



**CALIFORNIA STATE SCIENCE FAIR  
2003 PROJECT SUMMARY**

<b>Name(s)</b> <b>Rianna E. Isaak</b>	<b>Project Number</b> <b>J0319</b>
<b>Project Title</b> <b>Determining if Age, Gender, and Parkinson's Affect Brain Hemisphere Communication</b>	
<b>Abstract</b> <b>Objectives/Goals</b> I am trying to find out how the different variables (age, gender, Parkinson's disease) affect brain hemisphere communication (BHC). <b>Methods/Materials</b> I made a video of 20 words that appear on the screen one at a time. Each word is printed in a color other than its own name. I tested 2nd, 4th, and 6th grade students, as well as adults with and without Parkinson's disease (87 people in all). In test one, the person was asked to read the words that flashed on the screen. In test two, they were asked to identify the color the word was printed in. The difference between the scores of the two tests indicates how well the two brain hemispheres communicate, the BHC score. <b>Results</b> I found that the older a person gets from 2nd grade up to adults age 50, the better their BHC score becomes. Gender, however, does not seem to make a difference in the BHC score. Boys were better in 2nd, girls better in 4th and 6th, and male and female adults had the same BHC score. People with Parkinson's had a poor BHC score, more than two times the 2nd grade score. <b>Conclusions/Discussion</b> Age does make a difference in brain hemisphere communication (BHC). The older a person is, at least up to 50 years of age, the better their BHC score. Gender does not make a difference in BHC. Parkinson's disease makes a huge difference in the BHC score. However, there was no correlation between the number of years someone has had Parkinson's and their BHC score.	
<b>Summary Statement</b> My project is about determining how age, gender, and Parkinson's disease affects brain hemisphere communication (BHC).	
<b>Help Received</b> Mr. Russell helped with editing the board documents and with internet research. Mr. Gong helped me make the video. Mom and Dad helped type the report, make the board, and arrange for testing those with Parkinson's and some of the adults.	