



Sports Nutrition of High School Athletes

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INTRODUCTION

The nutrition of our high school's very own football players, has led various questions related to their athletic performance and any injuries associated with the sport they play. I have seen almost every player experience injury either during practice/games, this made me question if this has anything related to a poor diet, as expected, from kids around this age. Food plays the biggest role in how our body functions; in the athlete's case, their performance in game including proper nourishment to lower risk of injuries. For AER, in combination of both research and an action project, my goal is to create a school provided lunch for athletes specifically, tailored to their general nutritional needs as the current meal plan for our schools is for more non-active students, compared to students who have practice everyday after school. I will be looking at a diverse group of our school's football athletes in hopes to draw conclusions between poor athletic performance and diet. Survey participants will be asked to respond to questions to the best of their ability and with honesty in attempt to assure accurate data collection and analysis.

RESEARCH METHODOLOGIES

At the beginning of my research, my plan was to rule out athletic injuries being resulted from a poor diet; however, moving forward with my project has proved that this is difficult to rule out, to overcome this challenge I shifted the focus of my project to be based on the athletic performance aspect, still collection data on their nutritional health. Doing so, I conducted a survey that included questions about generally what the athletes are eating and the quantity, any health conditions they were diagnosed with, any injuries associated with their sport, as well as height and weight measurements. I continued with analyzed by collected data, doing so I broke down menu items from one of the most common eateries reported by athletes, Jersey Mike's Subs. With further research, I compared macronutrients values to daily recommended values to identify whether the sandwich is benefitting the consumer or is doing the

opposite. After further analysis, I will design a school provided lunch option for athletes, with greater nutritional value to what kids need that are practicing every day after school. I saw our current school lunch as not beneficial as it could be. Finally, I was not able to conclude a strong correlation between two groups of athletes.

DISCUSSION, ANALYSIS, AND EVALUATION

- o Upon survey response analysis, athletes most commonly stated they visit Jersey Mike's Subs and La Sirena Grill for lunch during school hours.
- o Taking a deeper look into popular menu selections, a comparison was completed to identify any red flags in amounts of macronutrients within menu items - Jersey Mike's #7 and #17 regular size subs.
- o Upon analysis after data collection, **these sandwiches were proven to be very high in sodium, high in unhealthy fats, and low in daily recommendation of protein** (when all compared to they daily recommendation of an adult with around a 2,000 calorie count).
- o With athletic performance in consideration, eating one of these sandwiches are proven to not be as beneficial to the consumer especially, as this would be their only meal before practice.

DATA AND FINDINGS

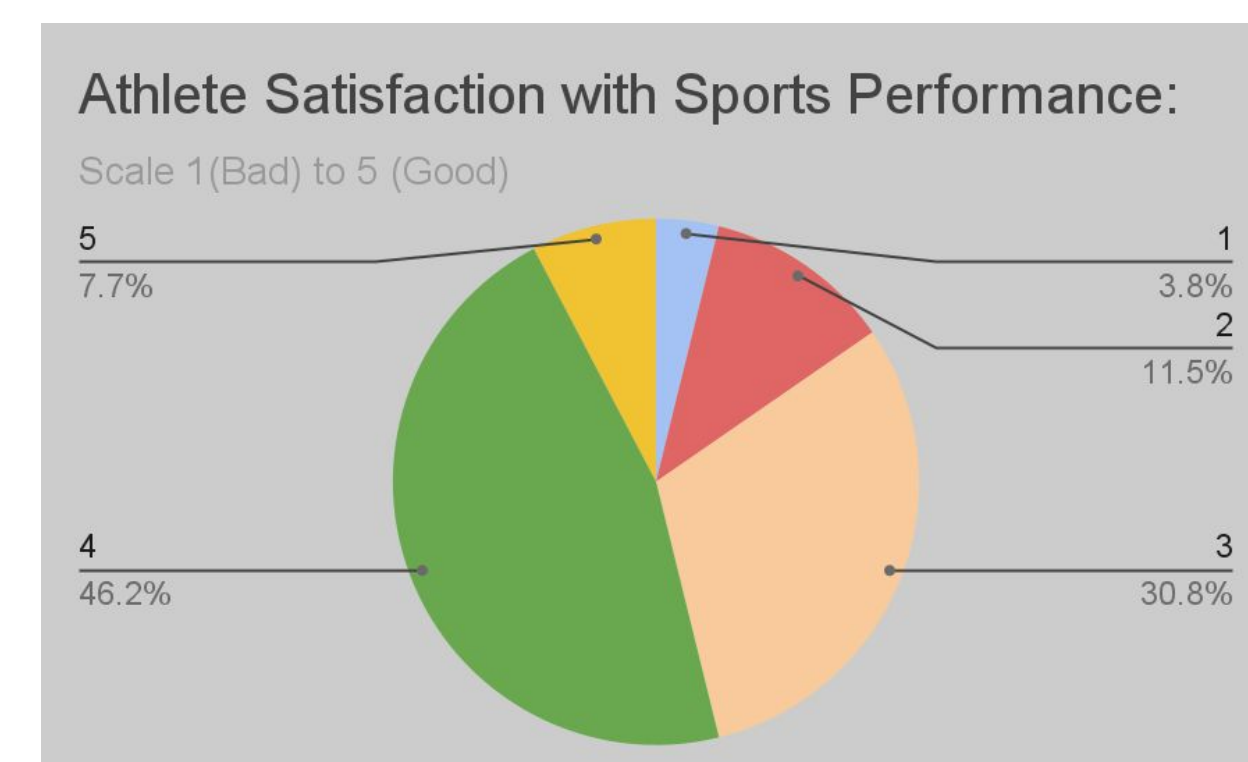


Figure 4: Variation of athletes rate their overall feeling of their athletic performance; 1 being the lowest (bad) and 5 being the best (good). Self reported data consists of mostly positive feedback on athletic performance.

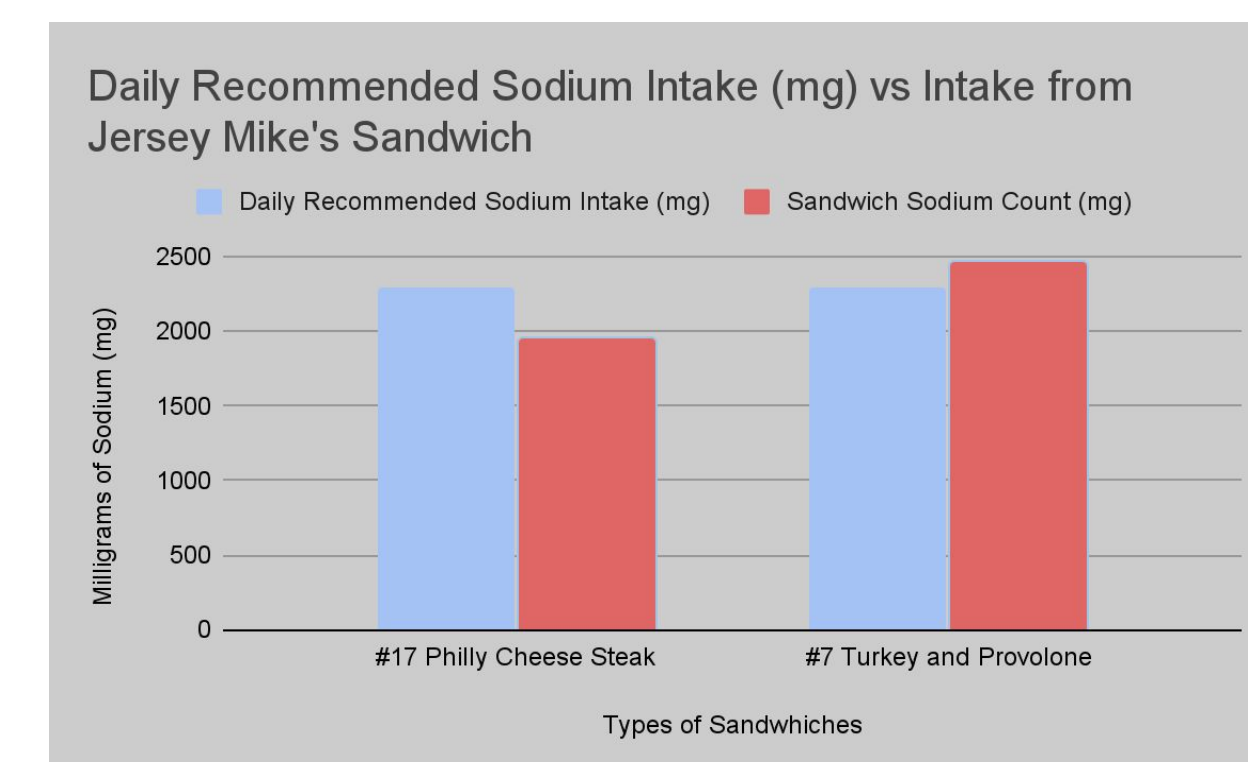


Figure 2: Graph represents the comparison of both the daily recommended sodium amount (mg) vs Jersey Mike's Sandwich sodium count (mg). Data demonstrates a close relationship between sandwich sodium count and daily recommended count with both #7 and #17 subs reaching just before the daily recommendation and even beyond.

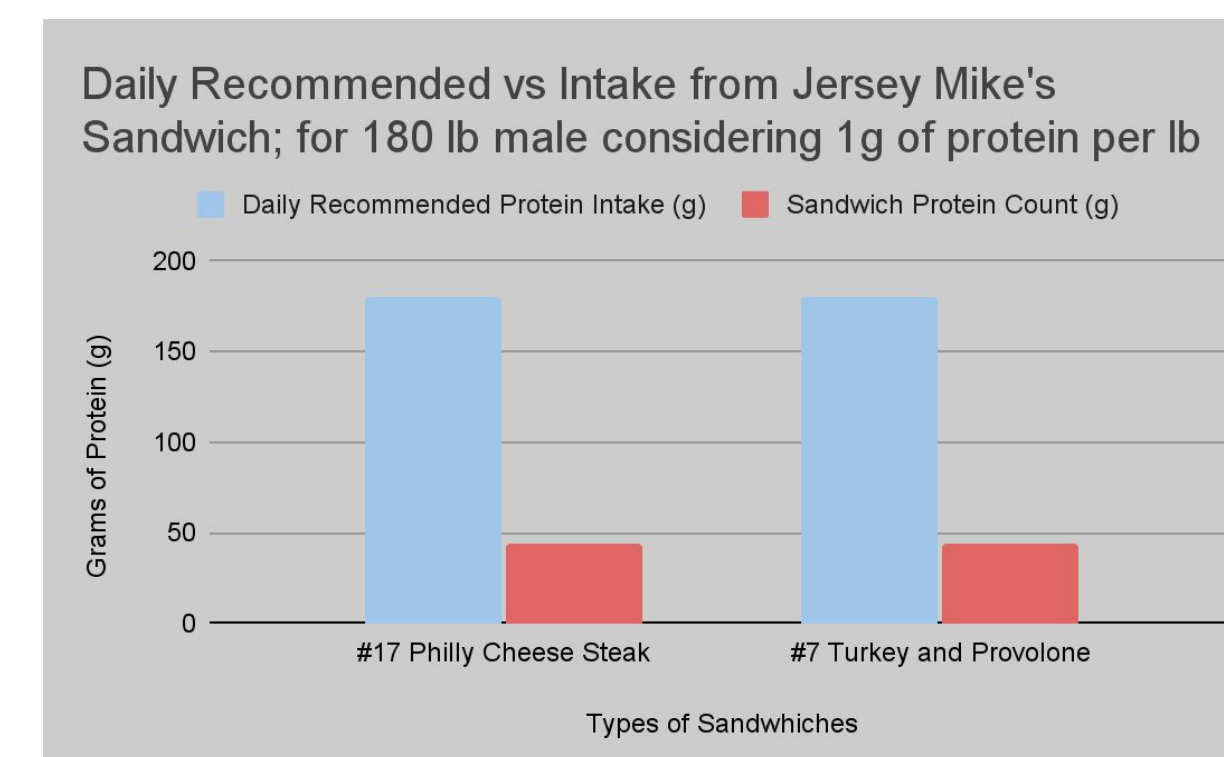


Figure 3: Graph measurements of both daily recommendation of protein intake (g) vs protein (g) in select Jersey Mike's Sub within standards of an 180 lb male consisting of 1 g/lb of protein. Data demonstrates a low protein content in a Regular #17 and #7, far below daily recommendation; eating just one sandwich will not suffice to meet standard.

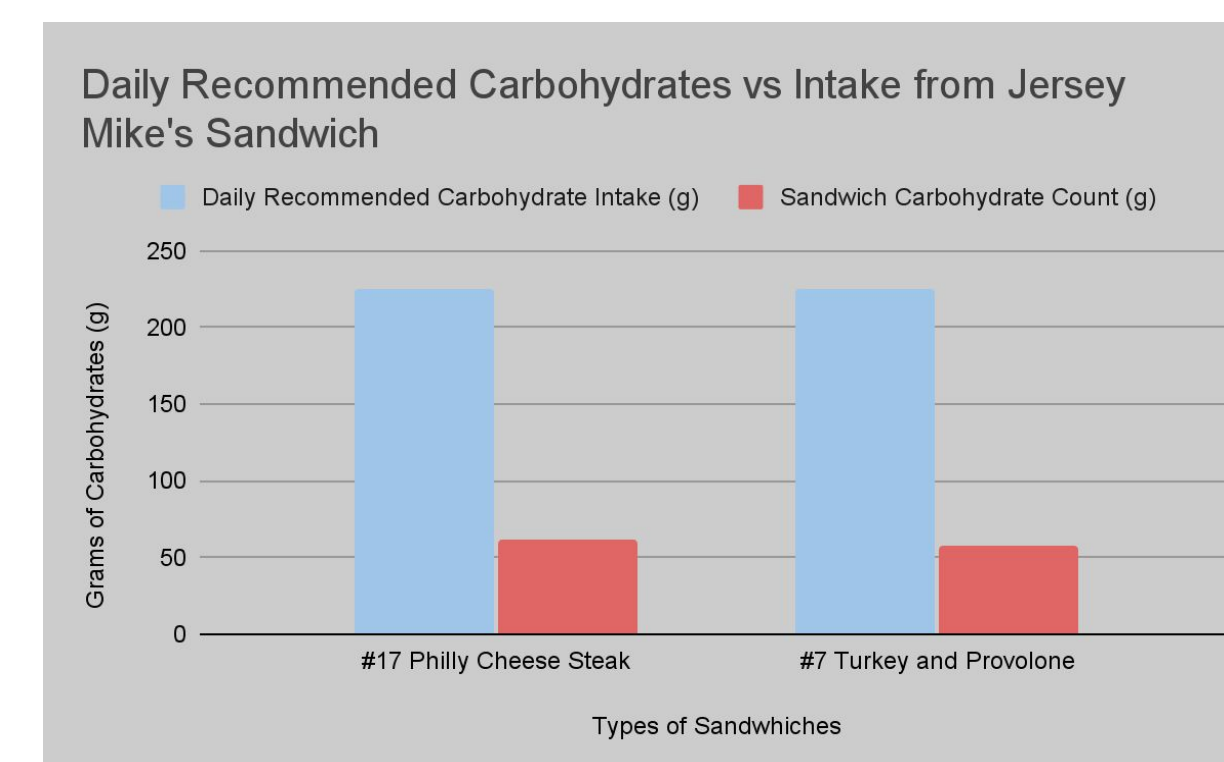


Figure 5: Graph measurements of both daily recommendation of carbohydrate intake (mg) vs carbohydrates (mg) in select Jersey Mike's Sub. Data demonstrates a low carb content in a Regular #17 and #7, far below daily recommendation; eating just one sandwich will not suffice to meet standard. Carbohydrates are important as a quick sugar source to fuel brain and body.

Final Response: While viewing survey responses, it can be said that **athlete's who said on campus during lunch (underclassmen), were seen giving themselves a lower rating on their overall satisfaction of their personal sports performance.** With this information, I can focus more on the group of students how eat lunch on campus from our school's cafeteria to provide better. **However, no direct correlation was found between students how go to Jersey Mike's during lunch and their self reported athletic performance score as ratings vary.** This is because the data collected was that of a small group, in a very short period of time, and results may have been skewed for a number of reasons associated with teenage athletes. To improve my data collection, I would focus on a larger, more controlled group of athletes and over a longer span of time to get accurate results and make stronger recommendations for dietary changes.

CONCLUSIONS, IMPLICATIONS, AND NEXT STEPS

1. Conclusions

- o To generalize, athletes that selected eateries such as Jersey Mike's with poor-moderate nutritional values recorded a 3-4 out of 5 on how overall satisfied they are with their athletic performance.
- o It can be concluded that athletes who are commonly going out to eat fast food during their lunch have lower levels of their self-reported performance.

- o My recommendations for lunchtime selections would be something with **enough protein and carbohydrates** to be able to properly nourish the athlete.

2. Recommendations and Next Steps

- o Moving forward, the goal is to bring a better nutritionally valued, school provided lunch for all our athletes as around half of the athletes consist of lower classmen who are unable to leave campus during lunch.

ACKNOWLEDGEMENTS / REFERENCES

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Please refer to the QR to view full paper and sources

