

## *Module 10, Lesson 1 Handout:*

### **Athlete Fuel Recommendations**

Let's start by being blunt: not everyone who exercises is going to need a specialized plan. In terms of nutrition needs, there's a big difference between an everyday gym-goer and a hardcore athlete.

Clients considered "exercise enthusiasts" - you know, the clients who are dedicated to their morning hot yoga class or ClassPass membership and maybe if they're feeling spicy they do two-a-days - will have nutritional needs that are still similar to the general population. Make sure they eat a balanced diet throughout the week and have nutrient dense snacks on hand to provide any extra energy they need after an especially tough workout.

Clients who are serious athletes - these are professional or college athletes who's days revolve around their training, or even clients who aren't professional but are rigorously training for intense athletic events like an iron man - will have more specific nutrition requirements than everyday exercisers. For these athletes, you'll need to customize their fuel recommendations and meal plans based on their specific needs and preferences.

#### **When Thinking About an Individual Athlete's Nutrition Plan, Start by Considering:**

- Type of sport
- Amount of training
- Seasons (Is there an off season? Are they in a conditioning phase?)
- Individual tolerance for things like hydrating and fueling during exercise
- Body composition requirements for their sport
- Daily schedule and training times

#### **Timing Meals and Snack**

Let's start with a quick science refresher on how our bodies get energy from food. Adenosine triphosphate, or ATP, is the usable form of energy in the body. ATP is synthesized from the foods we eat once those foods - mainly carbohydrates and fat - have been broken down and metabolized by the body. However, ATP is minimally stored in the body and it's also easily used up during activity. This means that what and when we eat plays a key role in giving our body the energy it needs, especially for exercise.

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Timing meals and snacks around training is especially important to ensure the body is properly fueled for exercise and that it has the nutrients required for recovery post workout.

## **Pre-Exercise Fuel Recommendations**

- Eat a combination of carbohydrates and protein 2-4 hours before a workout to help sustain your energy, preserve your muscle mass and speed your recovery
- Choose foods that are low in fat and fiber for easier digestion
- Aim for 3 to 4 grams of carbohydrates per kilogram of body weight 3 to 4 hours prior to exercise (this is like a big meal), or 1 to 2 grams of carbohydrates per kilogram body weight 1 to 2 hours before exercise (more like a snack), with 1 gram of protein for every 4 grams of carbohydrates. Specific examples are in another handout
- Start hydrating 24-48 hours before an event. Drink 16-20 oz. of water or a sports drink 4 hours before and then, 10-15 minutes before exercise, drink another 8-12 oz. of water.
- Recommend an athlete weighs him or herself before and after training to assess hydration status

## **During Exercise Fuel Recommendations**

- For exercise lasting less than an hour, 2-3 gulps of a sports drink or a 10-15 second swish of a carbohydrate mouth rinse (basically a glucose solution that you spit out) every 15-20 minutes may benefit performance. Because the mouth rinse is not ingested, some athletes, like runners and cyclists, may prefer the mouth rinse since it prevents any gastrointestinal distress. Drinking 3-8 oz. of water (2-3 sips) every 15-20 minutes is also recommended
- For activity lasting more than an hour, take in 30-60 grams of carbohydrates per hour. For extreme endurance athletes, this number can go up to 90 grams per hour. For hydration, drink 3-8 oz. of an electrolyte sports drinks every 15-20 minutes. Water will provide hydration too, but some athletes may benefit from the additional electrolytes when exercise is prolonged and intense

## **Post-Exercise Fuel Recommendations**

- Eating within 60 minutes of exercising is the general recommendation for optimal recovery.
- Aim to eat a combination of protein, carbs and water. Electrolytes (sodium and potassium) can usually be replenished through post-workout foods—you don't need to rely on sports drinks, such as Gatorade or Powerade to rehydrate after a workout
- A useful tool to remember is a 4:1 ratio of carbs to protein. A general recommendation is 20-25 grams of protein post-activity and 80-100 grams of carbohydrates

- Include healthy fats and antioxidants from fruits and vegetables for their anti-inflammatory properties to help with recovery. There are specific meal and snack recommendations in another handout
- Drink 16-24 oz. of fluid for every pound of weight lost

## Fasted Exercise

Some clients may have questions about fasted exercise. This is a topic many experts disagree on and the science is not so clear cut. Most people can benefit from getting some food in their systems to prevent them from fatiguing, but whether or not to fuel pre-workout depends on the person, the workout and the individuals goals. If the goal is to lose body fat, then fasted exercise might be a good strategy as long as the person feels good during the exercise and is refueling with carbs and protein. Again, recommendations are specific to the person. Unless an athlete plays a sport that requires a very specific body composition or the person needs to fall in a specific weight class, most athletes will want to fuel up before training.

## Competition Days

On a race or competition day, athletes should eat the way they've been eating during training. This isn't the time to try something new. The most important thing on an event day is to eat something you know will agree with your stomach. Remember that what works for one person might not work for someone else.

- Pre-Competition: A general recommendation is to eat about 500 to 800 calories (depending on individual this could vary even more) of easily digestible carbohydrates with some protein (about a 4:1 ratio) about three to four hours before the event. This is a time when "white foods" (white bread, white pasta, etc.) are actually an okay choice because they are easily digested and provide quick energy. Start hydrating the 24-48 hours before
- During Events: For endurance events like marathons, clients can take honey sticks, raisins, sports gels or other quick energy sources during the event. Use the same energy and hydration sources during training sessions/runs so there are no surprises on race day
- Post Event: Eat a combination of carbohydrates and protein and rehydrate ASAP. Aim for 20-25 grams of protein and 80-100 grams of carbs to quickly restore glycogen in muscles. Just like with training, assess hydration status by getting a pre and post event weight and rehydrate with water