

# Effectiveness of orthotic interventions on reducing genu recurvatum in adults post-stroke

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## References:

1. Bleyenheuft, C., Bleyenheuft, Y., Hanson, P., & Deltombe, T. Treatment of genu recurvatum in hemiparetic adult patients: A systematic literature review. *Annals of Physical and Rehabilitation Medicine*, 2010; 53(3), 189-199.
2. Geerars, M., Minnaar-van der Feen, N., & Huisstede, Bionka M.A. Treatment of knee hyperextension in post-stroke gait. A systematic review. *Gait & Posture*: 2022; 91: 137-148.
3. Fish, Deanna J. MS, CPO; Kosta, Cheryl S. PT Genu Recurvatum: Identification of Three Distinct Mechanical Profiles, *JPO Journal of Prosthetics and Orthotics*: 1998; 10(2): 26-32.
4. Cooper, A., Alghamdi, G. A., Alghamdi, M. A., Altowaijri, A., & Richardson, S. The relationship of lower limb muscle strength and knee joint hyperextension during the stance phase of gait in hemiparetic stroke patients. *Physiotherapy research international: the journal for researchers and clinicians in physical therapy*, 2012; 17(3), 150–156.
5. Boudarham, J., Zory, R., Genet, F., Vigné, G., Bensmail, D., Roche, N., & Pradon, D. Effects of a knee-ankle-foot orthosis on gait biomechanical characteristics of paretic and non-paretic limbs in hemiplegic patients with genu recurvatum. *Clinical biomechanics (Bristol, Avon)*: 2013; 28(1): 73–78.
6. Dong-Yun Bae, Jong-Hwa Shin, & Ju-Seung Kim. Effects of dorsiflexor functional electrical stimulation compared to an ankle/foot orthosis on stroke-related genu recurvatum gait. *Journal of Physical Therapy Science*, 2019; 31(11), 865-868.
7. Kobayashi, T., Orendurff, M. S., Singer, M. L., Gao, F., Daly, W. K., & Foreman, K. B. Reduction of genu recurvatum through adjustment of plantarflexion resistance of an articulated ankle-foot orthosis in individuals post-stroke. *Clinical biomechanics (Bristol, Avon)*: 2016; 35, 81–85.