

## NAIA Health and Safety: Optimizing Performance

The NAIA bears an organizational responsibility to promote the welfare of its participating student-athletes. We recognize that optimal health and safety – on and off the field – are necessary conditions for learning and competing. In order to empower our student-athletes to fulfill their personal and professional potential, we view protecting their health and safety as a fundamental obligation. This report follows a prioritization effort in early 2016 that named optimizing performance among the top health and safety topics facing NAIA student-athletes now and in the immediate future (see Appendix 1). This section will specifically focus on sleep, nutrition, and injury prevention/treatment for the student-athlete. Eating disorders and general stress management will be covered under the Mental Health topic.

This document contains optimizing performance resource information available to NAIA stakeholders. Each resource is coded according to the alphabetical legend below to indicate appropriate/relevant audience:

- AD - Administrator
- AT - Athletic Trainer (or other health care professional)
- C - Coach
- P - Parent
- SA - Student-Athlete

### Subject-Matter Experts

#### Sleep

The following individuals (listed in alphabetical order) would be considered among the thought leaders in this field as it relates to athletic performance:

- [Dr. William C. Dement, MD, PhD](#)  
Lowell W. and Josephine Q. Berry Professor of Psychiatry and Behavioral Sciences, Stanford University School of Medicine, and Director of the Stanford Sleep Disorders Clinic and Research Center
- [Cheri Mah, MS](#)  
Stanford Sleep Disorders Clinic and Research Laboratory
- [Dr. James B. Maas, MA, PhD](#)  
Leading authority and international consultant on sleep and performance, CEO of Sleep for Success Professor at Cornell University, Stephen H. Weiss Presidential Fellow, Chair of the Psychology Department
- [Dr. Christopher Winter, MD](#)  
Charlottesville Neurology and Sleep Medicine, CNSM Consulting and Medical Director of the Martha Jefferson Hospital Sleep Medicine Center

[American Academy of Sleep Medicine](#) is a professional society dedicated exclusively to the medical subspecialty of sleep medicine. As the leading voice in the sleep field, the AASM sets standards and promotes excellence in sleep medicine health care, education and research. The AASM has a combined membership of 11,000 accredited member sleep centers and individual members, including physicians, scientists and other health care professionals.

[The Stanford Center for Sleep Sciences and Medicine](#) is comprised of research, clinical and educational programs geared to advance the field of sleep medicine and improve patient care. As the birthplace of sleep medicine, Stanford has driven considerable growth in sleep research and treatment, and is at the leading edge of examining the sleep-sport performance connection. Researchers examine the effects of sleep on athletic performance, and routinely publish research such as [The Effects of Sleep Extension on the Athletic Performance of Collegiate Basketball Players](#).

[National Sleep Foundation](#) is dedicated to improving health and well-being through sleep education and advocacy. Founded in 1990 by the leaders in sleep medicine, NSF is the trusted resource for sleep science, healthy sleep habits, and sleep disorders to medical professionals, patients and the public. Guidelines and research from the NSF are routinely cited by the CDC.

[Centers for Disease Control and Prevention \(CDC\)](#) works to raise awareness about the problem of sleep insufficiency and sleep disorders and the importance of sleep health for the nation's overall health.

## Nutrition

[Sports, Cardiovascular, and Wellness Nutrition](#) (SCAN) is the largest dietetic practice group of the Academy of Nutrition and Dietetics. Members are registered dietitians with nutrition expertise in the areas of sports, physical activity, cardiovascular health, wellness, and the prevention and treatment of disordered eating and eating disorders. Its mission is to empower members to be the nation's food and nutrition leaders through excellence and expertise in nutrition for sports and physical activity, cardiovascular health, wellness, and disordered eating and eating disorders. The National Athletic Trainers' Association endorses this organization and links to its references.

[Gatorade Sports Science Institute](#) (GSSI) is committed to helping athletes optimize their health and performance through research and education in hydration and nutrition science. GSSI scientists study the effects of nutrition on the human body before, during and after exercise. For more than two decades, hundreds of amateur, elite and professional athletes have participated in testing with GSSI and in studies with university research partners around the world. GSSI's headquarter lab, mobile and satellite laboratories and on the field testing enable GSSI to do leading research with the aim to provide athletes with advice and products that help their performance and achieve their goals.

The [Collegiate and Professional Sports Dietitian Association](#) (SPSDA) leads the way in applied performance nutrition, advocates for the advancement of performance nutrition infrastructure, drives job growth and provides members with tools to support their full career development. Their mission is to close the circle of protection around athletes with an emphasis on long-term athletic development and safety--beginning with those participating at the highest levels of sports in the United States--by adding the full-time services of a sports dietitian in college, Olympic, professional and tactical (military) athletic settings, to work in concert with Support Service Directors responsible for sports medicine and for strength and conditioning.

[NCAA Sports Science Institute](#)



## Injury Prevention/Treatment

The following individuals (listed in alphabetical order) would be considered among the thought leaders in this field as it relates to athletic performance:

- [Damien Clement, Ph.D., ATC, CC-AASP, NCC, NASM-PES](#)  
Assistant Professor, Sport and Exercise Psychology /Athletic Training, West Virginia University
- [Dr. John Heil DA, LCP, FAPA, FAASP](#)  
Sport psychologist at Psychological Health Roanoke; partner in Zen Zone Digital Publishing; past president for Society for Sport, Exercise & Performance Psychology; Board of Directors of Virginia Amateur Sports
- [Leslie W. Podlog, Ph.D.](#)  
Exercise and Sport Science - Assistant Professor, Health Promotion and Education - Adjunct Assistant Professor, University of Utah

### [National Athletic Trainers' Association](#)

[Datalys Center for Sports Injury Research and Prevention](#) was founded to further the efforts of researchers, public health officials, associations, policy makers and the public in the understanding and prevention of injuries and illness. They specialize in epidemiological research focused on sports and other forms of physical activity. The Datalys Center manages the NCAA Injury Surveillance Program.

[STOP \(Sports Trauma and Overuse Prevention\) Sport Injuries](#) was initiated by the American Orthopaedic Society for Sports Medicine (AOSSM) in early 2007 to address overuse injuries in young athletes. They have extensive partnerships with key health and safety organizations in sport such as the National Athletic Trainers' Association and the American Medical Society for Sports Medicine. The comprehensive public outreach program focuses on the importance of sports safety-specifically relating to overuse and trauma injuries. Although the programming is specifically targeted to youth, many of the resources can be leveraged for college-aged student-athletes.

### [NCAA Sports Science Institute](#)

## Position Statements, Best Practices and Policies

### Sleep

[NCAA Healthy Sleep for Student-Athletes: A Guide for Athletics Departments and Coaches](#) (AD, AT, C)

[Mind, Body and Sport: Sleeping Disorders](#) by Michael Grandner, a chapter from the NCAA Sport Science Institute's guide to understanding and supporting student-athlete mental wellness (AT)

[Teens and Sleep](#) and [Sleep, Athletic Performance and Recovery](#) guidelines from the National Sleep Foundation (AD, AT, C, P, SA)



## Nutrition

National Athletic Trainers' Association (NATA) Position Statements (AT):

- [Safe Weight Loss and Maintenance Practices in Sport and Exercise](#)
- [Evaluation of Dietary Supplements for Performance Nutrition](#)

[Position of the Academy of Nutrition and Dietetics, Dietitians of Canada, and the American College of Sports Medicine: Nutrition and Athletic Performance](#) (AT)

[2014-15 NCAA Sports Medicine Handbook](#), Guideline 2D Weight Loss-Dehydration; Guideline 2F Nutrition and Athletic Performance; and Guideline 2G Dietary Supplements (AT)

The NATA's [Nutrition](#) website contains articles and handouts appropriate for their own continuing education as well as to guide education conversations with coaches and student-athletes. (AT)

[Mind, Body and Sport: Eating Disorders](#) by Ron Thompson, a chapter from the NCAA Sport Science Institute's guide to understanding and supporting student-athlete mental wellness. (AT)

The NAIA subscribes to the [Resource Exchange Center](#) (REC) from [Drug Free Sport](#) which provides up-to-date, confidential and accurate information and guidelines regarding dietary supplements, dangerous and/or banned (prohibited) substances and sports nutrition. (AD, AT, C, SA)

The [Sports Nutrition Care Manual®](#) are among a group of internet-based therapeutic diet manuals and professional practice manuals for registered dietitian nutritionists; nutrition and dietetics technicians, registered; and allied health professionals. NCM products are purchased by annual subscription and provide online access to evidence- and knowledge-based nutrition information that keeps you current and compliant. (AT)

The GSSI's [Sports Science Exchange](#) contains current research related to the gambit of nutritional concerns for the high-performing athlete. Although each article summarizes its key points, this resource is best targeted to the AT because of the scientific nature and language of the research. (AT)

## Injury Prevention/Treatment

The NATA has published several [injury prevention and treatment-related position statements](#), most of which contain best practice procedures and guidelines. Examples include "Exertional Heat Illnesses," "Lightning Safety for Athletics and Recreation," and "Preparticipation Physical Examinations and Disqualifying Conditions." (AT)

[2014-15 NCAA Sports Medicine Handbook](#), Guideline 1J Preseason Preparation and Guideline 1K Strength and Conditioning Principles: Foundations for Athletic Development (AT)

## Programs, Education and Support

## Sleep

### Awareness and General Communication (AD, AT, C, P, SA)

- [Christopher Winter: The importance of sleep for elite athletes](#) video from Christopher Winter, MD (5:07)
- [Sleep improves athletic performance](#) video from University of Minnesota expert Michael Howell, MD (1:26)
- [Sleep Deficit: The Performance Killer](#) video from Harvard Medical School and Charles Czeisler, MD, PhD, FRCP (13:03)
- [Sleep and Athletic Performance](#) video from Stanford University (9:55)
- [The Facts of Napping](#) video (6:30)
- [Sleep for Success! Everything You Must Know About Sleep But are Too Tired to Ask](#) by Dr. James Maas
- [Power Sleep: The Revolutionary Program That Prepares Your Mind for Peak Performance](#) by Dr. James Maas, Megan Wherry, David Axelrod, Barbara Hogan, and Jennifer Bloomin
- [Sleep to Win! Secrets to Unlocking Your Athletic Excellence in Every Sport](#) by Helen David and Dr. James Maas
- [CDC About Sleep](#)
- [CDC Sleep and Sleep Disorders](#) podcast series

### Case Study or Story (AD, AT, C, P, SA)

- [Arianna Huffington and an NBA Star on Why Sleep Is Crucial to Success](#) video (5:08)
- [Why Should We Sleep Like Olympians](#) video from Huffington Post with Dr. James Maas and Helen David (30:30)
- [Sleep Is The Key To Peak Performance In College Athletics](#) blog post

### Training (AD, AT, C, P, SA)

- [#SleeptoPerform Series: Introductions](#) video 1 from Mike Roussell, PhD (7:33)
- [#SleeptoPerform Series: Stages of Sleep](#) video 2 from Mike Roussell, PhD (27:47)
- [#SleeptoPerform Series: Sleep and Weight Loss](#) video 3 from Mike Roussell, PhD (4:53)
- [#SleeptoPerform Series: Sleep and Athletic Performance](#) video 4 from Mike Roussell, PhD (5:24)
- [#SleeptoPerform Series: The Benefits of Napping](#) video 5 from Mike Roussell, PhD (5:37)
- [#SleeptoPerform Series: How to Get Better and More Restful Sleep](#) video 6 from Mike Roussell, PhD (9:06)
- [Sleep Education](#) resources from American Academy of Sleep Medicine

### Social Media (AD, AT, C, P, SA)

- Follow sleep researcher [Cheri Mah](#) on Twitter
- Follow sleep expert [Christopher Winter](#) @SportSleepDoc on Twitter
- Follow the [Academy of Sleep Medicine](#) @AASMOrg on Twitter
- Follow #SleepRevolution and #SleeptoPerform on Twitter
- Access [Sleep Revolution](#) tag on Huffington Post

### Posters, Cues, Environmental Support (AD, AT, C, P, SA)

- [CDC Sleep Fact Sheets](#) available for every state for free download and printing

- [CDC Health e-Card “Sleep is a Necessity”](#) available to send to others for free
- [Sleep Infographics and Memes](#) available for free download from American Academy of Sleep Medicine

## Nutrition

### Awareness and General Communication

- A variety of nutrition-related [articles](#) for collegiate athletes were created from a partnership among the NCAA, SCAN and the Collegiate and Professional Sports Dietitian Association, and are available for free viewing and download as .pdfs. Example titles include: Nutrients and Timing for the Perfect Athlete’s Snack, Training Table, and Effects of Too Much Caffeine on Athlete Performance. (AD, AT, C, P, SA)
- [Defining and Timing Healthy Snacks](#), by Andrea Q. Vintro (AD, AT, C, P, SA)
- [Vegetarian Sports Nutrition](#) by D. Enette Larson-Meyer (SA)
- [Food for Thought](#) by Rachel Starks (AD, AT, C)
- The NCAA’s [Nutrition and Performance](#) website contains lists of resources appropriate for awareness and education of all audiences. (AD, AT, C, P, SA)
- [What’s Cooking](#) website sponsored by the United States Department of Agriculture (USDA) contains recipes, tools and other resources to promote healthy nutrition. (SA)
- [MyPlate On Campus](#) is an initiative to get college students talking about healthy eating and working with their campus community to create ways for students to adopt healthy lifestyles that they can maintain during and beyond their college years. Students on campuses around the country have an opportunity to champion healthy eating and lead the way in improving the health of young adults at their school. The [MyPlate On Campus Toolkit](#) supports front-to-back programming. (AD, AT, C)

### Case Study or Story

- [Find Your Athletic Edge](#) video by Brendan Brazier at TEDxFremont (17:59) (SA)
- [Fuel Like a Pro: Sanya Richards-Ross](#) video with Amy Culp, University of Texas assistant athletics director and sports dietitian (5:24) (SA)
- [Football Profile: Sports Dietitian Amy Culp](#) video (5:16) (C, SA)

### Training

- [Sports Nutrition](#) is a free, online course from National Federation of State High School Associations (NFHS). This course, hosted by sports medicine specialist Dr. Mick Koester, can help student-athletes perform at their peak through proper nutrition. (AD, AT, C, P, SA)
- A variety of nutrition-related [webinars](#) for collegiate athletes were created from a partnership among the NCAA, SCAN and the Collegiate and Professional Sports Dietitian Association, and are available for free viewing. Example titles include: Optimal Hydration, Fueling on the Road, and Creating a Balanced Performance Plate. (AT, C, P, SA)
- [NCAA SSI Tips: Creating a Balanced Performance Plate](#) video with Amy Culp, University of Texas assistant athletics director and sports dietitian (4:45) (SA)
- [NCAA SSI Tips: Q&A with Sports Dietitian Amy Culp](#) video (5:11) (SA)

- The [Vegetarian Resource Group](#) provides sports nutrition education and guidance for the vegetarian student-athletes (AT, C, P, SA)
- [MyPlate On Campus Ambassador Training Module](#) (SA)
- [How to Eat Like an Athlete](#) video by Dr. Josh Axe (6:51) (SA)
- [How to Eat to Gain Muscle](#) video by Dr. Josh Axe (4:03) (SA)
- [Nutrition for Training and Performance](#) by Lawrence Spriet (AT)

#### Social Media (AD, AT, C, P, SA)

- Follow [SCAN Nutrition DPG](#) @SCANdpg on Twitter
- Follow [SCAN Sports, Cardiovascular, and Wellness Nutrition](#) @scandpg on Facebook
- Follow [ChooseMyPlate.gov](#) @MyPlate on Twitter
- Follow [MyPlate](#) @MyPlate on Facebook
- Check out [MyPlate Recipes](#) on Pinterest
- Follow [Breaking Muscle](#) @BreakingMuscle on Twitter
- Participate in the [SCAN Discussion Forum](#), a place to share nutrition information and learn about sports nutrition

#### Posters, Cues, Environmental Support

- A variety of [Collegiate Athlete Fact Sheets](#) were created from a partnership among the NCAA, SCAN and the Collegiate and Professional Sports Dietitian Association, and are available for download as .pdfs. Example titles include: Energy Availability, Eating in the Off Season, Nutrition for Soccer, and Vegetarian Eating for Athletes. These are also contained on the NCAA's [Nutrition webpage](#). (AT, C, SA)
- Nutritional plans and menus for specific needs are available on NATA's [Nutrition website](#). (AT, C, SA)
- A variety of printable tip sheets targeting college students are available on [MyPlate Resources](#). (AT, SA)

#### Injury Prevention/Treatment

##### Awareness and General Communication

- [Winning at the College Level: Thriving as a First-Year Student Athlete](#) by Shaun Tyrance, PhD and Nyaka NiiLampti, PhD (P, SA)
- [NCAA Ask the Expert: Transitioning from High School to College](#) (C, P, SA)
- [The Psychology of Sports Injuries](#) by Dr. John Heil and Leslie Podlog (AT, C)
- [Sports Injuries](#) NCAA Sports Science Institute (AD, AT, C)
- [STOP Sports Injuries](#) public service announcements videos (P, SA)

##### Training

- [Athletic Body in Balance](#) by Gray Cook, contains chapters like “Developing Resistance to Injury”, “Balance Training”, and “Speed and Quickness Training”. Recommended by Stanford Sports Performance. (AT)
- [The Oxford Handbook of Sport and Performance Psychology](#) compiled by editor Shane Murphy (AT, C)
- [Dos and Don'ts of Muscle Recovery](#) video by Dr. Josh Axe (3:49) (C, SA)

- STOP Sports Injuries published an [Athletes' Toolkit](#) which provides sports injury prevention resources with the information to stay safe while playing sports. (SA)
- STOP Sports Injuries published a [Coaches' Toolkit](#) which provides sports injury prevention resources with the information to keep student-athletes safe while playing sports. Resources include a coach's curriculum, tips for working with difficult parents, and self-study PowerPoint presentations on multiple topics related to preventing overuse injuries. (AD, AT, C)
- STOP Sports Injuries published a [Parents' Toolkit](#) which provides sports injury prevention resources with the information to keep youth safe while playing sports. Resources include conversation starters to help communicate with athletes to know when play is too much, tips sheets to encourage success in student-athletes, and tips for specific sports and types of injury. (P)
- [Talking to Parents and Athletes About Sports Injuries](#) (AT, C)

#### Social Media

- Follow the [NATA](#) @NATA1950 on Twitter (AT)
- Follow the [NATA](#) @NATA1950 on Facebook (AT)
- Sign up for [subscriptions to the NCAA's Sports Science Institute's newsletter](#) (AD, AT, C)
- Sign up for [In the Game, a quarterly e-newsletter](#) from STOP Sports Injuries with athlete and parent-friendly articles covering popular seasonal sports and injury prevention. (AT, C, P, SA)
- Follow [STOP Sports Injuries](#) @STOPSportsInjuries on Twitter (AD, AT, C, P, SA)
- Follow [STOP Sports Injuries](#) @STOPSportsInjuries on Facebook (AD, AT, C, P, SA)
- Follow [STOP Sports Injuries blog](#) (AD, AT, C, P, SA)

#### Posters, Cues, Environmental Support

- [NCAA Sport Injury fact sheets](#) for field hockey, football, men's and women's soccer, and women's volleyball, are available on the Datalys Center website. They are produced by the Datalys Center for Sports Injury Research and Prevention in collaboration with the National Collegiate Athletic Association, and STOP Sports Injuries. (AT, C, SA)
- STOP (Sports Trauma and Overuse Prevention) Sports Injuries targets the sports that have the highest rates of overuse and trauma injuries. They have published [sport-specific tip sheets](#) and [injury-specific tip sheets](#) (for free download) to learn about how to stay safe when playing sports. (AD, AT, C, P, SA)

#### Sleep, Nutrition and Injury Prevention Additional Programming Ideas in Combination

- Distribute [Winning at the College Level: Thriving as a First-Year Student Athlete](#) to all new athletes as welcome gift.
- Post sleep and nutrition fact or tip sheets in locker rooms and athletic training rooms.
- Share a case study or story for discussion with student-athletes.
- Hold an Optimizing Performance Awareness Fair during championship events.
- Coordinate campaign to support the [National Healthy Sleep Awareness Project](#).
- Ask student-athletes to download helpful apps.

- Discuss necessary culture changes with coaches. Use STOP Sports Injuries messages and fact sheets to create customized STOP Sports Injuries messages/talking points.
- Host Performance Summits by exclusive invitation for key influencers in all audiences.
- Include Performance Programming as health and safety topic in leadership seminars.
- Record short (1-2 minute) podcasts on performance topics of concern to the NAIA.
- Send CDC Health e-Card to student-athletes.
- Share [Sleep Infographics and Memes](#) on social media or in print.
- Create local, team-level sleep and nutrition-related competitions using wearable device data.
- Meet with a [sports nutritionist](#) to assess the possibility of ongoing consultation with an individual student-athlete, targeted teams, or entire athletic departments.
- Attend Annual SCAN Symposium ([2017's conference: Syncing Nutrition Science & Practice: Advancing Knowledge and Building Skills](#)).
- Build and share individual, team or department recipes targeting athletic performance through shared Pinterest boards.
- Support MyPlate On Campus school campaign. Encourage student-athletes to become [MyPlate On Campus Ambassadors](#).
- Sponsor a local community event with the help of STOP Sports Injuries [Community Event Toolkit](#).
- Relate a "personal story" to the local media about a student-athlete, parent, coach or athletic trainer that conveys a compelling message about sports injury prevention.
- Evaluate fields of play, gyms, locker rooms, athletic training rooms, and other related venues for injury or disease hazards.

## Data, Analytics and Reports

The CDC provides current general data related to sleep, nutrition and injury prevention. Individual wearable devices and apps provide sleep and nutrition data which can provide personalized feedback to the student-athlete and can also be used to promote teamwork and competition towards goals. (AT, C, P, SA)

Drug Free Sport provides monthly reporting of use of the NAIA's instance of the REC. (AD, AT, C)

Datalys Center NAIA Injury Surveillance Program should provide quarterly reporting for NAIA student-athletes (and comparisons to the NCAA). (AD, AT, C)

## Apps and Tools

[Oral appliances](#) are available to treat snoring and obstructive sleep apnea. For example, the [aveoTSD®](#) is a simple, effective, noninvasive anti-snoring device available by prescription and endorsed by the American Academy of Sleep Medicine.

[Sleep Cycle](#) alarm clock and app tracks your sleep patterns and wakes you up during light sleep. Your movements vary with each sleep phase. Sleep Cycle uses sound analysis to identify sleep states by tracking movements in bed. Sleep Cycle uses a wake up phase (30 minutes by default) that ends at your desired alarm time. During this phase Sleep Cycle will monitor signals from your body to wake you softly, when you are in the lightest possible sleep state.

[Sleepbot](#) a suite of tools that help you get the sleep you need. Track your sleep on the mobile app. Set alarms and create auto-settings to get the most out of your sleep. View and share your stats online or from your phone.

[Sleep as Android](#) tracks your sleep to find the optimal moment for your wake up. Waking up in light sleep is natural, gentle and it may only be compared to the experience of waking up without any alarm clock. Additional features include sleep deficit stats and bedtime notification; sleep talk and snoring recording, snoring stats and anti-snoring, room noise stats; awake detection through heart rate sensing, using BT Smart devices or Android Wear; integration with major health services like Google Fit; and sleep advice, rating and tagging.

Wearable products like [Fitbit](#) or [Jawbone Up](#) with sleep monitoring and tracking capability.

[SuperTracker](#) free online tool from the USDA. Key features include: nutrition info look-up for over 8,000 foods with side-by-side food comparisons; food tracking and comparison to personalized nutrition targets; movement/activity tracking and progress; weight tracking and management guidance; tips and support from a virtual coach for up to five personal goals; creation of healthy eating and/or physical activity group competitions or challenges.

[MyFitnessPal](#) is one of the most popular combination nutrition planner, nutrition tracker, activity tracker and social support apps available. Among its many benefits are the largest food database of any Android/iPhone calorie counter (over 2,000,000 foods and growing daily); easy and fast food entry, remembers favorites, adds multiple foods at once; fully syncs with the web to provide convenience from multiple devices, continuous data backup online; add friends and easily track and support each other's progress; and full range of data and progress reports, customized goals based on your diet profile, recipe calculator.

## Asset Gap Evaluation

The NAIA could consider publishing a position statement regarding the importance of sleep, nutrition and injury prevention to the overall health and wellness of its student-athletes. This would include guidance on sleep and meal provision (especially during travel), the importance of recovery periods, etc.

The author of [Winning at the College Level: Thriving as a First-Year Student Athlete](#), Shaun Tyrance, appears interested in partnering with the NAIA to extend textbook distribution into member schools. The textbook comes with a syllabus and slides to support a centrally sponsored event, a road show event or a "book club" hosted by the ASA or NAIA.



[Sports, Cardiovascular, and Wellness Nutrition](#) (SCAN) website contains a plethora of resources focused on nutrition and the athlete, and provides a [Terms of Use](#) document to guide reproduction of materials, web use, commercial use, etc. Schools may find it helpful to join the organization, as members can access all resources for free.

NAIA's access to Drug Free Sport's REC is contingent upon an ongoing relationship.

NAIA's access to Datalys injury surveillance data is contingent upon an ongoing relationship.

The NAIA may find value in joining the STOP (Sports Trauma and Overuse Prevention) Sports Injuries movement as an [official, organizational affiliate](#).

All books, conferences and wearable devices listed as resources above have an associated purchasing fee.

## **Asset Delivery**

Those resources and assets deemed appropriate by the NAIA should be delivered through [www.naia.org/wellness](http://www.naia.org/wellness) (or as otherwise determined by NAIA leadership). The Wellness page could be designed as a robust health and safety portal with content sections relevant to each stakeholder audience. A review and maintenance plan would need to be established to ensure the latest and greatest content is always available.

## Appendix 1 Optimizing Performance Initial Report (Apr 7, 2016)

### Overview

Basic tenets of human physiology point to the focus areas that help students optimize both their academic and athletic well-being. The student-athlete's physical health and fitness, cognitive function and emotional state must all be aligned to successfully compete in his or her sport of choice. The physiological demands of student-athletes are compounded by rapid brain development, maturational changes, social expectations, activity overload, and life transitions experienced by the college age group.<sup>1,2</sup> Because student-athletes are in the crucial stage of transitioning from parental control to assuming responsibility for their own health and lifestyle choices, they are particularly vulnerable to the pressures and challenges college life brings their way.<sup>2</sup>

The first health and safety category, optimizing performance, encompasses a variety of general wellness topics specific to the unique needs of student-athletes who happen to be operating in the college environment:

- Sleep and rest
- Nutrition and dietary supplements
- Stress management
- Injury prevention and treatment

Imbalance among these basic health needs further propagate physical, mental, and emotional health risks which can negatively impact the student-athlete's ability to perform both on and off the field.<sup>3</sup>

Respondents to the NAIA's recent survey to members of the Association of Student-Athletes overwhelmingly revealed sleep and nutrition to be their top health and wellness issues as student-athletes (see Appendix 6). Student-athlete burnout and nutrition appear on the NAIA's athletic trainer survey (see Appendix 6). Members of the COP responding to a recent survey ranked optimizing performance as their number one concern for student-athletes (see Appendix 6). Access any college's menu of student health services, and they are highly likely to broadcast health and wellness content inclusive of the bulleted list above.<sup>4,5</sup>

### Incidence Information

Research (and our own practical experience) shows that the typical American adult lacks healthy sleep patterns and quality. This problem is magnified in college students who are 50% more likely to suffer from daytime sleepiness as compared to adolescents and adults; in fact, 60% of college students report that they are tired or sleepy at least three days a week.<sup>6</sup> College students average 1-2 fewer hours of sleep per night than recommended.<sup>3</sup>

Obesity is generally the primary American health concern related to nutrition, and has been the target of many public health campaigns for over a decade. More than one-third (34.9% or 78.6 million) of U.S. adults are obese.<sup>7</sup> Obesity-related conditions, including heart disease, stroke, type 2 diabetes and certain types of cancer, lead to enormous medical costs (\$147 billion nationwide in 2008, \$1,429 per person higher than those of normal weight).<sup>7</sup> Although

student-athletes may not routinely suffer from obesity, it is safe to say that healthy nutrition is an equal challenge to sleep within the college population. Students tend to demonstrate behaviors associated with unhealthy dieting, skipping meals, eating fast food, and nutritional imbalance.<sup>8,9</sup> Many student-athletes also try to juggle aspects such as supplement use and aggressive weight loss in their effort to maintain competitiveness. They may not have ready access to menus customized to their particular nutrition needs, and some may lack the financial resources to eat appropriately.

Like most people, college students routinely experience varying levels of stress coming from a variety of sources (e.g. personal, financial, social, environmental). In order to prepare students for transitioning to the “real world”, college is intended to be hard and stressful.<sup>2</sup> Some stress may be necessary to help the student to maintain focus and sustain persistence, but overwhelming levels of stress can lead to significant mental health issues, and overall reduction in academic and athletic performance. See Appendix 2 for incidence data related to mental health and Appendix 4 for that related to substance use and abuse.

Sports-related injuries can have a substantial impact on the immediate and long-term health of student-athletes. NCAA Injury Surveillance Program data from academic year 2013-14 led researchers to compile the following estimated national cumulative and annual average numbers of injuries in 25 NCAA championship sports.<sup>10</sup>

- An estimated 1,053,370 injuries occurred during 176.7 million athlete-exposures.
- Men's football resulted in the largest number of injuries (47,199).
- Men's wrestling experienced the highest overall injury rate (13.1 per 1,000).
- Gymnastics accounted for the highest overall injury rate (10.4 per 1,000) among women.
- More injuries occurred during practice than competition for all sports except men's ice hockey and baseball.
- Competition (vs practice) injuries were severe, requiring 7 days or more to return to full participation.

## References

<sup>1</sup>Grandner MA. (2016). *Healthy Sleep for Student-Athletes: A Guide for Athletics Departments and Coaches*. Retrieved from <http://www.ncaa.org/health-and-safety/sport-science-institute/healthy-sleep-student-athletes-guide-athletics-departments-and-coaches> (accessed March 24, 2016).

<sup>2</sup>Douce LA & Keeling RP. (2014). *A Strategic Primer on College Student Mental Health*. Retrieved from <http://www.acenet.edu/news-room/Documents/A-Student-Primer-on-College-Mental-Health.pdf> (accessed March 14, 2016).

<sup>3</sup>UGA Student Affairs University Health Center. (n.d.). *Let the Bulldawg Sleep!* Retrieved from <https://www.uhs.uga.edu/sleep/> (accessed March 24, 2016).

<sup>4</sup>Rutgers University Student Health Services. (n.d.). *101 Health and Wellness Tips for College Students*. Retrieved from [http://www.healthservices.camden.rutgers.edu/topics\\_wellness](http://www.healthservices.camden.rutgers.edu/topics_wellness) (accessed March 24, 2016).



<sup>5</sup>UC Davis Student Health and Counseling Services. (n.d.). *Top Health and Wellness Concerns for Students*. Retrieved from <https://shcs.ucdavis.edu/services/wellnessconcerns.html> (accessed March 24, 2016).

<sup>6</sup>Hershner SD & Chervin RD. (2014). *Causes and consequences of sleepiness among college students*. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4075951/> (accessed March 24, 2016).

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