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: April 20, 2007 - April 26, 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:
• Cut the thermoplastic into two pieces
• Drill holes in the two pieces and connect them with our bolts
• Add padding to the inside of our device
• Buy Velcro and attach it to our device
• Add carbon fiber to our device
• Begin testing

Summary of Accomplishments:
• Sanded edges of thermoplastic to prevent any friction on foot
• Began working on poster
• Decided on velcro that we are going to use
• Discussed how we are going to attach the velcro
• Decided on padding to be used to line the inside of the device

This Week’s Goals:
• Attach two pieces of orthotic together
• Cut material to pad then inside of our device
• Cut thermoplastic so that velcro can be attached
• Test the device
• Finish poster and begin working on paper
Difficulties:
This week we had trouble finding a time that we could attach the two pieces together because of Engineering EXPO. We were not able to get into the shop during the times that our team was able to meet. We are also having trouble deciding how we are going to attach the velcro to our device. We are deciding between threading the velcro directly through the thermoplastic or attaching it using something similar to a belt loop.

This Week’s Activities:

4/20/2007 Team: Sanded edges of orthotic 2 hours
4/22/2007 Team: Discussed poster and paper 3 hours
4/23/2007 Team: Met to discuss velcro and attachment 2 hours
4/24/2007 Tony: Website 1 hour
4/24/2007 Erin: Progress report 1 hour

Week Total 37 hours

Overall Total Hours:

Individual

Erin: 77 hours
Jess: 73 hours
Josh: 65 hours
Tony: 69 hours
Emily: 70 hours

Team Total: 354 hours