

Hip Strength Measurements Comparisons between PFPS and Controls

	Flexion	External Rotation	Internal Rotation	Abduction	Extension	Adduction
Ireland, 2003	NT	36% less strength than controls – tested in seated position	NT	26% less strength than controls	NT	NT
Piva 2005	NT	No difference in normalized strength (4% less strength than controls) - tested in prone	NT	No difference in normalized strength (14% less strength than controls) but can correctly classify 87% if used in multivariate stepwise discriminant analysis with gastroc length and soleus length	NT	NT
Cichanowki 2007	No significant difference in normalized strength between legs (.274±.07 versus .282±.06) but were weaker than controls (.274± .07 versus .329±.05)	Mean peak normalized strength significantly weaker than uninjured leg (.170±.04 versus .182 ±.04) – tested in seated position and weaker than controls (.170±.04 versus .201 ±.03)	No significant difference in normalized strength between legs (.179± .04 versus .190 ±.04) but were weaker than controls (.179±.04 versus .211 ±.03)	Mean peak normalized strength significantly weaker than uninjured leg (.290±.08 versus .330 ±.07) and weaker than controls (.290±.08 versus .368±.06)	No significant difference in normalized strength between legs (.304±.08 versus .309 ±.09) but were weaker than controls (.304±.08 versus .363±.05)	No significant difference in normalized strength between legs (.198±.07 versus .195±.04) or with controls (.198± .07 versus .236±.04)
Souza 2009	NT	NT	NT	14% less abductor strength	17% less extension strength	NT
Boling 2009	NT	Weaker average concentric ($F_{1,38} = 4.156$, $P = .048$) and eccentric ($F_{1,38} = 4.963$, $P = .032$) hip external rotation torque – tested in seated position	NT	Weaker than the control group for peak eccentric hip abduction torque ($F_{1,38} = 6.630$, $P = .014$)	No significant difference	NT
Dierks 2008	NT	No significant difference	NT	Lower strength (kg x cm/body mass) compared to controls (PFPS: begin 15.3, end 13.5, Uninjured: begin 17.3, end 15.4), Strong association between hip abduction strength and peak hip adduction angle at end of run	NT	NT
Robinson 2007	NT	30% less hip ER strength normalized to body mass compared to weaker limbs of control subjects	NT	27% less hip abduction strength normalized to body mass compared to weaker limbs of control subjects	52% less hip extension strength normalized to body mass compared to weaker limbs of control subjects	NT
Cowan 2009	NT	No difference	NT	No difference	NT	NT
Wilson 2008	NT	15% weaker in hip ER than control group	NT	15% weaker in hip abduction than control group	NT	NT