

How Nutrition Can Help Prevent Falls

Athletes are usually very careful about what they eat as they try to maximize their strength and endurance. Over time lifestyles often change. Many people lose their strength and endurance as they age. This article highlights what older adults can do to maintain their strength and reduce the risk for falls.

A national study of what individuals over 70 years of age ate unfortunately showed that the majority of calories came from white bread, cake, rolls, cookies, cereal, ice cream, pie and whole milk. Only three to four percent of individuals 55 years and older participated in active leisure time and spent on average 6.5 hours daily watching television

Muscle Loss

The normal aging process results in lost muscle mass even when maintaining the same weight. After the age of 70, there is approximately 15% muscle loss per decade. Comparing the thigh muscle of a 25 year old, active individual with a 75 year old, sedentary individual, when both are the same weight and height, the 75 year old will have considerably less muscle. This loss of muscle is called sarcopenia. As people age, they lose muscle mass faster whenever there is a period of inactivity such as a hospitalization and bed rest. It is possible to lose 10% of leg muscle mass in 10 days of inactivity even while eating an adequate amount of protein.

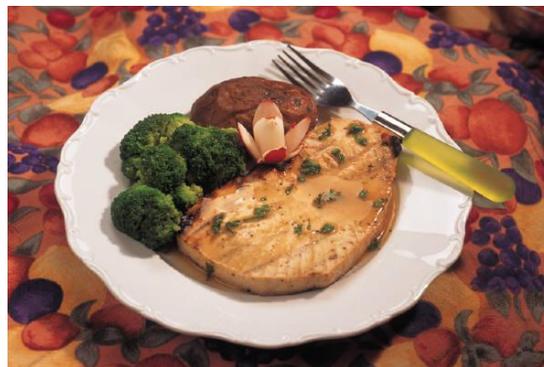
Loss of muscle mass is an important predictor of overall health status. Muscle loss often leads to diminished strength and decreased activity levels and can contribute to mobility issues, osteoporosis, frailty, and loss of physical function and independence. The weakness that accompanies sarcopenia can dramatically increase the risk of falls for older adults, and one-half of all accidental deaths among people over the age of 65 are related to falls. Therefore it is very important to maintain muscle mass for independence, mobility and normal walking speed.

Maintain Muscle Mass with Protein and Physical Activity



Muscle mass can be maintained by paying attention to both nutrition and physical activity. It is important to consume an adequate amount of protein evenly throughout the day. Unfortunately only 15 percent of older adults consume 75 percent of the protein they need. When less protein is consumed than is needed, there is muscle breakdown and muscle loss. Muscle growth requires adequate protein intake and exercise.

Studies have shown that consuming 20 to 30 g of protein or approximately three to four ounces of meat or high protein foods (depending on your body size) three times a day can help increase muscle growth both in the young and old. Protein containing the amino acid leucine provides additional benefits. Consuming more than 30 g of protein at one time is not beneficial. Adding exercise along with the protein is needed to maximize the muscle growth and strength. The best response is when protein foods are consumed 60-90 minutes before exercise or a protein beverage consumed up to 60 minutes after exercise. Consuming whey protein which is a good source of leucine following exercise has been shown to increase the muscle strengthening effects of resistance exercise.



Vitamin D

In addition to protein, vitamin D has been shown to impact muscle strength. Low blood levels of vitamin D are associated with low muscle strength and falls. Vitamin D deficiency is the most prevalent nutritional deficiency for older adults. It is very difficult for older adults to obtain adequate amounts of vitamin D from the diet or sunshine, so supplements are necessary. It is important to know blood levels of vitamin D levels. Vitamin D levels are not routinely checked so they should be requested. In sarcopenic individuals, vitamin D supplementation is needed in doses sufficient to increase levels to within normal ranges. Supplementation may range from 800 -2000 mg per day. Check with a physician on the amount needed. Supplementation of vitamin D in individuals with low levels has been shown to increase muscle strength.

Dietary recommendations to maintain muscle mass:

Consume 30 g of protein three times a day i.e. breakfast, lunch, supper. The follow menu has approximately 30 grams of protein at each meal.

Breakfast

- 2 egg omelet with vegetables
- 1 slice wheat toast
- 8 oz. skim milk

Lunch

- Sandwich (2 oz. chicken, lettuce, tomato, whole wheat bread)
- Peach and $\frac{1}{4}$ cup cottage cheese salad
- 8 oz skim milk

Dinner

- 3 oz fish, sweet potato
- Asparagus
- Strawberries on angel food cake
- Whole grain roll
- 8 oz. skim milk

And take a
Vitamin D
supplement

If the following is your typical breakfast, you are not getting enough protein.

1 cup raisin bran cereal - 5 g protein

½ cup milk - 4 g protein

½ cup orange juice - 0 protein

Good sources of protein include:

Cheese	Meat, chicken, fish
Cottage Cheese	Yogurt
Milk	Eggs
	Beans

Sources

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