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SDC 4: Description of the isometric hip abduction and adduction strength testing manoeuvre and list of measures obtained from it.

Isometric hip abduction and adduction strength test

Isometric hip abduction and adduction peak torques of the dominant and non-dominant limb were assessed with a portable handheld dynamometer (Nicholas Manual Muscle Tester, Lafayette Indiana Instruments) in a supine lying position on a plinth with the participant's legs extended and following the methodology described by Thorborg et al. [1]. Briefly, participants performed five trials of 5-second isometric maximal voluntary contraction for each hip movement. The mean of the three most closely related trials were used for the subsequent statistical analyses. Unilateral hip abductor/adductor peak torque ratio defined as the hip adductor peak torque divided by hip abductor peak torque was calculated for each leg. Furthermore, the hip abduction and adduction bilateral ratios were also determined as the quotient of the dominant hip mean isometric peak value by the non-dominant hip mean isometric peak value. A side-to-side difference higher than 10% was defined as bilateral asymmetry.

Measures obtained from the isometric hip abduction and adduction strength test

Name	Labels	
	Dominant Leg	**Non-Dominant Leg**
PT_{ISOM}-HipAbd	<190.64, 190.64-217.625 or >217.625	<194.025, 194.025-222 or >222
PT_{ISOM}-HipAbd-Normalised	<2.555, 2.555-2.91 or >2.91	<2.655, 2.655-2.92 or >2.92
PT_{ISOM}-HipAdd	<191.575, 191.575-219.625 or >219.625	<187.75, 187.75-215.5 or >215.5
PT_{ISOM}-HipAdd-Normalised	<2.635, 2.635-2.965 or >2.965	<2.555, 2.555-2.905 or >2.905
UnRatio-ISOM-HipAbd/HipAdd	<0.956, 0.956-1.095 or >1.095	<0.92, 0.92-1.015 or >1.015
BilaRatio-PT_{ISOM}-HipAbd	No Asymmetry (<10%) or Asymmetry (≥10%)	
BilaRatio-PT_{ISOM}-HipAdd	No Asymmetry (<10%) or Asymmetry (≥10%)	

Bila: bilateral; Uni: unilateral; ISOM: isometric; PT: peak torque; Abd: abduction; Add: adduction.

Reference

1. Thorborg K, Petersen J, Magnusson SP, Hölmich P. Clinical assessment of hip strength using a hand-held dynamometer is reliable. *Scand J Med Sci Sports* 2010;20:493-501.