

## QUADRICEP/HAMSTRING ASSESSMENT OF FEMALE FOOTBALLERS

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Although several studies have been done on isokinetic quadricep/hamstring assessment, there is very few data in female athletes. The purpose of this study was to provide reference data in female soccer high level athletes and to analyse quadriceps/hamstring ratio.

Isokinetic strength of the quadriceps and hamstring muscles was recorded in 18 young elite women football players (15 to 18 years old) using a Con-trex isokinetic dynamometer (Physiomed Elektromedizin, Schnaittach Germany) between june and september 2014.

We performed a database of concentric and eccentric peak torques for dominant (kicking leg) and non-dominant (supporting leg) lower limb.

Quadriceps/hamstrings ratio was obtained in using concentric quadriceps peak torque and eccentric hamstring peak torque.

We compared absolute peak torque and ratios between dominant and non-dominant leg, and variations with player position.

Mean quadriceps peak torque was  $97.3 \pm 7.4$  Nm for dominant leg vs  $99.6 \pm 8.1$  Nm for non-dominant leg. Mean hamstring peak torque was  $99.2 \pm 11.4$  vs  $102.7 \pm 9.0$  Nm.

Although differences were not statistically significant, we highlighted the non-dominant leg was stronger for majority of athletes (until 18% for quadriceps and 49% for hamstrings in some players). Furthermore offensive and defensive players had more strenght peak torque that goalkeepers and middle players.

Mean ratio was  $1.00 \pm 0.09$  for dominant leg vs  $0.99 \pm 0.08$  for non-dominant leg. No statistically difference was observed. Ratio was approximately equal between player position.

We may conclude that the mean ratio was approximately equal to 1 for those highly trained female athleted using for more than 2 years the 11+ FIFA protocol.