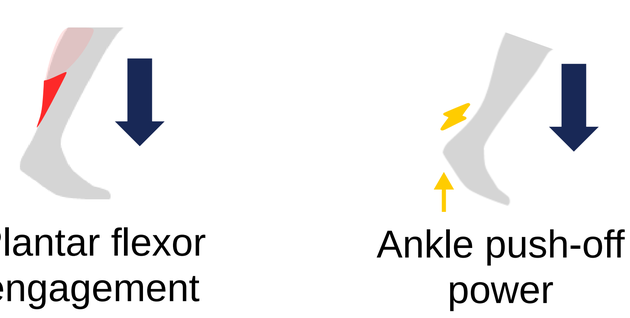
Ankle Power Biofeedback Augments Wearable Resistance for Improved Push-off Power and Muscle Recruitment in Cerebral Palsy

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Biomechatronics Laboratory

Introduction

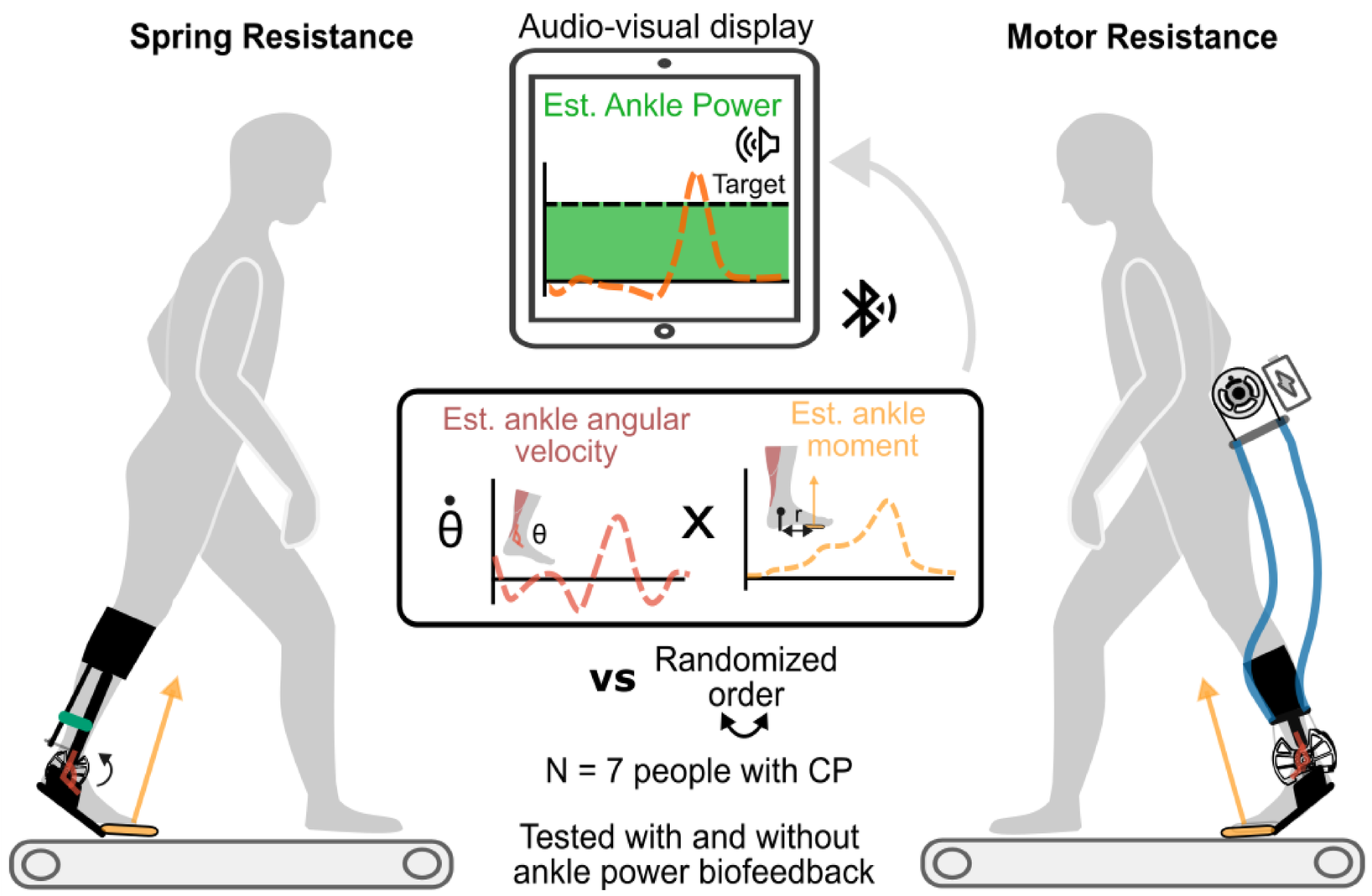
Individuals with CP experience [1]



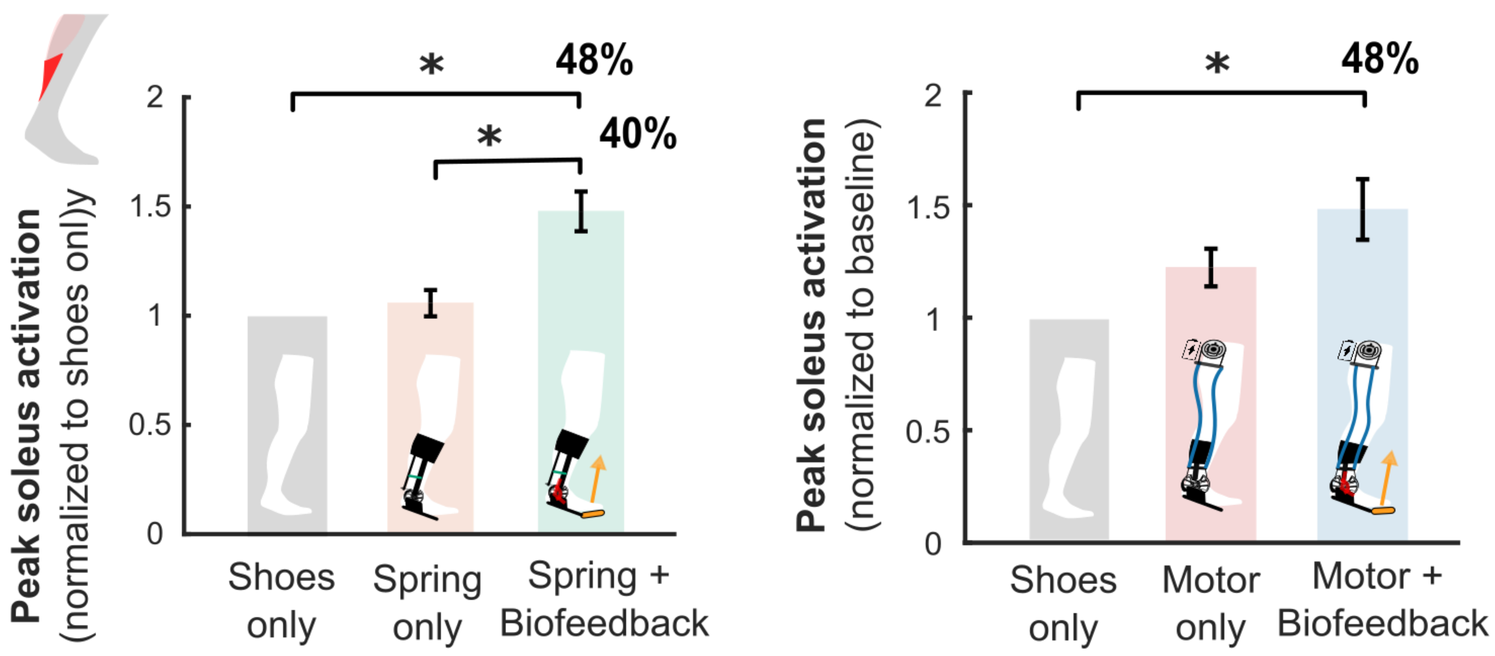
Both powered and passive (i.e., motor- and spring-based) resistance devices are being developed for targeted training [2].

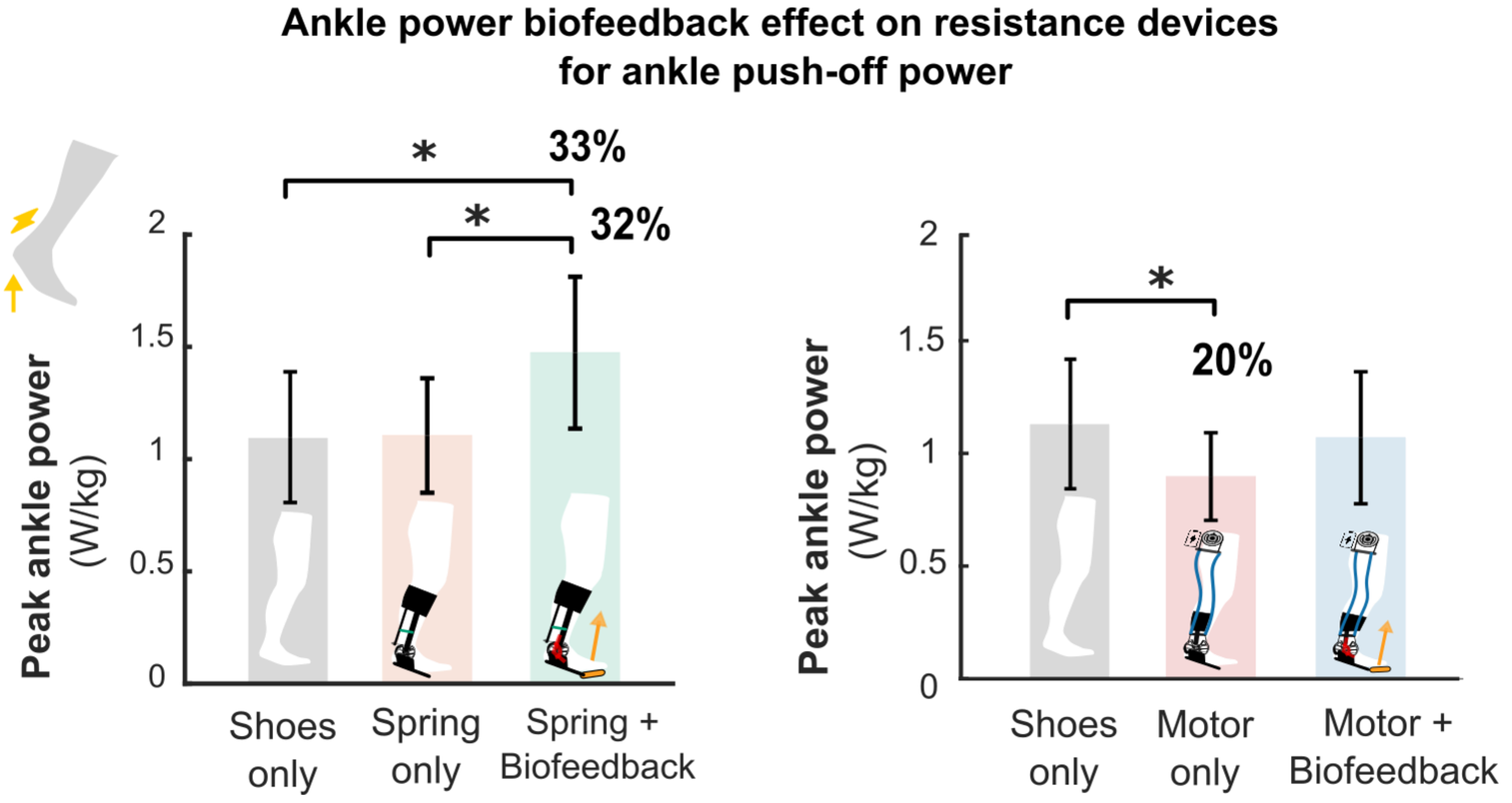
<u>Research Question:</u> Will ankle power biofeedback combined with both wearable resistance devices improve plantarflexor muscle recruitment and push-off power in individuals with CP?

Methods



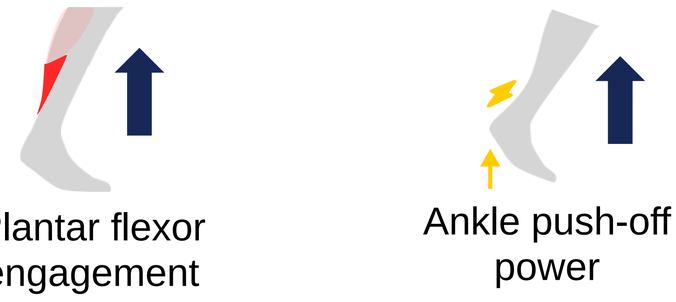
Results





Conclusion

Ankle power biofeedback augments **spring resistance to**



<u>Significance:</u> This work presents a promising way to improve key biomechanical outcomes for efficient walking for individuals with CP

Acknowledgements

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Participants

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References

[1] Kuo and Donelan, “Dynamic Principles of Gait and Their Clinical Implications” Phys. Ther., 2010

[2] Hanssen et al., Progressive resistance training for children with cerebral palsy: A randomized controlled trial…, Front Physiol. 2022