



Nutrition Matters

BACK TO BASICS-FOODS TO FUEL ULTIMATE WORKOUTS

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With the club season and championship series now behind us for another year, are you already hungry for more and thinking about next year? Ideally, the off-season is where most of your fitness, strength and power gains should occur. You will likely be doing many different types of workouts throughout the year, and each type of workout and training has its own nutritional demands.

BACK TO BASICS

Because there is no one specific diet or calorie requirement for all athletes in any given sport, it is up to us as individuals to see how our bodies react to training. What we do know is that ultimate is a demanding sport, requiring both cardiovascular and muscular fitness, strength and power. Similar to determining when to eat, the simplest way to determine what to eat is to go back to the basics and decide 1) what type of workout you are doing (e.g., strength, agility, endurance, etc.), 2) how intense the workout is going to be (e.g., how hard you will be working on average, on a scale of from zero to 100 percent), and 3) how long the workout will be. Then you decide what to eat and when. Done.

Well, okay, maybe it's not quite that easy, but if you can answer those three questions, you can use the resources below to choose your foods and decide when to eat them.

The next step is to understand each type of workout and what kind of energy you are using for the workout, so you know what you'll need to replace. Below are two tables describing each type of workout and the foods needed to fuel each of those workout types before, during and after. All recommendations are based on starting exercise three to four hours after a meal (so you basically have an empty stomach) and are assuming individuals are at their goal weight. Carbohydrates refer to healthy grain-based sources (e.g., dense bread, pasta, flour products, etc.) with no added sugar. Protein sources include meat, fish or eggs and some vegetable and grain combinations (e.g., beans and rice), and sources of good fats are high in Omega 3s, including nuts and nut oils; coconut and coconut oil; olives and olive oils; avocados; and whole-fat, organic dairy sources.

DETERMINING FOODS BASED ON TYPE OF WORKOUT

Keep the five tips listed below in mind when planning what to eat and when for your workouts. Then use the tables to determine what energy source is used and how to refuel after the workout.

Things to Remember when Planning Meals and Snacks around Workouts

1. Blood starts to leave your stomach and go to the muscles once you are exercising at approximately 70 percent of your heart rate max (HRM), about when you start sweating.
2. Leaving undigested food in the stomach when you start your

Table 1: Types of Workouts

Types of Workout	Duration	Intensity	Examples
Muscular or Cardiovascular Endurance	10-60+ minutes	50-75% of HRM	Body or low-weight activity or exercises (no jumping): gardening, walking, jogging, light dance or aerobics, swimming, cycling, etc.
Strength or Cardiovascular Power	15 minutes – 2 hours	50-100% HRM	Weight lifting, heavy pushing or pulling, cardiovascular interval training
Endurance Sport	15 minutes – 2 hours+	40-85% HRM	Track, cross country, cross-country skiing
Power Sport or Speed/Max Strength	20 minutes – 1 hour	60-100% HRM	Rowing, baseball, shotput, high jump, volleyball
Prolonged Sport or Agility/Power	20 minutes – 1 hour	70-100% HRM	Football, basketball, lacrosse, soccer, ultimate

Table 2: Foods to Fuel Workouts

	Muscular or Cardiovascular Endurance	Strength or Cardiovascular Power	Power Sport or Speed/ Max Strength	Prolonged Sport or Agility/Power
Energy Source	Carbs and fat	Carbs and protein	Carbs, protein and fat	Carbs, protein and fat
Before Workout	1 handful carbs 1 hour before	1 handful carbs 1 hour before	1 handful carbs 1 hour before	2 handfuls carbs and 1 handful protein 2 hours before
During Workout	Liquid carbs – 8 ounces every 30 minute	Liquid carbs and protein – 8 ounces every 15-30 minutes	Liquid carbs and protein – 8 ounces every 15 minutes, 1 handful carbs, up to half a handful protein every 60 minutes	Liquid carbs and protein – 8 ounces every 15 minutes, 1 handful carbs every 30 minutes, 1 handful protein every 2 hours
After Workout	1-2 handfuls carbs, ½ tbsp. good fat, within 1 hour	1-2 handfuls carbs, ½ tbsp. good fat, ½ handful protein, within 30 minutes – 1 hour	2-3 handfuls carbs, 1 tbsp. good fat, ½-1 handful protein, within 30 minutes	2-4 handfuls carbs, 1-2 tbsp. good fat, 1 handful protein, within 15-30 minutes
General Diet	1 handful protein per meal, extra ½ tbsp. good fat	1-2 handfuls protein per meal, 1 extra tbsp. good fat	1-2 handfuls protein per meal, 1-2 extra tbsp. good fat	2 handfuls protein per meal, 1-2 extra tbsp. good fat

workout can leave you with a bad stomachache a few hours later, and your performance may be affected due to a delay of energy and blood flow to the muscles.

3. One handful of carbs takes about one hour to digest.
4. One handful of protein takes four hours to digest.
5. One handful of good fat can take up to nine hours to digest!

Using the tables above can help you determine which foods are best at supporting your workout. For example, you can see that if you eat a meal within three or four hours of an endurance run, you probably won't need a pre-workout snack. But if you are a little hungry, you can follow the instructions in the table to determine that, for an endurance run, you would only need

about one handful of carbs within an hour of the run, then liquid carbs about every 30 minutes during the workout, and some carbs (one or two handfuls) and good fat (about half a tablespoon) after the workout. If this is how you work out most often, your normal diet would only require about one handful of complete protein per meal.

The requirements for an ultimate tournament are quite different. As an extreme example, during a tournament, ideally you would have a small meal an hour or two before playing and continue fueling during and between games with liquids and carbohydrate beverages, handfuls of carbs and protein. Then you would have a snack – two or three handfuls of carbs, one or two handfuls of protein and some good fat – right after playing AND a normal meal a few hours later.

FOODS TO FUEL WORKOUTS

As an ultimate player with a defined season and pre-determined tournament competition dates, you should ideally be following a periodized workout cycle. This means you will rotate through different types of workouts to 1) build an endurance base in the off-season, 2) focus on strength and speed during the pre-season, then 3) focus on power and agility during the season. Your dietary and caloric needs will need to cycle as well, which can sometimes catch us off guard. Using these simple guidelines and charts can help keep you healthy and performing well all year long!

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