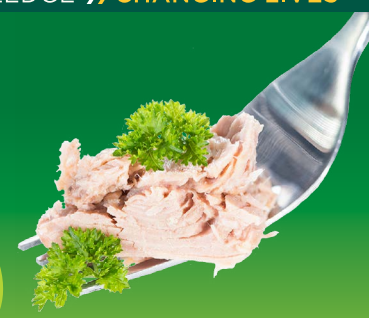
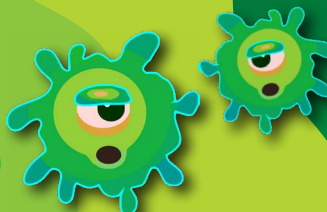


Nourish Your Immune System



Healthy Lifestyle, Healthy Body Get Healthy!

To have a healthy, strong immune system, we need to focus on overall maintenance of health. Here are a few lifestyle factors that can impact your immune health.

■ **Move your body:** Participate in regular physical activity. Regular activity can benefit your entire body by helping you stay closer to goal weight, keep joints lubricated, control inflammation, and can also impact your mental health such as stress, anxiety and depression. Aim to get in 30 to 60 minutes of activity at least five days a week and also muscle strengthening activities at least two times per week. Find excuses to stay active throughout the day such as using the stairs, parking your car far from the entrance, and getting up from a sitting position often.

■ **Manage stress:** Certain types of stress can weaken our immune system and make us more susceptible to infection. Get enough sleep, manage your blood pressure, and focus on the positive, less on the negative. Research shows that HOW we handle stressful situations may be more important than having stressful situations. Sleep deprivation can depress the immune system's disease-fighting power by reducing the production of T cells. T cells are part of the body's immune system machinery.

■ **Limit alcohol:** Alcohol is one substance that can suppress our immune system. If you do drink, drink in moderation. Moderation is defined as one drink a day for women and two drinks a day for men.

Did you know?
One drink is considered to be 5 ounces of wine, 12 ounces of beer or 1.5 ounces of 80-proof spirits.

■ **Take steps to avoid infection:** Wash your hands frequently. Practice food safety when preparing food at home to reduce the spread of bacteria. Wash fruits and vegetables before eating. Thaw food in the refrigerator, in cold water or in the microwave. Cook meat and seafood thoroughly and keep raw and cooked foods separate. Wash counters and other cooking surfaces before, during and after cooking.

■ **Eat a balanced diet:** Not all foods are good for the immune system. Food high in saturated and manufactured trans fat and can suppress the immune system and make us more susceptible to infection.

_____ is one of the best ways to avoid infections and help keep your immune system healthy.
Answer: Handwashing

Focus on creating a meal with half your plate in fruits and vegetables, ¼ plate of lean protein and ¼ plate of carbohydrates, 3 meals per day.

Our immune system functions throughout our body. It is composed of specialized cells that prevent or limit infection in our bodies. Immune cells recognize substances that enter our bodies and attempt to remove them if the substance appears to be harmful to us.

Consuming a healthful diet is one of the best strategies for having a healthy immune system. Research has shown some nutrients, including protein, and certain vitamins and minerals, have specific roles in immune health. If we lack any of these nutrients, our ability to fight infection can decrease.

Protein

Protein is found in every cell, tissue, and organ in our bodies. When we do not get enough protein, our bodies may produce less of certain immune cells and increase our susceptibility to infections of the respiratory, gastrointestinal, and urinary tract. Protein-rich foods include lean poultry, beef and pork, low-fat dairy products such as milk and yogurt, eggs and fish/seafood. Peanut butter, seeds, beans, and nuts and contain some protein.

TIP: Include lean protein at each meal to get enough protein for the day. Adults aged 50 and older should get about 1 gram of protein per kg per day. An easy calculation to determine how much protein you need is by taking your weight in pounds and dividing by 2.2 to get kg. As we get older, we are not able to use dietary protein as efficiently as younger adults, so the amount is important along with the regular dose—thus, 3 meals per day is best.



Protein Content of Selected Foods	
24 g	3 ounces lean beef
22 g	3 ounces salmon, tuna or halibut
16 g	3 ounces lean chicken
14 g	1 cup plain non-fat yogurt
9 g	1-ounce nonfat mozzarella cheese
8 g	1 cup low-fat milk
7 g	½ cup black beans
6 g	1-ounce almonds (about 23)
6 g	1 large egg

Antioxidants

Antioxidants defend against the damage that is caused by the breakdown of cells (free radicals) caused by sickness in our body.

What are some good sources of antioxidant nutrients? Which ones do you consume regularly?



Antioxidants	Food Sources
Vitamin C helps with the formation of antibodies and the production of certain immune cells.	Oranges, grapefruit, tangerines, red bell pepper, papaya, strawberries, kiwi, tomato juice and potatoes
Vitamin E protects cell membranes in the body. Many of us do not get enough vitamin E in the diet especially if we are not eating regularly and not getting enough healthy fat when we eat.	Sunflower seeds, almonds, and oils such as sunflower and safflower oil are rich sources but any nut or seed contains vitamin E. Try pumpkin seeds.
Selenium deficiency has been shown to decrease immune cells' disease-fighting power.	Selenium is a mineral found in the soil. We get selenium from the animals and plants we eat.

TEST YOUR KNOWLEDGE

Which food is high in vitamin C?

- A. Beets
- B. Red bell pepper
- C. Eggs
- D. Oatmeal

Answer: B. Red bell pepper



Vitamin D

When our dietary intake is low in vitamin D, we are less able to fight off infection and disease. The best way to get vitamin D is to absorb it from the sun. Unfortunately, for the states in the northern part of the U.S., the sun is only strong enough for our bodies to absorb vitamin D from March to October. Most people require a multivitamin/mineral with vitamin D or a vitamin D-3 supplement to get the needed amount of vitamin D. It is difficult to get the needed 600 to 800 IU from food alone; usually a supplement is needed.

TEST YOUR KNOWLEDGE

How much vitamin D does an adult between the ages of 19 and 70 need each day? How much vitamin D does an adult older than 70 need?

- A. 2,000 IU
- B. 800 IU
- C. 600 IU

Answer: C. 600 IU for 19-70; 800 IU for older than 70

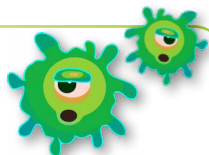


Glossary

Nutrient: anything that nourishes the body; we get nutrients from the foods we eat

Antibodies: a protein made by the body that produces an immune response when it senses an invader

Antioxidant: a substance that inhibits oxidation or reactions promoted by oxygen



Other Nutrients and Sources

What are some other immune system-friendly nutrients and their food sources?



Vitamins	Food Sources	Recommended Intake
B6	Tuna, turkey, beef, chicken, salmon, sweet potatoes, sunflower seeds, and banana	1.3 to 1.7 mg/day adults more than 19 years old
Folate	Spinach, broccoli, beans, lentils, asparagus, avocado, orange juice and fortified cereals	400 mcg/day adults more than 19 years old
B12	Lean beef is a particularly rich source but B12 can also be found in low-fat dairy products in a more concentrated form than fatty dairy products, and also in lamb, scallops, shrimp, and yeast	2.4 mcg/day adults more than 19 years old

Minerals	Food Sources	Recommended Intake
Iron deficiency has been associated with reduced immunity in human and animal studies. Our bodies can absorb iron better when it's paired with a food high in vitamin C, such as a citrus fruit, bell pepper or broccoli.	Lean red meat, pork, and poultry (darker cuts contain more), beans, seafood, spinach, and iron-fortified breads, cereals, and pastas (read food labels to know)	8 mg/day adults age 51+
Zinc deficiency can affect how certain immune cells function.	Lean meat and poultry (darker cuts have more), seafood, low-fat dairy, whole grain products and nuts	11 mg/day males more than 19 years old 8 mg/day females more than 19 years old

mg = milligrams; IU = International Units; g = grams; mcg = micrograms

TEST YOUR KNOWLEDGE

Circle the nutrients that are good for immune health.

- Antioxidants
- Vitamin D
- Alcohol
- Copper
- Iron
- Niacin
- Zinc
- Protein

Answer: Antioxidants, Vitamin D, iron, zinc, protein



More Information

National Institute of Allergy and Infectious Diseases, www.niaid.nih.gov
Centers for Disease Control and Prevention, www.cdc.gov
U.S. Department of Health and Human Services, www.foodsafety.gov

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This project is supported by the Rural Health & Safety Education Competitive Grant Program of the USDA National Institute of Food and Agriculture (NIFA), grant number 2013-46100-21467.