

Nutrition News

Information for Senior Citizens

Developed by Colorado State University Extension
Department of Food Science & Human Nutrition

There's a war going on: Free radicals vs. Anti-oxidants

Yes, there's a war going on in your body right now. The anti-oxidants are fighting the free radicals, and it's been going on since you were born. The free radicals are the bad guys. A free radical is a kind of renegade oxygen molecule that is produced when you digest and absorb food. It roams the body attacking healthy cells.



Did you know...

Some scientists believe that the damage caused by free radicals is a major cause of the decline in health and increased disease associated with aging.

Your cells receive 10,000 "hits" per minute from free radicals. But nature has a way of fighting back. Anti-oxidants turn free radicals into harmless oxygen molecules. Thanks to these anti-oxidants, your cells recover from most "hits."

However, over the decades a few hits may not be corrected and the damage they cause may gradually increase. In time, this damage can lead to heart disease, cancer, arthritis, cataracts, and a weakened immune system. Anti-oxidants help lower your chances of getting these diseases.

Our Friends, the Anti-oxidants

So, where do anti-oxidants come from? Surprise—they are found in vitamins C and E, the mineral selenium, and beta-carotene. You don't have to look any further than MyPyramid to find the anti-oxidants you need. Let's take a look at how they work.

Vitamin E:

Vitamin E works on the surface of the body cells to prevent damage. The free radical attacks the vitamin E instead of the cell. You might say vitamin E is our first line of defense against free radicals. Good sources of vitamin E are dark green leafy vegetables; nuts; oils such as soy, corn, and safflower oil; and raw wheat germ. Toasted wheat germ is not a good source of vitamin E because most of the vitamin is destroyed during processing.

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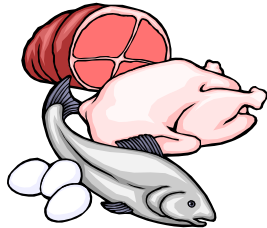
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Vitamin C:

Vitamin C is necessary because without it vitamin E cannot do its work. Vitamin C strengthens the immune system, which prevents many diseases, and helps in building protein and healing wounds. Fruits and vegetables are high in vitamin C. Cooking destroys some of the vitamin C, so be sure not to overcook green vegetables and enjoy raw fruits and vegetables often.

Selenium:

Selenium is a metal that works in the body to form another kind of anti-oxidant which, prevents damage *inside* the cell and provides a second line of defense. Selenium is found in meat, poultry, tuna, wheat, and eggs.



Beta-carotene:

Beta-carotene has two main functions in the body:

- 1) It can break down and form vitamin A
- 2) It can work by itself as an anti-oxidant.

Vitamin A has many important functions, including fighting cancer. Foods rich in beta-carotene are carrots, spinach, broccoli, kale, romaine lettuce, sweet potatoes, apricots, cantaloupes, and peaches.



Now, do you understand why the Dietary Guidelines say, "Eat a variety of foods"?

Variety: The Key to Good Health

Have you seen the new slogans, "Thrive on Five" and "Five a Day -- For Better Health"? The National Cancer Institute wants you to know how important it is to eat enough fruits and vegetables. When planning your daily meals, try to choose at least one serving of a food that is high in vitamin C, such as citrus fruit or green peppers, and one or more serving of yellow or dark green fruits and vegetables such as cantaloupe, broccoli, collards, or apricots.

You not only need plenty of servings of grains, fruits, and vegetables, you also need a variety of them daily.

If you follow the Dietary Guidelines and eat enough servings from MyPyramid, your body will get all the anti-oxidants it needs to fight off the free radicals attacking your cells.

For more information about foods that fight cancer, call your local county Extension office. In Colorado, request Colorado State University's Fact Sheet 9.313, *The role of nutrition in reducing the risk of cancer*. Or check out their web site for publications and fact sheets: <http://cerc.colostate.edu/titles.html> You can also call 1-800-4-CANCER and ask for their latest information on fruits and vegetables for health.



In past newsletters we've given recipes using tuna and chicken (rich in selenium) and raw wheat germ (a great source of vitamin E). This month the recipe is Lemon Broccoli. Broccoli is high in vitamin E, vitamin C, beta-carotene, and fiber. Broccoli is what you might call a *super-vegetable!*

Lemon Broccoli

Ingredients:

- 1 clove garlic, minced (or 1/4 tsp garlic powder)
- 2 Tbsp lemon juice
- 1/4 tsp pepper
- 1 tsp olive oil
- 1 cup chopped broccoli, fresh or frozen

Directions:

1. Combine garlic, lemon juice, and oil in small bowl.
2. Steam fresh broccoli in ¼ cup water about 8 minutes, until crisp-tender, drain off excess water. If using frozen broccoli, cook as directed on package.
3. Place broccoli in serving bowl and pour lemon dressing on top and toss.

Yields 2 servings

(One serving provides: 45 cal, 1940 I.U. vit A, 73 mg vit C, 3 g fat, 11 mg sodium, 3 g fiber)

Notice how low this recipe is in sodium and fat? It gets its seasoning from the lemon, garlic, and pepper. The small amount of olive oil adds a distinct taste and provides the fat needed for your body to absorb the vitamins A and E.

What are the Recommendations for Anti-oxidants?

If you eat a well balanced diet that includes a large variety of fruits, vegetables and grains, you are probably getting all the anti-oxidants that you need. But in case you want to track your intake of these important nutrients, the U.S Recommended Dietary Intakes are as follows:

Vitamin A	1000 R.E.
Vitamin C	75 mg
Vitamin E.....	12 mg
Selenium	45 mg

The recommendation for beta-carotene has not yet been established. However, if you get enough vitamin A in your diet, you will likely be getting enough beta-carotene as well.

Researchers are working daily to learn more about anti-oxidants--if you keep an eye out, you're sure to read more about them in the coming months.

The Dietary Guidelines are revised every five years to reflect the latest research and any changes in recommendations.

Quick Tip:

Enjoy a variety of foods. Remember, all foods can be enjoyed as part of a healthful diet. Foods are neither "good" nor "bad" from a nutritional point of view.



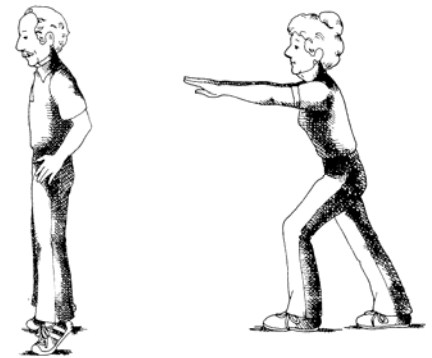
Fitness Focus: Strengthen Legs

We took a break from exercise last month, so we could bring you a shopping guide; now it's time to think about fitness again. How about strengthening our legs? After all, we need our legs for so many things--just getting up and walking across the room would be impossible without them!

Before beginning any exercise program, you should have a thorough physical examination, discuss the program with your doctor, and follow the doctor's advice!

1. Calf Raise: *to strengthen lower leg and ankle.* Stand erect, hands on hip or on back of chair for balance. Spread feet 6" to 12". Slowly raise body up on toes, lifting heels. Return to starting position. Breathe normally. Repeat 10-15 times.

2. Alternate Leg Lunges: *to strengthen upper thighs and inside of leg. Also stretches back of leg.* Take a comfortable stance with hands on hips. Step forward 18" to 24" with right leg while extending arms straight ahead. Keep left heel on floor. Shove off right leg and resume standing position. Suggested repetitions: 5-10 for each leg.



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Senior Resource: Are there special Food Stamp provisions for elderly and disabled people?

The following provisions apply to elderly or disabled people:

- Elderly and disabled people may apply for food stamps at local Social Security offices when they apply for Social Security Insurance benefits. Joint processing is limited to persons who live in households in which all members are eligible to receive SSI benefits.
- Households with elderly or disabled members may be certified for Food Stamps for an entire year.
- Elderly or disabled persons who have transportation difficulties can ask the Food Stamp office to arrange a home visit or telephone interview.
- Elderly or disabled people may ask for an "authorized representative" to help them complete the Food Stamp application process. This "authorized representative" can assist them with steps like completing the application form, engaging in an interview, and shopping for food.

For more information and to find out if you or someone you know qualifies for food stamps, call 1-800-221-5689.