Name(s)	Project Number
Nathan Chiu; Swasti Jain; Joe Lin	**S0410**

Project Title

The Design and Construction of a Patch with an Application for People that Alerts the User When They Are Slouching

Abstract

Objectives

The goal of our project is to improve the posture of users by creating a device with a constant alerting system to phase out incorrect posture. We aim to refine our device, so that it will better one s posture 85% of the time.

Methods

Our product is composed of elastic bands, velcro, and electrical components, such as the Arduino 101 with Bluetooth capabilities. We used techniques ranging from soldering to iOS Development in order to put the circuitry together and establish a user-friendly interface. During our testing period, we used materials such as a multimeter, skin tape and also gathered participants through surveys. We were able to obtain results using our product by testing participants to collect data about the effectiveness of the alerting over a duration of time.

Results

Our limited data shows that through our product s alerting system, the user is able to improve their posture 100% of the time. The trial from the second day showed that the average participant slouched about 50% less than the first day, which shows that our product allows the user to develop better posture.

Conclusions

We conclude that our product is able to train one s posture effectively through alerts from our application. Our participant testing results support our conclusion as it shows that users improve their posture 100% of the time.

Summary Statement

The goal of our project is to create a continuous alerting system that will allow the user to improve their posture.

Help Received

Our overseeing mentor taught us how to solder with smaller electronics. In addition, we consulted a pediatrician to help us understand the benefits of good posture and the characteristics of the correct posture.