

## **DOMINANT LIMB ASYMMETRY ASSOCIATED WITH PROSPECTIVE INJURY OCCURRENCE**

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### **ABSTRACT**

*The purpose of the study was to identify associations between dominant lower limb asymmetry in unanticipated agility performance and prospective injury occurrence. Female netball players (N=24) performed unanticipated 180° turn agility sprints on both the dominant and non-dominant legs interspersed with an additional straight running (no turn) task (5 trials per task), which were cued randomly using a visual monitor in the gait laboratory. A symmetry index was calculated for turn performance time over 2m for each netballer. Netball players were contacted regularly throughout the following six-month period for verification of any lower extremity injury experienced during their netball season. Pearson correlation coefficients with 90% confidence intervals were used to identify any associations between dominant limb asymmetry of greater than 10% for unanticipated agility performance and injury occurrence. Lower limb injury occurred in 37.5% (n=9/24) of the netball players. All injuries (100%) occurred in the netballer's dominant leg. A dominant limb asymmetry of greater than 10% in performance was identified for 57% (4/7) of the injured netball players and 14% (1/7) of the non-injured netball players. A moderate association of  $r=0.45$  (90% CI: -0.01 to 0.75) was identified between dominant limb asymmetry of greater than 10% and injury occurrence.*

**Key words:** Limb dominance; Turning performance; Prospective design; Netball.