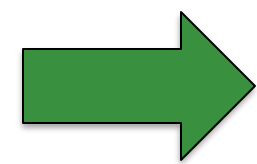


Community outreach about the effects of the western diet on the body

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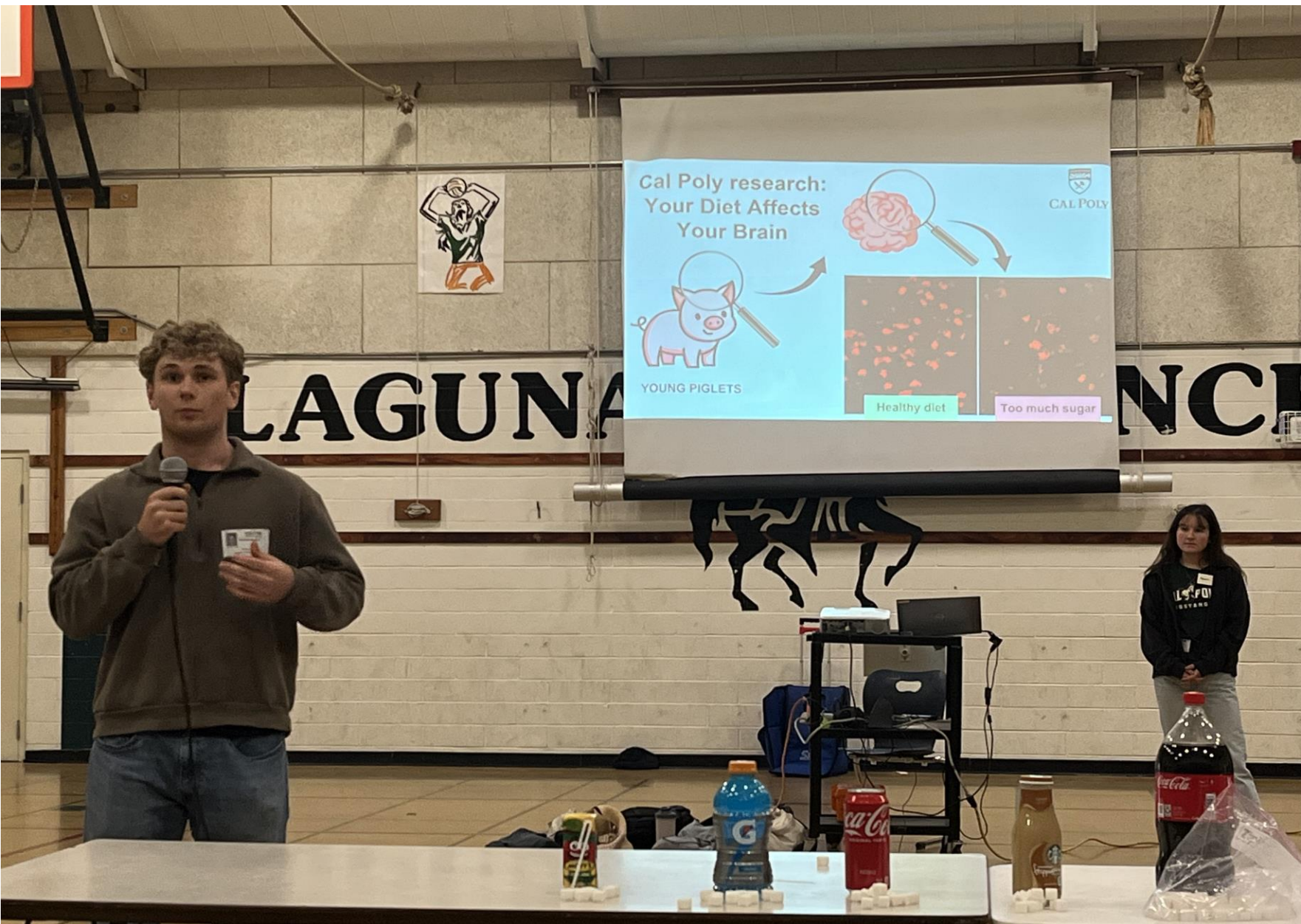
Background

- The **Western (Standardized American) diet** consists of high saturated fat, simple sugars, and processed food.
- Our focus is on the negative impact of High Fructose Corn Syrup on the health of young adults.
- Excessive fat and simple sugar consumption has led to a rapid increase in **metabolic syndromes** such as non-alcoholic fatty liver disease (NAFLD) and Type II diabetes.
- **Juvenile incidences of these syndromes** have increased recently, correlated with an overall decrease in natural cane sugar consumption and an **increase in the use of high fructose corn syrup (HFCS)**.

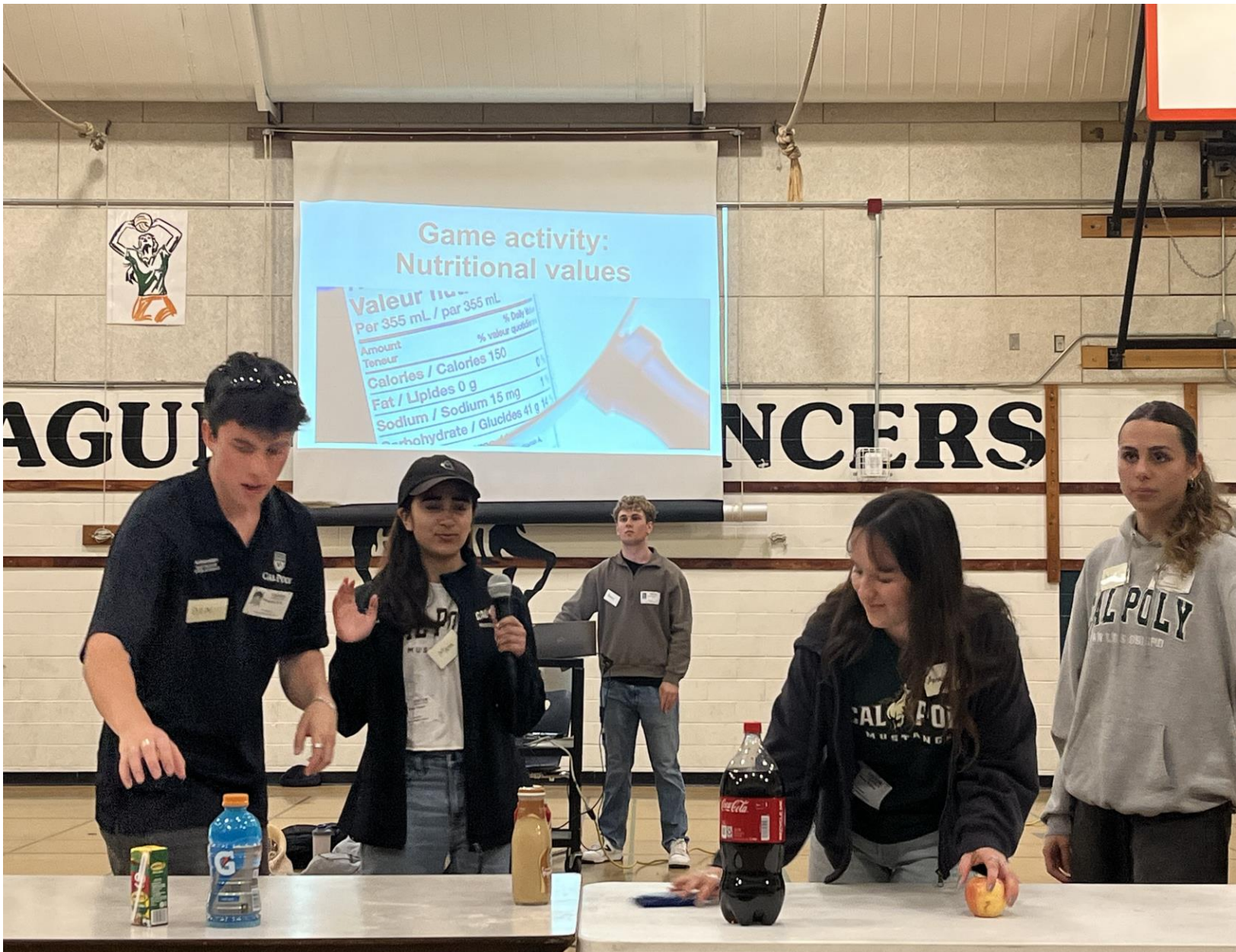


Methods

- **Interactive, hands-on activities** to engage students:
 1. Blind soda taste-test to identify presence of HFCS
 2. Guessing the amount of HFCS and artificial sugar in common snacks
 3. Identifying how highly-processed foods are advertised to be nutritious
- **Brochure** sent out to parents to promote helping their kids make informative nutrition decisions
- Incorporated **prior neuroscience research** to the presentation in a way that the eighth graders could understand and relate to



Danny presenting how HFCS affects neuronal activity in the brain.



Using drinks consumed by the everyday person, we compared the grams of sugar in these items to the amount of sugar cubes that equate to that amount.

Future Directions / Next Steps

To follow up on the success of the community outreach for the eighth graders, **expanding the presentation to a larger audience of young adults** could have a greater impact on those to take charge of their health, and potentially understand the consequences behind dietary choices.

This project set a precedent for presenting collegiate-level research to an audience of adolescents in a digestible, engaging format.



Outreach group photo after the presentation.

Goals

- To present the dangers of the **Western diet to eighth graders**, who are now entering the threshold of **health advocacy and mindfulness**.
- Increase understanding of the **dangers of metabolic syndromes and neural degeneration** caused by snacks marketed towards pre-teens.

Discussion and Results

- Incorporating **hands-on activities** was successful and well-received by the middle school students.
- **Active participation and group discussions** allowed middle school students to practice making nutrition decisions.
- A **supportive, holistic approach** was taken to ensure the students left with a **positive outlook** on nutrition and lifestyle choices.
- Conversation and literary understanding of ingredient labels worked to promote **self-advocacy** for these students.

References

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Hernandez, G.V. et al. 2020. Dysregulated FXR-FGF19 signaling and choline metabolism are associated with gut dysbiosis and hyperplasia in a novel pig model of pediatric NASH. *American Journal of Physiology-Endocrinology and Metabolism* 318: G582–G609.