

The immediate effects of foot orthoses on functional performance in individuals with patellofemoral pain syndrome.

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Source

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Abstract

OBJECTIVE:

Patellofemoral pain syndrome (PFPS) often results in reduced functional performance. There is growing evidence for the use of foot orthoses to treat this multifactorial condition. In this study, the immediate effects of foot orthoses on functional performance and the association of foot posture and footwear with improvements in function were evaluated.

METHODS:

Fifty-two individuals with PFPS (18-35 years) were prescribed prefabricated foot orthoses (Vasyli Pro; Vasyli International, Labrador, Australia). Functional outcome measures evaluated included the change in (1) pain and (2) ease of a single-leg squat on a five-point Likert scale, and change in the number of (3) pain-free step downs and (4) single-leg rises from sitting. The association of foot posture using the Foot Posture Index, navicular drop and calcaneal angle relative to subtalar joint neutral; and the footwear motion control properties scale score with improved function were evaluated using Spearman's ρ statistics.

RESULTS:

Prefabricated foot orthoses produced significant improvements ($p < 0.05$) for all functional outcome measures. A more pronated foot type and poorer footwear motion control properties were found to be associated with reduced pain during the single-leg squat and improvements in the number of pain-free single-leg rises from sitting when wearing foot orthoses. In addition, a more pronated foot type was also found to be associated with improved ease of completing a single-leg squat when wearing foot orthoses.

CONCLUSION:

Prefabricated foot orthoses provide immediate improvements in functional performance, and these improvements are associated with a more pronated foot type and poorer footwear motion control properties.

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