

Plantar-pressure based orthoses reduce foot ulcer recurrence

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(HealthDay)—Patient-specific orthoses manufactured on the basis of foot shape and barefoot plantar pressure are better compared to those manufactured only on the basis of foot shape and clinical insight, according to a study published online April 23 in *Diabetes Care*.

Jan S. Ulbrecht, M.D., from Pennsylvania State University in University Park, and colleagues randomized patients to wear shape- and pressure-based orthoses (experimental; 66 patients) or standard-of-care A5513 orthoses (control; 64 patients). Over 15 months of follow-up, [patients](#) were assessed for a composite primary end point of forefoot plantar ulcer or nonulcerative plantar forefoot lesion.

The researchers observed a trend toward the composite primary end point in favor of the experimental orthoses. There was a significant

difference in ulcer occurrence ($P = 0.007$), but no difference in the rate of nonulcerative lesions ($P = 0.76$). The ulcer prevention benefit of the experimental orthoses was significant ($P = 0.003$) at 180 days. Over the study period, the hazard ratio was 3.4 for the occurrence of a submetatarsal head plantar ulcer in the control compared with experimental arm.

"We conclude that shape- and barefoot plantar pressure-based orthoses were more effective in reducing submetatarsal head plantar ulcer recurrence than current standard-of-care orthoses but they did not significantly reduce nonulcerative lesions," the authors write.

Several authors disclosed financial ties to the orthotic industry.

More information: [Abstract](#)
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