# Biomechanical Principles of Common Orthotic Treatment Concepts for Gait Problems in Cerebral Palsy – A Critical Consideration

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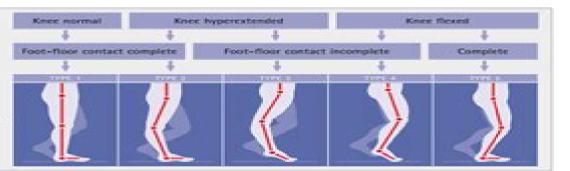
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#### Alims

The major goal of an orthotic treatment in cerebral palsy (CP) is to come closer to a physiological gait. An ankle foot orthoxis (AFO) prepares the foot for initial contact, enables stability and supports the ankle's push-off, it should have a positive effect on therapy, reduce energy consumption and must not lock residual physiological motion.

The Amsterdam Gait Classification evaluates knee position and Soot-Boor contact in mid stance in order to determine the requirements for an orthotic breatment.

Respecting the gait types of the Amsterdam Gait Classification, a detailed consideration of existing APO types should indicate whether all requirements for an effective orthotic treatment can be met.



#### Methods

The effects of common APOs are evaluated. The basic goals of an orthotic treatment result from the Amsteedam Gait Classification: plantar flexion and foot-floor contact, physiological knee extension and push-off as well as ability to adapt to the gait type. Certain biomechanical features of an orthosis help to achieve these goals.

Considering criteria of adjustable range of motion, defined pivot point, spring force, shell design and adjustable alignment, solid AFO (SAFO), dynamic AFO (DAFO), floor reaction AFO (FRAFO), posterior leaf spring AFO (PLS AFO) and hinged AFO (HAFO) are compared.

# Basic Goals for Orthotic Treatment Based on the Amsterdam Guit Classification Plantar flexion and Physiological knee extension and push-off Ability to adapt to changes in guit type Requirements for an AFO



#### Discussion

Due to an appropriate orthools, coming closer to a physiological gait and improving energy consumption of children with CP's possible. Common AFOs do not fulfil all necessary equirements because basic adjustment possibilities are missing (see results). Gait types 3 to 5 of the Amsterdam Gait Classification require high to extra high spring forces in the ankle joint in addition to a ventral shell for achieving physiological knee extension in mid stance. Due to changes in gait the spring forces must be variable.

A passive plantar flexion in loading response depends on adjustable range of motion and a defined pivot point. Resulting eccentric muscle work supports therapy. The correct alignment of the orthosis using biomechanical principles is essential especially when tuning the APO.

The resulting demand is: Both dynamic and static AFOs should be produced with an adjustable anile joint.

#### References

Becmer 30 (2000), J Provint Orth 14(4): 143-149. Majoris C, Carolie B, (2001), Capenhagen: (SPO. Nation K) et al. (2011), Chin Biomerch (2010), 800-880. Novambers TF et al. (2000) Candian Mar Keith Press, 227-348. Owen E. (2000), Fusion Grittini 14031: 524-2801. Romiers J et al. (2006). Guit Posture 2450; 467-474.



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John D. Hsu, John W. Michael, John R. Fisk, American Academy of Orthopaedic Surgeons

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