

HIP FACTS FROM THE LITERATURE #92

dr.alisongrimaldi.com

THE WEIGHTED ISOMETRIC COPENHAGEN ADDUCTION EXERCISE GENERATES LARGE ADDUCTOR TORQUES



Long Lever Squeeze (LLS)



Isometric Copenhagen Adduction Exercise (ICAE)



Weighted ICAE

Torque comparisons between LLS, ICAE & Weighted ICAE:

	LLS	ICAE	Weighted Isometric CAE				
			+5%BW	+10%BW	+20%BW	+30%BW	+50%BW
Torque Nm/kg	2.1	3.1	3.4	3.6	3.9	4.3	5.1
% increase rel to max LLS	-	47%	57%	67%	84%	100%	136%

ADD: Adduction; BW: Bodyweight; rel: relative

Be aware of the loads imposed by the CAE across the groin

Groin injury is a very impactful condition in sports, and yet we still have poor levels of evidence to help us understand the nature of the associated deficits and how best to approach rehabilitation. Which exercises are best?

The standard Copenhagen Adduction Exercise is a commonly prescribed exercise. This paper describes a weighted version i.e. bodyweight + additional external weight, and the amount of load that various levels place across the adductors and the anterior pelvis.

The weighted isometric Copenhagen Adduction exercise generates large hip adductor torques. Compare these torques to a maximal long lever isometric adductor squeeze. Large torques can be useful for strengthening but the risk of injury also increases, so apply such exercises with caution or consider alternatives, particularly where there are concerns about injury to the pubic aponeurosis or pubic symphysis. Select exercises and progressions appropriately for your patient.

Connor CO, Coyle E, Intyre MM, Delahunt E, Thorborg K. A comparison of force generation in isometric hip adductor strength exercises: Introducing the weighted isometric Copenhagen Adduction exercise. Phys Ther Sport. 2025 Mar;72:46-52.