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Type Registration	Definition	Price
Group rate	Register 20 or more	\$40
Individual Rate	Single Registration	\$65

Course #	Course Title	
Webinar Date		
Name	Discipline	
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E-mail Address for Confirmation (will not be shared or sold)		

Webinar Cancellation Policy: Motivations, Inc. reserves the right to discontinue or reschedule a course from our listing of options. Should you have already registered, you will receive a full refund. Participants may receive a full refund when requesting cancellation 24 hours prior to the the webinar. After that time, a credit for a future Motivations event may be awarded.

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WEBINAR #7426 Nutrition in Sport & Exercise

Instructor:
Colleen N Gulick, PhD (ExPhys), MS, BS
(BioE), EIT (ME), CSCS

Audience: Physical Therapists, and
Assistants, Athletic Trainers

Delivery Options:
Live Webinar or Self-Study Options

SUMMARY: While proper nutrition is imperative for daily health, dietary demands change dramatically when exposed to the stresses of sport and exercise. This course will cover how macronutrient requirements change according to an athlete's sport (endurance vs sprint vs team sport) and goals (muscle building, maintenance, body composition, etc.). Reference ranges for nutrients will be provided. Timing of food intake for optimal sport performance will be discussed for a variety of situations (pre-workout, training, after-workout, competition, etc.) Three popular diets (gluten free, paleo, ketogenic) will be examined and how these diets impact exercise performance. Signs and symptoms of common dietary disorders, such as Relative Energy Deficiency in Sport (RED-S) will be discussed as well as strategic treatment options. Female specific topics including the impact of hormonal fluctuations due to menstruation on nutritional needs will be addressed. Recommendations for dietary alterations to optimize athletic performance at different times of the menstrual cycle will be provided. Lastly, scientific evidence detailing the impact of 11 common sports supplements will be explored. Supplements will include substances designed to enhance endurance performance, sprint performance, muscle gain, as well as adaptogens intended to aid in the improvement of all training adaptations. After completion of the course, users will be able to write nutrition plans tailored to an individual's specific sport, goals, and dietary needs as well as identify the signs and symptoms of common dietary disorders.

PRESENTER: *Colleen Gulick, Ph.D., M.S., E.I.T., CSCS, [Podium Sports, LLC](#) Founder & CEO.* Colleen's academic pursuits have combined the areas of engineering and exercise physiology to analyze multiple avenues of athletic performance. Colleen received her B.S. in Bioengineering and E.I.T. in Mechanical Engineering from the University of Maryland. Her MS in exercise physiology was obtained from California State University, Fullerton. Colleen lived in Dunedin, New Zealand to earn her PhD in exercise physiology with an emphasis in endocrinology from the University of Otago. Her research has investigated topics including: EMG and MMG activity during isometric muscle actions in women, muscle activation comparing different squatting techniques, the influence of a padded hand wrap on punching force, gait analysis of shoes and prostheses, as well as the effects of dietary protein and exercise on IGF-1. Her work has resulted in 14 peer reviewed publications, 13 conference presentations, as well as appearing in Podium Runner Magazine and health blogs (Levels Health, Upgraid and ATAQ Fuel). Outside of the classroom Colleen's athletic skills are rooted in the field. She played D1 field hockey for the University of Maryland, where she won two NCAA national championships and All-American accolades. Colleen is currently a professional cyclist, specializing in the disciplines of track and criterium. On the bike she earned a Pan American Track Championship silver medal, represented the USA at a world cup, earned 8 national championship titles, and 50 national medals. She has raced in 8 countries and amassed over 150 wins (360 podiums) in the past 10 years of a 19-year career. When she is not racing, Colleen has worked as a strength and conditioning coach for USA Beach Volleyball, created and managed a professional women's cycling team, and owns her own coaching company, Podium Sports, LLC. She loves the opportunity to write and share her knowledge of exercise physiology and passion for athletics. *Financial—* Receives a teaching honorarium from Motivations Inc. *Nonfinancial—* No relevant nonfinancial relationship exists.

OBJECTIVES: Upon completion of this course, the participant will be able to:

- Understand the function of the macronutrients
- Differentiate the components of all 3 diets discussed
- Recognize the signs and symptoms of RED-S
- Identify at least 3 supplements and their impact on exercise performance

FORMAT: This is a 3-hour course equivalent to 3 CEU's or 0.3 CEUs offered as a live webinar or self-study. Instructors present the live course content via an internet website displaying real time power points. Learners will receive a course instruction link. Instructors lecture through livestreaming internet on your computer. Questions may be asked during the webinar using the chat feature or the "raise hand" feature for live discussion.

PT CEU's: Motivations Inc is an approved provider of Physical Therapy continuing education by these professional bodies: Texas Chapter of the American Physical Therapy Association, ILDPR- Illinois Department of Professional Regulation Approved PT CE Sponsor, NY- New York State Education Department, Office of the Professions. Physical Therapy Board of California. Many state boards recognize these for pre-approval purposes. Contact us if you would like verification a state.

ATC CEU's: Motivations, Inc. (BOC AP #P2549) is approved by the Board of Certification, Inc. to provide continuing education to Athletic Trainers. This program is eligible for a maximum of 3 Category A hours/CEU's.

AGENDA:

Pre-Study: 30 Minutes Plan to read the course materials, references and review the post test before the start time. Please be prepared to share patient case study and related question during the discussion time.

0:00 – 0:35 The basics – macronutrients

- quick run through of quantity of macronutrients and their function
- how to time them appropriately for specific exercise demands
- exceptions to the rules... which are the few times that you may want to stray away from the general recommendations for intake and/or timing

- Iron
- Creatine
- Beta-Alanine
- Vitamin B, C, D
- Antioxidants
- Sodium Bicarbonate
- Caffeine
- LCLT
- Beet juice
- Beta-Hydroxyl Betamethyl-butyrate (HMB)
- Ashwagandha

0:35-0:50 Types of diets – gluten free, paleo, keto

0:50 – 1:05 Relative Energy Deficiency in Sport (RED-S)

1:05 – 1:40 Supplements

1:40 – 1:50 Menstruation and Nutrition

1:50 – 2:00 Case studies

Post-test: Research, identify, and submit your post test question answers on the online form. This is an open book test you can take multiple times if needed to obtain the 70% score. Complete the evaluation feedback survey. Obtain and save your auto-emailed certificate for your files. (Allow 30 minutes for these completion tasks)