

The Effect of Forced Leg Movement on Heart Rate

Ito, Ayane

Sandoval, Juancarlos

The objective of the experiment is to determine if the forced movement of legs will increase an individual's heart rate. In order to test if an increase in heart rate will occur, a bicycle-based machine was created in which the pedals would automatically move for the individual. A person then their rested blood pulse take, and after on the machine for 30 minutes, had their ending blood pulse measured. As a result, all 10 subjects experienced an increase in heart rate. Furthermore, the 5 subjects who do not regularly exercise had a greater overall blood pulse per minute (bpm) increase than the five subjects who do exercise regularly. despite their age, BMI, and gender. Therefore, it was substantiated that forced leg movement does benefit an individual's health because it increases their overall blood pulse, since calf movement allows for blood to pump back to the heart. Specifically, the forced movement of legs is beneficial for those who do not regularly exercise.