



Sports Nutrition Advisory Panel

What is the Sports Nutrition Advisory Panel (SNAP)?

The Sports Nutrition Advisory Panel (SNAP) is a select group of key reputational thought leaders with expertise in sports nutrition. Bringing a unique, unbiased perspective regarding the consumption of dairy products for athletes of all levels, such as middle/high school, collegiate, professional, and recreational athletes, the panelists willingly serve as advocates for the dairy industry.

What is the purpose of SNAP?

A primary goal of SNAP is to help American Dairy Association North East (ADANE) become a valuable resource to athletes through the creation of new, relevant and evidence-based sports nutrition content — that highlights the value of including dairy in an athlete's diet — to obtain optimal sports performance.

The SNAP program also opens the door for ADANE to work with a well-respected group of sports nutrition experts to help build trust and inspire passion for dairy products — including milk, yogurt and cheese — among the Gen Z audience and those who influence what they eat. Other goals include:

- Engaging in focused, meaningful dialogue with sports nutrition experts
- Gathering valuable industry insights and trends in this niche area
- Maintaining beneficial relationships within the sports nutrition industry
- Creating original, shareable content for our target audience

Who is the target audience for the SNAP Content?

This content reaches more than 15,000+ high school athletic coaches within our territory as well as Gen Z student athletes between 13-18 years of age.

How is the SNAP content shared?

This content gets shared through multiple communication channels monthly.

- Our Sports Marketing Director, Brenda Beltram, shares this content with ADANE's external sports partners listed below. Additionally, *Refuel with Chocolate Milk* is an official sponsor, as well as the official beverage of the following athletic associations:
 - Delaware Interscholastic Athletic Association (DIAA)
 - District of Columbia State Athletic Association (DCSAA)
 - Maryland Public Secondary Schools Athletic Association (MPSSAA)
 - New Jersey State Interscholastic Athletic Association (NJSIAA)
 - New York State Public High School Athletic Association (NYSPHSAA)
 - Pennsylvania Interscholastic Athletic League (PIAA)
- Our Digital team posts this content on ADANE's social media platforms including Facebook, Twitter and Instagram and on **AmericanDairy.com**.
- The Health & Wellness Specialist who manages SNAP, Liz Jalkiewicz, RDN, LDN, also shares this content with other registered dietitians and ADANE's other third party advocates and spokespersons.



Liz Jalkiewicz, RDN, LDN

Health & Wellness Specialist, Manages the Sports Nutrition Advisory Panel

EJALKIEWICZ@MILK4U.ORG

Liz Jalkiewicz, RDN, LDN is a Registered Dietitian with 15 years' experience. As a Health and Wellness Specialist at American Dairy Association North East for the past 3 ½ years, Liz provides dairy nutrition education and outreach programs to health professionals and key influencers, including sports dietitians and fitness professionals. She has a diverse background in the food and nutrition industry working in retail, culinary and media production, as well as marketing and communication roles. Liz received her BS in Dietetics from Montclair State University and completed her Dietetic Internship at the University of Medicine and Dentistry of New Jersey. She is an active member of the Academy of Nutrition and Dietetics and the Food & Culinary Professionals dietetic practice group.



Brenda Beltram

Director Multimedia Communications & Sports Marketing

BBELTRAM@MILK4U.ORG

Brenda Beltram is the Director of Multimedia Communications & Sports Marketing with the American Dairy Association North East. She is a communications professional with over 20 years of experience coordinating public relations campaigns involving a wide range of industry stakeholders from farmers to professional athletes. Brenda has been responsible for project management tasks from strategic plan development, branding, script writing and media relations to onsite management and oversight of vendors including photographers, videographers and PR agencies.

Our Panelists



Heather Mangieri, MS, RDN, CSSD, LDN **Pittsburgh, PA**

LEAD CONSULTANT

Heather is a nationally recognized expert in Nutrition, Wellness & Human Performance, a Registered Dietitian-Nutritionist, a board-Certified Specialist in Sports Dietetics and the author of Fueling Young Athletes (Human Kinetics.) She has over 20 years of professional experience in Wellness, Sports Nutrition/Adolescent Sports Nutrition, Weight Management & Disordered Eating. Her company, Heather Mangieri Nutrition, provides food, fitness and nutrition consulting services for organizations, companies and clients. Heather is passionate about translating nutrition science into practical, easy-to-understand messages that resonate with consumers. She served as a national media spokesperson for the Academy of Nutrition & Dietetics for 8 years and built a solid reputation as a trusted source of food, fitness and nutrition information. She's been quoted in hundreds of national and local publications, including TV, radio, print and electronic. She uses her expertise to share science-based messages for the media, industry and brands that she trusts. She resides in Pittsburgh, Pennsylvania with her three children.



Leslie Bonci, MPH, RD, CSSD, LDN **Pittsburgh, PA**

Leslie J. Bonci, MPH, RD, CSSD, LDN, is the owner of Active Eating Advice- be fit, fed, fearless- a nutrition consulting company and is the co-founder of Performance365- a sports nutrition consulting company. Her clients include: Bayer, Gatorade, The National Dairy Council, California Prune Board, Douglas Lab, General Mills, Potatoes USA, The National Peanut Board, Produce for Better Health, Sodexo, The Mushroom Council, and the Wonderfals Brands. Performance 365 provided sports nutrition services for the XFL in 2020. She is the sports dietitian for the 2020 SuperBowl Champions Kansas City Chiefs. Leslie is the author of Sport Nutrition for Coaches and the American Dietetic Association Guide to Better Digestion and co-author of Run Your Butt Off, Walk Your Butt Off, the Active Calorie Diet and Bike Your Butt Off. She has authored chapters for sports medicine and sports nutrition manuals. Leslie is a blogger for US News and World Report Eat + Run, and appears regularly on local television as well as local and national radio programs.



Stephanie Coppola, MS, RD
Philadelphia, PA

Stephanie Coppola is a Registered Dietitian and one of the Sports Nutrition Advisory Panelists for the American Dairy Association North East. She is also the Performance Nutrition Assistant for the Philadelphia Eagles. She is in her 3rd season with the Eagles, which started off as an internship through the Gatorade Sports Nutrition Immersion Program for the 2018-2019 season. Stephanie earned her Bachelors of Science in Nutrition from NC State University, her Master's degree in Nutrition from Meredith College in Raleigh, NC and completed her Dietetic Internship through the Wellness Workdays Distance Program in Boston, MA. During her undergraduate and graduate programs, Stephanie interned for NC State's Sports Nutrition department working mostly with the Men's and Women's Basketball teams as well as Football. During her dietetic internship, she worked with the athletic department's sports nutrition department at the University of Maryland. She is also an active member of the Collegiate and Professional Sports Dietitians Association. A native of Billerica, MA, Stephanie currently resides in South Philadelphia, PA.



Matt Darnell, PhD, RD, CSSD, SCCC
Pittsburgh, PA

Dr. Darnell is an Assistant Professor within the Department of Sports Medicine and Nutrition at the University of Pittsburgh and Director of the Sports Science MS program. Additionally, he also serves as the Sports Dietitian for the Pittsburgh Steelers. Matt earned his Doctorate in Rehabilitation Science and Sports Medicine. He received his Bachelor's and Master's degrees in Clinical Dietetics and Nutrition at the University of Pittsburgh. Matt is a Registered Dietitian, Board Certified Specialist in Sports Dietetics, and Strength and Conditioning Coach Certified. His background and research interests include nutrition and exercise approaches for improved athletic performance, injury prevention and rehabilitation.



Jessica Garay, PhD, RDN, FAND, CSCS
Syracuse, NY

Jessica Garay is an Assistant Professor in the Department of Nutrition and Food Studies at Syracuse University. Dr. Garay's academic training is in the area of sports nutrition and her research interests focus on women's health issues, specifically for pregnant women and female athletes. She is a Registered Dietitian Nutritionist and has worked at the Food Bank of Central New York, Washington (DC) Cancer Institute, and in her private practice, Major League Wellness. In addition, Dr. Garay is a Certified Strength and Conditioning Specialist, 200-hour Registered Yoga Teacher, and group fitness instructor.



Sue James, MS, RD, LDN
Baltimore, MD

Sue A. James, MS, RDN, LDN is president of Pinnacle Health & Wellness, a consulting firm that provides health, wellness, and sports nutrition programming to businesses and schools. James received her MS degree in nutrition with a focus in sports nutrition from Georgia State University and her BS in nutrition from Purdue University. Pinnacle Health & Wellness, clients include the Baltimore Ravens, the Baltimore Orioles, and Johns Hopkins University Athletics. James has been honored to be a presenter for the U.S. White House's Wellness Seminar Series and the Healthier U.S. Fitness Challenge. She has been a contributor to the NFL's Play 60 website which is dedicated to improving the health of children throughout the United States. She is a member of the Academy of Nutrition and Dietetics (AND), and the Academy's Sports, Cardiovascular and Wellness Nutritionists, in which she has held several leadership positions. She is an advisory board member of the University of Maryland's College Park Dietetic Internship Program. James is a fitness and sports enthusiast who has participated in a variety of fitness and running events. She believes that being active, loving what you do, and everything in moderation are the keys to living well.



Dan Liburd, MS, CSCS, USAW
Brooklyn, NY

Dan Liburd has over a decade of experience working with professional athletes and as an NFL and NBA Strength and Conditioning Coach. Liburd earned his Bachelor's degree in Exercise Science from Boston University. He received his Master of Science degree from Canisius College in Health and Human Performance and is currently working towards his Ph.D. Health and Human Performance at Concordia University Chicago. Liburd holds a variety of certifications in Strength and Conditioning, Health and

Sport Nutrition, Olympic Weight Lifting, Manual Therapy Techniques and Movement Assessment. His professional experience includes stints with several professional teams such as the Buffalo Bills, the Pittsburgh Steelers and currently works as the Head Strength and Conditioning Coach within the NBA. Liburd has also worked as a Strength Coach for several Collegiate Strength and Conditioning programs including the Boston University Terriers, Springfield College Pride, American College Yellow Jackets and performance specialists positions at Private Training Facilities such as Mike Boyle Strength and Conditioning as well as Peak Performance Physical Therapy.



Molly Morgan, RD, CDN, CSSD
Apalachin, NY

Molly Morgan is a registered dietitian, author, and owner of Creative Nutrition Solutions. She has extensive experience in the area of sports nutrition and corporate wellness. Including working with Fortune 500 companies, national brands, and professional sports teams. Molly has authored three books including *Drink Your Way to Gut Health* (2015), *Skinny Size-It* (2014), and *The Skinny Rules* (2011). Molly worked with the Ottawa and Belleville Senators (NHL/AHL hockey) as their nutrition consultant for 14 seasons, where she created and developed custom nutrition plans for players along with interactive workshops. Additionally she works with Binghamton University Division 1 Men's Basketball team on nutrition plans and delivers custom workshops. Molly has been a blogger for MensFitness.com and routinely works with the media. Molly completed her degree in clinical dietetics at the State University at Buffalo and is a Board Certified Sports Specialist Dietitian.



Jake Sankal, M.Ed., RD, CSSD, RSCC
Ashburn, VA

Jake Sankal is in his fifth NFL season with the Washington Football Team as the Director of Sports Nutrition and an Assistant Strength and Conditioning Coach. Prior to joining Washington, Sankal worked as a strength and conditioning coach in the Cleveland Indians organization from 2010-2015. Sankal is a Registered Dietitian (RD), Certified Specialist in Sports Dietetics (CSSD), and holds certifications with USA Weightlifting and the National Strength and Conditioning Association (CSCS, RSCC). Sankal initially earned his bachelor's degree in history from the College of Wooster, where he played baseball and helped guide the program to the NCAA Division III Tournament in all four seasons of his collegiate career. In addition, he holds a bachelor's degree in dietetics from the University of Northern Colorado and a master's degree in exercise science from Cleveland State University. He currently resides in Ashburn, Va., with his wife, Amanda, and daughter, Emma.



Heidi Skolnik, MS, CDN, FACSM
Englewood Cliffs, NJ

Considered a thought leader in nutrition, Heidi has influenced many through her media work, writing and thriving consulting business. Her company, Nutrition Conditioning, oversees the Sports Nutrition program at The Juilliard School and the School of American Ballet. Heidi has also been part of The Women's Sports Medicine Center at Hospital for Special Surgery for over 20 years. Additionally, she served as the team nutritionist with the Knicks, Giants, and Mets; and has worked with numerous other professional and collegiate organization over the years. As a sought-after speaker, Heidi presents internationally and she is an expert resource in the media. Heidi earned two Master degrees (Exercise Science and Human Nutrition) and is a Fellow with the American College of Sports Medicine (ACSM).



Angie Dye, MS, RDN, CSSD, LDN
Hershey, PA

Angie Dye is a Registered Dietitian Nutritionist (RDN) and a Certified Specialist in Sports Dietetics (CSSD). She is also a Certified Intuitive Eating Counselor. Angie works one-on-one with both adult and pediatric clients at her nutrition practice, Carpe Diem Nutrition, in Hershey, PA. Her areas of expertise include Sports Nutrition, Digestive Health, and Intuitive Eating. Angie is passionate about nutrition and loves working with clients on ways to use this important tool to improve their overall health. For her clients exploring Intuitive Eating, this can mean working on letting go of old dieting rules and learning to trust the body's own hunger and fullness cues. She also enjoys helping athletes optimize their performance with nutrition and has seen the benefits in every level of athlete from youth, up to the ultra-endurance level. Angie holds a Master's Degree in Nutrition Science from Indiana University in Bloomington, Indiana.



Felicia Stoler, DCN, MS, RDN, FACSM, FAND
Holmdel, NJ

Dr. Felicia Stoler is a registered dietitian nutritionist, exercise physiologist and expert consultant in disease prevention, wellness and healthful living. She has a bachelors from Tulane University (N'89), a masters in applied physiology and nutrition from Columbia University and doctorate in clinical nutrition from Rutgers University. Felicia serves on many local, state and national committees related to health and wellness. Felicia is Fellow of the American College of Sports Medicine, a Fellow of the Academy of Nutrition and Dietetics, a Diplomate in Lifestyle Medicine (ACBM/ACLM); and a Council member of the True Health Initiative. Dr. Stoler hosted the second season of TLC's groundbreaking series Honey, We're Killing the Kids! and the author of Living Skinny in Fat Genes™: The Healthy Way to Lose Weight and Feel Great (Pegasus). She has been a contributor for FoxNews.com, the Patch.com, Active.com and written several book chapters. Stoler authored ACSM's Sports Medicine Basics on Childhood Obesity. Felicia is one of the most sought-after nutrition/fitness experts for TV, radio, newspapers, online and magazines in the US. She is passionate about helping people live healthier lives. From college professor, to public speaker, influencer, US Congressional candidate... residing in Holmdel, NJ.



Nicolette Mense, MS, RD
Boonton, NJ

Nici is a Registered Dietitian and the Team Dietitian for the New York Jets. She started with the Jets in July 2017 as their first full-time Team Dietitian. Nici is originally from Sycamore, IL and graduated from Northern Illinois University in 2013 with a Bachelor of Science in Nutrition/Dietetics. While at NIU, she was a member of the women's soccer team for four years. She continued her studies at Eastern Illinois University where she completed her internship to become a Registered Dietitian and received her Master of Science in Dietetics in January 2015. During her internship she worked with student athletes at MacMurray College and Illinois College. Prior to working with the Jets, Nici was the sports dietitian at the University of Missouri. During her time at the University of Missouri she worked mainly with Football but also with Men's and Women's Basketball, Baseball, Men's and Women's Golf, Swimming and Diving, Women's Soccer, and Gymnastics. She is also an active member of the Collegiate and Professional Sports Dietetic Association. Nici currently resides in Boonton, NJ with her husband and son.



Sarah Snyder, MS, RD, CSSD, LD, CSCS
Baltimore, MD

Sarah Snyder enters her sixth season in the NFL as the Director of Sports Nutrition for the Baltimore Ravens. Snyder created and implemented a performance nutrition program for the Detroit Lions from 2016-2018 after previously directing nutrition programs for the University of Florida and University of Michigan athletic departments. Snyder started her sports nutrition career at EXOS in Arizona, specializing in nutrition consulting and programming for NFL and NBA athletes while consulting for the Memphis Grizzlies. Snyder earned a bachelor's degree in combined sciences while working as a student athletic trainer for basketball and women's soccer at Santa Clara University. She completed her master's degree in food and human nutrition from Florida State University, while serving as a graduate assistant strength and conditioning coach for women's volleyball.



Stevie Lyn Smith, MS, RDN, CSSD, CDN
Buffalo, NY

Stevie Lyn is a Registered Dietitian and avid endurance athlete. Her mission is to help educate and coach athletes on how to fuel their goals while not sacrificing their health. As a board certified specialist in sports nutrition, Stevie Lyn has helped hundreds of athletes and active individuals fuel to improve their performance, energy levels, and recovery without feelings of guilt or restriction. Drawing from her experiences growing up as a team-sport athlete to completing ten full ironman distance triathlons and countless other endurance and ultra distance races, she knows firsthand how important nutrition is to be a healthy athlete. She has contributed to Runner's World Magazine, Outside Magazine, Bicycling Magazine, Triathlete Magazine and the InsideTracker blog. In her free time, she enjoys volunteering to help empower others through organizations such as Girls on The Run, We Finish Together, and Back on My Feet. When she's not swimming, biking, or running you can find her outside exploring new trails or on snowshoes with her dog.



Steve Smith, RD, CSSD, LD
New Jersey / New York City

Steve is the Director of Sports and Performance Nutrition with the New York Giants.

Special Projects for 2021

Chocolate Milk Reimagined

A new marketing campaign created this year, Chocolate Milk Re-imagined featured ingenious recipes using chocolate milk as the main ingredient. Targeted to Gen Z athletes, this dynamic marketing program reinforced the consumption of chocolate milk as an ideal recovery beverage while encouraging the use of chocolate milk as invaluable part of a daily nutrition plan. On **AmericanDairy.com**, you can find 10 chocolate milk recipes — from peanut butter chocolate milk whip to chocolate raspberry smoothie bowl — created by our Sports Nutrition Advisory Panel and our culinary consultants to help inspire creativity in the kitchen and passion for dairy products through chocolate milk. These recipes were shared with our sports partners and other consumers garnering more than 140,000 impressions and over 6,000 unique website visits to the targeted landing page — **AmericanDairy.com/chocolatemilkreimagined**.



Six Blog Spotlight Features: National Football League Team Dietitians



Nicolette Mense, MS, RD
New York Jets



Matt Darnell, PhD, RD, CSSD, SCCC
Pittsburgh Steelers



Jake Sankal, M.Ed., RD, CSSD, RSCC
Washington Football Team



Stephanie Coppola, MS, RD
Philadelphia Eagles



Sarah Snyder, MS, RD, CSSD, LD, CSCS
Baltimore Ravens



Leslie Bonci, MPH, RD, CSSD, LDN
Kansas City Chiefs

For access to all six blog posts, visit **AmericanDairy.com/SNAP** or scan the QR code:



2021 BEST OVERALL DIET REVIEW: TOP PICKS FOR ATHLETES

By: Leslie Bonci, MPH, RD, CSSD, LDN

January is the month when many resolutions revolve around losing weight and getting healthy. It's also the time when U.S. News and World Report publishes their annual rating of the best and worst diets. Many consumers turn to this list for guidance, but are the meal plans appropriate for athletes and active people? I took a look and want to share my thoughts on the best eating plans and why they may be beneficial. Certainly, the foods you choose should support body goals and performance, but with COVID-19 still raging, it is important to control what you can with your eating plan. You should not just focus on the take-aways such as decreasing carbs (which may hurt performance), sugar and fat but also what you add-in that may help to keep your immune system healthy and decrease inflammation.

First, let's talk about the word diet. Although the ranking refers to the list as best diets, they should be referred to as eating plans as they are not meant to restrict eating. The top-rated plans were found to be relatively easy to follow, nutritious, safe, effective for weight loss and protective against heart disease and diabetes. And, while they were not rated on their ability to fuel sports performance, many of the eating patterns work well for athletes and active people.

Second, it's important to remember that eating to alter body composition should be done at the right time to prevent any negative impact on strength, speed and stamina. Athletes should start well in advance of their upcoming season or at the very beginning of the off season. That way, when goals switch from altering body composition to fueling sports performance, they are ready to go.

Here are my thoughts on the best eating plans for athletes and why they may be beneficial.

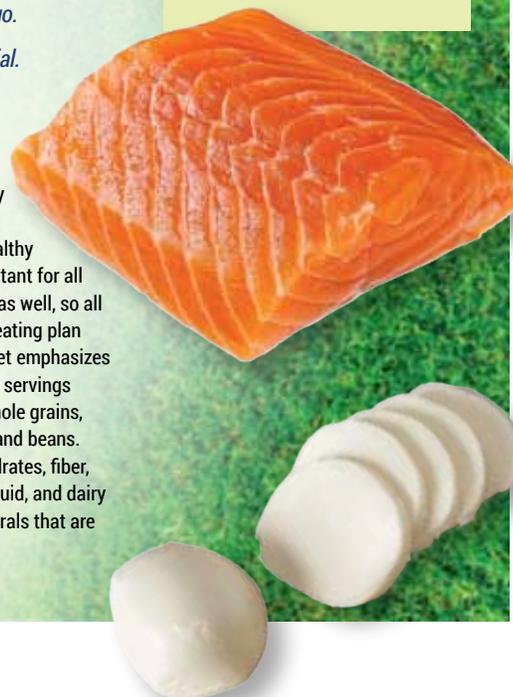
MEDITERRANEAN DIET

This plan is based on an abundance of fruits and vegetables, small amounts of meat and poultry, moderate amounts of fish, and generous amounts of beans. Full-fat yogurt and cheese are the predominant dairy foods. Pasta, rice, potatoes, farro, and breads make up the majority of the carbs, while olives, olive oil, nuts, and seeds are the recommended fat sources. This eating plan is not only heart-healthy – it also includes anti-inflammatory foods because athletes don't have to train in pain. The abundance of fruits and vegetables also play a role in supporting a healthy immune system



DASH DIET

DASH stands for Dietary Approaches to Stop Hypertension. Although healthy blood pressure may not be a concern now, maintaining a healthy cardiovascular system is important for all athletes. Coaching is stressful as well, so all the more reason to choose an eating plan that is protective. The DASH diet emphasizes lots of fruits and veggies, three servings of low or non-fat dairy daily, whole grains, lean meats, poultry, fish, nuts, and beans. The produce provides carbohydrates, fiber, vitamins, plant nutrients, and fluid, and dairy foods provide protein and minerals that are important for bone health.



You may also want to consider the following:

- Is the eating plan practical?
- Will it help you with your physique goals?
- Does it optimize performance?
- Does it meet your price point?



AMERICAN DAIRY
ASSOCIATION NORTH
EAST

AmericanDairy.com

@AmericanDairyNE



FLEXITARIAN DIET

This is a mostly plant-based diet, but as the name implies, it suggests flexibility for those who want to include meat and other animal foods like eggs and dairy. The base of the diet is plants: fruits, veggies, beans, peas, and whole grains. Those provide the energy for sport. The Flexitarian diet suggests getting the majority of protein from plants, which can be done with beans, peas, nuts, seeds, tofu, veggie burgers, and other soy-based products. Fat will come from nuts, nut butters, seeds, seed butters, oil, and avocado.

VOLUMETRICS

This diet is great for athletes in weight class sports, as well as those looking to lose weight without feeling hungry. The concept of volumetrics is to increase the fluid content in the foods consumed to feel fuller. This also supports the increased hydration needs many athletes face. Examples of foods included in this plan are smoothies, soups, stews, chili, salads, bean dishes, stir-fries, and oatmeal. Feeling fuller helps to stave off hunger and makes less food look like more. The pairing of protein with carbohydrates that athletes need can come from a Greek yogurt dip along with veggies, or a shrimp-veggie stir fry over whole grain rice. Extra-lean beef chili with beans and shredded cheddar over a baked potato also provides the fill factor, as well as the fuel for sport.

VEGETARIAN DIET

Athletes looking to follow a vegetarian diet have lots of options. The key is remembering that it's not just what you exclude from the plate but what you include. A plant-based eating plan is great for everyone as most of us do not eat enough plants, especially fruits and vegetables, but do remember that when choosing a plant-centered plate you should still include nutritious animal foods such as dairy, lean meats, poultry, fish and eggs. Vegetarians can be lacto-vegetarian, lacto-ovo vegetarian or pesco-vegetarian.

Here is what each of those eating plans looks like.

Lacto-vegetarian - includes eating a variety of fruits, veggies, pasta, rice, bread, cereal, potatoes, beans, nuts, seeds. And, while meat, poultry, eggs, and fish are excluded, athletes can meet their protein needs by incorporating dairy foods— like milk, yogurt, cheese— into their meals.

Lacto-ovo vegetarian - similar to the lacto-vegetarian mentioned above, but athletes that choose this plan can also incorporate eggs into their diet.

Pesco-vegetarian - includes eating the same fruits, veggies, pasta, rice, bread, cereal, potatoes, beans, nuts, seeds, eggs, and dairy foods as the above two plans, but also allows fish and shellfish.



A plant-based diet can be appropriate for an athlete, but it has to be well planned to ensure adequate intake of calories, macronutrients, and micronutrients.

BOTTOM LINE

At the end of the day, eating is not one size fits all. Any one of these diets can help you improve body composition while supporting your health. It's important to choose an eating plan that is sustainable, affordable, do-able, and palatable. When it comes to affordability, the highlighted diets revolve around fruits, vegetables, and grains. You can buy frozen, canned, dried or fresh fruits, vegetables, and grains such as rice, bread, pasta, cereal, and corn tortillas as these tend to be the least expensive items in the bowl or on the plate, and they also elevate your performance. Bodies need to be fueled to perform well. That means choosing an eating pattern that provides enough calories to optimize strength, speed, and stamina and enough macronutrients to attain and maintain one's goals — and doing so with foods that you like, can prepare, and will eat.



AMERICAN DAIRY
ASSOCIATION NORTH
EAST

AmericanDairy.com

 @AmericanDairyNE

Student Athlete Takeaways from the 2020-2025 Dietary Guidelines for Americans

By: Heidi Skolnik, MS, CDN, FACSMM

What if there was a national recommendation, put forth by leading government agencies, that eating should be pleasurable? Well, guess what? There is! The newly released 2020-2025 Dietary Guidelines for Americans (DGA) are hot off the press and suggest just that, along with other recommendations beneficial for student athletes.

What are the Dietary Guidelines for Americans?

The Dietary Guidelines for Americans provide advice on what food and drinks Americans should eat to meet daily nutrient needs, promote health and prevent disease. New, updated guidelines are released every five years, based on the most up to date, evidence-based science and research in nutrition and health.



Dietary
Guidelines
for Americans



How are the Dietary Guidelines Used?

If you've never heard of the Dietary Guidelines for Americans, you're not alone. The government agencies that publish the guidelines don't expect all Americans to read the 164-page document. That's my job. Health-care practitioners, like myself, use the DGAs as a framework to help educate Americans on how to eat. They are also used by policymakers and those in charge of updating federally funded nutrition programs, like school breakfast and school lunch, to help students meet their daily nutrient requirements.



Keep reading to learn more about what the DGAs mean for student athletes.



AMERICAN DAIRY
ASSOCIATION
NORTH
EAST

AmericanDairy.com



@AmericanDairyNE

What do the Dietary Guidelines mean for Student Athletes?

Student athletes need a solid foundation of health to perform their best, and the DGAs provide guidance on what foods and drinks to include in your diet to get you there. Here are some basics:

1. Create a Pattern of Eating to Support Your Goals

No need to get stuck on counting calories, rigid rules, and exact amounts. Instead, create a routine and pattern of eating that focuses on consistent well-rounded meals to include lean proteins like low-fat and fat-free dairy products, such as milk, yogurt and cheese, as well as lean meats, fish, eggs and beans; and fruits, vegetables, whole grains and healthy fats.

2. Incorporate Vegetables Into Your Meals

According to the DGAs, adolescents, ages 14-18, only consume around 1/3 of the recommended vegetable servings daily. In fact, everyone can benefit from including more vegetables in their diet throughout the day! Try adding broccoli and tomatoes to your omelet, top your pizza with sweet bell peppers and caramelized onions, add spinach to your morning smoothie, pile mixed greens high on your sandwich, try a veggie fajita instead of just grilled chicken, or roast vegetables like carrots, broccoli or zucchini as a side dish.

3. Drink More Milk

Three nutrients of concern that teenagers need to ensure they are getting enough of are potassium, calcium and vitamin D. And guess what? Milk has all three! Calcium is needed to support strong bones and Vitamin D helps to absorb that calcium. Potassium is an electrolyte important for maintaining fluid balance. It helps muscles contract and helps to maintain blood pressure, especially when sodium is in excess. Milk, cheese and yogurt are rich in calcium and potassium. Other sources of potassium include bananas, potatoes, spinach, beans, apricots and avocados.



4. Include a Few Bean-Based Meals

The DGAs recommends including beans at least three times a week. This is great for student athletes, since beans are packed with nutrients needed to succeed! Not only do they provide both the carbohydrates and protein needed to fuel and repair muscle tissues, but they're also packed with many vitamins and minerals. They have iron, which is an important mineral involved in the transport of oxygen to working muscles. Beans are also a great source of fiber, which helps keep your digestive track healthy, and B vitamins, which help cell metabolism and brain function.

5. Pay Attention to Protein-Rich Foods

According to the DGAs, teenage females tend to be low on protein intake. That means they may also have insufficient intakes of folate, iron, vitamin B6 and vitamin B12 – the nutrients found in protein packed foods. Be sure to incorporate a wide variety of both animal and plant-based protein rich foods. Examples include lean meats, low-fat dairy or fat-free products - like milk, yogurt and cheese - beans and legumes, tofu, nuts, and seeds.

6. Keep Added Sugars to Less Than 10% of Total Calories

Want a cookie? Eat a cookie. Just make sure you are not going overboard on simple sugars. The DGAs recommend added sugars be less than 10% of total calories in a day. That means if you need 2500 calories a day, up to 250 of them could come from added sugars. Be mindful of how often and how much candy, soda, cookies, and the like, you reach for daily. By choosing strategically, you can enjoy whatever sweet you're craving.

Look for the words "whole grain" or "whole wheat" listed first in the ingredient list; if it says 'wheat' or 'enriched wheat' it is not whole wheat!

7. Choose More Whole Grains

The DGAs encourage all Americans to eat more whole grains, and they happen to be great for student athletes, too. Whole grains contribute more nutrients than refined grains, especially B vitamins and fiber. Choose whole grain bread, brown rice, oats, popcorn, rye, wild rice, quinoa, whole grain pasta and whole grain cereal.



AMERICAN DAIRY
ASSOCIATION NORTH
EAST

AmericanDairy.com

 @AmericanDairyNE

Intuitive Eating for the Student Athlete

By: Angie Dye, MS, RDN, CSSD, LDN

Do you ever find yourself confused by all of the contradictory nutrition information that you see and hear? Student athletes get many messages about fueling appropriately for sport from coaches, parents and teammates. While this advice is intended to be helpful, it often overlooks an individual's unique physical and emotional needs. What if you could become the expert of your body's nutritional needs? There is a mind-body approach that focuses on just that. It's called intuitive eating.

What is Intuitive Eating?

Intuitive eating is an approach to caring for yourself by learning to honor your body's own hunger and fullness cues. It's comprised of ten principles that work together to promote body awareness. It is not a diet, or a structured sports nutrition plan. Rather, it is a process of honoring your body's physical and physiological needs by listening and responding to the messages that it sends.

Intuitive eating was created in 1995 by two registered dietitian nutritionists, Elyse Resch and Evelyn Tribole. Since then, over 100 studies have reviewed its effectiveness. Today, it is a weight-inclusive, evidence-based model that has helped many people improve their body awareness and connect to their own unique individual needs. Though studies on intuitive eating have not specifically focused on student athletes, some sport dietitians have used the principles to help athletes feel and perform their best without strict diets or meal plans.



AMERICAN DAIRY
ASSOCIATION NORTH
EAST

AmericanDairy.com

 @AmericanDairyNE

Applying the Principles of Intuitive Eating to Student Athletes

Intuitive eating may not be right for everyone, but it may be right for you. Here's a look at how student athletes can apply the ten principles of intuitive eating:

Principle #2: Honor Your Hunger

This sounds like an easy task, but so often diet messaging makes us feel that hunger should be ignored, fought and managed. Hunger is a biologic need, and learning how to honor it allows student athletes to fuel their bodies for all of their endeavors and everyday activities. If weight-loss dieting has been a part of an athlete's past, honoring hunger may take a lot of work and practice. Additionally, there may be times as a student athlete that you need to eat even when you don't feel particularly hungry. That may occur when you have back-to-back competitions or practices, where energy stores have been depleted.

The extra food will help to replenish your reserves so that you can recover and be ready for your next session. Some student athlete's nutritional needs for sport are simply too high to rely on hunger cues alone.

Principle #3: Make Peace with Food

This principle works by giving yourself unconditional permission to eat the foods you enjoy. No foods are off limits. That's because depriving yourself of your favorite foods can lead to over-consumption or bingeing on those foods. When making peace with food, you realize that all foods can fit into a healthful eating pattern. Student athletes will need to consider training and competition needs to determine when and where these foods fit. For example, you may find that some foods may work better for pre-competition, some foods may work better for recovery and some foods might be more enjoyable on rest days. However, you do not need to eat "perfectly" all the time to perform your best.

Principle #4: Challenge the Food Police

Food police and food rules are everywhere we turn these days. From a well-meaning teammate or family member to something that pops up in your social media feed, it seems like everyone is policing our food choices. This principle works on removing labels like "good" and "bad" from the foods we choose. Challenging the food police means letting go of the food rules that may be getting in the way of you properly fueling your body for sport.

Principle #1: Reject the Diet Mentality

An integral first step in intuitive eating is to understand that weight-loss diets do more harm than good. Studies have shown that 95 percent of dieters will regain lost weight within one to five years. Aside from this not being effective, diets can also be damaging mentally, physically and to sports performance. As a student athlete, embracing this principle means that you understand the negative side effects that weight-loss dieting can have on you.



Principle #5: Discover the Satisfaction Factor

Student athletes can be guilty of overlooking the importance of satisfaction and pleasure in the foods they choose. It is important to eat foods that provide enough carbohydrate, protein, fat and micronutrients to help you perform your best, but this should not come at the expense of limiting foods that you truly enjoy. Choosing delicious foods that you prefer to eat and that bring you pleasure goes a long way to help you feel satisfied and content.



AMERICAN DAIRY
ASSOCIATION NORTH
EAST

AmericanDairy.com

 @AmericanDairyNE

Principle #6: Feel Your Fullness

It may seem like an easy concept, but it's not easy for everyone. Many student athletes struggle to reach a comfortable fullness level, particularly if weight-loss dieting was part of their history. They might fuel up on low calorie or low carbohydrate foods that don't have staying power so they feel hungry all the time. Or they become so overly hungry that even an adequate amount of food leaves them still feeling starved. It can take practice and experimentation with nutrient-dense foods that naturally promote fullness. Dairy foods can play a key role here, as the combination of carbohydrate, protein and fat in something like Greek yogurt paired with fruit and nuts has an optimal macronutrient composition to stabilize blood sugar and promote satiety. It is also an excellent recovery snack!

Principle #8: Respect Your Body

Student athletes, this one is so great for you! Your body is the most advanced, high tech performance machine out there, so make sure to treat it like one. Don't spend time worrying about looking like anyone else and embrace the unique athlete that you are. Reject diet thinking that you need to change your body in any way to be a better athlete. Show your body respect by nourishing it with food, providing it with rest and appreciating it for the miracle that it is.

Principle #9: Movement—Feel the Difference

As student athletes, some training days will feel effortless and easy while other days will feel extremely challenging. However, this principle focuses on keeping enjoyment and pleasure in the physical activity that you do. Your sport should lift you up, celebrate your athletic talent and give you confidence. Make sure that you are not pushing your body past its limits, and that you are enjoying your training, competitions, and your progress as an athlete.

Principle #7: Cope with Your Emotions Through Kindness

This principle touches on emotional eating, which is perfectly normal some of the time. Coping with your emotions through kindness is a principle that fosters expanding ways to deal with everyday stress, fatigue, pain and other emotions without solely turning to food for comfort. It is normal to experience these feelings from time to time, so allow yourself to feel it. Ultimately, realizing the source of these emotions and dealing with them head-on is much more fruitful than turning to food for emotional comfort. As student athletes, one of the best ways to set yourself up for success in this area is to keep your body nourished. If you are well fueled and have adequate energy stored up for workouts and competitions, you may be less likely to use food as a coping mechanism.



Principle #10: Honoring Your Health with Gentle Nutrition

This principle is last, but certainly not least. In fact, gentle nutrition is woven throughout all of the previous nine principles. Contrary to some beliefs, intuitive eating does not mean eating whatever you want whenever you want it. All student athletes have nutrition guidelines and targets that need to be considered for health and performance. The difference in a gentle nutrition approach is that food preferences and enjoyment of food is considered equally important to health, and listening to body hunger levels may be more important than a daily calorie suggestion. Nutrition guidelines are important, but an intuitive eating approach will always allow for flexibility and individual preference, over rigid nutrition rules.



There are many approaches to healthfully fueling your body for your sport. Practicing the concepts of intuitive eating will help you tune in to your body's needs on a daily basis. Diets and meal plans may not be necessary if you are an intuitive eater, but learning how to become one may require some help.

*Please note: If you are interested in trying an intuitive eating approach, it may be best to contact a registered dietitian that specializes in that area. You can find a Certified Intuitive Eating Counselor who specializes in sports nutrition at <https://www.intuitiveeating.org/certified-counselors/>.



AMERICAN DAIRY
ASSOCIATION NORTH
EAST

AmericanDairy.com

 @AmericanDairyNE

2021 Sports Nutrition Advisory Panel Round Up: Tips to Decrease Food Waste

Did you know that about 40 percent of food goes uneaten in the U.S. each year? In a typical week, an average American family of four purchases 96 pounds of food, and of that, 22 pounds (about 23 percent) goes to waste.¹ That is like buying four bags of groceries and tossing one in the trash. To be more sustainable in the kitchen, we asked our 2021 Sports Nutrition Advisory Panel for their tips and tricks on how they help to reduce food waste in their everyday lives. Here's what they had to say:



Start with meal planning

On the weekend, plan your meals for the week ahead based around the ingredients you already have in your refrigerator, freezer or pantry. – **Jake Sankal, M.Ed., RD, CSSD, RSCC*D**



Plan to have a day or two of leftovers during the week. Depending on how much of each meal you plan to cook, this will not only save you time, but it will prevent you from overbuying. – **Nici Mense, MS, RD**



Go to the store prepared with a list and include the amounts of each food item you need; never “wing it”. Keep a running list on your smartphone of all the ingredients you’ll need for the week. – **Steve Smith, RD, CSSD, LD**

If it is difficult to buy fresh fruits and/or vegetables in the right amount so you can eat them all before they spoil, then just buy frozen so you can use what you want, when you want it.

– **Heidi Skolnik, MS, CDN, FASCM**



Cook once and make one or two other recipes with it. A favorite in our house is crock-pot chicken for tacos or burrito bowls. And we make enough to have it as a filling for enchiladas for another meal, too. Sometimes we even freeze the enchiladas for later in the month. It’s so nice to just pull it out of the freezer and have a delicious dinner, ready to heat up in no time. – **Angie Dye, MS, RD, CSSD, LD**

Shop at home before you roam — look at the #wealthyoursshelf. Become a food storage pro so you know before you throw! Give your leftovers new life: repurpose or renew in a smoothie, a stir fry, a sauce or a soup with great taste and no waste. – **Leslie Bonci, MPH, RD, CSSD, LDN**



AMERICAN DAIRY
ASSOCIATION NORTH
EAST

AmericanDairy.com

 @AmericanDairyNE

Make the most of leftovers

Repurpose foods by making a new dish with leftover vegetables. For example, you can use them in soups, stews, omelets, quiches, sandwiches or wraps, and even a DIY veggie pizza. – **Felicia D. Stoler, DCN, MS, RDN, FACSM, FAND**



Use milk that's about to reach its expiration date to make a quick breakfast like warm oatmeal or a cool, refreshing smoothie, or stir it into mashed potatoes for an easy side dish with dinner.

– **Heather Mangieri, MS, RD, CSSD**

When making sauces or marinades for a meal, pour the extra into ice cube trays. Next time you want the sauce or marinade, pull out as many frozen cubes as you need for your meal. It's a quick and easy way to have a homemade sauce or marinade on hand for a later date without having to do all the prep work.

– **Stephanie Coppola, MS, RDN, LDN**



Find creative ways to use all parts of the food you buy. Did you know you can actually use the watermelon rind? Try pickling it in some vinegar! And if you are a fan of beets (which may help improve endurance exercise!), keep the leaves and sauté them with garlic and olive oil!

– **Jessica Garay, PhD, RDN, FAND, CSCS**

Master food storage

Keep your refrigerator and freezer clean and organized and store leftovers in clear or glass containers. This makes it easier to see what foods you have so they don't get "lost" or forgotten. – **Matt Darnell, PhD, RD, CSSD, SCCC**



Understand "Best By" Dates. There is a lot of confusion over dates on food packaging. For a majority of foods, "best if used by" dates are simply recommendations for optimal quality, not an indication that the product isn't good anymore. **Here** is a quick read from the FDA with more tips

on navigating date labels. – **Molly Morgan, RD, CDC, CSSD**

Package up and store leftovers from meals in a way that is quick and easy to re-heat. Package leftovers in single portion containers to make a quick lunch or dinner for the next day or two. Use freezer-friendly containers so they can be easily transferred to the freezer if you don't eat them in the three to four days post-cooking. – **Stevie Lyn Smith, MS, RDN, CSSD, CDN**



Get familiar with the shelf life of foods. The **Foodkeeper** app is a great resource. This can be a helpful guide to show you when food items could be moved to the freezer for longer storage. – **Sarah Snyder, MS, RD, CSSD, LD, CSCS**

References:

1. <https://www.americandairy.com/core/fileparse.php/299/urlt/NDC-Honor-The-Harvest.PDF>
2. <https://www.americandairy.com/core/fileparse.php/299/urlt/NDC-What-a-Waste-infographic-pdf>

@AmericanDairyNE

AmericanDairy.com

Donate extra food to those in need in your community

Sharing unwanted food is an opportunity to improve the environment and connect with others. Consider offering prepped meals, sandwiches and food items as a way to care for your local community. – **Dan Liburd, MS, CSCS, USAW**



I like to freeze the extra portions of my meals or share the extra servings with friends and neighbors. I will also split up



food items that I purchase at big box stores and portion them out appropriately, so nothing goes to waste.

– **Sue James, MS, RD, LDN**

Did you know that the dairy community works hard to recover valuable nutrients to feed the hungry and transform food waste into natural fertilizer and renewable energy?²

*Reducing food waste helps the planet by keeping food out of landfills and conserving valuable resources. A family of four that buys and eats just what they need could reduce its annual carbon footprint by 4,587 pounds! Here are two additional resources, **Food Waste and Honor the Harvest**. Do your part and try some of these simple tips to help reduce food waste.*



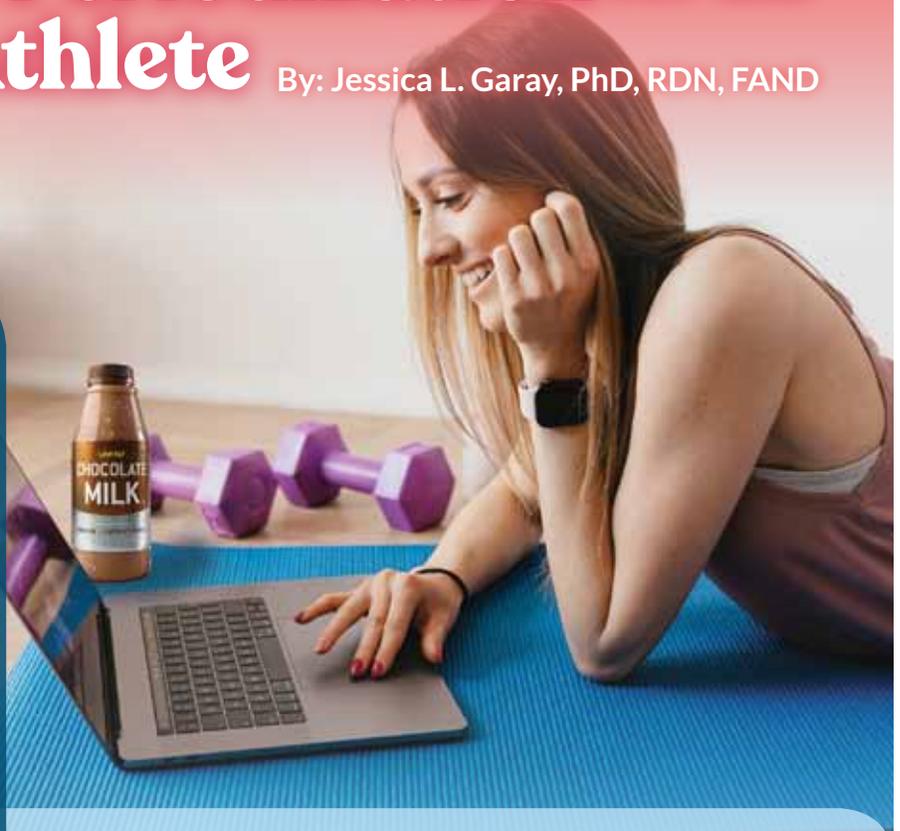
AMERICAN DAIRY
ASSOCIATION NORTH
EAST

Nutrition Periodization for the Student Athlete

By: Jessica L. Garay, PhD, RDN, FAND

Are you familiar with periodization training? It is a broad concept of training that separates the training process into specific phases throughout the sport season or training period. While every sport is different, almost all require the duration, intensity, volume and load of training to change at different points in the season.

Your diet should take a similar approach to your fitness plan. That's because your sports nutrition plan is meant to support your training. Eating the exact same thing day in and day out can not only lead to boredom, but it also prevents you from providing optimal fuel for your body. To get the most out of your diet, you should be using a technique known as nutrition periodization.



What is Nutrition Periodization?

Nutrition periodization refers to an eating plan that adjusts your food and fluid intake as your sports training changes. For example, the way you eat when you are doing two-a-day workouts in the pre-season will be different than when you are doing more weight training and less conditioning in the off-season. By creating a nutrition plan that complements your exercise routine, your body will be better able to recover from workouts, and you will feel ready to tackle your next workout.

What Does Nutrition Periodization Look Like?

Nutrition periodization is set up in phases based on your training and competition schedule. The preparation phase is how you will eat during the pre-season. The competition phase is how you will eat and drink during the stage when you are actively competing, and the transition phase is how you will adjust your eating plan once the competitive phase is over and before the next season starts.



AMERICAN DAIRY
ASSOCIATION NORTH
EAST

AmericanDairy.com

 @AmericanDairyNE

Preparation Phase

During your pre-season training, you are in the preparation phase of eating. You should have two main goals during this phase. The first is to make sure you are eating enough to maintain your weight. That means focusing on your total daily intake and getting a nutritious breakfast, lunch, dinner and snacks.

The second is to get into a good routine of eating and hydrating properly before, during, and after your workouts. This phase is a great time to experiment with sports drinks or other products that you may want to use during your workouts. **Before** or during exercise you may need to have some simple carbohydrates that are quickly absorbed. Consider trying a piece of fruit, like a banana or frozen grapes, if it's a hot day. A carbohydrate-rich granola bar or fruit bar is another good example. Remember, what works for a teammate or a friend may not always work for you. It's best to try out a few different brands or items to figure out what works best for you. By the end of this phase, you should know exactly what foods and fluids agree with you and provide sufficient energy for your competitions.

Competition Phase

If you ate and drank right through the preparation phase, you should feel highly confident with what you will eat and drink to fuel your competitions and events. During the competition phase, you will continue to eat and drink the same way you have practiced during the pre-season. **Recovery nutrition** becomes even more important, especially if you have back-to-back competitions or you are competing multiple days in a row.

Make sure to get a snack or meal that contains both carbohydrates and some protein. You'll also need to rehydrate with adequate fluids and replace lost electrolytes. Chocolate milk or a fruit and yogurt smoothie are both tasty and satisfying options that contain the nutrients needed to support recovery nutrition. You'll also need to drink extra water, even if you don't feel like you need it. Just like pre-season, you should eat and **drink enough** to maintain your body weight and support growth and development.

Transition Phase

The rest or off-season is referred to as the transition phase. During this period, both your exercise and eating may change quite a bit. You will still need to eat your regularly balanced meals and snacks, but the extra foods and fluids you were consuming to support training can be cut back. If you have a goal related to changing your body composition, this is the time to modify your diet to reach those goals. Continue to focus on your hydration plan and drink water to support your exercise. Overall, your diet should include foods that provide a lot of beneficial nutrients like protein, fiber, vitamins and minerals. Consider using some of your free time to cook a new recipe or take a trip to the grocery store to find a few new foods to try.

Nutritious Foods to Choose Throughout All Phases of Training

No matter what phase you are in, eating a balanced diet that includes a variety of foods from each food group is key. You will need carbohydrate-rich foods to provide the energy needed to support your intense workouts. Choose a variety of complex carbohydrates like breads, pasta, and rice, as well as fruits and vegetables to provide your body with vitamins and minerals. Protein rich foods support muscle repair and recovery. Dairy products provide a great source of both calcium and protein, which are two nutrients important for student athletes. Other high-quality protein options are meat, poultry, beans and eggs.

Who Can Help?

If you need help creating a customized nutrition plan to support you through all the phases of your training, a registered dietitian nutritionist can help. Look for one that specializes in sports nutrition or is board certified in sports dietetics (CSSD). You can find one near you by entering your zip code on the "Find a Nutrition Expert" page on the Academy of Nutrition and Dietetics Association website.

Dairy's Role in the Lactose Intolerant Student Athlete

By: Stephanie Coppola, MS, RDN, LDN



Dairy foods, like milk, cheese and yogurt, are packed with essential nutrients that are beneficial for student athletes' performance on and off the field. While lactose intolerant student athletes may be hesitant to incorporate dairy into their sports nutrition plan, it's important to note that dairy avoidance may not be necessary. The degree of lactose intolerance varies from person to person. The key is finding the right amount that works for you - and the products that you can still enjoy!



What Is Lactose Intolerance?

Lactose intolerance is a sensitivity to lactose, which is the natural sugar found in milk and other dairy foods. It can occur when a person does not produce enough lactase, the enzyme that helps break down lactose in foods. It can also occur in individuals who are unable to absorb lactase

properly. Individuals with lactose intolerance may experience gastrointestinal symptoms such as, bloating, abdominal pain, diarrhea or gas after consuming dairy products.

Prevalence and Risk Factors of Developing Lactose Intolerance

Research suggests that about 65 percent of humans have a reduced ability to digest lactose after infancy. Many infants and children, however, outgrow their lactose sensitivity. The prevalence of lactose intolerance is greater in African American, Asian American, Latino, and American Indian ethnicities and least common in people who are of European descent. Those who suffer from other gastrointestinal diseases, such as Crohn's or Celiac disease, may also be at higher risk. Student athletes come from all different ethnic backgrounds and even though some may fall into those higher risk categories, it doesn't automatically mean they should self-diagnose. Even if the athlete is lactose intolerant, it's not necessary to completely eliminate dairy from their diet.

Why Should I Still Consume Dairy Products?

There are many health benefits for student athletes when it comes to consuming dairy products. The biggest benefit is the **13 essential nutrients** that dairy provides to our bodies. One cup of cow's milk contains ~8 grams of high-quality protein and is a rich source of vitamin D, a nutrient essential for bone health. These nutrients play a role in overall health and sports performance. [Here](#) you can read more about how the nutrients in milk support student athletes.

Including dairy products, like **yogurt** and **cheese**, in your diet makes it easier to reach the recommended daily intake of calcium, phosphorus, potassium and other key nutrients. That's why - before assuming you have lactose intolerance and eliminating dairy - it's important to make sure lactose is truly what is causing your symptoms by consulting with a health professional.



AMERICAN DAIRY
ASSOCIATION
NORTH
EAST

AmericanDairy.com

 @AmericanDairyNE

Effectively Managing Lactose Intolerance with Dairy

Student athletes who are lactose intolerant may be able to tolerate certain dairy foods better than others. That's because the amount of lactose varies in all foods and beverages. The following chart shows dairy products that have little to no lactose.

This chart showcases just a few examples of dairy items that lactose intolerant student athletes may be able to consume. Many natural cheeses such as cheddar, Swiss, mozzarella, Provolone, and Parmesan have little to no lactose. This means athletes can enjoy a hearty sandwich with cheese or even spaghetti and meatballs with Parmesan sprinkled on top without worrying about consuming too much lactose. Yogurt is also a great addition to the diet. A great benefit of yogurt is that it contains live and active cultures called probiotics that help digest lactose, enhance the immune system, and support a healthy gut. Breakfast, lunch, dinner, snacks and a recovery smoothie can all contain dairy ingredients that help build an optimal performance diet for student athletes.

When adding dairy to your diet, start slow. Add a small amount of only one dairy product at a time to see how you tolerate that food before moving onto others. If you find that you don't tolerate any lactose, you can still enjoy dairy. There are a variety of lactose-free dairy products available in your local supermarket. They contain the same health benefits as regular cow's milk, but the lactose has been removed.

Remember, lactose intolerance is very individualized, and it doesn't mean that you can no longer consume dairy; it just takes some time to figure out which foods you can tolerate, and what amount of lactose works best for your body. As always, everyone should make sure to consult with a health professional before eliminating any food categories from their diet.

Lactose Amounts in Common Dairy Products

Food	Serving	Amount of Lactose
Lactose-Free Milk	1 Cup	0 g
Cream Cheese	1 Tbsp	<1 g
Cottage Cheese	¾ Cup	5-8 g
Ricotta Cheese	½ Cup	3 g
Cheddar Cheese	1-2 oz	0-2 g
Swiss Cheese	1-2 oz	0-2 g
Parmesan Cheese	1 ½ oz	0-2 g
Mozzarella Cheese	1-2 oz	0-2 g
American Cheese	1-2 oz	0-2 g
Yogurt, Plain	½ Cup	5-8 g
Greek Yogurt	6 oz	4 g
Lactose-Free Yogurt/Greek Yogurt	1 Cup	0 g



AMERICAN DAIRY
ASSOCIATION NORTH
EAST

AmericanDairy.com

 @AmericanDairyNE

Foods to Help Tame Inflammation

By Heidi Skolnik, MS, CDN, FACSM

You know how swelling can occur if you twist your ankle or bump your elbow? That swelling is due to inflammation. Part of the inflammatory process is to send signals to the body to protect and repair the damaged body part. This type of inflammation is called acute inflammation.

On the other hand, chronic inflammation occurs when consistent injuries happen over time causing a cascade of reactions in the body that can damage cells and tissues. Examples of chronic inflammation are conditions such as arthritis, tendonitis, and bursitis. The “itis” in those conditions is in part due to chronic inflammation. Some chronic diseases, like diabetes and heart disease, may also be related to chronic inflammation.

How Inflammation Can Impact Student Athletes

Chronic inflammation can negatively impact sports performance in multiple ways. It can cause muscle soreness and limit the ability to use the inflamed body part, including the tendons, ligaments and cartilage around it. It can also get in the way of healing, repair, and muscle recovery.

Not all inflammation can be prevented, but there are steps student athletes can take to support the body’s natural inflammatory pathways. Appropriate conditioning, adequate rest, and getting enough calories each day, all play an important role in preventing inflammation. There are also some specific foods you can include in your daily diet that may help.

Foods To Help Fight Inflammation

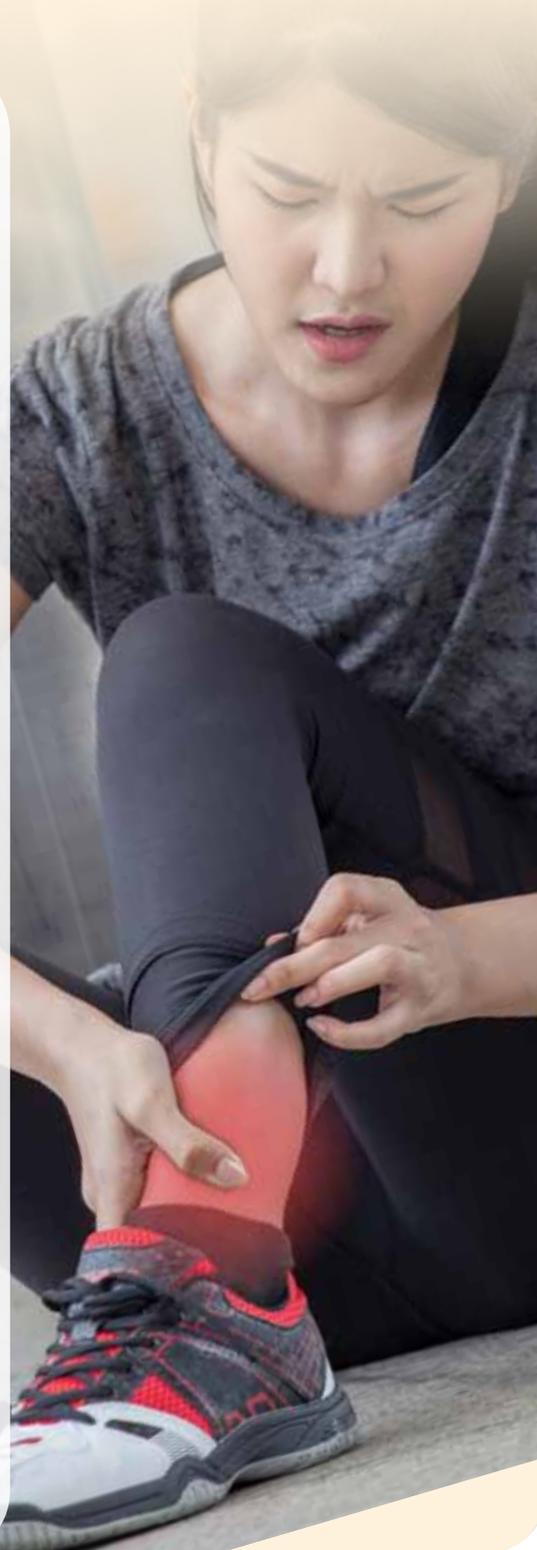
No one food can eliminate inflammation altogether, but certain foods contain compounds and nutrients shown to support the anti-inflammatory process. Try incorporating some of the following anti-inflammatory foods into your eating plan.

Dairy Foods

All dairy foods including milk, cheese, and yogurt, as well as dairy proteins, like whey and casein, were found in several systematic reviews to be anti-inflammatory or to have a neutral effect on inflammation.

EASY WAYS TO ADD DAIRY TO YOUR DIET:

Use chocolate milk as a recovery beverage after a hard workout or game: try cheese and an apple as a satisfying snack, use yogurt as part of a smoothie or with fruit and nuts for a snack or a meal.



AMERICAN DAIRY
ASSOCIATION

AmericanDairy.com



@AmericanDairyNE

More Foods That Help Fight Inflammation

Leafy Greens

Leafy greens like, broccoli, spinach, cabbage, collards, and kale are rich in vitamin K, which not only helps to reduce inflammation, but also protects bones and aids in blood clotting.

EASY WAYS TO ADD LEAFY GREENS TO YOUR DIET:

Add spinach to a shake in the morning, incorporate a vegetable stir-fry for dinner, or include a salad bowl, roasted broccoli, or homemade coleslaw (with cabbage) as a side dish.

Fruit

Berries, citrus, cherries, grapes, tomatoes and prunes are full of antioxidants, the powerful compounds in fruits responsible for their bright, vibrant colors. In addition to protecting cells against cell damage, they may also help lighten pain that can occur from intense training and speed up the recovery process.

EASY WAYS TO ADD FRUIT TO YOUR DIET:

Add frozen berries to a shake, make orange juice into ice pops, or try freezing grapes as a snack. You can even add cherry tomatoes into cold pasta with mozzarella cheese balls, olive oil and fresh basil for an easy and accessible meal or snack. Or add diced prunes and dried cherries to make a quick, homemade trail mix.



Nuts

Almonds, hazelnuts, peanuts, pecans, pistachios and walnuts are all a dense source of unsaturated fatty acids, plant sterols and certain antioxidants which have been shown to help minimize inflammation.

EASY WAYS TO ADD NUTS TO YOUR DIET:

Add nuts to oatmeal or yogurt in the morning, sprinkle them on your salad for lunch, or make a homemade trail mix that can be packed in your backpack and eaten in school when hunger strikes. You can even try toasted nuts for a new flavor variation.

Fatty Fish

Fatty fish like salmon, tuna, sardines and mackerel are a great source of omega-3 unsaturated fatty acids, which have been shown to decrease the activation of inflammatory cells and support brain health.

EASY WAYS TO ADD FATTY FISH TO YOUR DIET:

Try keeping salmon or tuna pouches handy to put on crackers for a quick lunch or even recovery snack after a tough workout, make a Greek Mediterranean salad with feta cheese and sardines, or sprinkle a blackened or Cajun spice on salmon before grilling it.

Fermented foods

Fermented foods like yogurt, kefir and naturally fermented sauerkraut, kimchi, kombucha and pickles, provide the gut, also known as the microbiome, with healthy bacteria that helps keep the whole system working better. That includes supporting immune function and the absorption of nutrients from the foods we eat. Both kefir and yogurt have the added benefit of providing protein, carbohydrate and calcium, which aid in workout recovery and support bone health.

EASY WAYS TO ADD TO YOUR DIET:

Use a kefir smoothie as part of your recovery post workout or game. Make an anti-inflammatory winning treat by topping your yogurt with berries and nuts.



Green Tea

Green tea is packed with special antioxidants which help prevent the breakdown of protein, upkeeping our joints and muscles.

EASY WAYS TO ADD GREEN TEA TO YOUR DIET:

Since tea can inhibit the absorption of some key nutrients like iron, it is best sipped in between meals. Hot or cold, green tea is a great refreshing drink. You can add other spices or flavors like, fresh mint or ginger, to enhance your drink.

Spices

Cinnamon, turmeric, fresh garlic, and ginger are four spices studied for their potential in targeting inflammation. They contain antioxidants and essential oils that provide protection against inflammatory cells. They may also help with muscle pain, soreness, and recovery.

EASY WAYS TO ADD TO YOUR DIET:

Sprinkle cinnamon on top of a latte or hot chocolate made with real milk, or add some on top of oatmeal in the morning. You can also add garlic to stir fries and sauces. Experiment with using turmeric in cooking and in smoothies, or try adding ginger to tea, like mentioned above.



Student athletes can help keep inflammation at bay by including dairy foods along with fruits, green leafy vegetables, nuts, fatty fish, green tea, fermented foods, and spices in their diet regularly. Experiment with all the ways you can include this array of nutritious and delicious options to support recovery and resiliency throughout your sports career.



AMERICAN DAIRY
ASSOCIATION

AmericanDairy.com

 @AmericanDairyNE

Best Fueling Options for Student Athletes at the Drive-Thru

By: Felicia D, Stoler, DCN, MS, RDN, FACSM, FAND, Diplomate ACLM

The life of a student athlete can be very busy. Family meals get pushed aside as parents shuffle kids from one activity to the next. Grabbing food on the go as you head to practice or stopping for something afterwards is often the only way to get a balanced meal. If you find yourself in that situation, don't fear. Fast-food choices have come a long way from what they used to be.

Here's a list of "better for you" choices at a few popular fast-food establishments. Items included on the list have under 500 calories per serving. Some athletes may need to add additional items or increase portions to meet their individual needs.

Chick-Fil-A®

This franchise is a popular pick with student athletes, and for good reason. They offer a wide variety of foods, including many that are packed with good nutrition. They even have a kale salad on the menu. If your meal on the go is a stop at Chick-Fil-A®, consider one of the following better-for-you options.

BEVERAGES

Low-Fat Milk
Low-Fat Chocolate Milk
Water

BREAKFAST

Fruit Cup
Greek Yogurt Parfait
Egg White Grill (comes with cheese)
Bacon, Egg & Cheese Muffin

MEALS AND SNACKS

Grilled Chicken Sandwich
Chik-Fil-A Cool Wrap
Grilled Nuggets
Grilled Spicy Deluxe Sandwich
Market Salad
Side Salad
Chicken Noodle Soup
Chicken Tortilla Soup
Greek Yogurt Parfait
Fruit Cup
Buddy Fruits
Kale Crunch Salad



AMERICAN DAIRY ASSOCIATION
NORTH EAST

AmericanDairy.com

@AmericanDairyNE

Quick-serve restaurants have a wide variety of foods on their menu – some that support sports performance, and others that don't. If you're visiting your favorite restaurant only once in a while, choose what you like. However, if you're typically visiting fast-food restaurants before or after practice, then be mindful of making healthier choices regularly.

Wendy's®

This quick-serve restaurant was one of the first to add a grilled chicken sandwich to their menu. They also boast about their salads – which they say are made fresh in store. Their salads come in two sizes, with dressings and dried ingredients always on the side. They are also the only fast-food restaurant to offer baked potatoes and one of the first to offer chili. For these reasons, Wendy's® is a great stop for student athletes.

BEVERAGES

Low-Fat Milk
Low-Fat Chocolate Milk
Water

BREAKFAST

Classic Egg & Cheese Sandwich

MEALS AND SNACKS

Any Fresh-Made Salad
Fresh-Made Oatmeal Bar
Chili
Plain Baked Potato
Baked Potato with Cheese
Apple Slices
Jr. Hamburger/
Jr. Cheeseburger
Jr. Cheeseburger Deluxe
Grilled Chicken Sandwich

McDonald's®

This classic fast-food restaurant is famous for their crispy, golden French fries and Big Mac, but they've also added some options for their health-conscious consumers. McDonald's® offers quite a few selections for student athletes to fuel up on the go. If this is your restaurant of choice, consider the following ways to pack energy and fluids into your meal.

BEVERAGES

Water
Low-Fat Milk
Low-fat Chocolate Milk
Juice

BREAKFAST

Fruit & Maple Oatmeal
Egg & Cheese on a Muffin/Biscuit/Bagel

MEALS AND SNACKS

Grilled Chicken Sandwich
Cheeseburger
Apple Slices



Panera Bread®

Panera® is a popular newcomer to the fast-food restaurant category. They offer a wide variety of sandwiches, soups and salads and are known for offering fresh fruit instead of bread with certain entrees. They offer a "You Pick Two" option, where you can get a half portion of your favorite sandwich and salad as one meal combo. Salads come in two sizes, and for student athletes that need more carbohydrates, their soups can be served in a bread bowl.

BEVERAGES

Water
Low-Fat Milk
Low-Fat Chocolate Milk
Unsweetened Iced Tea
Plum Ginger Hibiscus Tea
Any of the Fruit Smoothies

BREAKFAST

Avocado, Egg White & Spinach
Egg & Cheese on Brioche
Scrambled Egg & Cheese on Brioche
Scrambled Egg & Cheese on Ciabatta
Steel Cut Oatmeal with Strawberries & Pecans
Greek Yogurt with Mixed Berries Parfait
Fresh Fruit Cup

MEALS AND SNACKS

Caesar Salad
Caesar Salad with Chicken
Greek Salad
Asian Sesame Salad with Chicken
Any Soup
Sprouted Grain Bagel Flat
Turkey Chili
Fresh Fruit (Apple or Banana)
Squeezable Yogurt (Strawberry or Mixed Berry)
Turkey Sandwich



AMERICAN DAIRY ASSOCIATION NORTH EAST

AmericanDairy.com

@AmericanDairyNE



Subway®

Most people think of sandwiches when they think of Subway®, but even this restaurant has expanded their options. Now they have wraps and protein bowls, and you can order most of their sandwich items as a salad. They make it easy to identify healthier options, too – listing their lower calories subs as part of their Fresh Fit menu.

BEVERAGES

Low-Fat Milk
Water

BREAKFAST

Egg & Cheese Flat Bread

MEALS AND SNACKS

Any 6" Sub or Sandwich from the Fresh Fit Menu
Any Salads
Protein Bowls
Veggie Delight Wrap

Dunkin'®

If you pass a Dunkin'® on your way to practice, don't skip it just because you don't want a donut. This quick-serve establishment has made some big changes in the recent years, including dropping the donut from their name! Their updated menu offers some nutritious breakfast items, and they'll even warm or toast their bakery items on request.

BEVERAGES

Low-Fat Milk
Low-Fat Chocolate Milk
Unsweetened Tea
Unsweetened Coffee
Water

BREAKFAST

Veggie Egg White Omelet
Power Breakfast Sandwich
Wake-Up Wrap

MEALS AND SNACKS

Multigrain Thin English Muffin
Croissant
Bagel
Egg & Cheese Muffin
Ham, Egg & Cheese Muffin



Starbucks®

Starbucks® is known for their coffee, but their food selection has grown significantly over recent years. They have a large selection of better-for-you breakfast items that can be ordered all day long. They also sell sandwiches and sealed snack packs and meals that can be taken with you. The below items are pulled from their website menu and may not be offered at all locations.

BEVERAGES

Low-Fat Milk
Low-Fat Chocolate Milk
Unsweetened Coffee (caffeine)
Unsweetened Tea (Caffeine)
Water

BREAKFAST

Bacon, Gouda & Egg Sandwich
Turkey Bacon, Cheddar & Egg White Sandwich
Spinach, Feta & Egg White Wrap
Avocado Spread
Kale & Portabella Mushroom Sous Vide Egg Bites
Bacon & Gruyère Sous Vide Egg Bites
Egg White & Roasted Red Pepper Sous Vide Egg bites
Oatmeal (classic & blueberry)
Vanilla Yogurt Cup
Strawberry Overnight Grains
8 Grain Roll
Blueberry Scone
Blueberry Muffin

MEALS AND SNACKS

Tomato & Mozzarella Panini
Snack Trays and Boxes:
• Grilled Chicken & Hummus Protein Box
• Gala Apples, Egg, White Cheddar Cheese & Almonds Box
• Green Apples, Egg, Mild Cheddar Cheese & Cashews Box
• Gala Apples, Cheddar Cheese & Pretzels Snack Tray
• Carrots, White Cheddar Cheese & Almonds Snack Tray
• Prosciutto, Mozzarella and Breadsticks
Chicken & Quinoa Protein Bowl with Black Beans & Greens
Berry Trio Parfait
Strawberry Overnight Grains
Vanilla Yogurt Cup
All Bagels
Toasted Almond & Banana Nut Square
Raspberry Walnut & Oat Nut Square
Morning Bun
Any Croissants (& Croissant Sandwiches)



Disclaimer: Above recommendations are made based on nutrition information provided on website menus. Menu items subject to change and may not be available at all locations.



AMERICAN DAIRY ASSOCIATION NORTH EAST

AmericanDairy.com

@AmericanDairyNE

Baseball

Sports Nutrition for the Student Athlete: Baseball

By: Jake Sankal, M.Ed., RD, CSSD, RSCC*D

Did you know baseball is one of the only sports without a time limit? Unlike other sports, baseball games are divided into innings that may be short or long, and games often last longer than three hours. It's also one of the only sports with games played most days of the season.

The youth baseball season starts in the spring with games played mostly on the weekends. Once summer comes, games are played on weekdays and weekends. The high school baseball seasons typically includes around 30 games during the spring, followed by as many as 50 games during the summer months. College seasons are even more demanding, with 50 or more games played during each of the spring and summer seasons.

Although the seasons are long and grinding, the sport of baseball has a relatively low energy demand. Games consist of short burst plays, with long rest periods in between. Practices are often shorter than games, but can be a lot more intense. During training, players participate in more repetitions hitting, throwing, and fielding. They also typically work with multiple coaches, running various drills at the same time. That makes the fueling and hydrating demands during games quite different than during practice. It also makes the fueling and hydrating considerations for baseball unique, compared to other sports.

Nutrition Recommendations for Baseball

As with any sport, proper fueling and hydration practices are important for optimal performance. Players should be consuming a well-balanced, nutrient-rich diet every day, with additional fuel before, during and after games.

Carbohydrates

Players need adequate carbohydrates to keep energy levels high and support overall performance for training and competition. Additional carbohydrates are especially important to support the high-repetition, high-intensity, short-duration movements that occur during training and practice.

Protein and Fats

In addition to carbohydrates, baseball players need adequate protein and dietary fat to help with muscle recovery and support overall health. Protein helps to repair muscle tissue that was broken down during training and use. It's also needed to build new muscle tissue. As with carbohydrates, it's ideal to distribute daily protein and fat intake throughout the day, having some at each meal and as snacks. See the chart below for both daily and per meal recommendations.



AMERICAN DAIRY
ASSOCIATION NORTH
EAST

AmericanDairy.com



@AmericanDairyNE

Daily Nutritional Requirements for Baseball

Based on a 150 lb. Student Athlete (68 kg)

	Carbohydrate	Protein	Fat
Daily Requirements	(3-5 g/kg/d)	(1.2-1.7 g/kg/d)	(1 g/kg/d)
Daily Total	205-340 g	82-116 g	68 g
Per Meal (3 Meals/Day)	60 g	25 g	20 g
Per Snack (2 Snacks/Day)	25 g	10 g	5 g

Source: Sports Nutrition: A Handbook for Professionals

In addition to proper fueling, baseball players need to focus on maintaining healthy hydration levels. Research shows that fluid losses resulting in as little as a 1-2 percent of bodyweight can negatively impact sports performance. Further dehydration can result in decreased muscle endurance, cramping, heat exhaustion, and heat stroke. That makes hydration a top priority when it comes to both safety and performance in baseball, especially on hot, humid days.



BEFORE

Fueling and Hydrating Before Baseball Practice and Games

Since nutrition plays an important role in sports performance, it's important to start practice and games well fueled and well-hydrated. The pre-training or pre-game meal will depend on how much time you have leading up to performance. As a general rule, if you have more time, you can consume larger, slower-digesting meals. If you have less time, meals and snacks should be fast-digesting and smaller in nature. See [this](#) handout for specific guidelines and examples on how to fuel up prior to performance.

DURING

Fueling and Hydrating During Baseball Games

The purpose of consuming fuel and fluids during training and games is to prevent carbohydrate depletion and maintain a **good hydration status**. Ideally, enough fluid should be consumed to prevent losses greater than 2 percent bodyweight. While drinking water is important, sports drinks have the additional benefit of providing carbohydrates for energy and electrolytes to keep fluid balance and help prevent dehydration.

Most baseball players prefer not to eat solid food while playing, but it's still a good idea to have snacks on hand. It can be hard to predict how long a baseball game will last, and some end up going into extra innings, so you'll need extra fuel.

Choose easy-digesting foods that can be consumed quickly on the bench, such as bananas, oranges, granola bars, crackers, peanut butter and jelly sandwiches, or energy bars and chews. If unable to eat, most sports drinks contain sufficient carbohydrates to provide quick, usable energy when needed. If playing multiple games in a day, such as a tournament, foods with sufficient carbohydrate and protein should be consumed to help aid in recovery and help maintain feelings of fullness. Good examples include a deli meat and cheese sandwich, pasta salad with chicken, yogurt parfait, and a smoothie.



AMERICAN DAIRY ASSOCIATION NORTH EAST

AmericanDairy.com

@AmericanDairyNE

AFTER

Refueling and Rehydrating After Baseball Games

Post-game recovery is critical for baseball players because in many cases, they will have another game the next day. Proper refueling after activity plays a major role in an athlete's ability to come back stronger the next day. The right foods should supply sufficient calories and carbohydrates that can be stored for tomorrow's use, protein to rebuild broken down and fatigued muscle, and fluids to help prevent dehydration the following day. Fluids also help remove metabolic waste from activity while carrying new nutrients throughout the body to any areas in need. At a minimum, athletes should drink enough to replace any fluid lost during activity. That can be monitored by weighing in and out before and after activity. See [this](#) article for specific examples of what and how much to drink after a workout.

Three examples of post-game and post-training recovery fuel options for baseball are:

- Rice bowl with chicken, beans, vegetables, cheese, lettuce, and guacamole
- Pasta with ground beef and cheese, side salad with added vegetables
- 16 oz low-fat **chocolate milk**, banana, and trail mix



EXTRAS

One final consideration for baseball nutrition is travel. Professional and collegiate baseball players frequently endure long bus trips, often overnight, where food options can be very minimal. Due to the popularity of travel baseball, this is now occurring with younger athletes too. Many families find themselves on the road all weekend during the summertime and parents are frequently scrambling for dinners during the week between their work schedules and their child's practices and games.

This brings to light the importance of planning ahead. Be sure to have snacks, drinks, and even meals available for long car rides and in between activities. Keep a cooler packed with water and sports drinks, fresh fruit, yogurt, sandwiches, energy bars, chocolate milk and other ready-to-eat options. This level of preparation can save time, money, and make life easier for parents over the course of a long baseball season. Developing these nutritional habits from an early age sets baseball players up for success as they progress through their sports career.



AMERICAN DAIRY
ASSOCIATION NORTH
EAST

AmericanDairy.com

 @AmericanDairyNE

Basketball

Sports Nutrition for the Student Athlete: Basketball

By: Sarah Snyder, MS, RD, CSSD, CSCS

Basketball is a high-intensity sport that requires endurance, strength and agility to perform at a high level. Basketball players jog, walk or even stop, with intermittent sprints, jumps and quick movements throughout the game.

A high school basketball game consists of four, eight-minute quarters of stop-and-go action with a 15-minute halftime. The season spans over a four-month-long period, starting in November and ending in March, and can include between 20-35 games. Many high school athletes play other sports or continue playing in other leagues like the Amateur Athletic Union (AAU) or a club team. Adequate nourishment and recovery throughout the entire year is crucial to maintain energy levels and support muscle repair and growth.

Nutrition Recommendations For Basketball

Eating balanced meals for breakfast, lunch, dinner, and snacks supplies the energy and nutrients needed for overall health and sports performance. That includes fuel for the brain and muscles to function properly as well as what's needed to build and maintain lean body mass. Getting enough carbohydrates, protein and fat each day is critical to perform at a high level.

Carbohydrates

Carbohydrate is the predominant fuel used to play basketball. The total daily intake should make up over half of the total calories or energy intake. Basketball players need more than 5 grams of carbohydrate per kilogram of body weight each day, and between 7 and 12 grams of carbohydrate per kilogram of body weight on heavy training and competition days. For a 165-pound (75 kg) basketball player, that equates to over 375 grams of carbohydrate per day and between 525 and 900 grams per day on heavy training and competition days.

Sources of carbohydrate include starches and grains, like cereals, rice, pasta, bread, potatoes, sweet potatoes, beans, and starchy snack foods. Fruits, vegetables, milk and yogurt are also rich sources of carbohydrates.

Protein

Protein is another important nutrient for the basketball student athlete, as it plays a key role in building and maintaining all body tissues, enzymes, hormones and supporting immune health. Athletes require additional protein to assist in muscle repair and remodeling. The daily recommended protein intake for basketball players is between 1.4 and 1.7 grams per kilogram of body weight each day. For a 165-pound (75 kg) student athlete, that equates to between 105-128 grams of protein. Ideally, protein intake should be spread out evenly throughout the course of the day.

Examples of protein-rich foods are Greek yogurt, milk, cheese, eggs, chicken, grilled fish, lean cuts of steak and pork, fish and other seafood. Plant-based sources of protein include beans, lentils and soy-based products like tofu.



AMERICAN DAIRY
ASSOCIATION NORTH
EAST

AmericanDairy.com

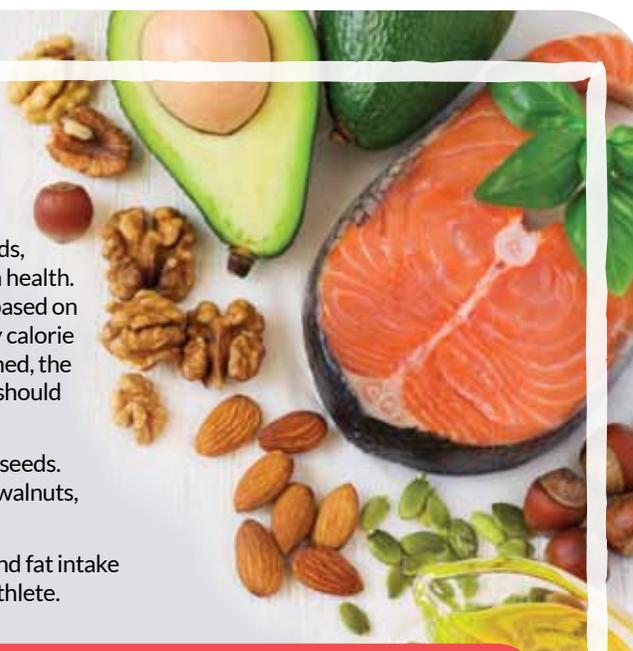
 @AmericanDairyNE

Fat

Fat is also an important nutrient and a valuable energy source for student athletes. It helps regulate body temperature, cushion and protect organs, assist with nerve transmission, and transport fat-soluble vitamins. Certain fats, referred to as omega-3 fatty acids, have been shown to play a valuable role in inflammation and brain health. Unlike carbohydrates and protein, fat recommendations are not based on a gram per kilogram amount. Instead, they are based on total daily calorie needs. Once carbohydrate and protein needs have been determined, the remainder of calories needed to meet daily energy requirements should come from fat.

Examples of dietary fats include oils, margarine, avocado, nut and seeds. Omega-3 fatty acids, specifically, are found in foods like flaxseed, walnuts, salmon and other fatty fish.

The chart below gives an example of how carbohydrate, protein and fat intake can be distributed throughout the day for a 165-pound student-athlete.



Daily Nutritional Requirements for Basketball

Based on a 165 lb. Student-Athlete (75 kg)

	Carbohydrate	Protein	Fat
Daily Requirements (Rest Days)	greater than 5 g/kg/d	(1.4-1.7 g/kg/d)	Remainder of calories to meet daily energy requirement
Daily Requirements (During Rigorous Training & Competition)	7-12 g/kg/d	(1.4-1.7 g/kg/d)	Remainder of calories to meet daily energy requirement
Daily Total Intake (Rest Days)	minimum of 375 g/d	105- 128 g	Varies based on daily calorie requirement
During Training & Competition	525-900 g	105- 128 g	Varies based on daily calorie requirement
Per Meal (3 Meals/Day)	150- 270 g	25-30 g	~20-30 grams
Per Snack (2 Snacks/Day)	45 g <i>meet daily requirement</i>	20- 25 g	Minimum of 15 grams

Source: Sports Nutrition: A Handbook for Professionals

Fluids and Hydration

Maintaining proper hydration is essential for basketball players. Research shows that a fluid loss resulting in a 2 percent loss of bodyweight can negatively impact sports performance. The best way to maintain a healthy hydration status is to make sure you are drinking all day long. Start early in the morning and consume water or other beverages at regular intervals throughout the day. Additional fluids will be needed before, during and after training and competition.



AMERICAN DAIRY
ASSOCIATION

NORTH
EAST

AmericanDairy.com

 @AmericanDairyNE

Fueling and Hydrating Before, During and After Training and Competition

Fueling and hydrating for practices and games involves strategy and planning to ensure food and fluids are available as needed and timing is ideal. Applying the strategy during training is the best way to assure the food and fluids are well tolerated. Athletes should avoid trying new or unfamiliar food and beverages on game day.

BEFORE

In preparation for basketball practice, athletes should make sure to eat and drink enough to maintain energy levels and adequate hydration. When time permits, eat a meal that is high in carbohydrate, moderate in protein, and low in fat and fiber about four hours prior to the start. Be sure to include 16-20 ounces of water with that meal, or around that mealtime.

In addition to eating a balanced meal in the hours before, athletes can make sure they start the game with proper energy stores by consuming extra carbohydrates in the 30-60 minutes prior to starting practice or a game. A smaller, high carbohydrate snack such as a banana, graham crackers, fig newtons or a sports drink are some examples. Also, plan to drink 8-12 ounces of water about 10-15 minutes before to make sure you are starting off well hydrated.

Other Considerations

Fluid needs can vary greatly from one athlete to another. Some athletes are heavy sweaters and lose a lot of fluid and electrolytes, while others may not sweat much at all. For this reason, it makes determining your individual fluid needs a challenge. Knowing how much water you lose during practice or a game can guide in you determining how much fluid to consume. Pro Tip: Weigh in before practice, then again immediately after. The difference is how much weight you lost in fluid. Hydration recommendations are to drink 16-24 ounces of water or sports drink for every pound lost. That means, an athlete that lost 3 pounds will need to drink about 60 ounces of fluid to fully replace their losses.

DURING

During practice or a game, try to drink 4-8 ounces of water or a sports beverage every 15-20 minutes. Taking these regular drink breaks during activity will help minimize fluid losses and support sports performance. Use longer breaks, like time-outs and the time between quarters and halftime, to refuel and rehydrate. Having a carbohydrate-rich snack at halftime, specifically, can supply energy for the second half of the game. Some easy to eat common choices for halftime are pretzels, sports gels or chews, sports drink, an orange or a banana.

AFTER

After practice or a game, it's important to rehydrate and refuel the body. Basketball players can do this by having a snack or meal that includes a combination of carbohydrates, protein, fluid and electrolytes. Eating a meal or drinking a recovery shake that includes those nutrients helps to replenish the muscle glycogen that was used during the game and supports muscle repair. The recommended carbohydrate intake after exhaustive activity is 1.0-1.2 grams of carbohydrate per kilogram of body weight. That means, a 165-pound basketball player should aim to ingest 75-90 grams of carbohydrate. Some players prefer the ease of liquids for recovery, like low-fat chocolate milk or a smoothie made with milk or Greek yogurt. Athletes who choose to refuel post-activity with something quick like that should also aim to eat a well-balanced meal within two hours to achieve full recovery.



AMERICAN DAIRY
ASSOCIATION NORTH
EAST

AmericanDairy.com

 @AmericanDairyNE

Football

Sports Nutrition for the Student Athlete: Football

By: Matt Darnell, PhD, RD, CSSD, SCCC

Football is an intermittent high-intensity, anaerobic, team sport involving running, sprinting, tackling, and blocking activities. The game consists of four quarters, each lasting 12-15 minutes with a 12 to 20-minute halftime depending on the state and level of play. An average game has about 14 possessions per team with about six plays per possession. Each play lasts anywhere from 2-12 seconds with about 25 seconds of rest allowed between plays.

A properly structured training program is essential to improve performance in the sport of football. To achieve optimal performance, an appropriate sports nutrition plan is needed to support the training. Without adequate nutrition, football players can struggle to recover and adapt to a training stimulus, which will ultimately negatively impact sports performance and increase the risk of overtraining and injury. With year-round training and competition in football becoming the standard, it is key to provide an individualized and **periodized nutrition program** to match energy and macronutrient needs of training and competition.

Nutrition Recommendations for Football

The foundation of a well-planned nutrition program focuses on matching energy intake to the energy demands of the athlete and their training. From there, specific carbohydrate, protein, and fat needs can be determined to meet daily caloric needs.

Carbohydrates

The importance of carbohydrates for athletes that play football is often overshadowed by the overwhelming focus on protein consumption. However, carbohydrates, especially the stored form known as glycogen, provide the main energy sources for football players during competition and training. Resistance training has been shown to reduce glycogen stores as much as 40% and single or repeated sprint exercises have been shown to reduce glycogen stores in the muscle by 14% and 47%, respectively. In order to maintain energy and intensity levels during training (especially when training multiple times per day) carbohydrates should be consumed in adequate amounts to restore and replenish glycogen losses from activity. Evidence suggests that carbohydrate intake should be between 5-7 grams of carbohydrate per kilogram of body weight per day, with 7-12 grams per kilogram of body weight during rigorous training. For a 175-pound (80 kg) student-athlete, that equates to more than 400 grams of carbohydrate each day, and between 560-960 grams of carbohydrate on rigorous training and competition days.



AMERICAN DAIRY
ASSOCIATION NORTH
EAST

AmericanDairy.com

 @AmericanDairyNE

Protein

Inadequate protein intake is seldom a concern for athletes. Most football players report protein intakes that easily meet or exceed the recommendations for athletes, which range from 1.2-2.0 grams per kilogram of body weight. When calculating protein needs, it is important to consider individual training loads, training experience, and energy availability. A student athlete football player requires increased protein intake if there is an increase in training intensities and frequency, a new training stimulus, or if they are new to the sport, due to the increased muscle protein breakdown in each of these scenarios. In general, student athlete football players should aim to get between 1.4 and 1.7 grams of protein per kilogram of body weight per day. For a 175-pound (80 kg) student athlete, that equates to 112-136 grams of protein each day, with intake evenly distributed between meals and snacks throughout the day.

Fat

After determining carbohydrate and protein needs for athletes, the remainder of the calories needed should come from fat. In most cases, fat intake should be between 20-35% of total calories. Diets containing less than 10% of calories from fat may lead to nutrient deficiencies and hormonal imbalances that can negatively impact health and sports performance. Though higher fat diets (>60% of calories) are trendy in today's diet world, they have not shown to be beneficial for improving performance in intermittent high-intensity type activities. Generally, 1.0 gram of fat per kilogram of body weight would be appropriate for team sport athletes such as football. For a 175-pound (80 kg) student athlete, that equates to a minimum of 80 grams of fat per day.

The below chart shows an example of how carbohydrate, protein and fat intake should be distributed between meals and snacks.

Daily Nutritional Requirements for Football

Based on a 175 lb. Student-Athlete (80 kg)

	Carbohydrate	Protein	Fat
Daily Requirement: (Rest Days)	greater than 5 g/kg/day	(1.4-1.7 g/kg/d)	Remainder of calories to meet daily energy requirement
Daily Requirement: (During Rigorous Training & Competition)	7-12 g/kg/day	(1.4-1.7 g/kg/d)	Remainder of calories to meet daily energy requirement
Daily Total Intake: (Rest Days)	minimum of 400 g	112- 136 g	Varies based on daily calorie requirement
Daily Total Intake: (During Training & Competition)	560- 960 g	112- 136 g	Varies based on daily calorie requirement
Per Meal (3 Meals/Day)	160- 290 g	25-30 g	~20-30 grams
Per Snack (3 Snacks/Day)	45-60 g	20- 25 g	Minimum of 15 grams

*NOTE: Additional carbohydrates may be needed before, during & after training or competition to meet daily requirement

Source: Sports Nutrition: A Handbook for Professionals



AMERICAN DAIRY
ASSOCIATION NORTH
EAST

AmericanDairy.com

 @AmericanDairyNE

Hydration

Maintaining proper hydration in football is of particular importance. Since preseason training and training camp occur during the warmer months, sweat rates and fluid loss is increased and can quickly lead to dehydration. Players should regularly weigh themselves before and after practice to keep track of how much fluid they lose. The goal is to prevent a fluid loss equal to or more than 2% of body weight during practices and competition. To help maintain adequate fluid levels, student athlete football players should consume 18-26 ounces of fluid three to four hours prior to exercise, with routine intakes of fluids ever 15-30 minutes during exercise. That amount may be more for greater intensity exercise sessions and hot weather.

Fueling and Hydrating Before, During and After Training and Competition

BEFORE

The goals of a pregame meal are to keep athletes from feeling hungry before and during the game and to top off carbohydrate and energy stores for the work that is ahead. When possible, athletes should try to consume a balanced meal that is high in carbohydrates and moderate in protein and fat 3-4 hours before training or competition. Then, have a quick digesting carbohydrate like a banana, sports drink or energy bar, in the 30 -60 minutes before starting. All choices should be familiar and easily digested. Read [this handout](#) for specific ideas on what to eat before training and competition.



DURING

Research has demonstrated that consuming carbohydrates in the form of a sports drink or easily digestible food (i.e., gels, chews, fruit snacks) can help improve performance or delay fatigue during intermittent high-intensity exercise. While the exact amount of carbohydrates needed will depend on playing time and position demands, a general recommendation would be to consume between 30-60 grams of carbohydrate per hour of activity.

AFTER

Following hard training or competition, athletes should focus on the three R's of recovery: refuel, rebuild, and rehydrate. In general, student athlete football players should aim to refuel within one hour of finishing activity with 0.5-1 gram of carbohydrate per kilogram of body weight. The refueling snack or meal should also include at least 15 grams of lean protein and ~20 ounces of fluid for every pound lost. **Chocolate milk** makes a great refueling option because it provides the fluid, carbohydrate and protein needed after strenuous activity. Check out [this handout](#) for other great after-exercise refueling options.

Other Considerations:

Football is a contact sport with lots of collisions and high-intensity activity that takes a toll on your body. To help combat inflammation and promote recovery from week to week, it is important to include foods high in omega-3 fatty acids (salmon, flax seeds, and walnuts), rich in vitamin D (dairy, eggs, mushrooms) and lots of colorful fruits and vegetables (broccoli, peppers, berries, etc.).



AMERICAN DAIRY
ASSOCIATION NORTH
EAST

AmericanDairy.com

@AmericanDairyNE



Do It Yourself: NFL Training Camp Refuel Shake

By: Dan Liburd,
MS, CSCS, USAW

National Football League (NFL) athletes are subjected to a long list of stressors, including intense schedules with grueling training, long games and significant travel. They need consistent fuel to support the energy needed for training and competition, as well as a variety of nutrients to support recovery, growth and overall health. Unfortunately, their busy schedule limits the time they have available to prepare nutritious food and even impacts the time they have to eat. Nutritious shakes are an easy way for athletes to get the calories and nutrients they need to perform at a high level and recover from exhaustive training and competitions.

How To Make A Nutritionally Balanced Refuel Shake

A nutritionally balanced shake requires a combination of ingredients that together provide carbohydrate, protein, fat, and a variety of vitamins and minerals. It should also include a source of fiber and even probiotics to support gut health. While that might sound like a challenge, you can get all of those nutrients with just a few simple ingredients. Here's a look at what goes into the refuel shake that I have served NFL athletes at training camp.

COW'S MILK

My all-time favorite shake ingredient is cow's milk. It's readily available, portable and packed full of a wide variety of nutrients. Just one cup of milk provides carbohydrates and **13 essential nutrients**, like protein, calcium, potassium, just to name a few.

GREEK YOGURT

Greek yogurt delivers the additional protein needed to support muscle repair, along with probiotics which help to support gut health. It also gives a creamy texture to the shake.

FRUIT

Another key ingredient to blend into your nutrition shake is fruit. Fruit provides additional carbohydrates for energy, as well as fiber and a wide variety of vitamins, minerals, and antioxidants. My favorite combination is banana and strawberries, but you can use any combination of fruit you want.

HONEY

We're not done adding the carbohydrates yet. Honey is a source of simple sugars and adds a bit of natural sweetness to the shake.



PEANUT BUTTER AND FLAX SEEDS

The last macronutrient needed to make a nutritionally balanced shake is fat. Like carbohydrates, dietary fats act as an important energy source. They also help your body to absorb certain fat-soluble vitamins, like vitamin D. Peanut butter is a great source of healthy fats and tastes great in a shake. If you don't like the flavor of peanut butter, flaxseeds are another option. They are a rich source of omega - 3 fatty acids that can help minimize inflammation and support heart health. It's a bonus if you add both of these ingredients!

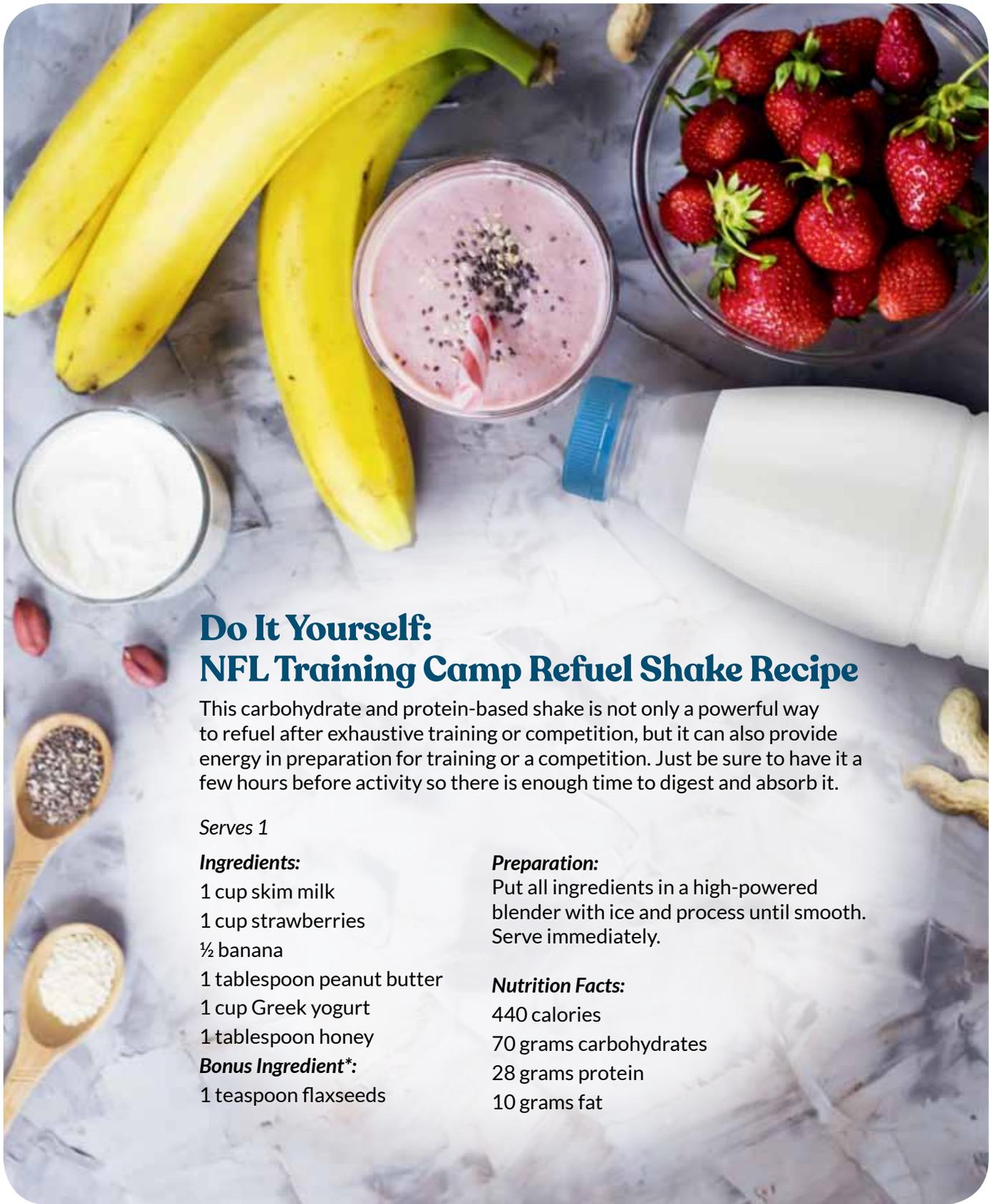


AMERICAN DAIRY
ASSOCIATION NORTH
EAST

AmericanDairy.com



@AmericanDairyNE



Do It Yourself: NFL Training Camp Refuel Shake Recipe

This carbohydrate and protein-based shake is not only a powerful way to refuel after exhaustive training or competition, but it can also provide energy in preparation for training or a competition. Just be sure to have it a few hours before activity so there is enough time to digest and absorb it.

Serves 1

Ingredients:

- 1 cup skim milk
- 1 cup strawberries
- ½ banana
- 1 tablespoon peanut butter
- 1 cup Greek yogurt
- 1 tablespoon honey

Bonus Ingredient*:

- 1 teaspoon flaxseeds

Preparation:

Put all ingredients in a high-powered blender with ice and process until smooth. Serve immediately.

Nutrition Facts:

- 440 calories
- 70 grams carbohydrates
- 28 grams protein
- 10 grams fat



AMERICAN DAIRY
ASSOCIATION NORTH
EAST

AmericanDairy.com

 @AmericanDairyNE

Gymnastics

Sports Nutrition for the Student Athlete: Gymnastics

By: Nicolette Mense, MS, RD

Gymnastics is unlike any other sport. It requires both strength and flexibility to repeatedly perform challenging skills, such as flipping and tumbling. Many gymnasts start as young as age three or four and continue into their twenties, working their way through the different levels of the sport. Beginning gymnasts may take recreational classes, spending one to three hours in the gym. Once gymnasts reach the level of competing, their weekly training hours increase significantly.

For example, a level 3 gymnast may spend three to four days at the gym, training up to ten hours a week. At level 6, that training can increase to 15-18 hours. Gymnasts who compete at a level 8, 9 or 10 are highly committed to the sport, training up to twenty hours a week. Though some level 9 gymnasts go on to compete at the collegiate level, most college gymnasts are at the highest level 10 or the elite level.

Although the intensity and duration of training varies by level and the season, all gymnasts require adequate fuel and hydration to perform on a consistent basis. Having a well-designed nutrition plan can make all the difference in the world.

Nutrition Recommendations for Gymnastics

When it comes to fueling gymnasts, the sports nutrition plan needed to support training is just as important as the foods and fluids consumed the day of a competition. That's because the training is demanding and involves many repetitions with intense effort. A gymnast needs enough fuel to complete lengthy training sessions and to refuel afterwards, so their body is prepared for their next training session and any upcoming competitions. Because many competitive gymnasts are younger in age, their consumption of nutrient-rich foods is important to support their growth and development.

Carbohydrates

The main fuel source used by gymnasts is carbohydrates. They need to eat enough each day to supply the energy to train and perform at a high level. The amount of carbohydrates needed varies based on their training level, but generally ranges between 3 and 7 grams of carbohydrate per kilogram of body weight. A younger gymnast, who participates in fewer weekly training hours, would likely fall on the lower end. As the amount and intensity of training increases, so do the daily carbohydrate needs of the athlete.

To meet those daily requirements, gymnasts should focus on including a combination of nutrient-dense carbohydrates - like whole grains such as oatmeal, legumes, and fruits and vegetables - at all meals and snacks. Including a variety of these foods will help ensure gymnasts get the wide variety of vitamins and minerals their bodies need.



AMERICAN DAIRY
ASSOCIATION NORTH
EAST

AmericanDairy.com

 @AmericanDairyNE

Protein

Protein is needed to help repair and recover muscle tissue that was broken down during training and competition. In general, gymnasts need between 1.2 and 1.7 grams of protein per kilogram of body weight. For example, a 115-pound gymnast would range between 63-89 grams of protein a day. Ideally, protein intake should be spread out evenly throughout the day and be included at each meal and all snacks, including after training and competitions.

When choosing what proteins to eat, try to include a variety of animal and plant-based sources. Animal sources include lean meats - such as chicken, fish, eggs, and lean beef - and dairy products like milk, yogurt and cheese. Plant-based protein sources include chickpeas, lentils, tofu, edamame, peanuts, or other tree nuts.

Fats

Fat is essential for overall body and brain development and functioning. It also plays a role in helping the body recover. Gymnasts first need enough carbohydrates for energy and enough protein for building and repairing body tissues. The remainder of their daily caloric intake will come from dietary fat.

Dietary fats are found naturally in foods like eggs, meats, some poultry, cheeses and other dairy foods. In addition to the naturally occurring fat found in those foods, dietary fats come from oils, butters, dressings, nuts, seeds, avocados and olives.

The chart below gives an example of how a 115-pound (52.3 kg) gymnast could distribute carbohydrate, protein and fat intake throughout the day.



Daily Nutritional Requirements for Gymnastics

Based on a 115 lb. Student-Athlete (52.3 kg)

	Carbohydrate	Protein	Fat
Daily Requirements	(3-7 g/kg/d)	(1.2-1.7 g/kg/d)	Remainder of calories to meet daily energy requirement
Daily Total	160- 366 g	63- 88 g	Varies based on daily calorie requirement
Per Meal (3 Meals/Day)	45 g	20 g	minimum of 15 grams
Per Snack (2 Snacks/Day)	25 g	10 g	minimum of 10 grams

Source: Sports Nutrition: A Handbook for Professionals

Although a high-level gymnast will require more fuel compared to a beginner-level gymnast, all gymnasts should start their daily training sessions well fueled and well hydrated. They should also hydrate throughout training, and refuel and rehydrate afterwards. This includes the day of competition.



AMERICAN DAIRY ASSOCIATION NORTH EAST

AmericanDairy.com

@AmericanDairyNE

BEFORE

Pre-Training/Competition

Gymnasts need to make sure they are fully fueled and hydrated before stepping into the gym. Just like cars, our bodies cannot perform on an empty tank. Underfueling and underhydration can lead to fatigue, dizziness, and light-headedness, which is a dangerous way for a gymnast to perform physically challenging skills during training and competition. A light meal or a sustainable snack one to two hours prior to warm-ups will provide the energy gymnasts need to power through their training and/or competition. It should be rich in carbohydrates, moderate in protein and low in fiber and fat. It's also important to drink plenty of fluids in the hours leading up to training.

The following are some good pre-training/competition meal and snack ideas:

- Turkey and cheese sandwich or wrap
- Bagel with peanut butter
- Peanut butter and jelly sandwich
- Yogurt with fruit and granola
- Crackers with a piece of low-fat string cheese
- Sports drink with cottage cheese and fruit

DURING

During Training/Competition

Gymnastics competitions can be lengthy, often overlapping meal and snack times. When this happens, fueling between routines is important to keep energy levels high and maintain focus. Food and fluids need to be easy to eat and digest. Foods high in fat and fiber should be avoided during training and competitions as they can slow digestion.

Some good options to have on hand are:

- Sports drink
- ½ Turkey sandwich
- Banana
- Applesauce
- Energy chews/gels

AFTER

Post-Training/Competition

After training or competition, it's time to refuel and rehydrate. The foods and fluids you eat and drink after training and competition help support the rebuilding of muscle tissues and prepare your body for your next training session. Try to have a snack or meal within 30 minutes after training/competition that includes carbohydrates, some protein, and fluid. If you're not headed home directly after your training, consider packing a snack so that you have something ready-to-eat.

- **Low-fat chocolate milk**
- Chicken salad sandwich or wrap
- Greek Yogurt with ¼ cup granola and fresh fruit
- Fruit and yogurt smoothie (**Try this one!**)
- ½ Peanut butter and honey sandwich

Other Considerations

Maintaining a healthy hydration status is critical for optimal performance. Gymnasts should aim to consume at least half their weight in ounces daily. For example, if you weigh 120 pounds, you should drink at least 60 ounces of water per day. Heavy sweaters likely need more, especially around training sessions and during competitions. The key to healthy hydration is starting early and drinking often throughout the day.



AMERICAN DAIRY
ASSOCIATION NORTH
EAST

AmericanDairy.com

 @AmericanDairyNE

Lacrosse

Sports Nutrition for the Student Athlete: Lacrosse

By: Sue A. James, MS, RDN, LDN

Lacrosse is played and enjoyed by all age groups across the United States, and its popularity continues to grow as a team sport. During a game, players sprint across the field on defense and offense, running an average of three to five miles during a game. To excel in the sport, athletes need proper endurance to make it through a game successfully, as well as strong hand eye coordination, strength and power to throw the ball to a teammate or when attempting to score a goal. A solid sports nutrition plan is essential to support the strength, power and endurance that lacrosse athletes need to perform well throughout a 60-minute game.

Nutrition Recommendations for Lacrosse

Proper nutrition for workouts, practice and games requires planning. A fluid and hydration plan should be top priority for lacrosse student-athletes. Muscle tissue sits in a fluid base, so staying hydrated every day will support performance and the body's ability to pass, protect and score a goal. A diet that includes adequate carbohydrate, protein and fat is needed to fuel a lacrosse player and support athletic performance.

Carbohydrate

Due to the amount of running and sprinting that occurs during a game, carbohydrate is the muscle fuel (glycogen) that is in greatest demand. It is important for lacrosse players to consume carbohydrates daily to keep the body energized for practices and games. The recommended daily intake varies based on training and actual playing time during a game. In general, lacrosse players should aim to get between 5 and 8 grams of carbohydrate per kilogram of body weight. For a 150-pound (68 kilograms) student-athlete, that equates to between 340 and 544 grams of carbohydrate per day.

Lacrosse players should choose carbohydrates that are packed with nutrients needed to support optimal health and sports performance. Examples include whole-grain breads, cereals, crackers, as well as fruits, vegetables, and beans. Simple carbohydrates, like the sugars found in sports drinks, can be used as an energy source before and during activity.



AMERICAN DAIRY
ASSOCIATION NORTH
EAST

AmericanDairy.com

 @AmericanDairyNE

Protein

Protein assists in muscle strengthening, repair and recovery, which is vital due to the intensity of lacrosse. Lacrosse players should aim to get between 1.4 and 1.7 grams of protein per kilogram of body weight. For a 150-pound (68 kilograms), that equates to between 95-116 grams of protein per day.

A nutrient-packed sports nutrition plan should contain a variety of animal and plant-based proteins to support strength and power. Some good examples include dairy - like milk, yogurt and cheese- or beef, poultry, ham, eggs, beans, and other legumes.

Fat

Fat is the slow and steady fuel used for practices, workouts, and games. The daily requirement for fat varies based on individual daily calorie needs. Once daily needs for carbohydrates and protein have been determined, the remainder of calories will come from fat. As a rule of thumb, include a minimum of 20 grams of fat at main meals and at least 10 grams of fat at snacks.

Examples of foods that contain fats are oils, butter, avocados, nuts, seeds, salad dressing, and the fats found naturally in meats and dairy products, like full or reduced fat milk, cheese, and yogurt.

Fluids

Staying hydrated will help improve agility and hand-eye coordination during a lacrosse practice or game. Hydrate with cool fluids like water or choose a sports drink if playing multiple games in a day. For some guidelines on how much fluid you need, review this hydration handout [Sip, Sip, Sip!](#)

Hydration Tips for Athletes.

Below is an example of how a 150-pound lacrosse student-athlete could distribute total daily calories over the course of the day.



Daily Nutritional Requirements for Lacrosse

Based on a 150 lb. Student-Athlete (68 kg)

	Carbohydrate	Protein	Fat
Daily Requirements	5-8 g/kg/day	(1.4-1.7 g/kg/day)	Remainder of calories to meet daily energy requirement
Daily Total	340- 544 g	95- 116 g	Varies based on daily calorie requirement
Per Meal (3 Meals/Day)	90- 120 g	25-30 g	at least 20 g
Per Snack (2 Snacks/Day)	30 g	10-15 g	at least 10 g

Source: Sports Nutrition: A Handbook for Professionals



AMERICAN DAIRY
ASSOCIATION
NORTH
EAST

AmericanDairy.com

 @AmericanDairyNE

Fueling and Hydrating Before, During and After Training and Competition

BEFORE

Most lacrosse games occur in the morning or early afternoon. A nutritious breakfast and a pre-game snack will help provide the fuel needed to perform well during the game. Examples of nutrient-packed breakfasts and pre-game meals include blueberry pancakes and sausage with a glass of milk; a ham and egg sandwich with a glass of chocolate milk; oatmeal made with milk and peanut butter; and Greek yogurt with berries.

As you get closer to game time, the size and nutrient composition will change. Examples of smaller, yet nourishing pre-game snacks could be an orange, cheese stick and crackers; peanut butter on graham crackers and a banana; or low-fat yogurt with berries and granola.



DURING

To maintain a healthy hydration status during activity, it is important to consume fluid early and at regular intervals throughout a game or practice. Make sure to have a full water bottle with you at the start and take 4-5 gulps at each break. For longer or higher intensity training, a sports drink is a good option.

Halftime is also a great opportunity to increase fluid consumption. A carbohydrate-rich sports drink is a popular option since the additional carbohydrate will provide muscle fuel for the second half of the game. Many lacrosse athletes get an energy boost when they consume a carbohydrate-rich snack at halftime, too. Suggestions for an easy halftime snack include a half of a peanut butter and jelly sandwich, a carbohydrate-rich energy bar or a piece of fruit.

AFTER

After a lacrosse game, the initial goal is to replenish fluids, electrolytes, and carbohydrates that were used. Due to the high intensity of sprinting and throwing the ball, the refueling snack should include some protein for muscle recovery and repair. Consuming a nutrient-rich beverage, like **chocolate milk**, will provide fluid to rehydrate the body, carbohydrates to replenish glycogen (the muscle fuel) and protein to assist in muscle recovery. Some quick, easy and budget-friendly refueling options are chocolate milk with a granola bar; a turkey & cheese sandwich with a piece of fruit; a peanut butter and jelly sandwich with milk; or yogurt and fruit. For more post workout snacks, check out [10 Post Workout Snacks To Fuel Sports Recovery](#).

Other Considerations for Lacrosse

Lacrosse tournaments normally include multiple games played over a weekend or several days. It is important to plan, pack and carry meals and snacks for fueling throughout the tournament.

Purchase a cooler or an insulated soft pack and add freezer packs or frozen water bottles to keep **food at safe temperatures**. Examples of meals and snacks to pack for tournaments include turkey or ham and cheese sandwiches; tuna packs; peanut butter and jelly sandwiches; wheat crackers; trail mix; graham crackers; fresh or dried fruits; granola or energy bars; whole grain cereal; Greek and low-fat yogurt, cheese sticks, low-fat chocolate milk; nuts and seeds; or even leftover pizza.



AMERICAN DAIRY
ASSOCIATION NORTH
EAST

AmericanDairy.com

 @AmericanDairyNE

Soccer

Sports Nutrition for the Student Athlete: Soccer

By: Heather Mangieri, MS, RDN, CSSD

Nutrition and healthy hydration are important for all student athletes, but for those who play soccer, it's essential. That's because soccer is a highly demanding sport that combines moderately intense exercise with short, intense bursts of activity. Training involves exercises to improve strength, endurance, agility, and focus, because soccer players need all of those skills to perform at a high level.

Both professional and collegiate soccer games consist of two 45-minute halves with a 15-minute interval between each period. Youth soccer games are slightly shorter, with high school soccer consisting of two 40-minute halves and middle school comprising two 30 or 35-minute halves, depending on age. Overtime periods can also add time to the length of the game.

Nutrition Recommendations for Soccer

Since the sport incorporates both aerobic and anaerobic activity, soccer players expend a significant amount of energy during a game. On average, a 165-pound soccer player may expend more than 1,500 calories during one game. In order to consume enough calories to support the high energy expenditure of the sport, athletes will need to eat regular meals and snacks, and get extra nutrition before, during and after training and competitions.

Carbohydrates

The high-energy demands of soccer make carbohydrate intake a priority for players. When considering how many carbohydrates to consume, it's important to consider the playing time of athlete. In addition, food and fluid intake should be adjusted based on rest days, training and competition.

During training and competition, recommended carbohydrate intake is between 7 and 12 grams per kilogram per day. For a 165-pound (75 kg) student-athlete, that equates to 525- 900 grams of carbohydrate distributed throughout the day. That large range is due to the high level of variation among players. Positions that cover a lot of ground, like midfielders, will have a higher daily carbohydrate need than players who cover less ground, like goal keepers.

Though energy expenditure is much less on rest days, carbohydrate intake is still highly important for daily nutrition requirements and recovery. On days when no training or competition takes place, soccer players should still aim to get approximately 5 grams of carbohydrate per kilogram of body weight, for the day. For a 165-pound (75 kg) student athlete, that equates to 375 grams of carbohydrate. Include a variety of carbohydrate-rich foods such as breads, cereals, pasta, rice, fruits, vegetables and beans.



AMERICAN DAIRY
ASSOCIATION NORTH
EAST

AmericanDairy.com

 @AmericanDairyNE



Nutrition Recommendations for Soccer

Protein

Protein is another important nutrient for soccer players. It is essential for health and helps to repair muscle tissue that was broken down during training and competition. It also helps to build new muscle tissue. All humans need some protein; student athletes that participate in exhaustive, intense activity just need more. The recommended intake for soccer players is between 1.4 and 1.7 grams of protein per kilogram of body weight, each day. For a 165-pound (75 kg) student athlete, that equates to 105 - 127 grams of protein each day. Ideally, that daily intake should be evenly distributed between meals and snacks throughout the day.

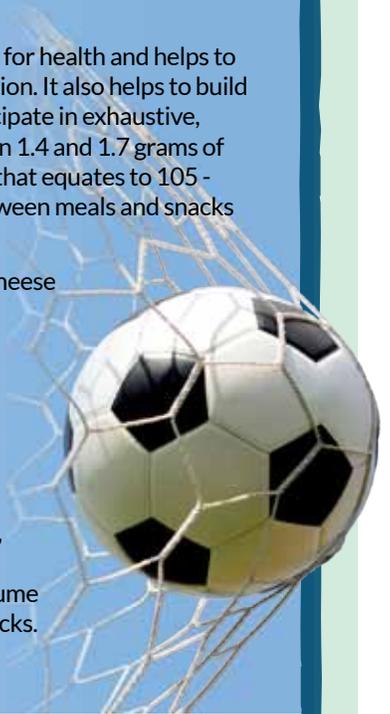
Try to include a variety of high-quality protein sources such as dairy products like milk, cheese and yogurt, as well as lean beef, poultry, fish, and beans and legumes.

Fats

While carbohydrates are the primary fuel used for soccer players, fat also acts as a valuable energy source. The recommended intake for fat is dependent on your daily energy requirement, and that varies greatly from one student athlete to another.

There are two things to keep in mind when choosing how much fat to consume. Fat fills you up, and it can slow down how quickly your food digests. If your meal is too high in fat, it can cause you to eat too little of another nutrient. That's not going to help your sports performance. The key to eating enough dietary fat, without it causing you to under consume another nutrient, is to evenly distribute it throughout the day, between all meals and snacks.

Sources of fats include nuts, seeds, salad dressings, olives, avocados, butter and oils.



Daily Nutritional Requirements for Soccer

Based on a 165 lb. Student-Athlete (75 kg)

	Carbohydrate*	Protein	Fat
Daily Requirements (Rest Days)	5 g/kg/d	(1.4-1.7 g/kg/d)	Remainder of calories to meet daily energy requirement
Daily Requirements (Training & Competition)	7-12 g/kg/d	(1.4-1.7 g/kg/d)	Remainder of calories to meet daily energy requirement
Daily Total (Rest Days)	375 g/kg/d	105- 127 g	Varies based on daily calorie requirement
Daily Total (Training & Competition)	525- 900 g	105- 127 g	Varies based on daily calorie requirement
Per Meal (3 Meals/Day)	90- 135 g	25-30 g	~20-30 grams
Per Snack (3 Snacks/Day)	30-60 g	10-15 g	Minimum of 15 grams

*Please note: Additional carbohydrates may be needed before, during & after training or competition to meet daily requirement

Source: *Sports Nutrition: A Handbook for Professionals*



AMERICAN DAIRY ASSOCIATION NORTH EAST

AmericanDairy.com

@AmericanDairyNE

Fueling And Hydrating Before, During And After Training and Competition

To meet the high nutritional demands on training and competition days, special attention must be paid to what is consumed before, during and after activity. Student soccer players will need to eat and drink even more, on those days.

BEFORE

Pre-Training/Competition

What you eat before soccer training or a competition is highly dependent on how much time you have. If you have three to four hours before you start, eat a well-balanced breakfast consisting of complex carbohydrates, protein and some dietary fats. That's plenty of time to eat, digest, absorb and metabolize your food. As you get closer to activity time, your meal size and composition should change. Limit fat and fiber, and replace your complex carbohydrates with easy digesting ones. Check out [Fueling For Competition Day](#) for some specific examples on what to eat in the hours and minutes leading up to competition.

DURING

During Training/Competition

It can be challenging to drink during a soccer game, especially for players that spend most of their time on the field. Be sure to start the game well fueled and hydrated and take advantage of every opportunity to drink fluids during the game. While water is a priority fluid most times, sports drinks are often recommended during a game. They provide fluid, electrolytes and carbohydrates all-in-one, and can be easily consumed during breaks. One gulp is equivalent to 1 ounce, so try to get 6-8 gulps each break.

AFTER

Post-Training/Competition

It is highly unlikely that soccer players will consume enough fluid during a game, so post-competition rehydration is a huge priority. Fluid, electrolyte and carbohydrate losses should be replenished immediately after competition. One easy way to refuel after a competition is by drinking [chocolate milk](#). It provides the important nutrients your body needs to support the recovery process. For additional ideas, check out these [10 post-workout snacks for after competition](#). Then when you get home, eat a full, balanced meal

Fluid Needs

Fluid is by far the most critical nutrient for soccer players – especially youth soccer players. Younger athletes do not sweat as much as older athletes, and the risk for dehydration and heat illness is high. This is especially true when competing in a hot and humid environment. Even small losses in fluid can negatively impact sports performance, mental function, motor skills and tolerance to heat. Soccer players need to keep fluid intake top of mind all day long.

Fluid needs can vary widely from one athlete to another based on level of activity and individualized sweat rate. It's important to begin hydrating early and drink often throughout the entire day. Start all activity well hydrated, and try to drink 4-8 ounces of fluid every 15-20 minutes during training and competitions. When training or competition is over, be sure to add extra fluids to help rehydrate.

Consuming a sports drink immediately before, during or right after training and activity will provide the body with additional carbohydrates and help to replenish electrolytes that were lost in sweat.

Other Considerations

Travel can make it difficult to maintain a routine and increases your reliance on fast food and convenience foods. Try to think ahead and pack healthy foods to take with you. Today, most fast-food establishments and convenience stores offer a variety of healthy options. The key is to choose the right thing! Look for items that you would make or eat at home such as containers of milk and yogurt, chicken, turkey or egg sandwiches, fruits and vegetables and nutrient-rich energy bars. Many sell pre-packaged snack trays with a variety of foods like cheese, fruit and nuts.



AMERICAN DAIRY
ASSOCIATION NORTH
EAST

AmericanDairy.com

 @AmericanDairyNE

Swimming

Sports Nutrition for the Student Athlete: Swimming

By: Angie Dye, MS, RDN, CSSD

The phenomenon of year-round sports seasons is nothing new to swim families. Many student athletes who participate in swimming have been kicking and pulling year-round since they were in elementary school. There are opportunities for club and competitive swimming throughout most of the calendar year, with a competitive high school season embedded right in the middle.

Most student athlete swimmers practice five to six days per week, often with morning practices or weight training sessions multiple days of the week. Weekends may involve multi-day swim meets that begin on Friday night and continue most of Saturday and Sunday. Swim events cover a wide range of intensity and duration, from short, powerful 50-meter sprints up to long-distance endurance events like the 1500-meter race.

A typical swim meet consists of a 30-minute warm up, then a period of waiting until the meet begins. The event length varies based on the type of meet. Swim club meets generally last four to six hours or more. A high school dual meet, where two teams compete against each other, typically takes 90 minutes to two hours. Larger, multi-team invitational meets may last an entire morning or afternoon, or may have a preliminary meet in the morning followed by a finals meet in the evening.

Nutrition Recommendations for Swimming

Swimming is an endurance sport consisting of one or more hours of moderate to high intensity training, most days of the week. It is unique from other sports in that it is an entire full-body, cardiovascular workout. Additionally, water creates resistance and pressure, making the body work harder than it would on land. The physical demands of swimming, combined with year-round practices and multi-day competitions, result in significant energy expenditure that needs attention on a daily basis. A solid daily sports nutrition plan, combined with smart pre- and post-workout fueling, can make the difference between a mediocre and an excellent swim performance.

Carbohydrates

The primary fuel source used by swimmers is carbohydrate. During training and competition, the recommended intake is between 7 and 12 grams of carbohydrate per kilogram of body weight, per day. For a 150-pound (68 kg) student athlete, that equates to between 476 and 812 grams of carbohydrate a day. When determining carbohydrate needs, it's important to consider the needs of each swimmer individually. Intensity, duration, individual goals and level of training all impact total carbohydrate intake. During the season when training volume and intensity are highest, fruits, vegetables, beans, pasta and other complex carbohydrates should be staples at each meal and snack to meet the higher part of that range.

Protein and Fat

The energy and nutrient needs of swimmers are very high, and eating a well-balanced diet is critical. This includes getting adequate protein and dietary fats. Swimmers should aim to consume between 1.2 and 1.7 grams of protein, per kilogram of body weight, per day. For a 150-pound swimmer, that equates to between 82-116 grams and should be evenly distributed between multiple meals and snacks.

The recommended intake for fat is around 1 gram per kg of body weight, per day, which means a 150-pound swimmer will need at least 68 grams of fat each day. That recommendation, however, is based on the minimal amount that should be consumed for a 150-pound student athlete. Many swimmers will need more in order to meet their daily energy requirements.

To meet daily nutritional requirements, swimmers will need to eat frequent meals and snacks. The following chart is an example of how a 150-pound (68 kg) swimmer can distribute their daily carbohydrate, protein and fat intake over the course of a day.



AMERICAN DAIRY
ASSOCIATION NORTH
EAST

AmericanDairy.com

 @AmericanDairyNE

Daily Nutritional Requirements for Swimming

Based on a 150 lb. Student-Athlete (68 kg)

	Carbohydrate	Protein	Fat
Daily Requirements	7-12 g/kg/d	(1.2-1.7 g/kg/d)	~1 g/kg/d or the remainder of calories to meet daily energy requirement
Daily Total	476-812 grams/day	82-116 grams/day	at least 68 grams per day but varies based on daily calorie requirement
Per Meal (3 Meals/Day)	115- 180 g	25-30 g	~20 grams
Per Snack (3 Snacks/Day)	45-60 g	10-20 g	5-15 grams

Source: Sports Nutrition: A Handbook for Professionals

Fluid Needs

Although swimmers are immersed in water for much of their practice and competition, they still need to focus on drinking adequate fluid to maintain proper hydration. Even a slight level of dehydration will make the effort of swimming feel more difficult. Swimmers compete in both indoor and outdoor venues, which present different challenges in terms of hydration. Both can be warm, causing increased sweat loss. However, outdoor competitions during the hot and humid summer months put swimmers at the greatest risk for significant fluid losses. It's essential to have a water bottle nearby to sip throughout long competition days. Sports drinks, chocolate milk, smoothies and water-rich fruits and vegetables can also help keep swimmers hydrated. For more hydration tips click [here](#).

Fueling and Hydrating for Half-Day or Full-Day Swim Meets

Preliminary or final meets can last from a half to a full day, requiring more attention to hydration and total daily calorie intake throughout the day. For full-day swim meets, student athletes should pay attention to what they consume the night before as carbohydrates will be a valuable fuel source for the next day. An example of what to eat the night before is 4 ounces of lean protein, like chicken or fish, 1 ½ cups of whole grain pasta or brown rice, 1 cup of steamed or roasted vegetables, a piece of fruit, and 1 cup of milk or water.

The day of the meet, pack enough food to keep your body well-fueled and hydrated all day long. That means a full breakfast and lunch as well as extra fluids and carbohydrate-rich snacks for before, during and after events.

A great breakfast option could be overnight oats made with ½ cup old-fashioned oats, Greek yogurt, skim milk and fruit. For lunch, pack a sandwich made with 3 ounces lean protein, a slice of cheese and 2 slices whole grain bread, a side of pita chips and hummus, a piece of fruit and 16 ounces of water. Then, be sure to refuel after the meet and have a balanced meal when you get home.



AMERICAN DAIRY ASSOCIATION
NORTH EAST

AmericanDairy.com

@AmericanDairyNE

Fueling and Hydrating Before, During and After Training and Competition

Swimmers rely on stored carbohydrate, known as glycogen, to perform their best at practice and training sessions. It is the primary fuel used by working muscles and is also used to maintain normal blood sugar levels during the day and while sleeping. Because glycogen stores are used at a low rate throughout the night, levels can be low in the morning. That makes eating or drinking a carbohydrate-rich meal or snack highly important for swimmers with early morning practice. Student swimmers may also need to sip a carbohydrate-rich beverage during swimming and should be sure to refuel and rehydrate once practice is over.

Other Considerations

Swimmers have faced new challenges staying on top of nutrition and hydration in the COVID-19 era. There has been a safe return to swim with mask protocols, temperature checks, and distancing during competition, but wearing a face covering diminishes the ease of eating and hydrating. Even though you are masked, you still need to follow good nutrition and hydration protocols. Lowering masks briefly to stay on top of hydration throughout the meet is essential. If venues are not allowing solid food, liquid sports nutrition products, like chocolate milk and smoothies, provide the best options for getting in nutrition while competing.

BEFORE

Pre-Training

Swimming practice is often held in the morning, before school starts, which makes it a super early start for students. That also makes properly fueling and hydrating a challenge. If it's too early for solid food, liquid nutrition can be a great way to get the carbohydrates needed to fuel practice. The same holds true for weekend competitions. Make a smoothie or grab a bottle of chocolate milk or juice as you head out the door. If you prefer solid foods, toast, cereal, oatmeal or a banana are quick and easy morning options. If your practice is right after school, you have more time to focus on getting the right nutrition. Be sure to eat regular meals throughout the day, and pack snacks that you can eat during the school day and after school. You can find some great pre-workout/pre-competition snack ideas [here](#).

DURING

During Training

Eating and drinking during swim meets shouldn't be a problem, since swimmers have plenty of time to snack and hydrate between events. Practice, however, is another story. Student swimmers often spend the entire practice in the pool, making it difficult to eat or drink anything. Taking fluid breaks, however, is critical to minimize fluid losses. Place a water bottle on the side of the pool and take sips as often as possible. Heavy sweaters or those who need additional carbohydrate and electrolytes may benefit from a sports drink.

AFTER

Post-Training/Competition

Refueling with carbohydrate-rich foods and beverages is essential to replete glycogen stores for the next day's workout. Including protein as part of the recovery meal and snack will help repair muscles. Ideally, you'll want a meal or snack within 30-45 minutes of finishing a workout. Student swimmers who have a commute or delay in getting home for a meal should take something along to practice, like portable, on-the-go foods and fluids. Pack a small cooler with a yogurt, peanut butter and jelly sandwich or chocolate milk. Chocolate milk is a great option since it provides the carbohydrate, protein, fluids and some electrolytes all in one. You can check out easy refueling ideas [here](#).



AMERICAN DAIRY
ASSOCIATION NORTH
EAST

AmericanDairy.com

 @AmericanDairyNE

Wrestling

Sports Nutrition for the Student Athlete: Wrestling

By: Dan Liburd, MS, CSCS, USAW

The sport of wrestling is very popular among student athletes, yet many are unfamiliar with the sport, and/or are misguided with the training and preparation required to excel in today's wrestling environment. To fully understand the importance of training and good nutrition, you have to first understand the culture and demands of the sport.

Wrestling has numerous forms or styles but can be generalized as a combat sport between two individuals of the same weight class. Most wrestling in the United States is recognized as Folkstyle or Scholastic wrestling. This form is commonly observed in the youth, high school and college ranks. Folkstyle wrestling awards athletes points for various offensive and defensive combat maneuvers such as takedowns, escapes, and reversals. Wrestlers are motivated by either outscoring their opponent or pinning their opponent, which requires the top wrestler to expose his or her opponent's shoulder to the mat for a certain number of seconds. A high school wrestling match normally consists of three 2-minute periods.

To compete, athletes must learn technical movements that allow them to attack, defend, and/or counterattack with precision and power. A high level of cardiovascular fitness, strength and speed are all required to outlast and/or overtake the opponent. Wrestlers also need tremendous mental focus and concentration to strategize through the various offensive and defensive maneuvers needed to gain control over the opponent.

Scholastic wrestling competitions include single meets, where wrestlers compete against one opponent; dual meets, where wrestler competes against one or two opponents; or tournaments, where athletes can compete against multiple opponents.

All across the nation, student wrestlers of various levels are in the process of training or preparing for the upcoming wrestling season. What some student wrestlers overlook, however, is the nutrition needed to support that training. An appropriate sports nutrition plan is critical to sustain the energy demands of training in a healthy and safe manner.

Nutrition Recommendations for Wrestling

The energy demand required to physically and mentally outmaneuver opponents on the wrestling mat is considerably high. When determining macronutrient and energy intake, it is important to consider the energy needed on competition day as well as the months leading up to training. Knowledge of the **various phases of preparation** and devising a long-term plan well in advance of competition can help student athletes navigate these nutrient and energy needs to maximize performance.



AMERICAN DAIRY
ASSOCIATION NORTH EAST

AmericanDairy.com

 @AmericanDairyNE

Carbohydrate

Carbohydrates are critical for optimal performance of the wrestling athlete. This nutrient provides energy for the short, quick burst of movements needed to take down, escape or outmaneuver an opponent. Glycogen, which is the form of carbohydrate stored in muscle, contributes to high intensity activities that occurs within one minute of a match. Carbohydrates are the primary nutrient used to fuel the sport.

The total daily amount of carbohydrate needed will vary based on the nature of the competition and the intensity, volume and total level of training. In general, during training and competition, the recommended carbohydrate intake is between 5 and 7 grams per kilogram of body weight, per day. For a 150-pound (68 kg) high school wrestler, that equates to ~340 - 476 grams of carbohydrate throughout the day.

Protein

Protein is a valuable nutrient known for its role in building and maintaining muscle and other body tissue. It also supports immune health. To support the muscle breakdown that can occur during training and competition, it's important for wrestlers to get adequate protein in their daily diet.

Wrestlers typically require between 1.2 - 1.7 grams of protein per kilogram of body weight each day. For a 150-pound (68 kg) high school wrestler, that equates to between 82 and 116 grams of protein per day. Dairy products like milk and yogurt, as well as beans and legumes, deliver both high-quality protein and carbohydrates, making them an easy way to get both nutrients. Other protein-rich foods include eggs, cheese, poultry, beef, fish and other seafood.

Fat

Fat is another valuable nutrient that should be included in a wrestler's diet. In addition to providing energy, it supplies essential fatty acids, helps to insulate and protect organs and provide warmth to the body. Dietary fats also help flavor food and keep you feeling full. Once daily energy, carbohydrate and protein needs are determined, the remainder of the calories will come from fat. While that amount varies from one student athlete to another, wrestlers should aim to get around 1 gram of fat per kilogram of body weight per day. For a 150-pound (68 kg) wrestler, that equates to ~68 grams a day. Healthy fat sources include dairy foods like milk, yogurt, and cheese, as well as nuts, nut butters, olive oil, and avocado.

Below is an example of how a 150-pound wrestler could distribute total daily calories over the course of the day.

Daily Nutritional Requirements for Wrestling			
Based on a 150 lb. Student-Athlete (68 kg)			
	Carbohydrate	Protein	Fat
Daily Requirements	5-7 g/kg/d	1.2-1.7 g/kg/d	Remainder of calories to meet daily energy requirement
Daily Total	340- 476 g	82-116 g	Varies based on daily calorie requirement
Per Meal (3 Meals/Day)	90- 115 g	20-30 g	at least 15 g
Per Snack (2 Snacks/Day)	35 -45 g	10-20 g	at least 10 g

Source: Sports Nutrition: A Handbook for Professionals



AMERICAN DAIRY ASSOCIATION NORTH EAST

AmericanDairy.com

@AmericanDairyNE

Fueling and Hydrating Before, During and After Training and Competition

As a weight-based sport, wrestling requires athletes to be extremely mindful of their nutrition strategies before, during and after competition. Forming a plan that considers nutrient timing helps to deliver adequate levels of carbohydrates, proteins and fats at the right time to maximize sports performance and body composition.

BEFORE

The National Collegiate Athletic Association (NCAA) and high school wrestling require wrestlers to weigh-in no more than two hours prior to competition. That rule is designed to dissuade wrestlers from engaging in dangerous weight loss strategies, such as food and fluid restriction and instead focus on healthy fueling and hydrating behaviors that can help them excel on the mat.

To support performance, student wrestlers should aim to consume a meal composed of complex carbohydrates, protein and/or some dietary fats, three to four hours before a match. As it gets closer to competition time, it's important to choose low-fiber, simple carbohydrate foods that will digest faster while still providing a fuel source to optimize energy levels. For ideas on what to eat, check out this post on [fueling for competition day](#).

DURING

A typical high school match consists of three 2-minute periods with no break between periods. That means there is no eating or drinking during a competition. The food and fluids consumed before will provide energy to perform and help wrestlers maintain a healthy hydration status while competing.

AFTER

Post competition is a vital time to refuel and rehydrate. Consuming carbohydrate-rich foods will help restore muscle glycogen stores, while eating protein can support tissue repair and minimize muscle breakdown.

Dual meet and tournament days can get long, so it is important to bring adequate food and fluids to consume at regular intervals. Wrestlers should pack low fiber, easy digesting carbohydrates for energy, some protein to help support tissue recovery, and plenty of fluids. Sport drinks are a great option before and after matches as well as in between competition since they provide simple carbohydrates, fluid and electrolyte all-in-one. Another great post-competition refuel beverage is [chocolate milk](#), since it provides the carbohydrate, protein, fluid and electrolytes needed to refuel after strenuous activity.

Other Considerations for Wrestling

Since wrestlers compete in weight classes, strength and power relative to total body weight is an important performance quality. Being the strongest wrestler within a particular weight class can no doubt increase the chance of victory. To gain a competitive edge, wrestlers may try to cut weight while working to improve strength. While that sounds good in theory, it can lead to harmful practices like voluntary dehydration that negatively impact a student athlete's health.

Though voluntary dehydration to promote a rapid weight loss is a common practice in the wrestling community, it is highly discouraged. The negative performance effects of dehydration have been well established in research. Not only can it increase physiological stress, but it can also negatively impact power, cardiovascular function, and rate of fatigue – all factors central to a wrestler's performance. Research has shown that serious dehydration practices prior to competition led to higher rates of skeletal muscle damage as compared to wrestlers who practiced healthy hydration practices. Such short-term practices should be avoided. Instead, athletes should focus on a high-quality nutrition plan that provides all the nutrients needed to succeed.

Wrestling is a complex sport that embraces athletes with a wide range of body types in different weight classes. Success in the sport requires long-term preparation, planning and goal setting. To make sure body composition goals are met and accomplished in a healthy way, consider the help of a registered dietitian nutritionist that specializes in sports nutrition.



AMERICAN DAIRY
ASSOCIATION NORTH
EAST

AmericanDairy.com



@AmericanDairyNE

For access to all sports nutrition content created by the Sports Nutrition Advisory panel, visit **AmericanDairy.com/SNAP** or scan the QR code:



**AMERICAN DAIRY
ASSOCIATION** NORTH
EAST

Interstate Place II
100 Elwood Davis Road
North Syracuse, NY 13212

AmericanDairy.com