Measuring Exercise Systolic BP in Kids

Client: Dr. Allen Wilson
Adviser: Paul Thompson
Team: Madison mlboston@wisc.edu (Team Leader)
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       Michal adamski2@wisc.edu (Communicator)
       Lizzie lkrasteva@wisc.edu (BPAG)

Problem Statement
A simple auscultory-cuff method is currently used to measure BP during treadmill stress testing in adults and kids. In younger kids, 6-12 yr old, however, it is often difficult to hear the peak systolic sound that defines systolic pressure. Sampling from 1st finger or thumb with probes at rest give accurate pulsed signal that can be used with BP cuff to find peak systolic BP equivalent. The problem is that laser Doppler signals are motion sensitive. Luckily, when we do exercise BPs with kids on treadmill, we hold the arm up off the treadmill. A stabilizing glove/device that holds a probe in place on 1st finger or thumb pulp, while stabilizing the finger or thumb from movement that causes artifact on the signal is needed.

Summary of Team Role Accomplishments
- Leader Madison - Completed Progress Report
- Communicator Michal - Emailed Client
- BWIG Katie - Updated Project Website
- BSAC Haley - No BSAC meeting
- BPAG Lizzie - Nothing to report

Summary of Design Accomplishments
- Team met on Wednesday afternoon to discuss an overview of the project and any questions/concerns the new team members may have.
- Awaiting response from Dr. Wilson on a good time to meet next week to go over semester goals and set up trials on target population (kids age 6-12 yrs old).

This Week’s Goals/Individual Goals
- Meet with client to discuss clinical trials.

<table>
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<th>Date</th>
<th>Person(s)</th>
<th>Task</th>
<th>Time(hrs)</th>
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