Name(s)	Project Number
Bavan P. Rajan	**34493**

Project Title

It's a Sweet Tongue, Not a Sweet Tooth: A Correlation between BMI and Papillae

Abstract

Objectives/Goals
I investigated the relationship between body mass index (BMI) and sweet fungiform papillae. Fungiform papillae are the bumps on your tongue that give it texture, and this specific kind of papillae have taste buds in them. My hypothesis was that if a person had more sweet fungiform papillae, they would have a higher BMI. This is because the person would get more signals to brain from the sweet area of the tongue that indicate that they like this taste.

Methods/Materials
I performed my experiment on twenty subjects, ten from each gender. The weight and height was kept confidential. I then applied blue food coloring to the participant#s tongue to illuminate the fungiform papilla in the sweet area of the tongue. I placed a paper tab with a 1.5 cm diameter opening on the front part of the tongue, where the dye was applied. I photographed the participant's tongue and was easily able to see the papillae in the photograph after it was magnified on the computer. I then measured the participant's height and weight and used a BMI calculator to find their BMI. I then input the data I collected into a graph.

Results
The results for my experiment did not show any clear relationship between BMI and papillae. The average male BMI was 20.57 and the average for females was 20.7. The average papillae density for males was 40.7 and the average for females was 46.6.

Conclusions/Discussion
My project gave us some important knowledge. From my project, we can conclude that papillae does not have any direct effect on the BMI of a person, as their BMI may be affected by several other factors such as genetics. Participants could have been supertasters as well, which could have given them higher amounts of total papillae in every area of the tongue. I think that papillae is more directly related to food preference instead of body mass.

Summary Statement
My project is about finding a correlation between body mass index and sweet fungiform papillae.

Help Received
My parents supplied me with some equipment for the project.