Advances in Nutrition

From daily living to high performance sport

Dietary proteins, carbohydrates, and fats are critical for everyone.

Proteins

Muscle can optimally use dietary protein for 24 hours after a workout.[1]

Leucine-rich proteins (including that from meats and dairy) are most effective at increasing muscle protein synthesis.[1]

Carbohydrates

During exercise, energy production from carbohydrates is more efficient than energy production from fat.[2]

A low FODMAP diet can be effective for alleviating GI symptoms during exercise.[3]

Fats

Over time, a high-fat diet allows the body to use fat for energy more efficiently.[2,4]

High fat, low carbohydrate diets have not been shown to increase athletic performance.[2,5]

Specific protein, carbohydrate, and fat needs vary based on individual goals, such as: weight loss, muscle gain, and improved athletic performance.

Weight Loss

Weight and fat loss can be achieved through restricted energy intake.[6]

Choosing water more often and restricting intake of sugar sweetened beverages can help with weight loss.

Appropriate protein intake is needed to prevent muscle loss. Non-athletes are recommended to consume 0.8g of protein per kg of body weight per day.[1]

Muscle Gain

Optimal muscle gain requires an appropriate training regimen in complement with the suitable amounts and timing of dietary protein.[1]

Training more muscle groups does not require more protein intake.[1]

Muscle protein synthesis can be maximized with consumption of 0.25-0.3g of protein per kg of body weight (~20g) following resistance training.[1,7]

Athletic Performance

Endurance and/or strength sports require different considerations for meal timing, food recommendations, and fluid intakes.[1,2]

6.1g of carbohydrates per kg of body weight per day has been shown to produce the highest athletic performance.[2]

1.5g-1.8g of protein per kg of body weight per day is recommended for elite athletes. Recommendations may vary based on exercise type and duration.[1]

Food can be used to help you reach your health, fitness, and performance goals!

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1. D. Moore, 2018 **2.** T. Stellingwerff, 2018 **3.** D. Lis, 2018 **4.** Volek *et al.* 2015 **5.** Burke *et al.* 2017 **6.** E. Sesbreno, 2018 **7.** Moore *et al.* 2009