

Exercise-Based Knee Injury Prevention Clinical Practice Guidelines

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The following is the reference list of all included articles in the forthcoming Exercise-Based Knee Injury Prevention Clinical Practice Guidelines. The guideline is organized into four sections to fulfill the following objectives:

- Review the evidence in the scientific literature for exercise-based knee injury prevention programs.
- Identify exercise-based knee injury prevention programs that are effective for specific sub-groups of athletes.
- Describe the evidence for the components, dosage and delivery of exercise-based knee injury prevention programs.
- Provide suggestions for implementing exercise-based knee injury prevention programs

Review the evidence in the scientific literature for exercise-based knee injury prevention programs

Donnell-Fink, L. A., Klara, K., Collins, J. E., et al. Effectiveness of knee injury and anterior cruciate ligament tear prevention programs: A meta-analysis. PLoS ONE 2015;10(12):e0144063. <http://dx.doi.org/10.1371/journal.pone.0144063>

Gagnier, J. J., Morgenstern, H. and Chess, L. Interventions designed to prevent anterior cruciate ligament injuries in adolescents and adults: A systematic review and meta-analysis. Am J Sports Med 2013;41(8):1952.

Sadoghi, P., von Keudell, A. and Vavken, P. Effectiveness of anterior cruciate ligament injury prevention training programs. J Bone Joint Surg 2012;94(9):769.

Identify exercise-based knee injury prevention programs that are effective for specific sub-groups of athletes

Achenbach, L., Krutsch, V., Weber, J., et al. Neuromuscular exercises prevent severe knee injury in adolescent team handball players. Knee Surg Sports Traumatol Arthrosc 2017;<http://dx.doi.org/10.1007/s00167-017-4758-5>

Alentorn-Geli, E., Mendiguchia, J., Samuelsson, K., et al. Prevention of non-contact anterior cruciate ligament injuries in sports. Part ii: Systematic review of the effectiveness of prevention programmes in male athletes. Knee Surg Sports Traumatol Arthrosc 2014;22(1):16-25. <http://dx.doi.org/10.1007/s00167-013-2739-x>

Caraffa, A., Cerulli, G., Projetti, M., Aisa, G. and Rizzo, A. Prevention of anterior cruciate ligament injuries in soccer. Knee Surg Sports Traumatol Arthrosc 1996;4(1):19.

Gilchrist, J., Mandelbaum, B. R., Melancon, H., et al. A randomized controlled trial to prevent non contact anterior cruciate ligament injury in female collegiate soccer players. Am J Sports Med 2008;36(8):1476.

Grimm, N. L., Jacobs, J. C., Jr., Kim, J., Denney, B. S. and Shea, K. G. Anterior cruciate ligament and knee injury prevention programs for soccer players: A systematic review and meta-analysis. Am J Sports Med 2015;43(8):2049-2056. <http://dx.doi.org/10.1177/0363546514556737>

Grimm, N. L., Shea, K. G., Leaver, R. W., Aoki, S. K. and Carey, J. L. Efficacy and degree of bias in knee injury prevention studies: A systematic review of rcts sports. *Clin Orthop Rel Res* 2013;471(1):308.

Hewett, T. E., Lindenfeld, T. N., Riccobene, J. V. and Noyes, F. R. The effect of neuromuscular training on the incidence of knee injury in female athletes. A prospective study. *Am J Sports Med* 1999;27(6):699.

Kiani, A., Hellquist, E., Ahlqvist, K., Gedeberg, R., Michaelsson, K. and Byberg, L. Prevention of soccer-related knee injuries in teenaged girls. *Arch Intern Med* 2010;170(1):43-49.
<http://dx.doi.org/10.1001/archinternmed.2009.289>

Mandelbaum, B. R., Silvers, H. J., Watanabe, D. S., et al. Effectiveness of a neuromuscular and proprioceptive training program in preventing anterior cruciate ligament injuries in female athletes: 2-year follow-up. *Am J Sports Med* 2005;33(7):1003.

Michaelidis, M. and Koumantakis, G. A. Effects of knee injury primary prevention programs on anterior cruciate ligament injury rates in female athletes in different sports: A systematic review. *Phys Ther Sport* 2014;15(3):200.

Myer, G. D., Ford, K. R., Brent, J. L. and Hewett, T. E. Differential neuromuscular training effects on acl injury risk factors in "high-risk" versus "low-risk" athletes. *BMC Musculoskelet Disord* 2007;8(39). <http://dx.doi.org/1471-2474-8-39>

Myer, G. D., Sugimoto, D., Thomas, S. and Hewett, T. E. The influence of age on the effectiveness of neuromuscular training to reduce anterior cruciate ligament injury in female athletes: A meta-analysis. *Am J Sports Med* 2013;41(1):203.
<http://dx.doi.org/10.1177/0363546512460637>

Myklebust, G., Engebretsen, L., Braekken, I., Skjolberg, A., Olsen, O. and Bahr, R. Prevention of anterior cruciate ligament injuries in female team handball players: A prospective intervention study over three seasons. *Scand J Med Sci Sports* 2003;13(4):272.

Olsen, O.-E., Myklebust, G., Engebretsen, L., Holme, I. and Bahr, R. Exercises to prevent lower limb injuries in youth sports: Cluster randomised controlled trial. *BMJ* 2005;330(7489):449.
<http://dx.doi.org/10.1136/bmj.38330.632801.8F>

Pfeiffer, R. P., Shea, K. G., Roberts, D. and Grandstrand, S. Lack of effect of a knee ligament injury prevention program on the incidence of noncontact anterior cruciate ligament injury. *J Bone Joint Surg* 2006;88A(8):1769.

Stevenson, J. H., Beattie, C. S., Schwartz, J. B. and Busconi, B. D. Assessing the effectiveness of neuromuscular training programs in reducing the incidence of anterior cruciate ligament injuries in female athletes: A systematic review. *Am J Sports Med* 2015;43(2):482.

Taylor, J. B., Waxman, J. P., Richter, S. J. and Shultz, S. J. Evaluation of the effectiveness of anterior cruciate ligament injury prevention programme training components: A systematic review and meta-analysis Br J Sports Med 2013;49(79-87). <http://dx.doi.org/10.1136/bjsports-2013-092358>

Walden, M., Atroshi, I., Magnusson, H., Wagner, P. and Hgglund, M. Prevention of acute knee injuries in adolescent female football players: Cluster randomised controlled trial. BMJ: Br Med J 2012;344(7858):16. <http://dx.doi.org/10.1136/bmj.e3042>

Yoo, J. H., Lim, B. O., Ha, M., et al. A meta-analysis of the effect of neuromuscular training on the prevention of the anterior cruciate ligament injury in female athletes. Knee Surg Sports Traumatol Arthrosc 2010;18(6):824.

Describe the evidence for components, dosage and delivery of exercise-based knee injury prevention programs

Hagglund, M., Atroshi, I., Wagner, P. and Walden, M. Superior compliance with a neuromuscular training programme is associated with fewer acl injuries and fewer acute knee injuries in female adolescent football players: Secondary analysis of an rct. Br J Sports Med 2013;47(15):974. <http://dx.doi.org/10.1136/bjsports-2013-092644>

Sugimoto, D., Myer, G., Barber Foss, K. and Hewett, T. Dosage effects of neuromuscular training intervention to reduce anterior cruciate ligament injuries in female athletes: Meta- and sub-group analyses. Sports Med 2014;44(4):551.

Sugimoto, D., Myer, G. D., Barber Foss, K. D., Pepin, M. J., Micheli, L. J. and Hewett, T. E. Critical components of neuromuscular training to reduce acl injury risk in female athletes: Meta-regression analysis. Br J Sports Med 2016;50(20):1259-1266. <http://dx.doi.org/10.1136/bjsports-2015-095596>

Sugimoto, D., Myer, G. D., Bush, H. M., Klugman, M. F., McKeon, J. M. M. and Hewett, T. E. Compliance with neuromuscular training and anterior cruciate ligament injury risk reduction in female athletes: A meta-analysis. J Athl Train 2012;47(6):714.

Sugimoto, D., Myer, G. D., Foss, K. D. B. and Hewett, T. E. Specific exercise effects of preventive neuromuscular training intervention on anterior cruciate ligament injury risk reduction in young females: Meta-analysis and subgroup analysis. Br J Sports Med 2015;49(5):282.

Sugimoto, D., Myer, G. D., McKeon, J. M. and Hewett, T. E. Evaluation of the effectiveness of neuromuscular training to reduce anterior cruciate ligament injury in female athletes: A critical review of relative risk reduction and numbers-needed-to-treat analyses. Br J Sports Med 2012;46(14):979.

Provide suggestions for implementing exercise-based knee injury prevention programs.

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Lewis, D. A., Kirkbride, B., Vertullo, C. J., Gordon, L. and Comans, T. A. Comparison of four alternative national universal anterior cruciate ligament injury prevention programme implementation strategies to reduce secondary future medical costs. *Br J Sports Med* 2016:<http://dx.doi.org/10.1136/bjsports-2016-096667>

Pfile, K. R. and Curioz, B. Coach-led prevention programs are effective in reducing anterior cruciate ligament injury risk in female athletes: A number-needed-to-treat analysis. *Scand J Med Sci Sports* 2017:<http://dx.doi.org/10.1111/sms.12828>

Swart, E., Redler, L., Fabricant, P. D., Mandelbaum, B. R., Ahmad, C. S. and Wang, Y. C. Prevention and screening programs for anterior cruciate ligament injuries in young athletes: A cost-effectiveness analysis. *J Bone Joint Surg* 2014;96(9):705.
<http://dx.doi.org/10.2106/jbjs.m.00560>

van Beijsterveldt, A. M., Krist, M. R., Schmikli, S. L., et al. Effectiveness and cost-effectiveness of an injury prevention programme for adult male amateur soccer players: Design of a cluster-randomised controlled trial. *Inj Prev* 2011;17(1):e2. <http://dx.doi.org/10.1136/ip.2010.027979>