Strengthen Your Immune System Naturally

By

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Objectives

At the end of this presentation, participants will be able to:

- Understand the function of the immune system
- Be able to describe the types of immunity
- List vitamins and minerals that aid immune function
- Recognize foods that help to boost immunity

What is the Immune System

- On a daily basis, we are constantly exposed to potentially harmful microbes of all sorts.

- Our immune system, a network of intricate stages and pathways in the body, protects us against these harmful microbes.

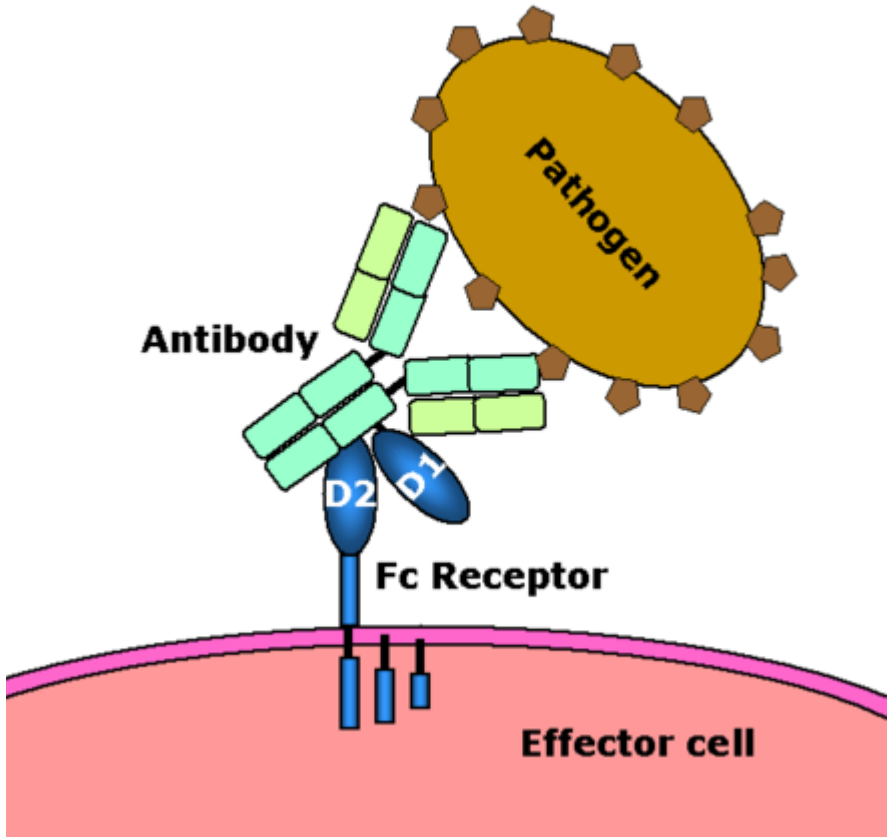
Function of the Immune System

- Your immune system is your body's version of the military: sworn to defend against all who threaten it, both foreign and domestic. It has some really interesting soldiers that help make this possible.

- Our immune system, allows us to fight harmful things that enter our body from the outside or harmful changes that occur inside our body. The main tasks of the body's immune system are:
  - to fight disease-causing germs (pathogens) like bacteria, viruses, parasites or fungi, and to remove them from the body,
  - to recognize and neutralize harmful substances from the environment, and
  - to fight disease-causing changes in the body, such as cancer cells.

Types of Immunity

- Humans possess two types of immunity:
  - Innate
  - Adaptive.



Innate Immunity

- **Innate immunity** is a first-line defense from pathogens that try to enter our bodies, achieved through protective barriers. These barriers include:

- Skin that keeps out the majority of pathogens
- Mucus that traps pathogens
- Stomach acid that destroys pathogens
- Enzymes in our sweat and tears that help create anti-bacterial compounds
- Immune system cells that attack all foreign cells entering the body

Adaptive Immunity

- Adaptive or acquired immunity is a system that learns to recognize a pathogen.
- It is regulated by cells and organs in our body like the spleen, thymus, bone marrow, and lymph nodes.
- When a foreign substance enters the body, these cells and organs create antibodies and lead to multiplication of immune cells (including different types of white blood cells) that are specific to that harmful substance and attack and destroy it.

Building Immunity

- During the flu season or times of illness, people often seek special foods or vitamin supplements that are believed to boost immunity.
- Eating enough nutrients as part of a varied diet is required for the health and function of all cells, including immune cells.
- Certain dietary patterns may better prepare the body for microbial attacks and excess inflammation, but it is unlikely that individual foods offer special protection.

Negative Impact

- A person's immune system needs to function well for them to remain healthy.
- Things that negatively impact the immune system:
  - Certain illnesses
  - Stress
  - Medications
  - Smoking
  - Excessive alcohol
  - Recreational drug

Stress and the Immune System

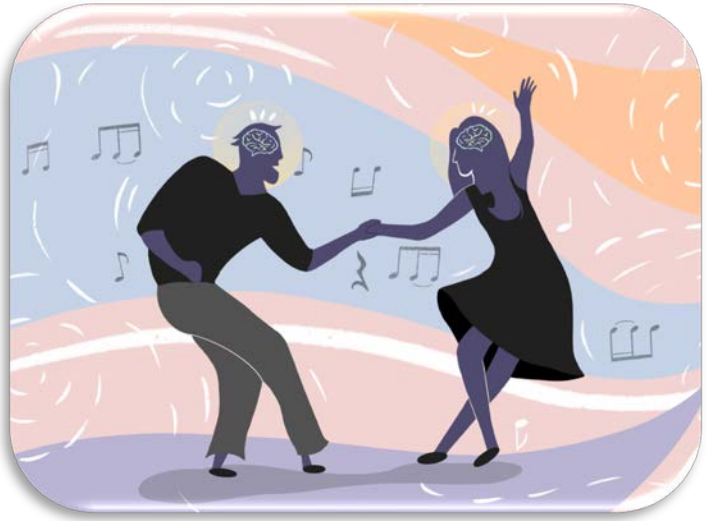
During stress, a series of events release cortisol, adrenaline, and other stress hormones from the adrenal gland. Together they help your body cope with stress.

- Chronic stress affects the way the body functions over time and increases the risk of health problems, including:
  - Anxiety
  - Depression
  - Digestive issues
  - Heart disease
  - Sleep disorders
  - Weight gain
  - Problems with memory and concentration

Stress and the Immune System

Healthy ways to decrease your risk of long-term stress and its related health problems, include:

- Meditation
- Yoga
- Acupuncture
- Talk therapy
- Art therapy
- Exercise
- Eating healthy



Does an Immune Boosting Diet Exist?

Each stage of the body's immune response relies on the presence of many micronutrients.

- Examples of nutrients that have been identified as critical for the growth and function of immune cells include:
  - Vitamin C and D
  - Zinc
  - Selenium
  - Iron
  - Protein (including the amino acid glutamine).

Beneficial Diet plan

- The gut is a major site of immune activity and the production of antimicrobial proteins.
- The diet plays a large role in determining what kinds of microbes live in our intestines.
- A high-fiber plant-rich diet with plenty of fruits, vegetables, whole grains, and legumes appear to support the growth and maintenance of beneficial microbes.

Probiotics and Prebiotics

- A diet containing probiotic and prebiotic foods may be beneficial because they feed gut microbes.

- Probiotic foods contain live helpful bacteria
- Prebiotic foods contain fiber and oligosaccharides that feed and maintain healthy colonies of those bacteria.

Diet Quality

Diets that are limited in variety and lower in nutrients, can negatively affect a healthy immune system.

- Western diet high in refined sugar and red meat and low fiber

- The Microbiome in fruits and vegetables can promote disturbances in healthy intestinal microorganisms, resulting in chronic inflammation of the gut, and associated suppressed immunity.

Nutrient Deficiency

- A deficiency of single nutrients can alter the body's immune response and studies have found that deficiencies in zinc, selenium, iron, copper, folic acid, and vitamins A, B6, C, D, and E can alter immune responses.

- High fat and high-calorie diets trigger a response from the immune system similar to a bacterial infection.

- Researchers suggest that eating unhealthy foods makes the body's defenses more aggressive long after switching to a healthful diet, which may contribute to diseases like arteriosclerosis and diabetes.

High Risk Group

- The elderly are a particularly high-risk group because our immune response generally declines with increasing age as the number and quality of immune cells decreases.
- About one-third of elderly in industrialized countries have nutrient deficiencies.
- Some reasons include a poorer appetite due to chronic diseases, depression, or loneliness; multiple medications that can interfere with nutrient absorption and appetite; malabsorption due to intestinal issues; and increased nutrient needs due to hypermetabolic states with acute or chronic conditions.

Foods that Boost Immune System

Vitamin C increases the production of white blood cells, which are key to fighting infections. Most most citrus fruits are high in vitamin C.

- Popular citrus fruits include:
  - Grapefruit, oranges, clementines, limes, tangerines, lemons
- Your body doesn't produce or store it but you need daily vitamin C for continued health.
- The recommended daily amount for most adults is:
  - 75 mg for women
  - 90 mg for men
- If taking supplements, do not take more than 2,000 milligrams (mg) a day

- Ounce for ounce, red bell peppers contain almost 3 times as much vitamin C as a Florida orange.
- They're also a rich source of beta carotene.
- Besides boosting your immune system, vitamin C may help you maintain healthy skin.
- Beta carotene, which your body converts into vitamin A, helps keep your eyes and skin healthy.

Foods that Boost Immune System

Papaya

- Papaya is another fruit loaded with vitamin C. You can find doubleTrusted Source the daily recommended amount of vitamin C in a single medium fruit. Papayas also have a digestive enzyme called papain that has anti-inflammatory effects.

- Papayas have decent amounts of potassium, magnesium, and folate, all of which are beneficial to your overall health.

Kiwis

- Like papayas, kiwis are naturally full of a ton of essential nutrients, including folate, potassium, vitamin K, and vitamin C.

- Vitamin C boosts the white blood cells to fight infection, while kiwi's other nutrients keep the rest of your body functioning properly.

Foods that Boost Immune System

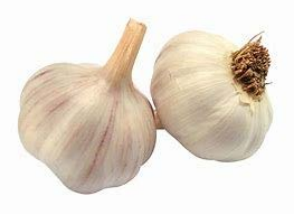
Broccoli

- Broccoli is supercharged with vitamins and minerals. Packed with vitamins A, C, and E, as well as fiber and many other antioxidants, broccoli is one of the healthiest vegetables you can put on your plate.
- The key to keeping its power intact is to cook it as little as possible

Spinach

- Spinach is rich in vitamin C and also packed with numerous antioxidants and beta carotene, which may both increase the infection-fighting ability of our immune systems.
- Cooked as little as possible so that it retains its nutrients. However, light cooking makes it easier to absorb the vitamin A.

Foods that Boost Immune System



Garlic

- Garlic is found in almost every cuisine in the world.
- Early civilizations recognized its value in fighting infections. Garlic may also slow down hardening of the arteries, and there's weak evidence that it helps lower blood pressure.
- Garlic's immune-boosting properties seem to come from a heavy concentration of sulfur-containing compounds, such as allicin.

Ginger

- Ginger is another ingredient many turn to after getting sick. Ginger may help decrease inflammation, which can help reduce a sore throat and inflammatory illnesses. Ginger may help with nausea as well.
- While it's used in many sweet desserts, ginger packs some heat in the form of gingerol, a relative of capsaicin.
- Ginger may also decrease chronic pain and might even possess cholesterol-lowering

Foods that Boost Immune System

Tumeric

- This bright yellow, bitter spice is a key ingredient in curry and has also been used for years as an anti-inflammatory in treating both osteoarthritis and rheumatoid arthritis.
- Research shows that high concentrations of curcumin, which gives turmeric its distinctive color, can help decrease exercise-induced muscle damage.

Green Tea

- Both green and black teas are packed with flavonoids, a type of antioxidant. Where green tea really excels is in its levels of epigallocatechin gallate (EGCG), another powerful antioxidant.
- The fermentation process black tea goes through destroys some antioxidants.
- Green tea is steamed and not fermented.
- Green tea is also a good source of the amino acid L-theanine which aids in the production of germ-fighting compounds in your T cells.

Foods that Boost Immune System

Yogurt

- Look for yogurts that have the phrase “live and active cultures” printed on the label, like Greek yogurt. These cultures may stimulate your immune system to help fight diseases.
- Try to get plain yogurts rather than the kind that are flavored and loaded with sugar. You can sweeten plain yogurt yourself with healthy fruits and a drizzle of honey instead.
- Yogurt can also be a great source of vitamin D, so try to select brands fortified with this vitamin. Vitamin D helps regulate the immune system and is thought to boost our body’s natural defenses against diseases.

Probiotics and Prebiotics

Probiotics are live bacteria found in certain foods or supplements.

- When shopping for probiotic foods, labels should say “live and active cultures”.
- Yogurt, Kefir, kambucha, kimchi, sauerkraut, and fermented soy products, supplements.

Prebiotics feeds the friendly bacteria in the gut.

- Dandelion greens, chicory root, garlic, onions, leeks, asparagus, banana, oats, barley, whole grains, flaxseeds, seaweed, apples, legumes, cabbage, fennel, jicama

Foods that Boost Immune System

Almonds

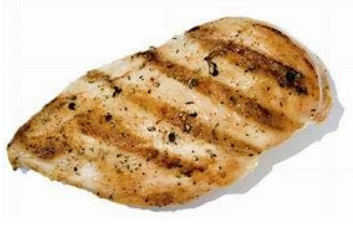
- When it comes to preventing and fighting off colds, vitamin E tends to take a backseat to vitamin C. However, this powerful antioxidant is key to a healthy immune system.
- It's a fat-soluble vitamin, which means it requires the presence of fat to be absorbed properly. Nuts, such as almonds, are packed with the vitamin and healthy fats.
- Adults only need about 15 mg of vitamin E each day. A half-cup serving of almonds, provides around 100 percent of the recommended daily amount.

Sunflower Seeds

- Sunflower seeds are full of nutrients, including phosphorous, magnesium, and vitamins B-6 and E.
- Vitamin E is important in regulating and maintaining immune system function. Other foods with high amounts of vitamin E include avocados and dark leafy greens.
- Sunflower seeds are also incredibly high in selenium. Just 1 ounce contains nearly the selenium that the average adult needs daily.

Foods that Boost Immune System

Chicken



- Poultry, such as chicken and turkey, is high in vitamin B-6. About 3 ounces of light turkey or chicken meat contains nearly one-third of your daily recommended amount of B-6.
- Vitamin B-6 is an important part of chemical reactions in the body and is vital to the formation of new and healthy red blood cells.
- Chicken soup can provide various nutrients involved in the immune system: protein and zinc from the chicken, vitamin A from carrots, vitamin C from celery and onions, and antioxidants in the onions and herbs.

Shellfish

Some types of shellfish are packed with zinc which our body needs for our immune cells to function well.

Varieties of shellfish that are high in zinc include:

- oysters
- crab
- lobster
- mussels

- Do not take more than the daily recommended amount:
  - 11 mg for adult men
  - 8 mg for most adult women
- Too much zinc can inhibit immune system function.

Multivitamin

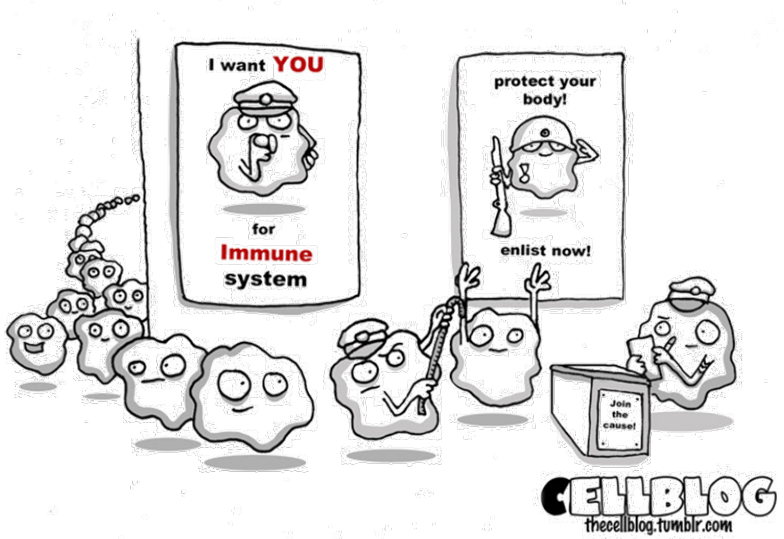
- A general multivitamin/mineral supplement providing the recommended dietary allowances (RDA) may be used unless your doctor says otherwise.
- Megadose supplements (many times the RDA) can sometimes do more harm than good by suppressing the immune system (e.g., as with zinc).

- Vitamin supplements should never be a substitute for a good diet because no supplements contain all the benefits of healthful foods.

Keeping your Immune System Strong

- Variety is the key to immune boosting nutrition.
- Eating just one of these foods won't be enough to help fight off the flu or other infections, even if you eat it constantly.

- Pay attention to serving sizes and recommended daily intake so that you don't get too much of a single vitamin and too little of others.



Summary

Eating right is a great start, but other things you can do to protect your immune health include:

- Don’t smoke (or stop smoking if you do).
- Drink alcohol in moderation.
- Perform moderate regular exercise.
- Aim for 7-9 hours of sleep nightly. Your body can’t function correctly if you aren’t sleeping well
- Aim to manage stress.
- Practice good hygiene. Wash hands throughout the day

Questions???


BATH ROOM
BUT IT SAYS RIGHT HERE THAT DIRTIER KIDS BUILD UP THEIR IMMUNE SYSTEMS MORE!
COURIER
MACLEOD


What kind of immune system ARE you?!
I keep getting Sick!
You're fired!
I'm getting a NEW immune system!

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