Caffeine and Heart Rate: Using Daphnia magna

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The title of my project is called “Caffeine and Heart Rate: Using Daphnia Magna”. In this project, water fleas (Daphnia magna), a semi-transparent freshwater crustacean, are used to study the effects of caffeine on heart rate. This experiment was tested about 30 times, but I only recorded it a total of 5 times and monitored the heart rate under a microscope. The use of the water flea (Daphnia Magna) was on purpose because of its transparent body. The heart can be seen beating and the rate can be counted and calculated. I found the beats per minute (BPM) by counting the beats for 10 seconds then multiply it by six. Using different concentrations of caffeine will help to show the effect it has on the heart rate of the Daphnia. I chose 2 concentrations of caffeine to be similar to concentrations you may find in pop or other caffeinated beverages. Each Daphnia recorded got both of one and two grams introduced to them in all of four minutes. My results came to prove that when caffeine is being used, it increases the heart rate.

Awards Won: