



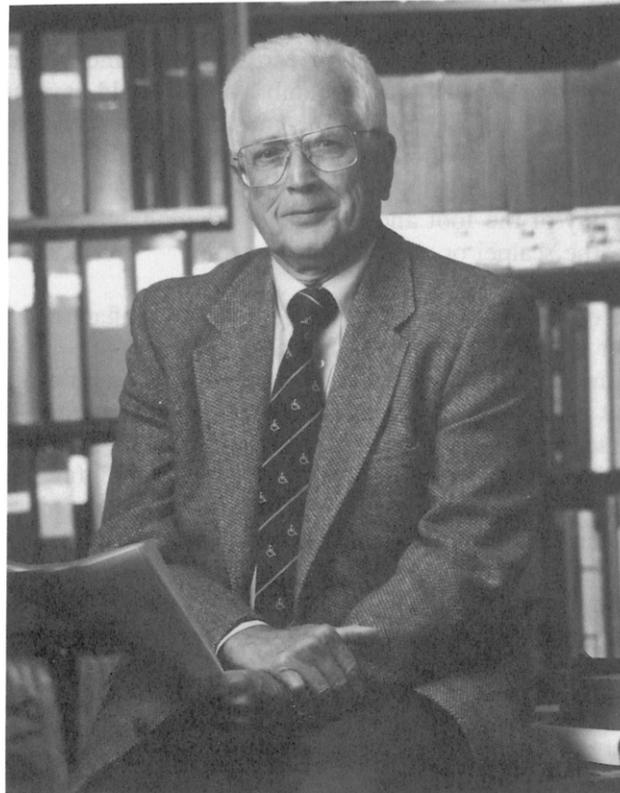
ELSEVIER

Journal of Back and Musculoskeletal Rehabilitation 5 (1995) 269–270

Journal of
Back and
Musculoskeletal
Rehabilitation

Foot Orthoses

The Runners' Frequent Bane and Rare Boon



Ernest W. Johnson

*Department of Physical Medicine and Rehabilitation, The Ohio State University, 370 West 9th Avenue, Columbus, OH
43210-1238, USA*

1053-8127/95/\$09.50 © 1995 Elsevier Science Ireland Ltd. All rights reserved.
SSDI 1053-8127(95) 00147-5

Definition: An overused, abused and misused device.

One misuse is “orthotic” as a noun when it’s an adjective!

Orthosis is the noun.

That is only a grammatical boo-boo. Much worse is the mal-use or should I say misuse of the Foot Orthosis (FO).

For example, prescribing a rigid orthotic device for pronation of the foot. All of us should understand Inman’s dictum that the hind foot is a kinetic right angle torque convertor—an essential for the fixed foot to accommodate for the lower limb rotation at the hip, knee and ankle by alternating pronation and supination during walking.

A rigid insert prevents this necessary flattening and restoring of the longitudinal arch.

Most of us should appreciate that lower limb length discrepancy has nothing to do with low back pain in spite of many “clinicians” recommending the 1/4” insert after measuring with a steel tape measure (ensuring accuracy, of course). It is axiomatic that repeated measurements of lower limbs by the same and different examiners rarely meet a mean difference of 2 centimeters—if that! Also, we would never correct the entire discrepancy, advising 50% at most.

Most physiatrists rapidly learn that any limb length discrepancy- even an inch would only manifest itself if the person stood at attention-military position. Most people stand with one limb bent at the knee or hip and feet in different positions so that varying limb lengths would have no effect on the back!

Runners have heel, foot, knee and hip pain. One must rule out a stress fracture. I’ve identified proximal femur, distal tibial and metatarsal bones as fracture sites. But if heel pain is dominant it is best characterized as plantar fasciitis and frequently causes the problem.

Many clinicians get an X-ray of the foot and then point triumphantly to the calcaneal anterior spur. They then either unsheathe the scalpel or refer to the surgeon.

A mistake!

The spur is not the cause of the pain but rather the result of the inflamed plantar fascia attachment at the periosteum—we prefer the term “plantar enthesitis.”

More rational treatment includes calf muscle stretching and perhaps, a flexible orthosis. In my opinion a heel cup rarely helps. But a heel well and a soft longitudinal arch support could give some comfort. More importantly, I recommend PRE (progressive exercises to the calf muscle by rising on toes with bar bells in the hands) which will produce a dense collagenous and non-painful scar.

I believe physicians who focus on function are best to treat running injuries. They understand the kinesiology of running and can help avoid more invasive treatments.

Mother Nature does best.

My advice to runners: Keep moving—running, walking or whatever.

Avoid doom sayers who caution “activity, eg. running, can cause injuries.” (Letter to Editor, JAMA, August 16, 1995, 274:533).

Minimize FO’s

E.W. Johnson, M.D.

* See editorial *Amer J. PM & R*, Sept-Oct 1995.