

EATING FOR IMMUNITY

Now, more than ever, we are aware of the power of our daily habits. From social distancing to sheltering in place, our actions influence not just our personal health, but that of our family members, neighbors and communities at large.



How are your eating habits supporting your efforts to stay well through the coronavirus pandemic?

The immune system is incredibly complex and greatly influenced by our eating habits and nutrient status. The following is a comprehensive and whole-foods approach to building a strong immune system and supporting its many efforts to combat anything and everything that comes its way. Use these recommendations to empower yourself in a time when uncertainty and worry have rocked the foundation of your daily life. Eating for your immune system is something you can *do* right now.

Following these recommendations will have the added benefit of:

- Balancing your blood sugar to support your metabolism and stress resilience,
- Amplifying the nutrient density of your meals and snacks,
- Improving attention, memory, cognition, while relieving worry and despair,
- Promoting gut health for easy digestion and elimination, and
- Aiding your systems of detoxification.

When you focus in on one area of your wellbeing, you can't help but benefit your whole self!

On the coming pages, you'll find a spotlight on functional foods that play an important role in the immune system, a quick guide for outsourcing immune support to your microbiota, and a mindfulness moment you can take 3 times per day.

I hope this guide brings you some ease of mind, direction and confidence in your ability to take action that will support you and your efforts to stop of the spread of coronavirus.

Sending love and solidarity,

Jesse

A note about sharing:

This document was put together with care and compassion for all of us who are experiencing fear and worry surrounding the COVID-19 pandemic. Years of study and 10s of thousands of dollars invested in my education are behind the generosity of making this information available for free. Instead of forwarding this pdf to your contacts, please share the link to access it from my website so other resources and services I provide may also be seen. Thank you!

FOOD FIRST

Every meal and snack is an opportunity to supercharge your body and your immunity. Let's focus first on what to bring into your meal plan, then we'll review a short list of foods to limit.

PLANT POWER

It's no secret that vegetables and fruits are nutritious. We've all been told time and again to eat our vegetables...but it's worth saying again. Honestly, these foods are Mother Nature's medicine cabinet! Fill at least half your plate at breakfast, lunch and dinner with colorful vegetables and fruits.

Here are some IMMUNE SUPERFOODS from the plant kingdom to work into your meal plan:

- Bell pepper (all colors), broccoli, Brussels sprouts, cauliflower and kale are all excellent sources of vitamin C - just as good as citrus, kiwi and melons. It's easy to get an adequate amount of vitamin C from food when you're eating a plant-powered diet (just 1/2 cup of red bell pepper provides 146 mg - more than twice the amount your body needs to prevent scurvy!).
- Garlic, onions, leeks, scallions and other alliums contain anti-viral compounds called "allicin" that have been shown to reduce the common cold by up to 70%. Cook with these ingredients. To get the full benefit of allicin on your immune system, smash a clove of garlic and let it rest for 10 minutes before eating it raw (this increases the allicin composition). You can mix this into a meal or chow down on its own. Do this every day.
- Mushrooms have been used around the globe as medicine for generations. In addition to containing some pretty awesome nutrients like selenium (antioxidant) and vitamin D2 (immune modulator), mushrooms contain a polysaccharide called beta-D-glucans that directly influence the immune system, enhancing the compounds that kill "bad" cells, including viruses.
- Eat the rainbow every day! The color we find in our food comes from chemicals called phytonutrients. These compounds also directly influence in the immune system, amplifying cell protective mechanisms and killing damaged or foreign cells (i.e. viruses). Phytonutrients also engage the microbiota (more on that to come). _____

YOUR IMMUNE SYSTEM IS MADE OF PROTEINS, which means you need protein to maintain your immune system. Americans tend to overdo it when it comes to eating meat, poultry, dairy and eggs. Use your hand as a guide for what your body needs: your palm is the perfect serving size for beef, pork, chicken, turkey, fish and any other meat items you serve yourself. Look at the length, the thickness - eat that amount 2-3 times per day. Talk with a nutritionist about what is the right amount of protein for your body and activity level.

Animal proteins are an important source of ZINC, a mineral that our immune system uses to block viruses from reproducing. Zinc is suspected of being especially important to preventing COVID-19 (and SARS-COV-2, the virus that causes it).

How do you feel about **oysters**? Zinc lozenges and supplements are hard to come by right now, but last time I checked, oysters hadn't made it to preppers shopping lists. Eating a few oysters a day is a very efficient and effective way of increasing zinc in the body. Keep in mind that you can only absorb so much zinc in one setting, so it's better to eat a couple oysters a few times per day instead of chowing down on a whole tin.

If eating oysters just isn't in your wheelhouse, lean on your animal proteins for your zinc needs. Also incorporate a few servings of almonds and/or cashews per day. If you can get your hands on zinc supplements, talk with a nutritionist about how to dose appropriately for your health needs. Zinc intake needs to be balanced with copper, so it's not always wise to hit zinc just because you can.

PLANT PROTEINS have a powerful place at the immune-boosting table, too. Beans, peas and pulses provide gut-nourishing fiber, which helps us maintain regular elimination habits, among other benefits (see below). Additionally, these protein sources store well for long periods of time, which is really helpful when our ability to run to the grocery store is limited by physical distancing.

Work tofu, tempeh, lentils, peanuts and other beans into your meal plans. Aim for **1/2 cup** every day. Look for color when shopping for beans - kidney beans and black beans have more phytonutrients than their paler cousins.

NOURISH YOUR MICROBIOTA

I've mentioned the microbiota (also commonly called the microbiome) a few times already so hopefully you're catching onto the importance of it. There are colonies of beneficial bacteria and yeast wherever our body comes into contact with the outside world: our sinuses, our mouths, our lungs and skin, as well as our digestive tract. The largest colony of microbiota in the human body is in the colon (large intestine).

Is it a coincidence that 60-70% of our immune cells are surrounding the gut (gut-associated lymphatic tissue or GALT)? Turns out, the microbiota interacts with our immune systems. This can be good or bad, depending on the health of the ecosystem in our colons. Here are 3 things to consider when we want to encourage our microbiotas to do us good:

- 1) The microbiota is an ecosystem that is constantly changing. Every time we pass stool, we're eliminating inhabitants of this ecosystem which need to be replaced. Eating probiotic or fermented foods is one way to repopulate the community. My favorites are fermented vegetables (that go towards that daily vegetable goal). These can be found at the grocery store in the refrigerated section. Coconut or other non-dairy yogurts and kefirs, kombucha, raw vinegar and fermented condiments are also probiotic foods worth stocking. Probiotics supplements can also be helpful.
- 2) If you think of your microbiota as your pet, you need to care for your pet by feeding it nutritious foods. Fiber and phytonutrients are microbiota superfoods. Work beans, seeds (chia, flax, hemp), artichoke hearts, avocados, Jerusalem artichokes (aka sunchokes), inulin, chicory, psyllium and other fiber-rich foods into your meal plan. If these foods give you bloating, gas or other digestive symptoms, slowly increase the frequency and amount of these foods that you eat. Drink lots of

water to help you digest well.

To get that phytonutrient need met, work on that goal above of eating the rainbow in vegetables and fruits every day.

- 3) The environment of the colon is another key factor for nourishing a healthy microbiota. Regular bowel movements sweep the debris from our colon. If you're struggling to eliminate every day, make this a high priority. Daily exercise, plenty of water, deep belly breathing and following these food guidelines are all a good place to start. Talk with a nutritionist or health care provider for a more personalized approach.

BRING ON THE FLAVOR

Herbs and spices contain volatile essential oils that provide flavor and smell (i.e. pleasure!), but also bring on additional health benefits that support our health goals. Cook with the following herbs and spices to bring anti-viral and/or immune-boosting flavor to your meals:

- Basil, thyme, rosemary, oregano, sage
- Fennel
- Garlic and onion
- Allspice, cardamom
- Turmeric

WHAT NOT TO EAT

There are many, many edible food products on the shelves that are oh, so enticing on a good day and downright magnetic on a bad day (for the record, I consider most days in a pandemic to be justifiably "bad days"). The trouble is that these foods crowd out other more nutrient-packed foods from your diet.

Limit eating these as much as possible:

- **Refined and processed/packaged foods:** Many of us feel the pull of mac and cheese or frozen pizza when our nerves are fried and we're wanting to feel comforted. Sadly, these foods lack the nutrients we need to stay well. Additionally, if we fill up on mac and cheese now, how are we going to eat 5 cups of veggies later?! Make whole foods a priority. Take the extra time social distancing has given you to dust off your cookbooks and brush up on your cooking skills. Cook as much of your food from scratch as possible.
- **Sugar** depresses the immune response for hours after consumption. If you're craving something sweet reach for fruit, dried fruit or dark chocolate containing 65% or more cacao.
 - Sugar is in most processed and packaged foods, as well as sauces, condiments, yogurts, even marinara sauces. Before putting a box, bag, jar or can in your shopping cart, turn the packaging around and read the list of ingredients. Look for alternatives to products containing sugar, cane sugar, beet sugar, corn syrup, high fructose corn syrup, rice syrup and other sweeteners, as well as ingredients ending in "-ose" (glucose, fructose, sucralose, etc.).

HOW WE EAT MATTERS TOO

Humans around the globe are experiencing more stress, worry and fear right now as we live through a pandemic (for crying out loud!). Stress hijacks our bodies and makes us primed for survival...which is very helpful when we need it but we don't thrive in that state. When we're stressed, blood is redirected from our digestive organs to our skeletal muscles to make it easier for us to fight or flee from the source of that stress. This is true whether we're late for a meeting or running for our lives; the response is the same.

We need blood in our digestive organs to make use of anything we eat. Taking time to cook a meal can be a great way to unwind and de-stress. You can also think of mealtime as a "mindfulness bell." In Buddhist monasteries, bells are chimed throughout the day to remind people to bring mindfulness to that moment, into whatever they're doing. In lieu of an actual bell bringing our attention to the present moment, we can seek out habits to attach mindfulness to. Hence, mealtime: we're sitting down to eat at least 3 times per day. What an opportunity to attach some de-stressing to!

When you eat in a relaxed state, you digest, absorb and use all those precious nutrients you so thoughtfully put together for your immune system. Take a few deep breaths before digging in. Eat slowly, chew thoroughly and enjoy your food.

IMMUNE SUPPORTIVE MEAL PLAN

Let's try to put this all together in a checklist you can bring to the table. It's easy to feel overwhelmed when trying to make changes to the way you eat. Reach out for help if you need it!

Daily Food Goals include:

- 5 cups (8 servings) or more of vegetables and fruits every day. Here's a breakdown of specifics:
 - 1/2 cup **each** red, orange, yellow, black/blue/purple (= 2 cups)
 - Example: 1/2 cup red bell pepper, 1/2 cup carrot, 1/2 cup spaghetti squash, 1/2 cup blueberries
 - 2 cups leafy greens (arugula, spinach, kale, salad greens, etc.) - these can be raw or cooked
 - 1/2 cup mushrooms, cooked (button, crimini, shiitake, oyster, etc.)
 - 1/2 cup alliums (onions, leeks, garlic, scallions), plus a raw clove of garlic
- 2-3 palm-sized servings of meat, poultry or fish - 1 bonus point for every oyster you eat!
 - 2-3 eggs = 1 serving of meat
- 1/2 cup cooked kidney, black or other beans, tofu or tempeh
- 2 tablespoons chia, flax, hemp, sesame or other seeds
- fermented foods (1/4 cup or more daily)
- anti-viral flavor (basil, thyme, rosemary, oregano, sage, fennel, allspice, cardamom, and turmeric)
- no (or limited amounts of) processed foods and foods made with sugar or other sweeteners
- a slow, calm environment to enjoy your meal

A QUICK NOTE ON SUPPLEMENTS

I have a food-first approach to nutrition and advocate for eating a nutrient-packed diet before bringing in dietary supplements. You can't supplement yourself out of a bad diet, after all.

Another thing to keep in mind when choosing supplements to support your immune health is that COVID-19 is a new kid on the block. We have experience researching and treating other SARS viruses, but no research has been conducted on how nutrients interact with SARS-COV-2 or COVID-19. We don't know if high doses of vitamin A amplify our immune system's activities, or if it makes it easier for the virus to get into our cells. It's going to be a bit before functional nutritionists like me are able to advise on supplementing to prevent or treat this virus.

In the meantime, I'm advising extreme caution. Focus on the food you eat and do other things that are going to help you out (get quality sleep, enough exercise and address your stress). There are a lot of smarties working on our collective understanding of this virus, so more and more information is coming out every day. Talk with your nutritionist or health care provider for more personalized recommendations.

WHERE DO WE GO FROM HERE?

I am a gal of action, so for me to be cooped up in my house for an indeterminate amount of time with no direction is cause for alarm. Former CDC director, Dr. Tom Friedman is calling on all Americans to work on building their health resilience. This starts with addressing chronic health concerns like high blood pressure and diabetes, but extends to establishing daily habits that promote wellbeing. We need to take pressure off our health care system so that our doctors, nurses and health care workers can focus their efforts on saving lives and staying safe.

A personalized nutrition plan is a powerful way to get organized and on your path. Health coaching can help you stay on the path and moving forward. This document provides a good starting point.

When you're ready to take the next step, I hope you'll reach out.

Resources: Much of the information shared here was accumulated through my various studies and not linked to a specific resource. Here are some that can be linked directly:

Aggarwal, B., Yost, D. (2011). *Healing Spices*. Sterling

Akramiene, D., Kondrotas, A., Didziapetriene, J., Kevelaitis, E. (2007). *Effects of beta-glucans on the immune system*. Medicinia. PMID: 17895634

Masterjohn, C. (2020). *The Food and Supplement Guide for Coronavirus*.