



Sport Nutrition

Tip of the Month | February 2011



Smoothies and Training

Stress affects everyone differently. Some lose their appetite completely. If you don't feel hungry before training but have not been eating for many hours, choose liquids over solids. Drinks and liquid meals can be digested more quickly than solid food. Unlike solid food, liquids do not have to be physically broken down. You can also get the benefit of additional pre-exercise hydration when you take your nutrients in liquid form.

Convenience and Simplicity! It is very easy to prepare a smoothie that will meet all the criteria for a good pre or post-exercise drink: Fluid high in carbohydrates, moderate in protein, low in fat and fibre, a pinch of electrolytes!

The top two reasons to include a smoothie in your daily training diet:

1. Before Exercise

An adequate food and fluid intake is important to store the energy substrates that will be needed for exercise and to make sure that you will be fully hydrated before the beginning of exercise. Therefore, a smoothie may be a perfect way to meet these needs. Smoothies will provide adequate amounts of:

- Carbohydrates: to optimize your glycogen stores and to ensure maintenance of blood glucose during exercise;
- Protein: for satiety so you can train without feeling hungry;
- Low fat and fibre to facilitate digestion;
- Fluids to start exercise in a balanced hydration status.

2. After Exercise

You need to recover rapidly. This is even more important if you have another training session later on in the day or during tournaments, when you might have multiple subsequent events in a single day. As soon as possible after the end of exercise; i.e. within 20 minutes after exercise, a Smoothie may be the perfect way to meet your recovery needs as it can provide:

- Adequate fluids: 1.5 Litre of fluids/kg of body weight lost;
- Adequate Carbohydrates to replace muscle glycogen: 1.0-1.5 g/kg body weight;
- Adequate Proteins: for building and repair of muscle tissue;
- Adequate electrolytes: mainly sodium and potassium depending on an athlete's individual sweat rate.



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Are all Smoothies Created Equal?

Commercial smoothies come in different sizes and forms:

- Powders to which you have to add your favorite juice or beverage;
- Ready-to-use formulas which contain various herbs and supplements or mixtures of vegetables or fruits and milk or soy beverage with or without herbs and supplements.

NOTE OF CAUTION! Commercially prepared smoothies can be very expensive and may not meet your individual taste preferences! In addition, you must be cautious of additional hidden ingredients to ensure they do not contain any banned substances!



Preparing the Perfect Smoothie!

Elements of the “perfect smoothie” include:

- A source of complete protein; ideally milk protein contains slow (casein) and fast (whey) absorbable proteins. Soy milk protein is also a good choice if you avoid lactose in dairy for any reason.
- A source of carbohydrates: fruits and/or fruit juices are great high carbohydrate choices. Choose the ones you like best. You can also add some honey or maple sugar for taste or to meet higher carbohydrate and energy needs.
- A pinch of salt to effectively replace sodium which is lost during exercise, especially if you sweat a lot.

Here is a simple recipe that fits the bill:

U-Juice (4 servings, 250 ml each)

- 1 355 ml can frozen orange juice concentrate, not thawed
- 2 355 ml cans 1% or skim milk (use the empty juice can as a measure)
- 1 pinch salt

Depending on the type of milk, each serving contains:



Total Kcal=251

49.3 g carbohydrate (78%)
8.6 g protein (15%)
2.2g fat (2%)



Total Kcal=238.6

49.5 g carbohydrate (83%)
8.8 g protein (15%)
0.6g fat (2%)

Directions:

- Combine the ingredients in a food processor or blender until smooth.
- You can vary the flavour by adding honey, syrup or fruit while blending.

