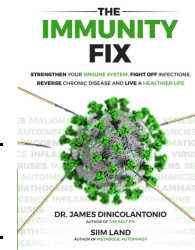


The Immunity Fix

Dr. James Dinicolantonio & Siim Land (2020)



*Notes by Bob Evelyn
Wilmore, Kentucky; 2024.*

While this book contains information on how our immune system functions, the emphasis of my notes will be focused on things that are beneficial in strengthening the immune system, and things that are detrimental. I'll start with the summary of conclusions found on page 306.

Fundamentals of a Strong Immune System (Conclusion)

1. Optimize sleep.
2. Fix Metabolic Syndrome (from pages 139-167)
 - ✓ Omega-3 fatty acids (salmon, grass-fed beef, sardines, krill oil, algae, some nuts).
 - ✓ Omega-9 fatty acids (olive oil, certain nuts).
 - ✓ Avoid vegetable oils, seed oils, trans fats. Instead cook with pastured animal fats like butter, ghee, lard, tallow. They are mostly saturated fat which are much more heat-stable and won't easily become oxidized.
 - ✓ Organic, extra virgin olive oil is good; but keep cool and use within a few weeks.
 - ✓ Vitamin C and E.
 - ✓ Exercise.
 - ✓ Don't over-cook food.
 - ✓ Limit intake of canned seafood (due to high heat in canning process).
 - ✓ Avoid excess iron.
 - ✓ Avoid copper deficiency.
 - ✓ Carotenoids are good (colorful vegetables and pastured animal fat. Carrots turnips, yams, beetroot are great sources. Also good are algae, salmon, pink-red seafood – just don't overeat it. Saturated fats are good.
 - ✓ Spirulina (2-3 grams with meals).
 - ✓ Crushed garlic.
 - ✓ Turmeric.
 - ✓ Magnesium.
 - ✓ Coffee, cacao, olive oil, red wine, tea, spices, avocado.
 - ✓ Glycine.
3. Eat a nutrient dense diet.
 - ✓ Mix of plant and animal whole foods. The most important nutrients are vitamin D, magnesium, selenium, zinc, copper, vitamin A, vitamin E, vitamin C, vitamin K, and the B vitamins. Other beneficial nutrients are omega-3s, glutamine, collagen, glycine, and astaxanthin.
4. Key supplements to fix nutrient deficiencies.
 - ✓ The most common deficiencies: Vitamin A, vitamin D, choline, magnesium, omega-3s, zinc, vitamin K, and vitamin Bs (especially riboflavin – B2).
5. Forest bathing (spending time in nature).
 - ✓ Exposure to the natural particles and bacteria when in nature builds up your microbial diversity and enhances immunity against various pathogens. Living in a hyper-sterile disinfected environment reduces your body's resilience because it's not receiving enough experience to different microbes. Getting your hands dirty with gardening, hiking, or mountain climbing is also beneficial.
6. Regular exercise.
7. Hot-Cold hormesis.
8. Intermittent fasting.

Bad for immune system

1. Malnutrition / bad diet.
2. Alcohol excess.
3. Smoking.
4. Age (ability to mount immune response decreases with age).
5. Chronic stress.
6. Obesity.
7. Lack of exercise / sedentary lifestyle.
8. Sleep deprivation / insomnia.
9. Circadian rhythm misalignment (irregular sleep patterns or meal timing).
10. Blue light exposure at night.
11. Sugar, especially fructose (blood glucose).
 - ✓ Drop the sugar and boost the immune system (p. 110).
12. Refined grains and refined/processed carbohydrates.
13. Poultry (unfavorable fatty acid profile).
14. Processed meat (bacon, sausage, canned meats).
15. Larger fish (tuna, shark, pike, halibut, trout – higher in heavy metals).
16. Deficiencies: Vitamin B6, selenium, sodium, chromium, copper, vitamin C (100 mg daily, taken 500 mg twice daily).
17. Excessive intake of calcium, vitamin D, phosphorus, iron.
18. Gluten, grains, nightshade, lectins, dairy, sugar (increase autoimmune disease).
 - ✓ Gluten may not be harmful if coming from traditional, unrefined grains.
19. Trans fats and vegetable oils (margarine, corn, soybean, safflower, cottonseed, canola oil).
20. Cadmium.

Western diet characterized by high fat, high sugar, processed foods can be a trigger for autoimmunity due to its pro-inflammatory effect. (p 90)

Eating foods with a lot of carbohydrates and fats will raise both blood glucose and triglycerides (p. 120).

Good for immune system

1. Sleep.
2. Sunlight exposure.
3. Optimism.
4. Music to lift mood.
5. Exercise (cardiovascular, moderate).
 - ✓ 30 minutes of walking can raise natural killer cells, lymphocytes, monocytes, neutrophils (p. 267)
 - ✓ Regular strength training.
 - ✓ Full body compound exercises.
6. Stay hydrated.
7. Intermittent fasting (skip meals and have only 1-2 per day in a shorter eating window).
8. Get grounded (walking outside on grass with bare feet).
9. Hot/cold therapy (primes the immune system).
 - ✓ Cold shock. Exposure to cold.
 - ✓ Inhaling hot air.
 - ✓ Sweat removes toxins from the body.
 - ✓ Sauna increases body temp which mimics a fever, priming the immune system.

- ✓ Sauna or ingestion of beta-glucans (yeast or medicinal mushrooms like chaga, reishi) enhances immune surveillance. (p. 71)
- ✓ Stay hydrated when using sauna. Consume some salt.
- ✓ Heat therapy is superior to cold therapy.
- ✓ Viruses are more stable in cold and dry environments, enabling them to survive longer (p. 183).

10. Carrots (raw).
11. Carotenoids (carrots, turnips, yams, beetroot, algae, salmon, pink/red seafood – but don't overheat).
12. Cayenne pepper, chili pepper, black pepper (can kill pathogens).
13. Cinnamon.
14. Clove.
15. Coconut oil.
16. Collagen (chicken drumsticks, tendons, ligaments, broth soup, fish skin, chicken skin, eggs, protein).
17. Cultured dairy: kefir, cheeses, yogurt.
18. Dandelion root.
19. Dark green plants.
20. Elderberries and dark berries.
21. Elderberry extract.
22. Fermented foods: Sauerkraut, yogurt, tempeh, miso, natto, kimchi.
23. Ferulic acid (many vegetables, the bran of cereal grains, barley, flaxseed, legumes, beans).
24. Fisetin (apples, strawberries, onions, cucumbers).
25. Garlic (crush and consume lightly heated as over-heating destroys key ingredients).
26. Ginger / Ginger extract.
27. Honey (raw) and bee pollens.
28. Lactoferrin (milk).
29. Lemon balm.
30. L-Glutamine (meat, eggs, fish, poultry, legumes, beans, vegetables).
31. Mushrooms (chaga, reishi, shiitake).
32. Olive oil (virgin).
33. Omega-3 fatty acids lower inflammation. (salmon, grass-fed beef, sardines, krill oil, algae, some nuts).
34. Omega-9 fatty acids (olive oil, certain nuts).
35. Onions, leeks, shallots.
36. Oregano and oregano essential oil.
37. Piperlongumine (long peppers).
38. Polyphenol-rich diets to reduce inflammation (p. 90): Dark pigmented vegetables (broccoli, artichoke, leafy greens, cabbage), raspberries, blackberries, blueberries, chokeberries, pomegranate, cherries, olives, green tea, black tea, coffee, beans.
39. Prebiotics – foods that bacteria in our gut will eat (asparagus, leeks, onions, green bananas, artichoke, dandelion greens, garlic – also cooking and cooling starch like potatoes or rice).
40. Probiotics and probiotic food (fermented foods, supplements).
41. Quercetin (found in apples, broccoli, onions, cabbage, and other vegetables – also lowers blood pressure).
42. Rosemary.
43. Sulfur-rich foods (eggs, fresh pastured meat, beef, dark leafy greens, broccoli, cauliflower)
44. Tea (especially green tea).
45. Thyme.

46. Yeast beta-glucan.
47. Higher protein intake.
48. Mediterranean-style diet.
49. Activated charcoal (take on empty stomach to eliminate pathogens and toxins – don't take with food as it will remove good nutrients).
50. Allicin supplement.
51. Andrographis.
52. Artemisinin.
53. Ashwagandha.
54. Astragalus (Chinese herb).
55. Berberine (barberry).
56. Butyric acid and butyrate.
57. Carrageenan (extracted from edible red seaweed).
58. Cat's claw.
59. Curcumin (reduces effects of stress).
60. Echinacea (good for respiratory infections).
61. Ferulic acid.
62. Ginseng.
63. Glucosamine.
64. Glycine (5 grams 3-4x daily).
65. Holy basil or tulsi.
66. Licorice root.
67. Lipoic acid.
68. Magnesium (depleted by stress – most are deficient – 350-420 mg/day).
 - ✓ Bananas, dark leafy greens (spinach, swiss chard, kale), nuts (almonds, brazil nuts), seeds (pumpkin, sesame), dark chocolate, mackerel, beans (black beans, white beans), legumes, vegetables.
 - ✓ Needed to activate vitamin D and move it around the body.
 - ✓ Likely need 500 mg/day supplement with normal dietary intake.
69. Melatonin (antioxidant; modulates immune system when asleep).
70. Moringa.
71. N-acetylcysteine.
72. Resveratrol.
73. Salt and salt water (inc. gargle, inhale, irrigate nasal passages).
74. Schisandra chinensis.
75. Selenium.
76. Spirulina (2-3 grams with meals to lower oxidation of dietary fats).
77. Sulforaphane.
78. Turkey tail.
79. Turmeric.
80. Zinc – upper limit is 100 mg daily (oysters, beef, poultry, some nuts).

Don't over-cook food.

Olive oil is one of the healthiest fats for heart health and is provided in a Mediterranean diet. Use organic and extra virgin and keep in a cool place. Consume within a few weeks. Most commercial olive oils are mixed with canola oil or don't contain the polyphenols or antioxidants.

Instead of using vegetable and seed oils, use pastured animal fats like butter, ghee, lard, or tallow. They are comprised of mostly saturated fat which is more heat-stable and won't easily become oxidized (p. 157).

The best cooking fats: Coconut oil, pastured butter, ghee, lard, tallow, extra virgin olive oil, avocado oil, argan oil.

Vitamins (good for immune system)

1. D is critical for immune system.
 - ✓ Sun, fatty fish like wild salmon, cod liver oil, egg yolks.
 - ✓ 2000-4000 IU daily.
 - ✓ Many have vitamin D deficiency – poor diet and lack of sunlight exposure.
2. K2 and D work together (fermented foods, egg yolks, dark poultry).
3. A in its active form – retinol, retinal, retinoic acid (animal foods, liver cod liver oil, egg yolks, salmon). More than 12000 mcg can become toxic.
4. C and E. (E deficiencies are rare – found in many foods. Diet should be primary source.)
5. B1 (thiamine).
6. B2 (riboflavin). Eggs, fish, some vegetables.
7. B3 – niacin (brewer's yeast, red meat, fish, coffee).
8. B5 – pantothenic acid (liver, organ meats).
9. B6 – pyridoxine, pyridoxal.
10. B9 – folic acid or folate.
11. B12 – cobalamin.

Occasional sickness

Episodic sickness may have benefits over an extended period of time. Mild fevers and infections during early childhood can be protective in adulthood. When we have prior exposure to infections, the body knows how to fight similar pathogens better. But it's not beneficial to get seriously sick as it will deplete the body's resources for immunity. Still, getting sick once in a while should have an adaptive effect. (1-31)

Fevers can be good – but not *high* fevers.

Cancer

A robust immune system helps the body kill cancerous and precancerous cells. (p. 57)

A prime cause of cancer is the replacement of the respiration of oxygen in normal body cells, with a fermentation of sugar. (p. 66)

Part of the toxic microenvironment is a decrease in pH (increase in acidity). Taking sodium bicarbonate increases pH. Also good is an alkaline diet (fruit, vegetables). Avoid sugars, grains, cheeses which are acidic. (p. 71-2)

Covid treatment

Effective Covid treatments are found on pages 104-109. These include chloroquine, hydroxychloroquine (HCQ), azithromycin (antibiotic found in Z-pak), colchicine, ivermectin, quercetin.

Other thoughts

To avoid deficiencies and hypersensitivities, include as big a variety as you can (p. 207).

Nothing replaces quality nutrition and getting most of your nutrients thru whole foods (p. 216).

Eat whole food proteins like eggs with yolk, salmon, mackerel, beef, chicken, organ meats, red meats.

Increased use of antibiotics, antiseptics, vaccines, and sterilized environments are potential reasons for the rise in autoimmunity among children. Children not exposed to bacteria from dirt, animals, grains, and other sources are much more likely to develop autoimmune disorders later in life. Exposure to bacteria may provide protection against the onset of autoimmunity. (p. 89)

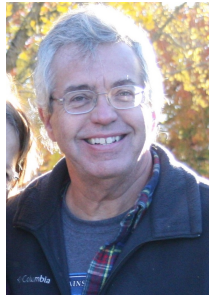
Intake of canned seafood should be limited (tuna, sardines, salmon) as high heat in canning process can oxidize the polyunsaturated fats and cholesterol.

Hippocrates: "Let food be thy medicine, and medicine be thy food." (p. 185)

Closing thoughts

While the book contains a lot of good information, I found it to be highly disorganized which led to much duplication from one section of the book to another. I've tried my best to organize things a bit better in these notes, but I fear you will still see some duplication and disorganization. I also found it annoying that the book had no index that might allow one to look up, for example, "magnesium" to find all mentions of it throughout.

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