

How Music Affects Muscle Contractions

Williams, Alex (School: Baker High School)

Shumaker, Emily (School: Baker High School)

The purpose of this experiment was to determine if music affects muscle contractions when performing physical activities. Our hypothesis was that there would be a difference in muscle contractions when listening to music. In this experiment we first found an upbeat song to use when engaging in physical activity. The beats per minute (bpm) of the song chosen is 140 bpm. Next, we gathered equipment to test muscle contractions (EKG). We then found a variety of participants to be tested. Then we tested muscle contractions with no music, while the subject lifted a six pound weight in their dominant hand for 30 seconds. After that we gave the subject a 30 second break to relax the muscles. After the 30 seconds of rest ended, the subject repeated the process only with music at 140 bpm and then the same song slowed down to 40 bpm. We have concluded that with a larger sample size, the average of muscle contractions while listening to music would be higher than with no music at all.