INTRODUCTION

The hammertoe is described as a digital deformity of the proximal interphalangeal joint in which the metatarsophalangeal joint is dorsiflexed, the proximal interphalangeal joint is plantarflexed and the distal interphalangeal joint is in a neutral or hyper-extended position. (McGlamry,1987; Sarrafian,1983; Root, Orien and Weed, 1977; Green and Brekke, 1996).

McGlamry (1987) describes the hammertoe as a syndrome in which … 'there is a loss of the normal delicate balance of power surrounding the lesser metatarsophalangeal joints'. Both McGlamry (1987) and Green and Brekke (1996) state that the pathomechanics of the hammer digit syndrome fall into three major categories:

1. Flexor stabilisation: These deformities occur in the pronated foot in the stance phase of gait and are associated with a weakness in the interossei. This weakness enables the flexor digitorum longus to exert a mechanical advantage at the proximal interphalangeal joint and deform the digits.
2. Flexor substitution: These deformities occur in the supinated foot during the late stance phase of gait, when weak triceps surei allow the long flexors to exert a mechanical advantage over the interossei and deform the digits.
3. Extensor substitution: This occurs during the swing phase of gait when weak lumbricals allow the extensor digitorum longus to gain a mechanical advantage and deform the digits.

This article centres on the development of hammer digit syndrome associated with a flexor substitution deformity of the digits.

Australasian Journal of Podiatric Medicine
2000; Vol 34, No.1 : 17-23

Correspondence: Jeff Peters, North Lake Medical Centre, Cnr Northlake Rd & McCoy St, Myaree WA 6154
Email: Jeff.Peters@health.wa.govt.au