</td></tr><tr><td>SQoL-F</td><td>0.13 (-0.23, 0.49)</td></tr></tbody></table> <p style="text-align: center;">-2 -1.5 -1 -0.5 0 0.5 1 1.5 2</p> <p style="text-align: center;">Favours Control SMD(95%C.I.) Favours Treatment</p>	Outcome	SMD (95% C.I.)	Arousal-sensation	-1.18 (-1.58, 0.78)	Arousal-lubrication	0.45 (0.08, 0.83)	Arousal-cognitive	0.33 (-0.04, 0.70)	Desire	-0.11 (-0.48, 0.25)	Enjoyment	0.11 (-0.42, 0.65)	Orgasm	0.27 (-0.34, 0.87)	Pain	0.01 (-0.37, 0.40)	Partner	-0.12 (-0.49, 0.24)	SQoL-F	0.13 (-0.23, 0.49)	
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Sipski et al. 2000; USA PEDro=6 RCT Level 1 N=19	<p>Population: Age range: 25-45 yrs, 19 females, 13 complete, 6 incomplete, length of injury range=15-457mos.</p> <p>Treatment: Random assignment to sildenafil (50mg) or placebo on day 1 and the alternate medication on day 2. One hour after drug, participants underwent two 12-minute periods of audiovisual stimulation, followed by two 12-minute periods of audiovisual plus manual clitoral stimulation, each separated by 6-minute baseline periods. The identical protocol was administered on the subsequent day with the alternate medication.</p> <p>Outcome Measures: Subjective arousal, vaginal pulse amplitude.</p>	<ol style="list-style-type: none">1. Significant increases in subjective arousal were observed with both drug and sexual stimulation conditions.2. Borderline significant effect of drug administration on vaginal pulse amplitude, an objective measure of vaginal arousal, was noted.3. Findings suggest that sildenafil may partially reverse sex dysfunction in women with SCI.																				
Sipski et al. 2005 USA PEDro=4 RCT Level 1 N SCI=46 N controls=11	<p>Population: Women with SCI (n=46) and 11 non-disabled/control women; Age: Mean (SCI) 35.1 yrs, SD=7.9, (control) 34.3 yrs, SD=8.2; Injury level: C5-S3; Lesion level: upper motor neuron (UMN) (n=32), lower motor neuron (LMN) (n=14); Time since injury: mean 127 months, range 15-494.</p> <p>Treatment: Vibratory stimulation vs manual stimulation.</p> <p>Outcome Measures: Vaginal pulse amplitude (VPA), levels of arousal.</p>	<ol style="list-style-type: none">1. Increased arousal from both manual and vibratory stimulation in both groups. No difference in arousal level between vibratory and manual clitoral stimulation in women with SCI.2. In participants with SCI, VPA increased (non-significant) more from vibratory clitoral stimulation compared to manual stimulation.3. No impact on VPA or arousal levels by completeness of injury or by UMN vs LMN injury.																				
Sipski et al. 1995 USA Matched Controlled Trial Level 2 N=34	<p>Population: Women with SCI (n=25) and 9 non-disabled/control women; Age: Mean (SCI) 32 yrs, SD=7.9, (control) 34 yrs, SD=8.2; Injury level: Cervical = 20, Thoracic = 5. Time since injury: mean 98 months, range 10-242.</p>	<ol style="list-style-type: none">1. All able-bodied participants achieved orgasm whereas 52% of SCI participants achieved orgasm.2. Degree and type of SCI did not significantly relate to participants' ability to achieve orgasm, and there																				

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	<p>Treatment: Participants attempted to perform stimulation to orgasm in a controlled laboratory-based setting.</p> <p>Outcome Measures: Dependent Variables included: vaginal pulse amplitude, heart rate, respiration rate, blood pressure, subjective arousal and subscores on the Derogatis Sexual Functioning Inventory (DSFI).</p>	<p>were no significant differences ($p > .05$) between subject groups on any of the dependent measures.</p> <ol style="list-style-type: none"> Participants with no lower extremity function took significantly longer than able-bodied participants to achieve orgasm. Results of DSFI revealed that able-bodied participants acknowledged greater sexual satisfaction than the participants with SCI. No consistent characteristics were identified that would allow prediction of which women with SCI would be able to experience orgasm.
<p>Celik et al. 2014 Turkey Cross-Sectional Level 5 N=26</p>	<p>Population: 26 women (mean age 32.96 ± 8.23 years, range=22-50 years), mean time post injury=168 ± 88.73 months'; level of injury: 24 paraplegia, 2 tetraplegia</p> <p>Treatment: None</p> <p>Outcome Measures: Demographic questionnaires regarding marital status before and after SCI, sexual experience, pregnancy, miscarriages and abortions, and family members of the patients. Female Sexual Function Index (FSFI) and Beck Depression Inventory (BDI) were also administered.</p>	<ol style="list-style-type: none"> 8 participants had regular sexual intercourse while one married woman did not have any sexual relationship after SCI. 24 people received no information about pregnancy or sexual health after SCI. 2 people only received information when actively requested. All women were willing to receive information about sexuality after SCI. These patients expected the doctors to start the conversation about sexuality rather than asking about it. FSFI revealed 5 of the 8 sexually active patients had sexual dysfunction. BDI scores depicted that 3 out of the 8 sexually active patients had depression, whereas 14 out of 18 sexually inactive patients had depression.
<p>Hajiaghababaei et al. 2014 Iran Cross-sectional study Level 5 N=105</p>	<p>Population: 105 women (mean age 41.0 years); AIS A-E, lesion level 8.6% cervical, 42.9% thoracic, 21.9% lumbar-sacral; etiology of SCI 80% car accident, 11.4% impact of object on body, 8.6% fall.</p> <p>Treatment: None</p> <p>Outcome Measures: Sociodemographic information, Female Sexual Function Index, Hospital Anxiety and Depression Scale, and Female Sexual Distress Scale-Revised questionnaire.</p>	<ol style="list-style-type: none"> Women with SCI reported significantly higher levels of sexual dysfunction compared with normal controls. 88% of SCI patients reported at least 1 type of sexual dysfunction, whereas only 37% of healthy controls reported sexual dysfunction. Lack of vaginal lubrication was reported more frequent in SCI patients compared with controls. Women with SCI reported a significantly higher level of sexual distress compared with healthy women. Sexual dysfunction was observed to be significantly higher in older patients, those with less education, patients with complete lesions, those with sexual distress and patients who were anxious and depressed.
	<p>Population: 62 women; 31 women with SCI (mean age 35.42 ± 6.51) and 31 case controls (mean age 33.77 ± 4.02 years); mean time since injury 36.32 ± 19.21 months; 13 AIS A, 10 AIS B, 5 AIS C, 3 AIS D; most common</p>	<ol style="list-style-type: none"> The SCI group performed worse in scores of quality of life, SQOL-F, and FSFI domains (except satisfaction). In the case group, there was a significant positive correlation between SCIM score and the mean score

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Merghati-Khoei et al. 2017 Iran Case-control study Level 3 N=62 (31 SCI)	<p>cause was traffic injuries (74.2%), falls (19.3%), surgery side effect (6.5%).</p> <p>Treatment: None</p> <p>Outcome Measures: Socio-demographic and reproductive traits questionnaire, Sexual Quality of life-Female (SQOL-F), Female Sexual Function Index (FSFI) and Spinal Cord Independence Measure (SCIM).</p>	<p>of and SQOL-F, suggesting that higher levels of independence correlate with better sexual function and quality of sexual life in women with SCI.</p> <ol style="list-style-type: none"> Although our participants showed low sexual dysfunction, they tended to report moderate to poor quality of sexual life. Results from regression models indicated that spinal cord injury, participant's education, occupation and duration of SCU were variables most affecting the quality of sexual life e.g., proportional regression showed that women with SCI had 4.2 times the odds of being in the poor or moderate quality of sexual life category, compared with the good quality.
Moreno-Lozano et al. 2016 Mexico Cross-Sectional Level 5 N = 295	<p>Population: 83 women with SCI (mean age 42.8±15.87 years); mean time since SCI 65.16±117.65 months; 40 AIS A, 10 AIS B, 12 AIS C, 19 AIS D, and 2 AIS E; level of injury: 16 cervical, 26 high thoracic level, 34 low thoracic, and 7 lumbar.</p> <p>Treatment: None</p> <p>Outcome Measures: AIS, Female Sexual Function Index (FSFI), Modified Ashworth Scale for spasticity, Spinal Cord Independence Measure III Score. Other variables such as neurologic level, time since injury, age, relationship status, socioeconomic status, spasticity, use of antispasticity drugs, education level, antidepressant medication, offspring, work activities and neuropathic pain were also considered.</p>	<ol style="list-style-type: none"> There is a high percentage of sexual dysfunction among women with SCI in this study (81.9%). The study showed a negative correlation between age and the FSFI questionnaire (- 0.384). Results showed that the younger the person is, the better sexual function they have, and offspring decreased sexual function and work activities increased it.
Fritz et al. 2015 USA Observational Level 5 N=20	<p>Population: 20 women (mean age=46 years, age range=27-77 years); average time since SCI=19.5 years; 11 had paraplegia and 9 had tetraplegia; 60% obtained SCI via car accidents and 20% were obtained from gunshot wounds.</p> <p>Treatment: None</p> <p>Outcome Measures: In-depth qualitative interview re: sexual and reproductive health experiences of 20 women with SCI. Questions about overall health and physical functioning, accessibility of doctor offices, interactions with health care providers, gynecological health-seeking behaviors, sexuality and sexual</p>	<ol style="list-style-type: none"> Regardless of participants' personal definitions of sexual intimacy, 15 (75%) reported wanting to be more sexually active than they currently were. The lack of bowel and bladder control was especially problematic for women who were developing new intimate relationships. Participants believed that women with SCI "age faster" than able-bodied women and that they experienced age-related barriers to sex at an earlier age than their able-bodied peers. Lack of support and education about sexual activity also contributed to the challenges faced by participants in our study. Only 1 woman received any education regarding sexual activity.

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	behavior, and complementary and alternative medicine use.	<ol style="list-style-type: none"> 5. The life stage of participants and their level of adjustment to their injury affected how ready and interested they were in education about sexual intimacy and the types of concerns they reported about their sexual lives. 6. Ultimately, SCI can greatly alter a person's sexual identity and sexual self-esteem. Identity and self-esteem issues can further complicate a person's efforts to date potential partners or develop new intimate relationships.