



**CALIFORNIA STATE SCIENCE FAIR
2014 PROJECT SUMMARY**

Name(s) Lindsey K. Gillette	Project Number 34820
Project Title Allergies et Pulsus Rate in Effectu: A Study of Food Allergies and Their Effect on Pulse Rate	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals Many Americans suffer from food allergies, including my mom, my sister, and myself. Allergy testing usually means needles and pain and is very difficult for children. We found out through our nutritionist that if we took our pulse after we ate, we may be able to determine if we are allergic to a certain food. The purpose of my project was to determine if an allergic response to a food increases your heart rate.</p> <p>Methods/Materials The pulse rate of five individuals, three with known food allergies and two without, was taken throughout the day for a period of ten days. Each person measured their pulse for one full minute in the morning before sitting up in bed and after they sat up in bed. Then, they measured their pulse before eating, right after eating, then again 30 minutes and 60 minutes after eating. A food journal was kept by each person, recording the foods they ate. I then calculated the change in pulse rate to determine if there was an increase of 12 beats per minute, as determined to be a significant increase by Arthur F. Coca, MD.</p> <p>Results During this experiment, there were 13 times pulse rates increased by 12 or more beats per minute. Of these 13 times, nine were after breakfast, one after lunch, and three after dinner. This was inconsistent and not proof that allergies cause an increase in heart rate.</p> <p>Conclusions/Discussion According to my data, my hypothesis was incorrect. The results were too inconsistent to prove the Coca Pulse Test an effective way to test for allergies to food on its own. However, we did take the data to our Doctor/Nutritionist who ran a blood test for my sister to check for food allergies. This test showed she was allergic to dairy, corn, and eggs, which made up a large portion of her diet. This pulse test was a benefit to my sister because the nutritionist could use one specific lab test and not stick her with multiple needles for multiple tests.</p>	
Summary Statement My project is to determine if a person's pulse rate increases after eating a food he or she is allergic to.	
Help Received Mother helped format graphs; Rick Peterson, DC helped with information about the elimination diet and personal allergies.	