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Nutrition Tune-Up: Nutrition for Active Women

We all know that daily exercise is essential for optimal health, but nutrition is often the forgotten aspect of a complete exercise program. Proper nutrition is key to:

- Increase athletic performance
- Increase energy production
- Injury and illness prevention
- Improved recovery from illness and injury

Too many women eagerly begin new exercise programs or increase their activity level without addressing the nutritional demands placed on the body due to exercise. Women require different quantities of food and nutrients than men and active women require increased amounts of certain nutrients to support these physical demands on the body. This article will cover specific nutrients, quantities and timing of meals that support increased activity levels as well as improved recovery.

So what should I eat?

In general, the active woman's diet should consist of a variety of whole fresh foods including vegetables, fruits, whole grains, legumes and lean sources of protein that are organic and antibiotic- and hormone-free wherever possible. Refined, processed foods should be avoided as they only deplete the body of nutrients. Hidden sources of refined sugar, additives, preservatives and colourings should be eliminated. Caffeine and alcohol intake should be kept to a minimum, especially before long distance training as they are diuretics and can decrease performance.

Carbohydrates

Carbohydrates are essential for the active woman as they are the number one source of energy for the body, needed for brain function as well as storage of energy. Carbohydrates are also the rate-limiting fuel, meaning "*no carbs equals no energy*". Each gram of carbohydrate provides four calories of energy. In general, women should aim for 6-8 grams of carbohydrate per kilogram of body weight per day, making up 50 to 65 percent of the daily diet depending on the types of activity. For example, endurance runners require at least 60 percent carbohydrates in their diet.

Ideal sources of carbohydrates include: whole grains (oats, millet, spelt, brown rice, quinoa), legumes, 8-12 servings of fresh organic vegetables and fruit per day with the emphasis on vegetables.

Protein

Protein is essential to the active woman for many reasons including: muscle growth, repair and recovery and as an alternate source of energy for endurance activities. Each gram of protein provides four calories of energy. On average, 1.1 to 1.5 grams of protein per kilogram of body weight is required. Additional protein (0.3 grams of protein per kg per day) is required during times of injury. On average protein should make up 15 to 30 percent of your diet.

Ideal sources of protein include: lean meats, eggs, legumes, fish, whole grains, nuts and seeds.

Fats

The intensity and duration of activity, fitness level and diet will all determine whether you burn fat or carbohydrates for energy. A well-trained, fit person will burn fat quicker and will burn more fat than an untrained person. Each gram of fat provides nine calories of energy. Your diet should consist of 15-25% fat with the majority of that consisting of Omega-3 essential fatty acids. These good fats are needed for building and repairing cells, controlling inflammation, providing joint lubrication, and for improved aerobic metabolism.

Ideal sources of healthy fats (Omega-3, 6, 9) include: flax seed, cold water fish oil (herring, mackerel, halibut, salmon), soybeans, almonds, walnuts, olive oil, and hemp seed oil.

Minerals & Vitamins

Active women require an increased supply of vitamins and minerals in their diet. Vitamins and minerals help regulate hormones and metabolic processes, muscle contractions, nerve impulses, and help in the building of strong bones, ligaments and tendons. While vitamin and mineral supplements are not replacements for a balanced healthy diet, the daily use of a high quality, broad spectrum multivitamin-mineral supplement can help provide a base-line of nutrients that may support increased physical activity. Women who lead an active lifestyle and who exercise regularly require higher amounts of antioxidants and both B and C vitamins to combat the increased physical stress levels. Nutrients such as sodium, calcium, and magnesium, help replace electrolytes that have been lost through strenuous activity. Food sources of four specific vitamins and minerals are discussed in more detail below.

Vitamin C

Vitamin C is a potent antioxidant required to repair oxidative damage caused during exercise and to control inflammation. Vitamin C is also essential for the manufacture of collagen, as well as the maintaining of healthy joints, ligaments and tendons. Sources include: citrus fruits, red and green peppers, asparagus, parsley, broccoli, and sprouted grains.

B-Vitamins

Known as the energy vitamins, B-complex vitamins are needed to release energy for metabolism of nutrients. They are also important for stress. Sources of B-vitamins include: whole grains, molasses, dark green leafy vegetables, and brewer's yeast.

Calcium

Calcium is essential for good bone health. Active women require increased calcium intake. Strenuous exercise can impair calcium assimilation in the body. Exercise also increases bone density and therefore requires increased calcium to support this growth. The best non-dairy sources of calcium include: kelp, tofu, kale, nuts, seeds, buckwheat, and green leafy vegetables.

Iron

Iron is important for oxygen transfer in the blood and muscles; however, too much iron is harmful. Active women are typically at risk for low iron levels. To increase iron absorption, blanch vegetables prior to eating and soak whole grains prior to cooking. Iron absorption can be increased from dark-green vegetables with the addition of vitamin C in the form of fresh lemon juice or strawberries. Sources of iron include: red meat, spirulina (blue-green algae), molasses, kelp, pumpkin seeds, wheat bran, parsley, and almonds.

Don't forget the water!

Hydration is as critical to well-being and athletic performance as eating. Our bodies are nearly 70% water and water is the life source for everyone. Water is critical to the athlete for a number of reasons and can affect exercise by:

- o Maintaining blood volume and oxygen transfer
- o Regulation of temperature
- o Shock absorption and joint lubrication
- o Balance of metabolic and enzymatic functions.

A 4-5% level of dehydration results in a decreased capacity for prolonged exercise by 20-30%. As a minimum, 10-12 cups of pure water must be consumed daily. As a rule of thumb, take your weight in pounds and divide by 2 for the number of ounces of water you need per day. Divide that number by 8 for the number of cups you need to consume.

For example: 150 lbs individual requires 75oz of water, which roughly equates to nearly 10 cups.

Remember, more water is required if any alcohol or caffeine is consumed, since they act as diuretics and deplete the body of water.

When to eat

Eating 5-6 smaller meals per day will help maintain blood sugar levels and keep you energized throughout the day.

Eat a small meal or a snack 2-3 hours before exercise to provide energy during activity and don't forget to eat after exercise to replenish the body of what's been depleted. Carbohydrates and glycogen stores, protein, water and lost minerals all need replacing. Opt for some fruit within the 15 minutes of finishing and a complete meal consisting of 75% carbohydrate and 25% protein within 2 hours after prolonged activity for optimal absorption and utilization of nutrients.

Top Ten Nutritional Recommendations for Active Women

So, kick off your return to activity with a fresh start on nutrition! Here are ten nutritional recommendations to help support an active lifestyle.

1. Eat plenty of fresh fruit and vegetables. Full of vitamins, minerals, antioxidants, bioflavonoids and fibre, fresh fruits and vegetables help improve recovery by combating free-radical damage incurred during activity.
2. Eat complex carbohydrates consisting of legumes and whole grains (such as brown rice, spelt and oats).
3. Buy organic where possible to avoid pesticides and antibiotics. Buy local over imported to increase freshness and nutrient content.

4. Eat foods high in Essential Fatty Acids, especially Omega-3 including: fish, nuts, seeds, and high-quality oils.
5. Reduce your intake of saturated fat from dairy products, red meats, etc.
6. Drink enough fluids, with a minimum of 8-10 cups of pure water daily.
7. Increase your intake of fibre to 30-50 grams. Sounds like a lot? Not when you're eating whole grains and vegetables!
8. Avoid refined, processed foods with additives, preservatives and chemicals such as artificial sweeteners.
9. Reduce your intake of caffeine and alcohol as they are diuretics and will dehydrate you.
10. Limit use of sugar on its own and avoid sugar, especially in hidden sources such as your breakfast cereal.