

A Nutrition Guide for Cal Poly, San Luis Obispo Student Athletes

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Introduction:

There is a misconception collegiate student athletes have better training and nutrition regimens than the average college student. Student athletes more than anyone have the largest challenge to continually nourish their body with the proper food while balancing a full load of college course along with practice and competition. According to Louise Burke, author of *Practical Issues in Nutrition with Athletes*, “Many athletes do not achieve sound nutritional practices to optimize their sports performance.” There is a need for athletes to be given proper nutritional guidance in order to keep them healthy and maximize their performance on the field. There are challenges to having proper nutrition before, during, and after practices and competition. For this reason, the focus of this project will be to help educate student athletes nutritionally and promote a well-rounded diet that supports their sports performance by creating a nutritional guide for California Polytechnic State University, San Luis Obispo, athletes.

Background:

According to the National Collegiate Athletic Association (NCAA) there are 1,117 colleges and universities and more than 460,000 student athletes involved in 40 sports (NCAA, 2019). Of those 1,117 colleges and universities about 60 have at least one full-time sports registered dietician (RD) on staff. That means approximately 13% of student athletes are receiving the proper nutrition training, given each of those RD’s are providing the training to all athletes at the college or university. According to Burke, many factors leading to an athlete’s poor nutrition is mostly due to “poor nutrition knowledge, dietary extremism, poor practical skills in choosing or preparing meals, and reduced access to food due to a busy lifestyle and frequent travel.” In addition, Jun Zhuang and Qingcheng Huang report in the *Journal of Food Science and Technology* there is a strong correlation between nutrition and immune function

(Zhuang, Huang, 2013). They also discuss the importance of making nutritional interventions in order to improve physical function which is critical for student athletes.

Methodology:

The purpose of this project was to develop a nutritional guide for student athletes at California Polytechnic State University that will increase their awareness of proper nutrition before, during, and after exercise so they can maximize their athletic performance.

First, research was conducted to find out what was available to student athletes around the country in the form of nutritional guidance. According to the NCAA of the 1,117 colleges and universities about 60 have at least 1 full-time sports registered dietician (RD) on staff (NCAA). This research was then compared to guidance that NCAA athletes at Cal Poly may receive. This was done by sending out a survey to 30 student athletes at Cal Poly to see if they had been given any form of nutritional education through the school. In this survey students were also asked about their eating habits and whether or not they would take guidance in the form of a handout.

After analyzing the results from the survey, it was clear student athletes needed and wanted nutritional information in order to increase their athletic performance through a well-balanced diet.

Lastly, components of a complete sports diet for student athletes were explored. This diet was created with the help and expertise of the head strength and conditioning coach at Cal Poly, Sara Mackenzie along with registered dietician Claire Anspach. The guide consists of how much protein, carbohydrates, fat, and vegetables an athlete should consume when having a typical meal. Once the guide was created using the online software canva . The guide utilized a template for ease of design and appeal to the student audience. It was also made clear that student athletes

wanted a simple and easy to read handout. Head Strength and Conditioning coach at Cal Poly Sara Mackenzie and dietician Claire Anspach reviewed the guide and provided edits to the author. The updated guide was sent out via email and handed out to student athletes via the Cal Poly athletic coaching staff. The digital guide file was shared with athletic staff via Cal Poly's OneDrive for future use and updates.

Results

After researching, surveying student athletes and gathering nutritional information, the author created a guide for Cal Poly student athletes. Informal feedback to the author was positive from both athletic faculty, students and the registered dietician. The results from the 43 student athletes who answered the seven question survey coincided with the authors prediction that help was both wanted and needed with their diets and eating habits.

The results from the survey are as follows. Question one began by asking the participants if they were Cal Poly student athletes, responses for "yes" were 100%. Question two was, "when being asked how healthy on a daily basis student athletes considered their eating habits to be, on a scale ranging from 1-5, 5 being the most healthy and 1 being the least, 51% answered with a 3. Question three: "Most often, do you eat out or cook your own food?" the response was 74% (32 votes) cook their own food, while 25% (11 votes) eat out. Question four: "If you had access through Cal Poly, would you use a registered dietician to assist you in bettering your eating habits?" the response to this was a 90% (39 votes) for yes and 9% (4 votes) for no. Question five: "If given the option of a nutritional guide (handout) or attending a monthly class with a registered dietician, which would you prefer?" 76% (33 votes) wanted the nutritional guide in the form of handout, and 23% (10 votes) would attend a monthly class. Question six involved asking "If your were given a nutritional guide would you prefer the handout in person or through an

online PDF?” the participants responded with 67% (29 votes) for the handout in the form of PDF while 32% (14 votes) preferred the handout be in person. Lastly the participants were asked “On a scale of 1-5 how badly do you want to improve your eating habits? 5 being the most, 1 being the least” responding that the majority 75% voted for a 3 or higher while the other 25% voted for not wanting as badly to improve their diets.

The completed guide is 8.5 x 11 inches and available to Cal Poly athletic staff for edits and updates in the future.

Conclusion

The author successfully met all the objectives of creating a nutritional guide for student athletes at Cal Poly. Some of the things the author would have done differently were when asking students if they preferred the nutritional guide in the form of a handout of PDF, their should have been a third option for both. The author thinking of the idea after receiving all completed surveys made both options available for Cal Poly athletic staff along with student athletes. In the future this guide could be continued to updated and improved as nutritional trends change and become different.

References

1. Brown, M. L., & Tenison, E. (2018). Creation of a Dual-Purpose Collegiate Athlete Nutrition Advising Program and Educational Curriculum. *Journal of Nutrition Education & Behavior*, 50(10), 1046–1052.

2. Chun-Jung Huang, Michael C. Zourdos, Edward Jo, and Michael J. Ormsbee, “Influence of Physical Activity and Nutrition on Obesity-Related Immune Function,” *The Scientific World Journal*, vol. 2013, Article ID 752071, 12 pages, 2013.
<https://doi.org/10.1155/2013/752071>.
3. Louise Burke (1995) Practical issues in nutrition for athletes, *Journal of Sports Sciences*, 13, S83-S90
4. “NCAA.org - The Official Site of the NCAA.” *NCAA.org - The Official Site of the NCAA*, www.ncaa.org/.