



**CALIFORNIA STATE SCIENCE FAIR
2017 PROJECT SUMMARY**

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Project Title Correlation between Preference of Monosodium Glutamate on Body Mass Index	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals Monosodium glutamate (MSG) is glutamic acid is naturally present in our bodies, and in many foods like tomatoes, cheese, seaweed and other foods. MSG is used in the food industry as a flavor enhancer and frequently used in Chinese food. Some people are concerned that MSG can cause obesity, depression, visual and even brain damage. We decided to put one of these concerns to test, mainly the effect of MSG on obesity using Body Mass Index (BMI).</p> <p>Methods/Materials After obtaining informed consent. Subjects were given vegetable broth along with different concentration of MSG desolved in vegetable broth Subjects were asked to taste each samples and asked to fill out a survey asking for their age, gender, height, diabetic status, which sample(s) they felt that had a flavor enhancer and which sample they preferred. Subjects weight was measured and recorded to determine the BMI.</p> <p>Results : Most subjects (42 out of 51 or 82.4%) could tell which sample contained added MSG. Among them, 35 out of 42 or 83.3% of them prefer the flavor of sample containing MSG. Seven subjects who could tell which sample contain(s) contain MSG, but prefer the flavor of sample with no added MSG. When you compare percentage of people who have normal BMI versus BMI greater then 25, there was no statistical difference among people who prefer the flavor of MSG versus who did not. However, when you compare percentage of people with BMI greater than 30, increased preference for MSG seem to be associated with increased BMI of the subjects</p> <p>Conclusions/Discussion People who preferred the flavor of Monosodium glutamate (MSG) was not associated with increased Body Mass Index (BMI) between 25 to 29.9 (overweight range). However, people who preferred the flavor of MSG was associated with increased BMI greater than 30 (obese range).</p>	
Summary Statement We wanted to find out whether monosodium glutamate caused people to become obese.	
Help Received Doctor Jim C. Kim oversaw the the safety of the project to human subjects.	