

Soda Bad, Water Rad!



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Abstract

A lot of people drink soda but they don't know how it can affect them. The four scientists had a hypothesis that the soda would affect the red worms by making them burrow slower. Soda contains many chemicals that can affect you. Soda affects humans in many ways, it can cause a higher risk of cancer, Type 2 Diabetes and many more effects. An experiment was performed on red worms to see if soda can affect red worms burrowing times. Four different types of soda, Sprite, Fanta, Coke, and Mountain Dew were tested. The results showed that soda does affect red worms.

Introduction

The average child drinks 500 cans of soda each year!. Have you ever wondered what that much soda would do to you? Would the outcome be positive or negative? The effects of soda can come either fast or slow but each of the effects are different depending on the time exposed to soda and the different types of soda consumed. Soda is just one of the many unhealthy foods that are overeaten to a point where it can be dangerous.

When a group of scientists thought about this they decided to conduct an experiment to test the effects of soda on earthworms. They exposed three earthworms to four drastically different sodas: Mountain Dew, Orange Fanta, Sprite, and water as the control and analyzed the data collected.

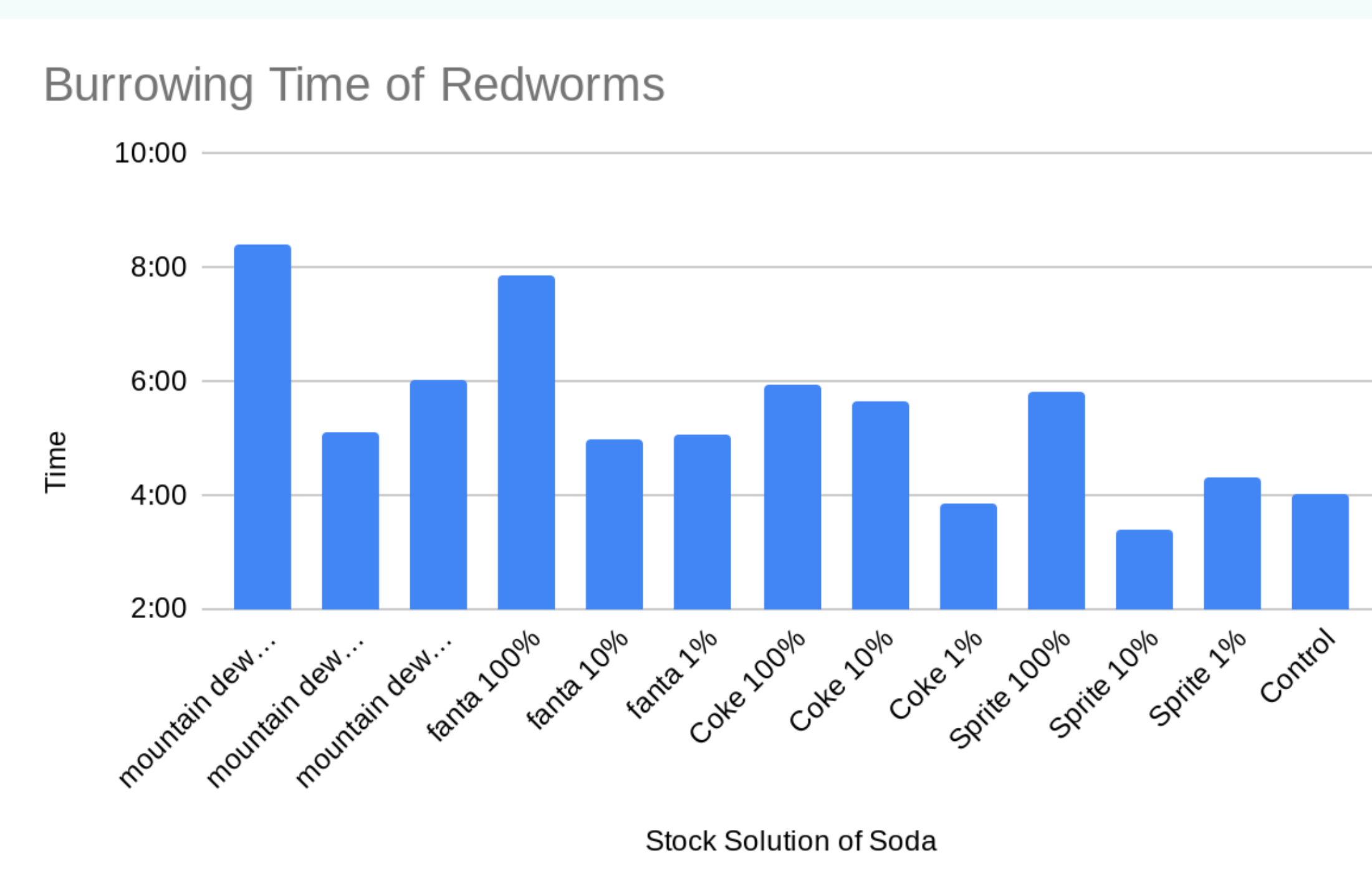
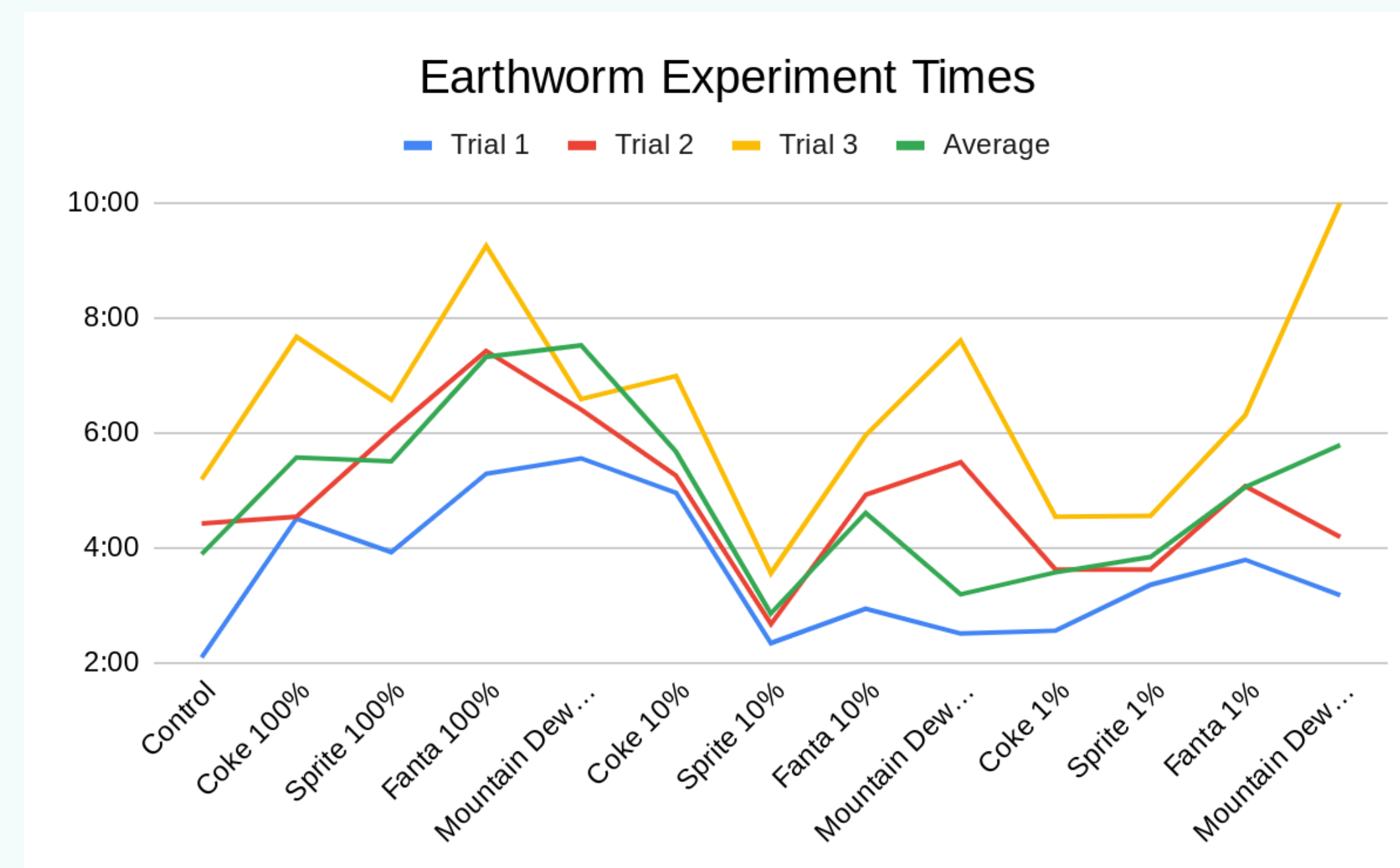
Discussion

For all of the burrowing times, none of them were in any sort of pattern. Most of the data was scattered so the scientists data doesn't really support the scientists hypothesis very well. The scientists inferred that as the sugar content in the different types of soda increased. This was because the burrowing times would decrease and the earthworms would burrow faster. When a human is exposed to large amounts of sugar they tend to have short bursts of energy.. Since the scientists data didn't show that, another experiment would need to be done to show the effects of caffeine on earthworms to see if that would change their burrowing times. Another reason why the scientists would test caffeine is to see the negative and positive results of caffeine and how that applies to humans since, "studies show that animals that are very distantly related show something strikingly in common that hadn't been expected." Since the data that the scientists collected affected earthworms in a negative way the scientists can infer that soda will have a negative affect on humans.

Materials and Methods

The scientists filled the plastic cup with 1 cup of potting soil to use as a burrowing chamber. The scientists exposed 3 adult red worms to the stimuli Coke for a minute with the original solution. The scientists put the worms in the burrowing chamber. The scientists timed how long the adult red worms burrowed. They repeated step 2-4 with 10% of the solution and 1% of the solution. The scientists needed to be safe so they use safety goggles washed their hands before the experiment, they also didn't drink the solution because it could be harmful.

A Worm is More Like a Human Than Previously Thought | The" 30 Mar. 2001, <https://www.news.ucsb.edu/2001/011459/worm-more-human-previously-thought>. Accessed 5 Feb. 2020.



Results

The reason why the scientist chose soda for their stimuli is that they wanted to see how the chemicals and ingredients in soda would affect an earthworm's internal organs. The hypothesis was what would the chemicals and ingredients in soda affect the earthworm's burrowing time. When the scientist tested the different sodas at 100%, the burrowing time of the earthworms was longer than the control, which was water. When the scientists tested the 10% and 1% of the different sodas, they found out that the burrowing times were usually shorter than the 100% but not necessarily shorter than the control burrowing time.