Swelling is often present after an ankle sprain. Swelling can delay healing and reduce ankle function. The main goal of early treatment is to control swelling. One way to do this is with a special form of electrical stimulation (ES) called neuromuscular electrical stimulation (NMES).

NMES causes muscles to contract. The result is a mechanical pump that increases fluid and blood flow away from the injured ankle toward the heart. In this study, 34 patients with early ankle sprains were put into one of three groups.

Group one was treated with NMES. Group two had ES at a level too low to cause muscle contraction. Group three had a sham treatment (the setup was the same as the other two groups but no ES was given). Everyone was treated for 30 minutes for three days.

Ankle volume, size (girth), and function were measured before and after treatment. Measurements of the uninjured ankle were also taken for comparison.

No real difference was observed in ankle volume or function among the three groups. The NMES group had improved ankle girth between the first and third treatment sessions. Overall the NMES was not effective in reducing swelling after ankle sprain.

The authors remark that this was just one way to use and test NMES on patients with ankle sprain. More studies are needed using other treatment protocols with various NMES approaches before concluding that electrical stimulation is not effective treatment for ankle sprain.