

<b>Authors; Country</b> <b>Date included in the review</b> <b>Total Sample Size</b> <b>Level of Evidence</b> <b>Type of Study</b> <b>Score</b>	<b>Methods</b> <b>Databases</b>	<b>Conclusions</b>
<p>Liu et al. 2015 Canada</p> <p>Reviewed published articles from 1956 to 2014</p> <p>N=40</p> <p><b>Level of Evidence:</b> Methodological quality not assessed</p> <p><b>Types of study:</b> Information not provided</p> <p>AMSTAR: 5</p>	<p><b>Methods:</b> Literature search for English articles, including original articles, practice guidelines, case reports and literature reviews, pertaining to iatrogenic urological triggers of AD following SCI. Studies with no data on AD or changes in blood pressure during urological assessments were excluded.</p> <p>The keywords used during the search were population search terms that included 'paraplegia', 'tetraplegia', 'quadriplegia', 'spinal cord inj*', 'spinal cord dys*(function)', 'spinal cord dis*' and 'spinal cord lesion', as well as 'autonomic dysreflexia' or 'autonomic hyperreflexia'.</p> <p><b>Databases:</b> PubMed</p>	<ol style="list-style-type: none"> <li>1. The included articles were divided into four groups according to the urological procedure: 1) urodynamics and cystometry (n = 21); 2) cystoscopy and transurethral litholapaxy (n = 12); 3) extracorporeal shock-wave lithotripsy (ESWL) (n = 6); and 4) other procedures (n = 2).</li> <li>2. Incidence of AD ranged from 36.7%- 77.8% in urodynamics. AD symptomatic rate ranged from 50%-65%.</li> <li>3. No relationship between AD and neurogenic detrusor overactivity or detrusor sphincter dyssynergia.</li> <li>4. The majority of patients without anesthesia developed AD during cystoscopy, transurethral litholapaxy, and EWSL.</li> <li>5. Nifedipine was shown to be most effective medication during urodynamics, cystoscopy and ESWL for relief of acute AD and for prevention of AD.</li> <li>6. Flexible cystoscopy is accepted as an effective alternative to rigid endoscopy in minimizing occurrence of AD</li> <li>7. Common types of anesthesia used for individuals with SCI include local, subarachnoid, epidural, and general anesthesia.</li> <li>8. The effectiveness of different anesthesia methods is dependent on blocking nociceptive signals from the lower urinary tract (LUT) below the level of injury.</li> </ol>
<p>Krassioukov et al. 2009; Canada</p> <p>Reviewed published articles from 1950 to 2007</p> <p>N=31</p> <p><b>Level of Evidence:</b> PEDro scale – RCTs, Modified Downs and Black – non-RCTs</p> <p><b>Types of study:</b> 6 RCTs 11 pre-post 5 observational 5 case series 3 prospective controlled 1 case report</p> <p>AMSTAR: 5</p>	<p><b>Methods:</b> Literature search for English articles, practice guidelines, and review articles evaluating the efficacy of interventions related to autonomic dysreflexia (AD) in the spinal cord injury population. Interventions included non-pharmacologic and pharmacologic (nifedipine, captopril, terazosin, prazosin, phenoxybenzamine, prostaglandin E2, sildenafil, and nitrates) management of AD, as well as preventative strategies to reduce episodes and symptoms of AD from common triggers.</p> <p><b>Databases:</b> PubMed/MEDLINE, CINAHL, EMBASE, PsycINFO</p>	<ol style="list-style-type: none"> <li>1. There is strong evidence (level 1 and 2) supporting the use of intravesical resiniferatoxin as well as intersphincteric anal block with lidocaine for the management of AD in SCI patients.</li> <li>2. There is also evidence that topical lidocaine does not limit or prevent AD in susceptible patients during anorectal procedures and that there is no beneficial effect of topical anesthetic in the prevention of AD during FES.</li> <li>3. Nifedipine is the only pharmacological agent supported by controlled trials (Level 2) in the prevention of dangerous blood pressure reactions.</li> <li>4. There is low-level evidence (level 4 and 5) for the effectiveness of botulinum toxin injections into the detrusor muscle and use of intravesical capsaicin and anticholinergics in limiting AD.</li> <li>5. There is conflicting level 4 evidence regarding the effectiveness of sacral deafferentation in the prevention of AD</li> <li>6. There is level 5 evidence (clinical consensus) but there are no clinical studies that support the use of nitrates in the acute management of AD.</li> <li>7. There is conflicting evidence with the use of phenoxybenzamine for AD management. There is level 2 evidence that sildenafil citrate has no effect on blood pressure changes during AD</li> </ol>

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		episodes induced by vibrostimulation in men with SCI.
<p>Courtois et al. 2012 Canada</p> <p>Reviewed published articles from 1948 to 2011</p> <p>N=37</p> <p><b>Level of Evidence:</b> Methodological quality not assessed</p> <p><b>Types of studies:</b> Information not provided</p> <p>AMSTAR: 2</p>	<p><b>Methods:</b> Literature search for English or French language articles of all levels of evidence that provided scientific evidence on the specific treatment of AD following SCI in human males. The review focused on treatments that could be implemented at home during sexual activities therefore studies on intravenous treatment were generally rejected (with the exception of one). Also excluded were studies that only mentioned a procedural management of AD in their methods without giving specific results. Interventions included non-pharmacologic and pharmacologic (nifedipine, prazosin, prostaglandin E<sub>2</sub>, sildenafil, captopril, terazosin, doxazosin, phenoxybenzamine) management of AD, as well as preventative strategies to reduce episodes and symptoms of AD from common triggers</p> <p>Outcome measure: seated blood pressure (SBP), incidence of AD.</p> <p><b>Databases:</b> PubMed/MEDLINE</p>	<ol style="list-style-type: none"> <li>37 papers on the specific treatment of AD showed that nifedipine, prazosin, captopril and clonidine are candidates in the context of sexual activities.</li> <li>Prazosin, has an initial hypotensive effect requiring to begin treatment 12h before intercourse, which makes it less ideal for spontaneous sexual activities.</li> <li>Captopril has an initial hypotensive effect and was only studied in acute AD. Its usefulness in prophylaxis remains to be demonstrated.</li> <li>Clonidine has successfully been used clinically for decades, but never studied in randomized control trials.</li> <li>Nifedipine remains the most widely studied and significant treatment of AD whether in acute or prophylactic conditions. Recent concerns suggest increased cardiovascular risks with sublingual nifedipine in non-SCI populations, but negative long-term effects have not been reported in the SCI population.</li> </ol>