The studies reviewed dealt with different populations of patients with neuropathic pain with diagnoses including diabetes, stroke, tarsal tunnel syndrome and low back pain. Outcomes assessed were also different based upon the population and included pain, function, short-term disability, strength, range-of-motion, sensation, straight leg raise, functional reach and pain questionnaires. Neuropathic mobilization was shown to improve pain in those with sciatica and diabetic neuropathy and flexibility, range-of-motion and function in those with sciatica and stroke. Sensation was improved in patients with a diagnosis of tarsal tunnel syndrome.

**DISCUSSION AND CONCLUSION**

Overall there were positive affects to adding neural mobilization to other interventions for the patients populations that were included in the studies reviewed. It is not known if the effects were diagnosis-specific based upon this review. There were no adverse events reported in any of the studies, making neural mobilization a low risk intervention. Clinically, the addition of neural mobilization to standard physical therapy care should be added to patients with the diagnoses present in the studies reviewed. Various outcomes were affected based upon the diagnosis of the population studied. The exact mechanism for the improvements seen from neural mobilization is still unclear. Patients with lower extremity diagnoses are not at risk to be adversely affected in the physical therapy clinical interventions, such as neural mobilization, that are shown to benefit this condition are a welcomed addition to the physical therapy toolbox.

**REFERENCES**


**ACKNOWLEDGEMENTS**

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**CONTACT INFORMATION**

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**SUMMARY OF STUDIES**

<table>
<thead>
<tr>
<th>Study</th>
<th>PEDro Score</th>
<th>Subjects</th>
<th>Control Group</th>
<th>Experimental Group</th>
<th>Outcome Measures</th>
<th>Results</th>
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</thead>
<tbody>
<tr>
<td>1. Kumar</td>
<td>8/10</td>
<td>16 subjects</td>
<td>Treatment: 45 min.; standard care of glycemic control, diet advice and palliative care for neuropathic pain; gentle active movements, 25 min. walking to be done 5 times a week.</td>
<td>16 subjects</td>
<td>Vibration thresholds, straight-leg neurodynamic test</td>
<td>Improvements by both groups in all variables studied. Experimental group plus standard care was better than standard care alone in type II diabetes subjects with peripheral neuropathic pain.</td>
</tr>
<tr>
<td>2. Hyun-Kyu</td>
<td>7/10</td>
<td>10 subjects</td>
<td>Treatment: conservative physical therapy of the LE’s for two daily 30 min. sessions five times per week for four weeks.</td>
<td>10 subjects</td>
<td>Functional reach test</td>
<td>Sciatic nerve mobilization had a positive effect on functional improvement of the LE’s for the stroke patients. Improvements in neurodynamics in the intervention group. Improvement of knee joint angles and hamstring flexibility.</td>
</tr>
<tr>
<td>3. Ahmed</td>
<td>8/10</td>
<td>15 subjects</td>
<td>Physiotherapy only; TENs advice about sciatica, and either flexion or extension exercise as advised</td>
<td>15 subjects</td>
<td>Body diagram for location of symptoms</td>
<td>Nerve mobilization in combination with standard physiotherapy improved short-term disability, function, pain.</td>
</tr>
<tr>
<td>4. Kovács</td>
<td>8/10</td>
<td>14 subjects</td>
<td>Treatment: Muscles strengthening with tibia-band. Home exercise program for 6 weeks consisting of gastrocnemius-stretching, strengthening, ice application, bandaging, medial arch supports, and wedges as necessary.</td>
<td>14 subjects</td>
<td>VAS, ROM of the ankle and subtalar joint, strength of the foot muscles innervated by the tibial nerve 2-point discrimination, light touch, Tinel sign, tibial nerve stretch test, paresthesia</td>
<td>Improvements in ROM, strength, and pain. The addition of nerve mobilization did not enhance these outcomes. A decrease in Tinel’s test and 2-point discrimination in the study group implies that sensory parameters may benefit from nerve mobilization.</td>
</tr>
</tbody>
</table>

**METHODS**

The databases CINAHL complete, MEDLINE, Cochran Database of Controlled Reviews, SPORTDiscus, SocINDEX, Gale Virtual Reference Library, and Google Scholar were systematically searched using keywords related to neural mobilization and lower extremity pain. The search was limited to randomized controlled trials. The initial search provided 32 publications that were then screened by title and abstract, followed by an in-depth full text analysis, after which five articles still met the study criteria. Furthermore, the remaining articles were evaluated for quality using the PEDro scale, and one article was excluded. The resulting four articles were included in this review.