Supertasting Ability, Satiety, and Childhood Obesity in the Hispanic Population

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Taste sensitivity, known to be genetically inherited, varies greatly in individuals and has been shown to strongly influence food choices. There are normal tasters, non-tasters, recessive and dominant supertasters in any society. The World Health Organization has emphasized on an urgent need to examine childhood obesity globally. There are no data, till date, that link tasting ability, satiety, and childhood obesity in general and in the Hispanic population in particular. A group of 100 children aged 6-18 years volunteered to participate in the study. The intensity of taste perception was measured directly by response to Phenylthiourea taste strips. Cognitive eating behaviors were evaluated using study-designed questionnaires; Body Mass Index was used as a measure of obesity. Measuring serum Leptin and Leptin receptor levels determined satiety. We found a significant positive correlation between the Body Mass Index and the Leptin levels of our population ($p<0.05$). There was a significant negative correlation between the Body Mass Index and the Leptin receptor levels of our population ($p<0.05$). One-way ANOVA comparisons of 35 tasters, non-tasters, and dominant supertasters did not yield any significant difference between the Body Mass Index, Leptin levels, and Leptin receptors. We continue to analyze data on more subjects to improve the power of our testing; some trends of correlation between satiety and tasting ability can be observed, but they are not statistically significant. In addition, we are also, currently analyzing serum concentrations of TAS2R38, a tasting gene protein and CD36, a fat sensor protein amongst various tasting ability groups.

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