Feel It in Your Heart: The Effects of Caffeinated Drinks on the Daphnia Heart

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Caffeine is one of the most widely consumed and used psychoactive substances in the entire world. In North America, more than 90% of people regularly consume a form of caffeine. In children, young adults, and even the elderly, this commonly popularized concept of consuming high dosages of caffeine beverages can be seen. We have yet to see the long-term effects of caffeine because of the concept of being new to many generations, but we have certainly been able to detect the short-term effects. Through this experiment I was able to observe these short-term effects on the Daphnia heart, witnessing the imitation of what our heart would look like because of caffeine. Five different energy drink beverages were tested on Daphnia and observed to see the change in the heart rate, witnessing a high increase from its normal 180 BPM heart rate. After testing the five energy drinks, it was clear to see that the high rate was highly impacted, almost doubled in some cases, due to the high caffeine intake. We were also able to observe that our energy drinks #4 and #5 were averaged with the highest beats per minute after five trials. Although this project only covered the short-term effects, it is clear to see that the damage experienced during this short time would most certainly worsen and extend into long-term problems.

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