



**CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY**

Name(s) Samuel A. Blaustein	Project Number J1006
Project Title Does Exercise Affect Weight?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals My science project, Does Exercise Effect Weight? ,was intended to prove the hypothesis that exercise will cause living beings to lose weight. Given that all conditions of living, except for the presence of an exercise wheel, were controlled and constant for eight mice, the mice that had an exercise wheel could have been expected to lose weight while the mice without a wheel could have been expected to gain weight.</p> <p>Methods/Materials The experiment was conducted over a 30 day time period. For my experiment, I used eight, four month-old, female feeder mice that were assigned a number (# 1-# 8). Each mouse was housed in a clear, 17 liter container (41.1 x 28.1 x 25.1 cm) with a metal mesh cover made of hardware cloth. The containers were filled to a height of 5 centimeters with Carefresh small animal bedding that is made from dye-free, chemical-free, reclaimed paper pulp. All mice had a ceramic food bowl with a 30 gram dry capacity and a ¼ inch bracket watering tube to provide them with bottled spring water. Their diet was limited to Fiesta mouse and rat food (consisting of seeds and nuts) and I monitored their intake by weighing uneaten food and new food added on a daily basis. The control group, mouse #1- mouse #4, were given metal mouse exercise wheels that were 14 centimeters in diameter. The experimental group, mouse #4 # mouse #8, were not provided with a wheel. Daily, I weighed each mouse individually, using a glass container and a Chefmate battery operated, digital kitchen scale. I made daily notations in a log to record observations about their habits and activity levels.</p> <p>Results Contrary to my expectations expressed in my hypothesis, three of my control group mice gained more weight than my experimental group.</p> <p>Conclusions/Discussion I did not expect the mice with wheels to gain more weight than the mice without wheels. After further research, I have concluded that my control group mice gained more weight because they built up muscle from running on their wheels. As I found out, muscle weighs more than fat. A greater increase in muscle in the control group could account for a greater overall weight gain than the experimental group. Though my experiment did not go as planned, I learned new information about living organisms and it gave me an alternative question to explore#How does exercise effect body composition?</p>	
Summary Statement Using common feeder mice, I explored the effect of exercise, or the lack thereof, on weight gain over a 30 day period.	
Help Received Mother checked written material for spelling and grammatical errors.	