

Progress Report

Title: Active Ankle/Foot Orthotic (AFO) to Enhance Walking and Balance

Names: Jessica Hause: Co-leader
Erin Main: Co-leader
Emily Andrews: BSAC
Josh White: Communicator
Tony Schuler: BWIG

Date: March 16, 2007 – March 23, 2007

Problem Statement:

Create a device that actively enhances forefoot step-off and increases proprioception to improve balance for people experiencing ankle weakness, foot-drop and the inability to walk and balance safely as a result of various neurological diseases such as Charcot-Marie-Tooth disease, multiple sclerosis and stroke. The device should be non-obtrusive, fit in a shoe, comfortably attach to the leg, and be economical.

Last Week's Goals:

- Gather temporal spatial data and video of observational gait analysis of our patient from the orthotic specialist
- Meet with Professor Thelen to discuss gait patterns
- Continue pursuing donations from outside companies to improve our budget
- Continue brainstorming ideas on how to improve our final design to make it fit within our allotted budget
- Begin looking for parts for our project
- Arrange a meeting time with our client to speak with him about our presentation

Summary of Accomplishments:

- We were able to get the spatial data from our orthotic specialist
- Brainstormed different parts and materials that we can use for our final design
- We brainstormed ideas of ways to improve our final design while keeping our budget in mind
- Generated a list of unique components that we could incorporate into our AFO
- Sketched several possible designs that incorporated things from our brainstorm

This Week's Goals:

- Obtain the video of observational gait analysis from our orthotic specialist
- Contact Professor Thelen to discuss gait patterns
- Decide on a final design that fits within our budget
- Order materials and supplies that we will need for our final design
- Use data from gait analysis to assure that our final design will support the forces being applied

Project Schedule:

Task	Jan	February				March					April				May
Project Research	26	2	9	16	23	2	9	16	23	30	6	13	20	27	4
Research															
Contact Patient															
Contact Client															
Meet with PT															
Brainstorming															
Design															
Develop Prototype															
Website															
Deliverables															
Mid-semester Presentation															
Mid-semester Report															
Final Presentation															
Final Report															
Progress Reports															
Meetings															
Semester Wrap-up															

Difficulties:

We had difficulty loading the gait video on to the flash drive when we met with our orthotics specialist. We will have to arrange another time with him in the future to allow us to obtain this information. In addition, we are having some difficulty finding time to meet with Professor Thelen due to his limited availability and as a result, we must continue pursuing time to meet with him.

This Week's Activities:

3/16-3/22	Team: Brainstorming and compiled design ideas	3 hours
3/16/2007	Team: Meeting with orthotics specialist	1 hour
3/21/2007	Erin: Progress Report	1 hour
Week Total		21 hours

Overall Total Hours:

Individual

Erin:	48 hours
Jess:	48 hours
Josh:	46 hours
Tony:	45 hours
Emily:	46 hours

Team Total 233 hours

