

[Core] Chiropractic and Wellness

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“Nutrition for Athletes”

Ground Rules

[LivFit] Basics:

1. Eat food made by God, not made by man
2. Avoid sugar and insulin destabilizing foods
3. Eat high quality fats and proteins
4. Time food properly to meet your goals
5. Hydrate with water
6. Use only high quality supplements to achieve goals quicker and easier

Big Points:

1. Carbohydrates are needed for those going at very fast speeds, working out with high intensity, and/or those who are very fit.
2. Healthy fats should be the fuel source for the low to moderate intensity workout, and/or those who are trying to lose body fat.
3. Consume meals at 2 hours prior to training and within 45 minutes after.
4. The carbohydrate/fat ratio should be in line with the type of workout, duration of the workout, and your personal fitness goals.

note: Omega-3 fats found in fish oil consumed prior to a workout has been shown to improve blood flow, this is essential for maximizing muscle output.

Hydration:

1. Hydrate with water and/or electrolytes

1. 4g of carbohydrate with 150-300mg of sodium per liter is the ideal standard (delivers 100 calories)
2. Large workouts create caloric deficits, these deficits are reduced with a combination of fluids and solids. Proper hydration secures the absorption of the calories and sodium.
3. In higher temps more fluids are needed, therefore more calories can be consumed through liquid form leaving less solid food that is needed.

Ex. 100 mile bike ride performed in 5 hours at 60 degrees requires 1700 calories of fuel. 8L of fluid are required giving 800 calories, 900 calories are needed from solid food. In the heat (80 degrees) 17 bottles are required giving 1700 calories of fuel, 64 calories of real food are then needed.

Consume food based upon training needs:

1. Short, quick, and recreational workouts-
Enough protein and fats to stabilize blood sugar

Carbs should be included only if its the first meal of the day

2. Endurance athletes- mixture of carbohydrates, fats, and quick absorbing protein is best during training under 2 hours. A higher carbohydrate intake is needed for greater intensity or workouts over 2 hours.
3. Weight lifting athletes- Lower carbohydrate meals are taken in before the workout in favor of high protein-based meals. Following the workout and before bed carbohydrate heavy meals are preferred to prevent auto-catabolism and increase body mass.

After your workout

1. **Hydrate with water and/or electrolytes use *homemade Gatorade recipe***
2. **Within 45 mins. post workout consume a fast absorbing protein source (Whey Protein is best) with:**
 - a. **Low** carbohydrate load (if trying to lose body fat)---Penu Butter Cup Shake, Grilled Chicken Salad, ChilliOR
 - b. **High** carbohydrate load (if trying to gain muscle mass or recover from injury)--The Pits Shake, Salmon and brown rice, Steak Burrito

A 3:1 carb to protein ratio may be ideal for endurance athletes, which translates into 0.8 to 1.5 g/kg/body weight of simple carbs with 0.3 to 0.5 g/kg/body weight of protein that contains BCAAs

Note: More smoothie recipes can be found on our [LivFit] page at www.coreroanoke.com/livfit

Injury Prevention:

1. **Consume high anti-oxidants such as blueberries, blackberries, cooked kale and spinach, Vitamin C, or N-acetyl Cysteine post workout to clear cortisol and other inflammatory molecules.**
2. **Avoid alcohol and NSAID pain killers as both retard the healing process and delay muscle recovery.**
3. **Supplement with Fish oil, l-aurine, l-arginine, and/or l-glutamine**
4. **Eat “yin” supporting proteins in the evening to produce recovery during sleep**
Turkey, chicken, and cold water fish are best; goat cheese, coconut oil, and avocados can also help.

Protein Note: Shoot for upwards of 1.6 g/kg of bodyweight of protein a day for muscle recovery. Up to 2.4 g/kg a day may be beneficial for packing on muscle. Every 1 ounce of meat has around 7-9 grams protein depending on the meat, with fish and beef typically on the higher end of that range. So in order to get to 140 grams (150lb person), you would need to eat 12 ounces+ per day along with other high protein sources including eggs, whey protein, and protein laden vegetables (chick peas, beans, etc.).

GI Upset During Training:

1. *Avoid fermentable foods before training, such as: wheat, most grains, beans, and dairy (whey protein is generally not a problem because high-quality sources will be lactose free)*

2. Avoid fatty animal products, such as: pork, cheese, and/or warm water fish
3. Dehydration is the number one cause of GI upset
4. Reduce the osmolality of your high calorie drink. 250 calories/L is the recommended max, in warmer weather this should be closer to 175 calories/L.

Ideal Plans Based Upon Workout Types:--150lb Athlete with 15% Body Fat

Endurance Athlete Low-Moderate Intensity:

Pre-Meal: Low Glycemic Carb with Moderate Amount of Fat

ex.--Egg muffin bake

During Workout: Under 2 hours-- Water or low calorie drink

--Over 4 hours-- 1500 calories needed—PB&J Rice Cakes, 4% Carb Drink X 4,

Post-Meal: Grilled Chicken, Quinoa, and Broccoli--

Endurance Athlete High Intensity:

Pre-Meal: Low Glycemic Carb with a high carb/fat ratio

ex. Sweet Potato with butter and cinnamon

During Workout: Under 2 hours—Low calorie drink

--Over 4 hours-- 2600 calories needed-Nut Butter Cookies X 10, high calorie drink 7% Carb Drink X 5, 4% Low carb drink X 4,

Post-Meal: High Carb and High Protein Meal

ex. Quinoa Chicken Risotto

Gym Workout—Trying to lose weight

Pre-meal: Peanut Butter Protein Balls

During Workout: Water only

Post-workout: Detox Green Smoothie

Gym Workout—Trying to gain muscle

Pre-meal: Bison burger with brown rice

During Workout: Water only

Post-Workout: 2 Salmon fillets, Quinoa, Peaches and Cream Shake