

# The Cross-Education Effect

## Resources



### Designing Cross-Education Interventions

#### Volume

~ 250 reps / 4 weeks (healthy)  
~ 300 - 400+ / 8 weeks (clinical) ..?

#### Intensity

High Load, Low Reps (3 -5 RM) + rest

#### Contraction Type

Eccentric... Isotonic ... Isometric

# The Cross-Education Effect

## Resources



### Reading

Farthing et al (2009) Strength training the free limb attenuates strength loss during unilateral immobilization. *J Appl Physiol* 106: 830–836

LINK: <https://journals.physiology.org/doi/full/10.1152/jappphysiol.91331.2008>



### Selected References

Carr et al (2019). The time course of cross-education during short-term isometric strength training *Eur J Appl Physiol*. 119(6):1395-1407

Kidgell et al. (2015). Increased cross-education of muscle strength and reduced corticospinal inhibition following eccentric strength training. *Neuroscience* 300; 566–575

Manca et al. (2017) . Cross-education of muscular strength following unilateral resistance training: a meta-analysis. *Eur J Appl Physiol*; 117(11):2335-2354

Minshull et al. (2020) Contralateral strength training improves muscle performance but not function following anterior cruciate ligament (ACL) reconstruction; a randomised-controlled trial. (Under review)

Zult T, Gokeler A, van Raay JJAM, et al. (2018) Cross-education does not accelerate the rehabilitation of neuromuscular functions after ACL reconstruction: a randomized

# The Cross-Education Effect



Notes