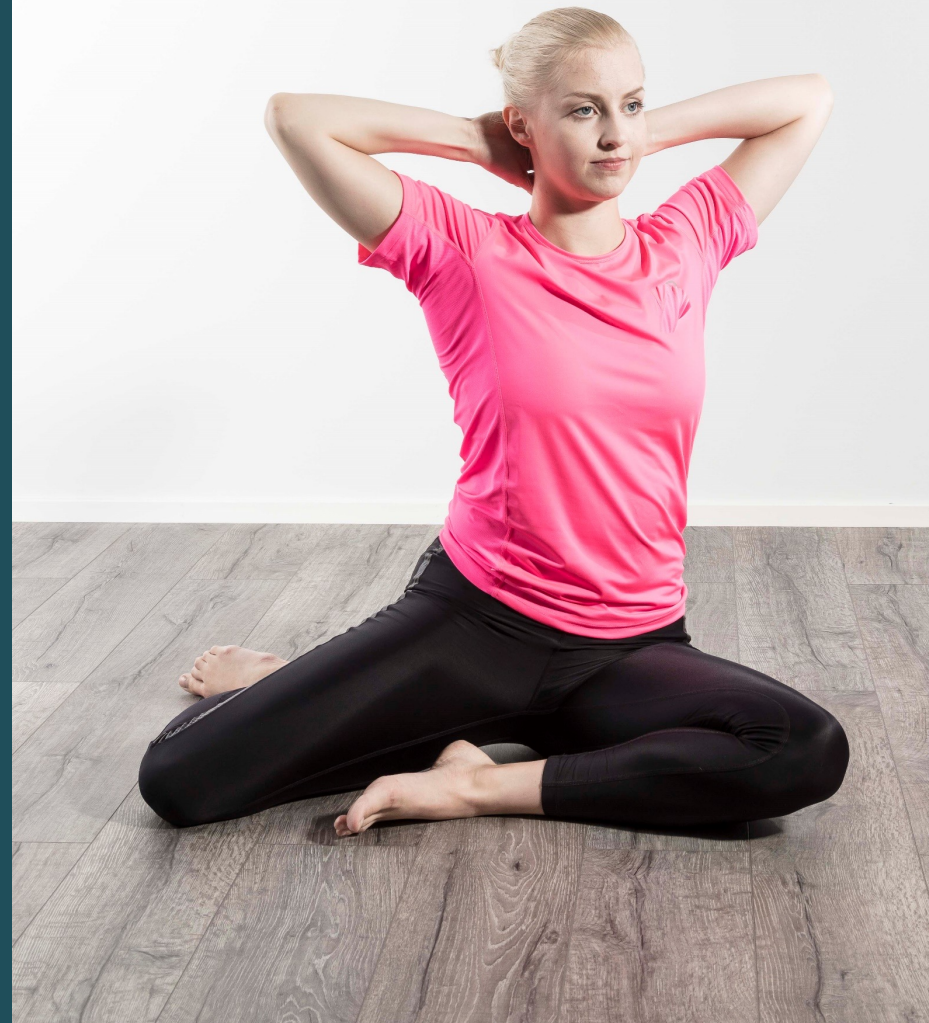


Liikkuvuus- tutkimuksia

EXERCISE
MASTER



Tieteellisiä tutkimuksia (A-B)



Alizadeh, S. ym. (2023) Resistance training induces improvements in range of motion: A systematic review and meta-analysis. *Sports Medicine Jan 2023*.

Andrade R.J., ym.. (2018) The potential role of sciatic nerve stiffness in the limitation of maximal ankle range of motion. *Scientific Reports 8*, 14532.

Andrade R.J., ym. (2020) Chronic effects of muscle and nerve-directed stretching on tissue mechanics. *Journal of Applied Physiology 129*, 1011-1023.

Ayala F & de Baranda Andujar PS (2010) Effect of 3 different active stretch durations on hip flexion range of motion. *J Strength Cond Res. Feb 2010;24(2):430–436*.

Bandy W, **Dirion** JM & **Briggler** M (1997) The effect of time and frequency of static stretching on flexibility of the hamstring muscles. *Phys Ther. Oct 1997;77(10):1090–1096*.

Behm D. (2018) *The Science and Physiology of Flexibility and Stretching: Implications and Applications in Sport Performance and Health*. 1st edition. Routledge.

Behm D., **Blazevich** A.J., **Kay** A.D., **McHugh** M. (2016) Acute effects of muscle stretching on physical performance, range of motion, and injury incidence in healthy active individuals: a systematic review. *Applied Physiology, Nutrition, and Metabolism 41*, 1-11.

Behm D. ym. (2004) Effect of acute static stretching on force, balance, reaction time, and movement time. *Med Sci Sports Exerc. Aug 2004;36(8):1397–1402*.

Behm D, **Button** DC & **Butt** JC (2001) Factors affecting force loss with prolonged stretching. *Can J Appl Physiol. 2001;26(3):262–272*.

Behm D & **Kibele** A (2007) Effects of differing intensities of static stretching on jump performance. *Eur J Appl Physiol. Nov 2007;101(5):587–594*.

Ben M & **Harvey** LA (2010) Regular stretch does not increase muscle extensibility: a randomized controlled trial. *Scandinavian journal of medicine & science in sports. Feb 2010;20(1):136–144*.

Brandenburg JP (2010) Duration of stretch does not influence the degree of force loss following static stretching. *J Sports Med Phys Fitness. Dec 2006;46(4):526–534*.

Tieteellisiä tutkimuksia (C-E)



Caplan N ym. (2009) The effect of proprioceptive neuromuscular facilitation and static stretch training on running mechanics. *J Strength Cond Res.* Jul 2009;23(4):1175–1180.

Ce E ym. (2008) Effects of stretching on maximal anaerobic power: the roles of active and passive warm-ups. *J Strength Cond Res.* May 2008;22(3):794–800.

Cipriani DA, **Bel** B & **Pirrwitz** D (2003) A comparison of two stretching protocols on hip range of motion: implications for total daily stretch duration. *J Strength Cond Res.* May 2003;17(2):274–278.

Coppieters M.W., **Hough** A.D., **Dilley** A. (2009) Different nerve-gliding exercises induce different magnitudes of median nerve longitudinal excursion: an in vivo study using dynamic ultrasound imaging. *Journal of Orthopaedic & Sports Physical Therapy* 39, 164-171.

Curry BS ym. (2009) Acute effects of dynamic stretching, static stretching, and light aerobic activity on muscular performance in women. *J Strength Cond Res.* Sep 2009;23(6):1811–1819

Dalrymple K (2010) Effect of static and dynamic stretching on vertical jump performance in collegiate women volleyball players. *J Strength Cond Res.* Jan 2010;24(1):149–155.

Davis DS (2005) The effectiveness of 3 stretching techniques on hamstring flexibility using consistent stretching parameters. *J Strength Cond Res.* Feb 2005;19(1): 27–32.

Dilley A., **Summerhayes** C., **Lynn** B. (2007) An in vivo investigation of ulnar nerve sliding during upper limb movements. *Clin Biomech* 22, 774-779.

Ellis R., **Hing** W., **Dilley** A., **McNair** P. (2008) Reliability of Measuring Sciatic and Tibial Nerve Movement with Diagnostic Ultrasound During a Neural Mobilisation Technique. *Ultrasound in Medicine & Biology* 34, 1209-1216.

Tieteellisiä tutkimuksia (F-H)



Fasen JM ym. (2009) A randomized controlled trial of hamstring stretching: comparison of four techniques. *J Strength Cond Res.* Mar 2009;23(2):660–667.

Feland JB & Marin HN (2004) Effect of submaximal contraction intensity in contract-relax proprioceptive neuromuscular facilitation stretching. *Br J Sports Med.* Aug 2004;38(4):E18.

Feland JB, Myrer JW & Merrill RM (2001) Acute changes in hamstring flexibility: PNF versus static stretch in senior athletes. *Physical Therapy in Sport.* 2001;2(4):186–193.

Ferber R, Gravelle DC & Osternig LR (2002) Effect of proprioceptive neuromuscular facilitation stretch techniques on trained and untrained older adults. *Journal of aging and physical activity.* 2002;10:132–142.

Fletcher IM & Anness R (2007) The acute effects of combined static and dynamic stretch protocols on fifty-meter sprint performance in track-and-field athletes. *J Strength Cond Res.* Aug 2007;21(3):784–787.

Ferreira GN, Teixeira-Salmela LF & Guimaraes CQ (2007) Gains in flexibility related to measures of muscular performance: impact of flexibility on muscular performance. *Clin J Sport Med.* Jul 2007;17(4):276–281.

Ford P & McChesney J (2007) Duration of maintained hamstring ROM following termination of three stretching protocols. *J Sport Rehabil.* Feb 2007;16(1):18–27.

Guissard N., Duchateau J., Hainaut K. (2001) Mechanisms of decreased motoneurone excitation during passive muscle stretching. *Experimental Brain Research* 137, 163-169.

Herman SL & Smith DT (2008) Four-week dynamic stretching warm-up intervention elicits longer-term performance benefits. *J Strength Cond Res.* Jul 2008;22(4):1286–1297.

Tieteellisiä tutkimuksia (K-L)



Katalinic OM ym. (2010) Stretch for the treatment and prevention of contractures. Cochrane Database Syst Rev. 2010(9):CD007455.

Kay AD &Blazevich AJ (2010) Concentric muscle contractions before static stretching minimize, but do not remove, stretch-induced force deficits. J Appl Physiol. Mar 2010;108(3):637–645

Kistler BM, ym. (2010) The acute effects of static stretching on the sprint performance of collegiate men in the 60- and 100-m dash after a dynamic warm-up. J Strength Cond Res. Sep 2010;24(9):2280–2284

Kruse N.T., Scheuermann B.W. (2017) Cardiovascular Responses to Skeletal Muscle Stretching: “Stretching” the Truth or a New Exercise Paradigm for Cardiovascular Medicine? Sports Medicine 47(12), 2507-2520.

Lee J.H., Kim T.H. (2017) The treatment effect of hamstring stretching and nerve mobilization for patients with radicular lower back pain. The Journal of Physical Therapy Science 29, 1578-1582.

Lizis P., Kobza W., Manko G., Jaszczur-Nowicki J., Perlinski J., Para B. (2020) Cryotherapy With Mobilization Versus Cryotherapy With Mobilization Reinforced With Home Stretching Exercises in Treatment of Chronic Neck Pain: A Randomized Trial. Journal of Manipulative and Physiological Therapeutics 43, 197-205.

Tieteellisiä tutkimuksia (M-N)



Mahan M.A., Warner W.S., Yeoh S., Light A. (2019) Rapid-stretch injury to peripheral nerves: implications from an animal model. *Journal of Neurosurgery* 4, 1-11.

Mahan M.A., Yeoh S., Monson K., Light A. (2020) Rapid Stretch Injury to Peripheral Nerves: Biomechanical Results. *Neurosurgery* 86(3), 437-445.

Manoel ME ym. (2008) Acute effects of static, dynamic, and proprioceptive neuromuscular facilitation stretching on muscle power in women. *J Strength Cond Res.* Sep 2008;22(5):1528–1534

Marek SM ym. (2005) Acute Effects of Static and Proprioceptive Neuromuscular Facilitation Stretching on Muscle Strength and Power Output. *J Athl Train.* Jun 2005;40(2):94–103

McHugh MP & **Cosgrave** CH (2010) To stretch or not to stretch: the role of stretching in injury prevention and performance. *Scandinavian journal of medicine & science in sports.* Apr 2010;20(2):169–181.

McHugh MP & **Nesse** M (2008) Effect of stretching on strength loss and pain after eccentric exercise. *Med Sci Sports Exerc.* Mar 2008;40(3):566–573

McMillian DJ (2006) Dynamic vs. static-stretching warm up: the effect on power and agility performance. *J Strength Cond Res.* Aug 2006;20(3):492–499

Mitchell UH (2007) Acute stretch perception alteration contributes to the success of the PNF “contract-relax” stretch. *J Sport Rehabil.* May 2007;16(2):85–92’

Nelson AG, **Kokkonen** J & **Arnall** DA (2005) Acute muscle stretching inhibits muscle strength endurance performance. *J Strength Cond Res.* May 2005;19(2):338–343

Nordez A., Gross R., Andrade R., Le Sant G., Freitas S., Ellis R., McNair P.J., Hug F. (2017) Non-Muscular Structures Can Limit the Maximal Joint Range of Motion during Stretching. *Sports Medicine* 47(10), 1925-1929.

Tieteellisiä tutkimuksia (O-S)



O'Sullivan K, Murray E & Sainsbury D (2009) The effect of warm-up, static stretching and dynamic stretching on hamstring flexibility in previously injured subjects. *BMC Musculoskelet Disord.* 2009;10:37.

Page, P. (2012) Current concepts in muscle stretching for exercise and rehabilitation. *Int J Sports Phys Ther.* 2012 Feb; 7(1): 109–119.

Page P, Frank CC & Lardner R (2010) Assessment and treatment of muscle imbalance: The Janda Approach. Champaign, IL: Human Kinetics; 2010

Power K ym. (2004) An acute bout of static stretching: effects on force and jumping performance. *Med Sci Sports Exerc.* Aug 2004;36(8):1389–1396

Robbins JW & Scheuermann BW (2008) Varying amounts of acute static stretching and its effect on vertical jump performance. *J Strength Cond Res.* May 2008;22(3):781–786

Small K ym. (2008) A systematic review into the efficacy of static stretching as part of a warm-up for the prevention of exercise-related injury. *Res Sports Med.* Jul 2008;16(3):213–231.

Sayers AL ym. (2008) The effect of static stretching on phases of sprint performance in elite soccer players. *J Strength Cond Res.* Sep 2008;22(5):1416–1421

Sekir U ym. (2010) Acute effects of static and dynamic stretching on leg flexor and extensor isokinetic strength in elite women athletes. *Scandinavian journal of medicine & science in sports.* Apr 2010;20(2):268–281

Siatras TA ym. (2008) The duration of the inhibitory effects with static stretching on quadriceps peak torque production. *J Strength Cond Res.* Jan 2008;22(1):40–46

Tieteellisiä tutkimuksia (T-Y)



Taylor DC ym. (1990) Viscoelastic properties of muscle-tendon units. The biomechanical effects of stretching. *Am J Sports Med.* May-Jun 1990;18(3):300–309

Taylor KL ym. (2009) Negative effect of static stretching restored when combined with a sport specific warm-up component. *J Sci Med Sport.* Nov 2009;12(6):657–661

Thacker SB ym. (2004) The impact of stretching on sports injury risk: a systematic review of the literature. *Med Sci Sports Exerc.* Mar 2004;36(3):371–378.

Thomas E ym. (2021) Peripheral Nerve Responses to Muscle Stretching: A Systematic Review. *J Sports Sci Med.* Jun 20(2): 258-267.

Thomas E., Bianco A., Paoli A., Palma A. (2018) The Relation Between Stretching Typology and Stretching Duration: The Effects on Range of Motion. *International Journal of Sports Medicine* 39, 243-254.

Weppler C.H., Magnusson S.P. (2010) Increasing muscle extensibility: a matter of increasing length or modifying sensation? *Physical Therapy* 90, 438-49.

Wilson JM ym. (2010) Effects of static stretching on energy cost and running endurance performance. *J Strength Cond Res.* Sep 2010;24(9):2274–2279

Yamaguchi T & Ishii K (2005) Effects of static stretching for 30 seconds and dynamic stretching on leg extension power. *J Strength Cond Res.* Aug 2005;19(3):677–683

Ylinen J ym. (2009) Effect of stretching on hamstring muscle compliance. *J Rehabil Med.* Jan 2009;41(1):80–84

Youdas JW ym. (2010) The efficacy of two modified proprioceptive neuromuscular facilitation stretching techniques in subjects with reduced hamstring muscle length. *Physiother Theory Pract.* May 2010;26(4):240–250

Young W ym. (2004) Acute effects of static stretching on hip flexor and quadriceps flexibility, range of motion and foot speed in kicking a football. *J Sci Med Sport.* Mar 2004;7(1):23–31

Young W, Elias G & Power J (2006) Effects of static stretching volume and intensity on plantar flexor explosive force production and range of motion. *J Sports Med Phys Fitness.* Sep 2006;46(3):403–411

Yuktasir B & Kaya F (2009) Investigation into the long-term effects of static and PNF stretching exercises on range of motion and jump performance. *J Bodyw Mov Ther.* Jan 2009;13(1):11–21