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[A comparative study between total contact cast and pressure-relieving ankle foot orthosis in diabetic neuropathic foot ulcers.](#)

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Abstract: Off-loading of the ulcer area is extremely important for the healing of plantar ulcers. Off-loading with total contact cast (TCC) may be superior to other off-loading strategies studied so far, but practical limitations can dissuade clinicians from using this modality. This study was conducted to evaluate the efficacy of TCC compared with that of a pressure-relieving ankle foot orthosis (PRAFO) in healing of diabetic neuropathic foot ulcers and their effect on gait parameters. Thirty adult diabetic patients attending the foot clinic with neuropathic plantar ulcers irrespective of sex, age, duration and type of diabetes were randomly assigned to 1 of 2 off-loading modalities (TCC and PRAFO). Main outcome measures were ulcer healing after 4 weeks of randomization and effect of each of the modalities on various gait parameters. The percentage reduction of the ulcer surface area at 4 weeks from baseline was 75.75 ± 9.25 with TCC and 34.72 ± 13.07 with PRAFO, which was significantly different ($P < .001$). The results of this study however, showed that most of the gait parameters were better with PRAFO than with TCC. This study comprehensively evaluated the well known advantages and disadvantages of a removable (PRAFO) and a nonremovable device (TCC) in the treatment of diabetic neuropathic foot ulcer. Further studies are needed involving larger subjects and using 3D gait analysis to collect more accurate data on gait parameters and wound healing with different off-loading devices.

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