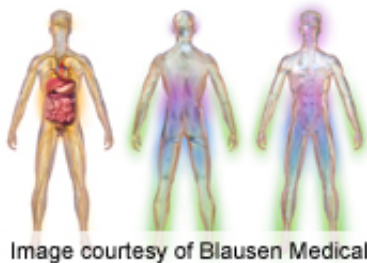


# Tibial nerve decompression doesn't cut cross-sectional area

January 7 2014

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(HealthDay)—For patients with painful diabetic polyneuropathy (DPN), surgical decompression of the tibial nerve has no effect on the mean cross-sectional area of the nerve, according to a study published online Dec. 30 in *Diabetes Care*.

It has been thought that the development of DPN may be due to swelling of the nerve and thickening of surrounding ligaments. With this in mind, Joanne F.M. Macaré van Maurik, M.D., from the University Medical Center Utrecht in the Netherlands, and colleagues conducted a [randomized trial](#) involved 42 subjects with painful DPN to examine the effect of surgical decompression of the tibial nerve on the mean cross-sectional area. Thirty-eight healthy subjects were included as controls. The mean cross-sectional area and thickness to width ratio of the tibial nerve, as well as the thickness of the flexor retinaculum, were measured

by an experienced sonographer.

The researchers found that, compared with controls, [patients](#) with painful DPN had a significantly larger tibial nerve cross-sectional area (8.4 versus 6.4 mm<sup>2</sup> P = 0.007), thickness to width ratio (0.64 versus 0.59; P = 0.03), and thicker retinaculum (1.1 versus 0.84 mm; P

"Although no effect on cross-sectional area after surgery was found, this study using ultrasound demonstrates a larger and swollen tibial nerve and thicker flexor retinaculum at the ankle in patients with diabetic polyneuropathy compared to healthy controls," the authors write.

The study was funded by NutsOhra.

**More information:** [Abstract](#)  
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