

ASSOCIATION BETWEEN ELITE BASKETBALL PLAYERS AND FOOT PRONATION

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ABSTRACT

Basketball is a sport that involves repetitive landing, running and sideways cutting maneuvers. A variation in the landing mechanism and the associated GRF position in these players can influence their hind foot position, predisposing them to lower extremity injuries. To provide a better insight into the abnormalities in lower extremity mechanics there is a need to assess foot posture in basketball players. The objective of this study is to determine if any association exists between elite basketball players and their foot pronation. Convenience sample of 30 male and 30 female Elite basketball players playing for state and sixty age matched controls were recruited. The foot posture of all the participants was assessed using the foot posture index. It comprises of six components talar head palpation, curves above and below lateral malleoli, inversion and eversion of calcaneus in frontal plane, bulge in the region of talo-navicular joint, congruence of the medial longitudinal arch, adduction and abduction of fore-foot on rear foot. Each item is scored as - 2, -1, 0, +1, +2, where negative score indicates an increase in supination of the foot and a positive score indicates in pronation of the foot. A significant association was found between the individuals playing basket ball and hind foot pronation with a Pearson Chi Square of 21.176 at $p < 0.001$. An association exists between individuals playing basket ball and pronation of the foot. The individual components of FPI which measured hind-foot ,mid-foot and fore-foot also showed an increase in pronation.