Strategies For Strengthening Immunity

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Learning Objectives

- Understand the basics of immunity & the immune system
- Learn how diet, exercise, sleep & stress can impact the immune system
- Become aware of simple steps you can start to take to benefit your immune system



What is Immunity?

 The ability of an organism to resist a particular infection or toxin by the action of specific antibodies or sensitized white blood cells.









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Chronic stress Long-term, chronic stress has been shown to suppress immune function.

factors

affecting

immune

health



Poor diet

Diets high in processed foods, saturated fat, sugar, and excess sodium are linked to compromised immunity.



Nutrient deficiencies

Certain vitamin and mineral deficiencies have been associated with dysregulated immune function.



Substance use

Excessive alcohol intake can reduce immune function and increase your risk of certain infections.



Lack of sleep

Chronic sleep loss has been associated with systemic inflammation and an increased risk of infections.



Physical inactivity or excessive exercise

Moderation is key when it comes to benefiting from the immunoprotective effects of exercise.



Poor personal hygiene

Failing to practice proper personal hygiene can promote the transmission of certain pathogens.



Impaired microbiota

Your intestinal microbiota play an important role in maintaining homeostasis and regulating immune function.

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Environmental toxins

Overexposure to toxins, such as parabens and heavy metals, can result in immune dysfunction.

The problem with a poor diet...

- + Impairs the production and activity of immune cells and antibodies
- + Can lead to prolonged inflammation that can cause tissue damage
- + Can lead to chronic inflammation in the gut that is associated with depressed immunity
- + It is lacking in the fiber required to produce short chain fatty acids in the gut, which have been shown to stimulate immune cell activity
- + Is that it is essentially the S.A.D. one that is largely ultraprocessed https://www.hsph.harvard.edu/nutritionsource/nutrition-and-immunity/



Immune-Boosting Foods

Pre & Pro Biotics

- Optimize the health and function of the gut so you get the nutrition you need form the foods you eat
- + Probiotic foods are fermented foods that seed the gut with beneficial bacteria
- Prebiotic foods lay the ground-work or for the fermented foods, ie: feed the probiotic foods allowing them to do their job

Pre-Biotics	Pro-Biotics
Bananas	Sauerkraut/KimChi
Artichoke Hearts	Kefir
Asparagus	Yogurt
Garlic	Tempeh
Leeks & Onions	Miso
Jicama	Soy Sauce

Source: The Genomic Kitchen, Amanda Archibald



Top 5 Immune-Boosting Plant Food Groups

- + Cruciferous Vegetables Broccoli, Cauliflower, Brussels Sprouts, Cabbage, Fennel, Radish
- + Dark Leafy Greens Spinach, Swiss Chard, Dandelion Greens, Mustard & Collard Greens, Kale
- + Alliums Onions, Leeks, Shallots, Garlic
- + Mushrooms
- + Herbs and Spices



Suggestions for adding to your diet:

- Roast a large sheet pan of broccoli, cauliflower, fennel, Brussels sprouts, radish drizzled with olive oil and 425 degrees for 20-25 minutes – have along with salmon, grilled chicken, add to a salad, dip into hummus, save for lunches and snacks
- + Shred cabbage into salads, onto sandwiches or make into a slaw
- Sauté garlic in olive oil and add darky leafy greens cook until wilted – top with soy sauce or balsamic vinegar and sesame seeds
- Start recipes with onions or garlic add to vegetables when roasting, add onion to salads and sandwiches, add garlic to dressings and marinades
- Sauté mushrooms as a topper for burgers, beef, chicken breasts, veggie burgers or tofu, chop raw mushrooms and add to ground beef as an extender, grill portabellas and use as a burger replacer
- + Add dry herbs while cooking and fresh herbs at the end of a recipe before serving, grow your own start a small herb garden in a container



Exercise and Immunity

- Many studies have shown that moderate intensity exercise does have a positive impact on immune system function
- A well-rounded exercise routine that includes moderate intensity exercise also means that one is tuned into listening to their body, moving in a way that feels good for you and resting when your body is telling you that you need rest



To Exercise or to Not Exercise?

- When you aren't feeling well, that could be a time when you would benefit more from rest than exercise
- Some medications, such as some cold medications, increase heart rate.
 Exercise also increases heart rate.
 When combined, this could potentially lead to one experiencing shortness of breath and/or difficulty breathing.
- If you have a fever, exercise could cause more stress on the already stressed body so it would be best to rest until you feel better.
 - Exercise is a stressor itself





How else might exercise influence our immune system?

- Often those who participate in exercise experience improved sleep, which we also know influences our immune system's function
- + The same is true with stress. Exercise can help prevent/relieve stress, which we know has a negative impact on our immune system.



Stress and Immunity

- + When life gets stressful, our bodies start to produce a large amount of a hormone called cortisol.
- If stress starts to impact our lives for a long period of time, our bodies can get used to having too much of this hormone in our blood.
- + When there is too much cortisol in our blood, inflammation can occur.
- Stress also decreases our body's white blood cells that help to fight off infection, therefore leading to higher risk of catching viruses or the common cold.



Depression and Anxiety

- High levels of stress can also cause depression and anxiety.
- + This can then also lead to higher levels of inflammation.
- Overtime, high levels of inflammation can cause our immune system to be overworked and therefore it cannot properly protect us.



Stress Management Practices

- + Practice relaxation techniques such as:
 - meditation
 - yoga
 - deep breathing exercises
- + Practice Reframing
- Connect with others
- Set goals for yourself in your career, relationships, creativity, play and health
- + Journaling
- Take small breaks during your day





First steps for positively influencing your immune system

Maybe You...

- + Take a break, get outside and take a walk!
- + Be aware of how you are breathing
- + Think about plants first when planning your meals
- + Establish a sleep hygiene routine to help get more and better sleep



Resources

- + <u>https://www.webmd.com/cold-and-flu/cold-guide/exercise-when-you-have-cold</u>
- + <u>https://www.webmd.com/cold-and-flu/use-your-immune-system-to-</u> prevent-flu -
- + <u>https://www.health.harvard.edu/mind-and-mood/best-ways-to-</u> manage-stress
- + <u>https://health.clevelandclinic.org/what-happens-when-your-immune-</u> <u>system-gets-stressed-out/</u>





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