Work Completed

Over the past week I have continued doing redone research on about what type of materials should the implant is made of and the sterilization techniques of these materials. The best suited material for the stretch sensor would poly(tetrafluoroethene) or poly(tetrafluoroethylene) (PTFE), as it is biocompatible, non biodegradeable and flexible. I have also continued looking at various ways in which we can power the implant for a long period of time (3-5 years). Powering an implantable device is extremely important and special precautions have to be taken into consideration for the patient’s safety and privacy. Since our original RF wireless does not work, I will be updating the wireless section with the new wireless information. We have changed our wireless from RF to Bluetooth, eb 550.

Figure 1. EB 550
Future Work

The work for this upcoming week is to understand how to establish a wireless communication of the implanted portion of our device. Once the fluid balloons and pumps come in from Alan we should be able to continue with our overall setup.

Project Review

We have been having major problems with our wireless communication, so we decided to order new wireless. We are also at a set back because the tubing we ordered is the incorrect size. Zack used a finger sleeve of a latex glove for the tubing. The cuff was able to completely stop fluid flow. An example of that set up is shown below. We are still at a set back, hopefully the remaining parts of our project comes in soon.

Hours Worked

This week I worked 10 hours, majority of it spent doing research on our physical assembly, and research on the materials used and information for our user manual.

Figure 2. Inflatable cuff around latex glove tubing