Worm Amnesia: The Effect of Taurine, Glucose, and Caffeine on Dugesia dorotocephala

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Energy drinks are known for having negative health effects with a potential consequence of cardiac arrest if consumed in large amounts. The experimentation aims at finding whether or not common ingredients such as taurine, glucose, and caffeine is beneficial or harmful to memory retention in dugesia dorotocephala and thus in humans.Through the regeneration of the planarian and testing in a y-maze, it can be proven whether or not their memory is inhibited with the exposure to the ingredients. In order to proceed with experimentation, the planarian in the y- maze were trained to go right with the led light being a negative stimuli if it went to the left and rewarded by removal from maze if they went right. They were separated into six groups with 3 groups cut and either in the ingredients or just water and the other three groups uncut in the same way. After being cut, they were left alone to regenerate for two weeks then their inaccuraccies rates and times were recorded. Analyzed data demonstrated that the group that was cut and exposed to caffeine alone had the lowest inaccuracy rate and faster times which consolidates the scientists hypothesis. However, cut and exposed to taurine had the highest inaccuracy rate and average time which means that taurine negatively affects memory. Further research on the topic would provide insight on the correct dosage of taurine that is beneficial. Which is important since it is being used as an additive in infant formula.

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