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Still Sitting?

The purpose of this engineering project was to limit the amount of time people spend sitting down. According to recent studies, prolonged sitting has been linked to various health problems including chronic diseases, cancers, diabetes and early death. This investigation involved creating and programming a device that would alert someone after they had been sitting for too long. The essential design criteria included the following: (1) able to prevent people from sitting for more than 10 minutes (2) measures less than 13 centimeters (3) sensors are accurate enough to know if a subject was sitting or standing. Prototype 1 met all of the essential design criteria. Prototype 2 met an average of 96.2% of all design criteria, and prototype 2 met an average of 99.7% of all design criteria. Based on the analysis, the next prototype will have more flexible straps, and a smaller battery; this would allow the device to cut off circulation less as well as be smaller in size.