

## Nutritional Strategies to Combat Aging by Dr. Lynn Kam

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Aging brings on many new challenges for the master swimmer. One such challenge is sarcopenia or muscle loss, which occurs at a rate of ~4% every decade. Both exercise and eating well can help slow down the rate of muscle loss. This article will focus on roles of dietary proteins and antioxidants in sarcopenia.

### DIETARY PROTEIN

**Can dietary protein prevent sarcopenia?** Yes and No. The recommendations for total daily protein intake are 0.8 g/kg or 46-56 g/d (recommended dietary allowance [RDA]) for general population and ~1.2-1.7 g/kg or 86-120 g/d for athletes. Individuals meeting the requirements will likely not benefit by increasing their overall protein intake. In the U.S., the average protein intake was 102 g/d for men and 70 g/d for women (Source: National Health and Nutrition Examination Surveys (NHANES, 2005-2006)). Thus, most individuals are meeting the recommendations for athletes. Protein quality and timing of intake, however, can have an impact on preventing muscle loss.

**Protein Quality:** Dietary protein intake, specifically those high in branched-chain amino acids (BCAAs; leucine, isoleucine, and valine), stimulates the repair and rebuilding of skeletal muscle after exercise. Thus, it is important to include high quality proteins in your diet. Good sources of BCAAs include lean meats (beef, pork, chicken) and fish, eggs, dairy products (milk, yogurt, low-fat cheese), legumes (beans, peas, lentils, peanuts, chick peas), nuts (almonds, cashew nuts), soy products, and certain grains (brown rice, quinoa).

**Timing of Intake:** An important dietary strategy for all athletes is to optimize food intake around exercise. For protein, it is important to consume a lean protein within 30-60 min after exercise. A food that contains both carbohydrate and protein in 4:1 or 3:1 ratio is ideal for recovery. Carbohydrate-protein sport drinks are designed as a convenient way to meet these recommendations. Good post-workout food choices include a lean protein sandwich, cereal with milk, yogurt with fresh fruit, and homemade smoothie. Cooking Light has some fun recipes for post-workout recovery meals (<http://www.cookinglight.com/healthy-living/fitness/post-workout-meals-00400000046491/>).

### ANTIOXIDANTS

**What are antioxidants?** Antioxidants are substances that are found in food that protects your body from damage by reactive oxygen species (ROS).

**Can antioxidants prevent sarcopenia?** ROS are thought to play a role in sarcopenia. Since antioxidants are the defense mechanism against ROS, a diet high in antioxidants may slow down the rate of sarcopenia.

**Sources of Antioxidants:** Fruits and vegetables are high in antioxidants. Berries (blueberries, cranberries, and blackberries), in particular, are a great food source but can be costly. Other fruits that are high in antioxidants are apples with the skin, pears, cherries, and plums. Good vegetable sources include spinach, potatoes with skin, and sweet potatoes. Nuts such as pecans and walnuts also are good source of antioxidant. For a treat, indulge in some dark chocolate – of course, this should not be your primary source!

### FINAL THOUGHTS

We can't stop aging - we can, however, slow it down by making smart choices that will help us live longer, healthier lives. Daily exercise and a diet containing lean proteins, fruits, and vegetables can help slow down muscle loss associated with aging. A post-exercise meal, containing both carbohydrate and protein, will aid in the repair and rebuilding of skeletal muscle. Diets that include 5 servings of fruits and vegetables may help offset age-associated muscle loss and improve overall health.

*Disclaimer: This article is for informational purposes only. Consult a health professional before adding fortified foods and dietary supplements to your diet.*

