CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY

Name(s)
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Project Number
S1107

Project Title
Age vs. BMI

Abstract

Objectives/Goals
The experiment was conducted to figure out whether or not there is any correlation between a child's age, BMI, and their heart rate's response to excercise.
Hypothesis: The hypothesis is that BMI of a child will have more of an affect on his/her heart rtae more than age because kids with abnormal BMIs will have higher heart rates because they are less fit than those with normal BMIs.

Methods/Materials
Materials: 36 children, 24 note cards, heart rate monitor, measuring tape, paper, pencil, scotch tape, weight scale, pen.
Procdeure: 1) Find children that are willing to have their BMI calculated and are willing to run. 2) Use scotch tape to tape the measuring tape to the wall. 3) Then set up a place where you can weigh each child. 4) Measure height of each child (record on individual note cards or paper), then weigh each child (record on individual note cards or paper). 5) Measure out the distance for each run. 6) Take heart rate before the run (record on individual note cards or paper). 7) Have child run the distance and take heart rate again (record on individual note cards or paper). 8) Continue procedure for each child. 9) After taking measurements calculate BMI. 10) Check whether or not there is any correlation between a child's age, BMI, and Heart Rate after excercise.

Results
Overall people with normal BMIs had heart rates higher than those with abnormal BMIs before and after the run. Only a few measurements of people with abnormal BMIs were higher than those with normal BMIs. This result proved half of our hypothesis wrong. The other half was right becasue we had predicted that BMI would affect heart rate more than age and that was correct.

Conclusions/Discussion
On result depended on many things including how much effect the children put into their run. Also the food the children eat can also affect their BMI and their ability to run when we take their heart rates. These two things will be looked into more closely next year as we continue this study to learn more about the relationship between food, BMI, and the aging process.

Summary Statement
Our project is about figuring whether age has more of an affect on a child's heart rtae's response to excercise or does BMI have more of an affect

Help Received
Our parents took us to Lincoln Alternative Elementary School to test students there. They also got supplies for our project. We recieved permission from Lincoln Alternative's Assistant Principal Mrs. Peardon. The teachers Mrs. Curly and Mrs. Marting also gave us permission. Lincoln Alternative's school