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# Exploring the Feasibility of an Academic Course That Provides Nutrition Education to Collegiate Student-Athletes

Christine Karpinski, PhD, RD, CSSD, LDN

## ABSTRACT

The purpose of this article is to explore the delivery of nutrition education to collegiate student-athletes through an academic course. Existing literature has established the need for nutrition education among collegiate athletes. This article considers the collaboration of the university and the athletic department to better serve this population. Academic wellness courses for student-athletes can be used as models. Finally, benefits, barriers, and proposed course objectives are considered. This report proposes a potential solution to provide consistent, sustainable nutrition education to collegiate student-athletes.

**Key Words:** nutrition, athletes, education, universities (*J Nutr Educ Behav.* 2012;44:267-270.)

## THE NUTRITIONAL NEEDS OF ATHLETES

Competitive athletes have increased nutritional needs as a result of rigorous training and athletic performance, which can be enhanced by optimal dietary intake.<sup>1,2</sup> However, dietary practices of collegiate athletes are of particular concern because of the increased risk for suboptimal eating, misguided nutritional practices, a rigorous schedule, and the drive to excel in sports.<sup>1,3-6</sup> Although the National Collegiate Athletic Association (NCAA) enacted rules in 2006 aimed to reduce the hours student-athletes could spend on their sport, the mandated 20-hour maximum per week is still a significant time commitment for the student-athlete.<sup>7</sup> In addition, student-athletes continue to train and develop their skills year round, extending their time commitments beyond the competitive season.

Collegiate athletes are at risk for receiving misinformation about nutrition and dietary supplements from the many influences in their lives, including friends, family, coaches, and athletic trainers.<sup>8</sup> Improving misguided dietary practices and nutrition knowledge is dependent upon the athletes obtaining accurate and

relevant information from credible sources. Hinton et al, Jonnalagadda et al, and Rosenbloom et al found that many collegiate athletes lack nutrition knowledge and misunderstand nutrition-related concepts, therefore they may fail to consume optimal levels of nutrients to support health and performance.<sup>4,6,9</sup> Schifflet et al and Froiland et al reported parents and friends to be the first choice for nutrition or dietary supplement information among collegiate athletes surveyed,<sup>8,10</sup> whereas Burns and Jacobson found coaches and athletic trainers to be the most identified resource for nutrition and dietary supplement information.<sup>11,12</sup> Parents, friends, and coaches in general do not possess the necessary training to provide sports nutrition information. The evidence supports the need for student-athletes to receive nutrition education from credible sources, although who is responsible for providing that nutrition education remains a question.

## THE UNIVERSITY'S RESPONSIBILITY TO STUDENT-ATHLETES

University athletic programs are charged with ensuring the overall well-being and educational success of

their student-athletes, in addition to improving their athletic performance. Many, but not all, university athletic departments offer up several major student-athlete services, which include orientation, career and life skills development, career planning and placement, academic advising and monitoring eligibility, and academic support services.<sup>13</sup> These services are intended to help the student-athlete develop the skills needed to balance the demands of academics and athletics.

In addition, most collegiate athletic programs have a sports medicine team that works with the athletes to keep them healthy and to assist them in recovering from illness or injury.<sup>14</sup> Quatromoni described a model of a multidisciplinary collegiate sports medicine wellness team that collaborates to serve all members of the college athletic community, including student athletes, coaches, and trainers.<sup>14</sup> This team may consist of sports medicine physicians, athletic trainers, strength and conditioning coaches, academic counselors, sports psychologists, sports dietitians, and related subspecialists.<sup>14</sup>

A potential barrier to providing adequate services to student-athletes is that many universities may not have a sense of shared responsibility with the athletic department for the student-athletes' educational and personal success. Many athletic departments throughout the nation operate as and consider themselves to be a separate entity from the university, and this dissonance can lead a university to act under the

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assumption that the athletic program will handle all issues and concerns of athletes, including the academic performance of the student-athletes.<sup>15</sup> The responsibility for the provision of nutrition education to student-athletes may lie somewhere in this gray area.

### THE ROLE OF THE SPORTS DIETITIAN

Although a sports dietitian may be a member of some sports medicine teams, there is a significant deficit of nutritional services for athletes at universities nationally. Less than 10% of NCAA university athletic programs employ a sports dietitian (A. Goodson, MS, RD, LD, personal communication, 2009). Burns surveyed athletes from 8 NCAA Division I universities in the Big Ten conference and found that about half of the universities (49.6%) had a registered dietitian on staff, 75% provided nutrition-related brochures and handouts, and about half (47.5%) had the registered dietitian provide individual counseling at least once each academic term.<sup>11</sup> Despite these services, 27% of the athletes surveyed were unsure of the availability of a dietitian. In addition, only 30% attended group classes, 33% used brochures and handouts, and 18% received individual counseling. Two studies found that only 10% and 28.5% of male and female Division I/II collegiate athletes surveyed identified a dietitian or nutritionist as an available source of nutrition or dietary supplement information.<sup>10,12</sup> This finding suggests that collegiate athletes may not be aware of or fully use the nutrition services available to them.

In addition, there exists a discrepancy of available resources and services to athletes depending on the divisional affiliation of the athletics program. Division I programs may have more resources to provide nutrition services to their athletes compared to Division II or III programs, considering the average total expenses for the 2003 fiscal year were \$27,200,000 for Division I-A, \$2,700,000 for Division II with football, and \$1,570,000 for Division III universities with football.<sup>16,17</sup>

### THE MODEL SPORTS NUTRITION COURSE

With the literature suggesting that the majority of collegiate student athletes are not receiving adequate nutrition education through the services of a sports medicine team, and specifically a sports dietitian, other models need to be explored. Sports psychology courses targeting the student-athlete can act as models for the development of a sports nutrition course. Curry and Maniar reported on 3 studies from 1996–1999 that found student-athletes significantly enhanced several psychological indices when taking a sports psychology course and described 1 approach to incorporating psychological skill training into a classroom format.<sup>18,19</sup> Since those earlier studies, several universities have begun offering sports nutrition courses targeting teachers and coaches, but there are few, if any, undergraduate sports nutrition courses specifically created for the student-athlete. For example, Pennsylvania State University offers an undergraduate psychology course entitled *Inner Sport: Mental Skills for Maximizing Performance* and the University of Montana began offering a course for credit entitled *Principles of Optimal Performance* to its student-athletes in 1985. Both courses are open to all students, and the objectives are to provide the student-athletes with psychological tools to enhance performance and overall well-being.

In 1994, the NCAA created the CHAMPS (Challenging Athletes' Minds for Personal Success)/Lifeskills program to enhance the overall quality of the student-athlete experience within the context of higher education.<sup>20</sup> The comprehensive wellness program could be delivered through a variety of methods, including classes, workshops, new student orientations, socials, community service activities, and speaker series. The Pennsylvania State University and the University of Massachusetts–Amherst require first-year student-athletes to enroll in a bio-behavioral health course that focuses on general health topics, such as healthful coping, sports nutrition, alcohol and other drug abuse, and sexuality.<sup>21,22</sup> Although these programs could act as a model, nutrition education was only a very small component of these curricula, and athletes may require more exposure in order to change knowledge and behaviors.<sup>23</sup>

Developing a model for a sports nutrition course for credit targeting student-athletes would fit best with universities that offer allied health degrees. These programs require their majors to complete a science-based introductory nutrition course. In addition, many universities offer a nutrition course that has a *personal nutrition* focus, which targets the non-allied health majors who have an interest in nutrition but do not have a strong science background. The model for a student-athlete sports nutrition course would be similar to

<p>Describe the role of nutrition, exercise, and fitness in health promotion.</p> <p>List dietary strategies and recommendations given by relevant agencies for promoting health and physical performance.</p> <p>Approximate energy and nutrient requirements based on the type and level of athlete, as well as individual needs.</p> <p>Identify personal nutrition goals.</p> <p>Develop a personal meal plan.</p> <p>Describe macronutrient and micronutrient functions and their relationship to athletic performance.</p> <p>Describe the significance of water, electrolytes, and temperature regulation to health and athletic performance.</p> <p>Describe the appropriate use of dietary supplements.</p> <p>List principles of proper weight control.</p>
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**Figure.** Proposed course objectives of student-athlete nutrition course.

the non-allied health course; however, it would address the unique needs of student-athletes. The course could be taught by existing faculty or an adjunct faculty member who specializes or has interest in sports nutrition, preferably a board-certified sports dietitian.

The course would differ from sports nutrition courses already offered by some universities that are intended to educate students in majors who will potentially be working with athletes in the future (ie, athletic training, exercise physiology, and coaching). This course would focus on the personal nutrition of the student-athletes. The content would be appropriate for a student who has never taken a college nutrition course. There would be a focus on application of the content to identify each student-athlete's nutrition needs and explore ways in which the student-athlete could improve his or her diet to optimize health and performance.

## BENEFITS AND BARRIERS

There may be several potential benefits of creating a course for credit. As part of the normal course load, it would not pose an additional burden to the athlete's schedule. The course could count as an elective for student, which most programs include as part of the curriculum. The attrition rate may remain low, because students must attend class and complete assignments. A course like this may foster behavior change, because the semester is longer than most nutrition interventions. If the student-athletes are encouraged to take the course as freshmen, it could instill nutrition knowledge and favorable dietary practices early in their career. Lastly, this course would not need to be part of the athletics department budget.

There are also several potential barriers of creating a course for credit. If it is optional, the student-athlete could choose to not enroll in the class. On the other hand, if it is mandatory and the athlete is not interested in the class, the student may not perform well. Lastly, it would require the appropriate faculty resources (sports dietitian or nutrition faculty with knowledge of sports nutrition). Based on these benefits and barriers, some proposed course objectives to

consider for a nutrition course developed for collegiate student-athletes are outlined in the **Figure**.

Although it is possible that several universities offer this type of course, it is not possible to determine the number of universities, if any, that offer a sports nutrition course for their student-athletes because published data do not exist and college catalogs would need to be reviewed individually to identify course listings of nutrition for athletes. The need for and lack of nutrition education among collegiate athletes has been well established in the literature, and although the NCAA's members recognize proper nutrition as the key not only to keeping student-athletes healthy, but also to achieving peak athletic performance,<sup>24</sup> a comprehensive nutrition education program does not exist. This situation presents both a challenge and an opportunity for colleges and universities to find a consistent, sustainable way to deliver nutrition education to their student-athletes. It seems 1 option worth consideration would be to integrate sports nutrition into a classroom format and offer it as a course for credit that is specific to student-athletes.

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