**PROJECT BACKGROUND**

- Gait abnormality is a common symptom for people with stroke, traumatic brain injury, or multiple sclerosis.
- Abnormal gait affects one's ability to stand and walk without assistance.
- The Physical Therapy Department at UT Southwestern needs a mechanical device to supplement hip flexor activity in patients.
- Strider BIOMECH is tasked with creating a Hip Flexion Assist Device (HFAD) to effectively supplement hip flexor activity during the swing phase of the gait cycle.

**OBJECTIVES**

- Effectively supplement hip flexor activity
- Long term wear device
- Low profile/inconspicuous design
- Easy to put on and take off
- Mitigate internal/external rotation of hip
- Rigid aspects with adjustability

**DESIGN OVERVIEW**

- **FLEXION**
- **COMFORT**
- **ADJUSTABILITY**
- **ROTATION**

**CONCLUSION**

With the HFAD consumers will have the ability to:
- Wear the device comfortably for long periods of time
- Assist with 10-20% flexion during gait cycle
- Improve internal/external rotation at the hip
- Easily don/remove in under a minute
- Low cost of <$150 with off-the-shelf parts

**ACKNOWLEDGEMENTS**

A Special Thank You to Dr. Fey and his lab, Dr. McCain, Nancy Scroggins and the 3D Printing Team Applied Research Center.
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