### Scientific Literature Overview
**Neuro-Rehabilitation**

<table>
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<tr>
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<td><strong>Place of origin</strong></td>
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#### Background

Objectives: To compare the relative efficacy of baclofen and self-applied transcutaneous electrical nerve stimulation (TENS) for the treatment of spasticity in the lower extremities in multiple sclerosis (MS).

#### Tested products

**Study design & methods**

**Randomized controlled clinical trial.**

**Subjects:** 52 patients with MS presenting muscle spasm in the leg (20-50 years of age).

**Methods:** patients were randomly allocated to receive a 4-week treatment course of either baclofen (10 mg twice daily, increasing over three weeks to 25 mg) or self-applied TENS (pulse width 250µs, frequency 100Hz, daily 20-30 min + during any episode of muscle spasm).

**Outcomes:** modified Ashworth scale (MAS) before and after 4 weeks of treatment.

#### Results

- Spasticity decreased in both groups.
  - In the TENS group, the mean MAS decreased from 1.77 at baseline to 0.73 at the 4-week follow-up ($P < 0.001$).
  - In the baclofen group, the mean (SD) MAS decreased from 1.73 to 1.15 at the 4-week follow-up ($P < 0.001$).
The mean difference in MAS score at the 4-week follow-up was significantly lower in the TENS group than the baclofen group (mean difference -0.42; P < 0.05).

### Conclusion

This study demonstrates that both baclofen and TENS can be effective in reducing MS-related spasticity. The mean MAS score was significantly lower in the TENS group. However given the side-effect profile of baclofen, TENS may have some benefits over baclofen.

### Key message

TENS decreased spasticity more than Baclofen and had no side effects.

### Pubmed

**Comparison of the effect of baclofen and transcutaneous electrical nerve stimulation for the treatment of spasticity in multiple sclerosis.**