



**CALIFORNIA STATE SCIENCE FAIR
2014 PROJECT SUMMARY**

Name(s) Allyson M. Rosenblum	Project Number J1730
---	---------------------------------------

Project Title Can Your Mind Play Tricks on You?
--

<p>Objectives/Goals My objective was to study the the placebo effect in a blind study using caffeinated and decaf coffee.</p> <p>Abstract</p> <p>Methods/Materials Method- This was a blind study where subjects were told they were drinking regular coffee. My mom prepared the coffee and did not tell me whether the coffee was caffeinated or decaf. Before drinking the coffee the subject's BP, pulse were taken and recorded and they played the board game operation according to the instructions of the game. Any misses in the game were recorded. Then the subjects drank the 6 ounces of coffee and waited one hour for the caffeine to enter the blood stream. After an hour, the subject's blood pressure and pulse was taken and recorded and they again played the operation board game. The misses were recorded. After this they subjects filled out a survey that basically asked how they were feeling, whether they felt more awake, jittery and asked them number the change of how they felt before and after drinking the coffee on a scale of one to ten. One being no change and ten being a very significant change.</p> <p>Materials: # 1 Coffee maker; # 1 Tablespoon; # 1 Digital sphygmomanometer; # 22 Informed consents; # 22 Explanations of experimental procedure to give to subjects; # 22 Questionnaires; # 11 heaping tablespoons of decaf coffee; # 11 heaping tablespoons regular coffee; # 132 ounces of water; # 1 Operation board game; # 1 piece of paper; # 1 Pen; # Coffee cup; # Timer.</p> <p>Results In the caffeine group there were both physical and psychological changes as BP and Pulse rose and fine motor skills diminished. In the decaf group BP, pulse and fine motor skills were unaffected, only psychological changes were significant.</p> <p>Conclusions/Discussion The placebo effect was shown to occur in the decaffeinated group and was psychological not physical. The caffeine group showed a significant change in fine motor skills where there was no change in the decaf group. Physical changes were more significant in the caffeine group.</p>

Summary Statement A test on the placebo effect using caffeinated and decaffeinated coffee.
--

Help Received Mother helped in blinding
