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 27, 2007 – May 3, 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:
• 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

Summary of Accomplishments:
• Attached two pieces of orthotic together with screws
• Padded the inside of the orthotic with mole skin
• Cut thermoplastic and attached Velcro
• Purchased and attached padded sole in to orthotic
• Tested our device
• Finished poster and began working on paper

This Week’s Goals:
• Present orthotic to client and advisors
• Complete final paper
• Complete work in design notebooks
• Fill out self and peer-evaluations
Difficulties:
This week we had a small amount of difficulty testing our device due to our inability to get a hold of, and use, a gait analysis machine. As a result, we were forced to test our device based off of client feedback and comparison alone. In addition, we found the screws we used to attached the two pieces of our device made our orthotic somewhat uncomfortable. As a result, we padded the inside of our device with moleskin in hopes of reducing the amount of contact these screws had with the wearer’s skin.

This Week’s Activities:

<table>
<thead>
<tr>
<th>Date</th>
<th>Task</th>
<th>Activity Description</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>4/27/2007</td>
<td>Team:</td>
<td>Attached two pieces of orthotic</td>
<td>2 hours</td>
</tr>
<tr>
<td>4/27/2007</td>
<td>Josh:</td>
<td>Purchased Velcro and elastic band</td>
<td>1 hour</td>
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<tr>
<td>4/28/2007</td>
<td>Emily &amp; Erin:</td>
<td>Purchased padded insole and attached Velcro, elastic strap, and insole</td>
<td>2 hours</td>
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<tr>
<td>4/29/2007</td>
<td>Team:</td>
<td>Worked on poster</td>
<td>1 hour</td>
</tr>
<tr>
<td>4/30/2007</td>
<td>Emily:</td>
<td>Worked on poster</td>
<td>2 hours</td>
</tr>
<tr>
<td>5/1/2007</td>
<td>Josh:</td>
<td>Tested device</td>
<td>2 hours</td>
</tr>
<tr>
<td>5/2/2007</td>
<td>Team:</td>
<td>Completed poster</td>
<td>2 hours</td>
</tr>
<tr>
<td>5/3/2007</td>
<td>Team:</td>
<td>Worked on presentation</td>
<td>1 hour</td>
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Week Total 45 hours
Overall Total Hours:

Individual

Erin: 86 hours  
Jess: 82 hours  
Josh: 75 hours  
Tony: 75 hours  
Emily: 81 hours

Team Total: 399 hours