



**CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY**

Name(s) Heidi E. Honeycutt	Project Number 22103
Project Title Lowering Total Cholesterol	
Objectives/Goals This investigation was designed to determine if the daily consumption of oatmeal (a water soluble fiber) and regular exercise will reduce a person's total blood cholesterol level twice as much as solely the daily consumption of oatmeal. Abstract Methods/Materials Thirty randomly selected subjects were divided into three groups, one group maintaining their normal eating and exercise schedule (control group), another group eating 3/4 cup of Quaker oatmeal once a day for thirty days, and the last group eating 3/4 cup of Quaker oatmeal once a day for thirty days and adding thirty minutes of aerobic exercise three times a week to their normal schedule. The two groups that ate oatmeal, substituted one of their normal meals with the oatmeal. Each subject's total cholesterol level was measured before and after the thirty days of experimentation, with the Lifestream Cholesterol Monitor Home Kit. Both the change in cholesterol readings and the percentage of improvement were calculated and recorded. Results Both the daily consumption of oatmeal and regular exercise reduce total cholesterol measurements, but the daily consumption of oatmeal and regular exercise will not reduce a person's total blood cholesterol level twice as much as solely the consumption of oatmeal. The exercise/oatmeal group's total blood cholesterol reduction average was 32.2 mg/dl. The oatmeal group's total blood cholesterol reduction average was 20 mg/dl. Statistical analysis was run on the data, and the oatmeal/exercise group proved to be statistically significant. The oatmeal group was not found to be statistically significant, but showed a useful trend in the data. More subjects would need to be tested to confirm the significance of the oatmeal group. Conclusions/Discussion A person may indeed reduce his total blood cholesterol level by consuming a water soluble fiber such as oatmeal on a daily basis. A person may also reduce his total blood cholesterol by performing aerobic exercise on a regular basis (at least three times a week). Combining the consumption of water soluble fibers and participating in aerobic exercise increases one's chance of reducing blood cholesterol levels; but the daily consumption of oatmeal and aerobic exercise will not reduce a person's total blood cholesterol level twice as much as solely the consumption of oatmeal. Results show that my hypothesis was incorrect.	
Summary Statement My project was constructed to determine if the daily consumption of oatmeal and regular exercise would reduce a person's total blood cholesterol level twice as much as solely the daily consumption of oatmeal.	
Help Received Mother helped construct back board and helped test subjects.	