EXPLAINING THE CORONAVIRUS AND HOW A STRONG IMMUNE SYSTEM (AND ALGAE)* HELPS PROTECT YOU

WHAT IS A VIRUS

A VIRUS is DIFFERENT from a bacteria so it can't be stopped or killed the same way by taking antibiotics. So, the best way to stop or prevent a virus is by having a strong immune system which can protect you with its anti-viral abilities.

The reason why a virus is different from a bacteria is because a VIRUS is NOT ALIVE (like a bacteria is). A virus CANNOT reproduce on its own like a bacteria can. In contrast, a virus must come in contact with a « host » cell and use the DNA of that host cell in order to reproduce. Without the host cell, the virus remains an INERT cell full of RNA.

The RNA of the virus is surrounded by a round shell that protects its single strand RNA and a coronoavirus has protrusions that allow it to « dock » on one of your living cells. Once the cornoavirus has docked on your cell, it invades your cell and uses YOUR cell DNA to replicate and spread to your other cells. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4369385/

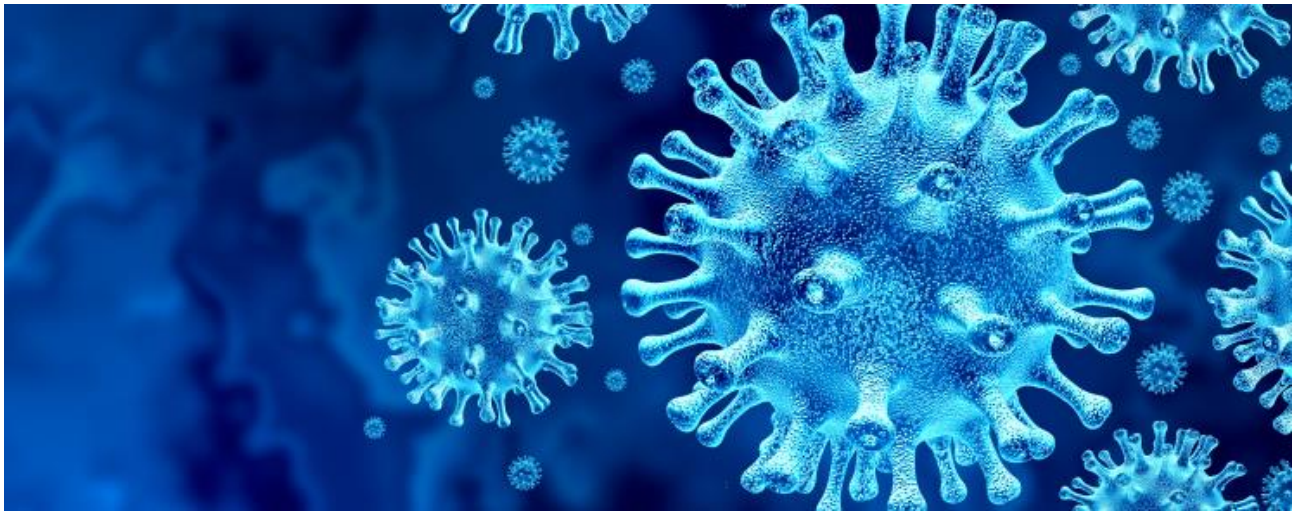
The key thing to know is that a cornoavirus remains INERT (ie the virus can't do anything) UNTIL its protrusions identify receptors on your cell and uses them to enter your cell Once the virus has entered one of YOUR cells, it attacks YOUR CELL DNA and uses it to replicate its own until your cell is so full of the VIRUS DNA, the cell bursts and the virus spreads to your neighboring cells. This process continues unless you have a strong immune system to stop it.

HOW YOUR IMMUNE SYSTEM PROTECTS YOU

A strong immune system protects you from viruses in two important ways :

1. It can disarm and prevent the virus from entering your cells.
2. It can kill the virus once it has entered your cells so it can't spread

Unfortunately if you have a compromised immune system (due to poor diet or pre-existing health conditions), your immune system may have difficulting defending you from a virus which can result in the virus cascading through your body, invading and infecting your cells and threatening your ability to recover or survive.



HOW IS COVID-19 **SIMILAR** TO OTHER VIRUSES :

The Coronavirus is circular like other viruses but it has protrusions that allow it to"dock" on your cells. As mentioned above a coronavirus has ONLY a single strand of RNA which prevents it from reproducing on its own. That's why it needs to find a host cell to replicate and once the virus has "docked" and entered one of your healthy cells, it takes over your cell's DNA so it can replicate itself WITHIN your cell. When it has replicated itself so much, your cell bursts open and this releases more of the virus so it can find more healthy cells that it docks, invades and infects. But it can be stopped by a strong immune system.

HOW IS COVID-19 **DIFFERENT** THAN OTHER VIRUSES :

The COVID-19s differs from other viruses in four important ways:

1. The COVID-19 is « novel ». In other words it is NEW. It has never existed before so we have never been exposed to it. That means none of us have the natural antibodies to protect us (as we have from other strains of viruses that have previously existed).

2. There is NO VACINE developed (yet) to protect us from this strain of virus

3. The COVID-19 virus CAN REMAIN INERT AND UNDETECTED FAR LONGER than any other virus (inactive with no symptoms visible). The WHO says the COVID-19 can incubate in your body for up to 30 days during which you may not show or feel symptoms. This results in the virus SPREADING FASTER, easier and more undetected than other viruses.

4. Once the COVID-19 has infected your body, if you do not have a strong immune system, the virus SPREADS IN YOUR BODY FASTER THAN OTHER VIRUSES. The unimpeded and rapid growth of the COVID-19 races through your body faster than other viruses. This results in high death rates among those with a compromised immune system.

HOW TO PROTECT YOURSELF FROM COVID-19

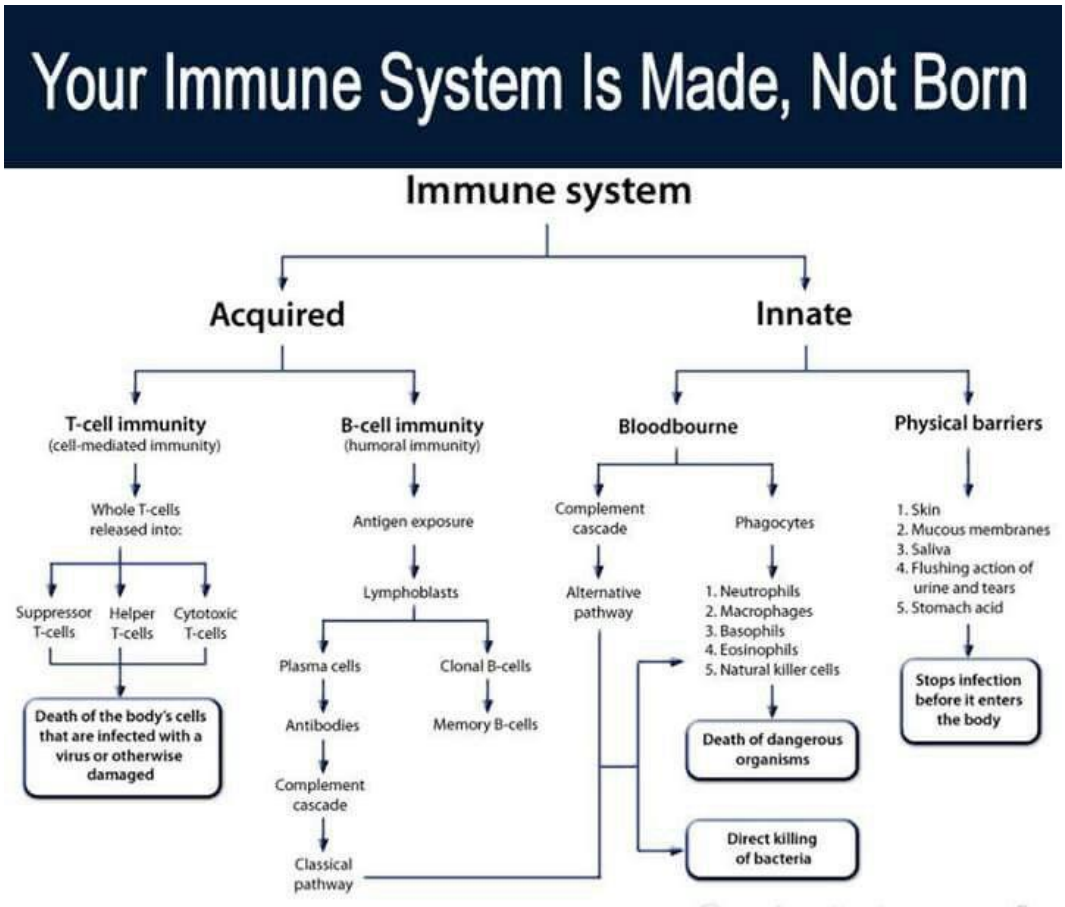
Science has shown that a STRONG IMMUNE SYSTEM can help protect you from viruses including COVID-19. But to have a strong immune system, you need to give your body nutrients that have « anti-viral properties » to activate your immune system so it can defend you.

Your immune system needs specific anti-viral nutrients to build white blood cells, killer cells, T cells, macrophaghes, and other immune proteins that it uses to defend you. But where does it get these anti-viral nutrients ? It gets them from YOUR FOOD.

WHAT IS THE IMMUNE SYSTEM ?

1. The immune system is a complex network of cells and proteins that defends the body against infection.

2. The immune system keeps a record of every germ (microbe) it has ever defeated so it can recognise and destroy the microbe quickly if it enters the body again.



Your immune system is an incredibly complex, protective system. But it only works effectively if it has the nutrients it needs to protect you (the last page lists some of these nutrients).

UNDERSTANDING YOUR IMMUNE SYSTEM

Your immune system is like an orchestra. Orchestras have the finest instruments, stages and conductors so they can perform beautiful music. But NOTHING happens if they don't have the muscians to play the instruments. Each musician uniquely contributes to the majesty, functioning and performance of the orchestra. Your immune system works the same way.

Your immune system is just like an orchestra. It uses « instruments » to protect and defend you. But its instruments are molecules, proteins and processes, none of which can perform without the right nutrients. Your immune system simply can't perform and defend you properly if the nutrients it needs are missing. This is similar to how an orchestra can't perform if its players (musicians) are missing. So, just as musicians are necessary for an orchestra to perform, so too are the right nutrients necessary for your immune system to perform.

It's that simple.

Missing Nutrients Is Like Missing Musicians
The Result is a Weak Immune System

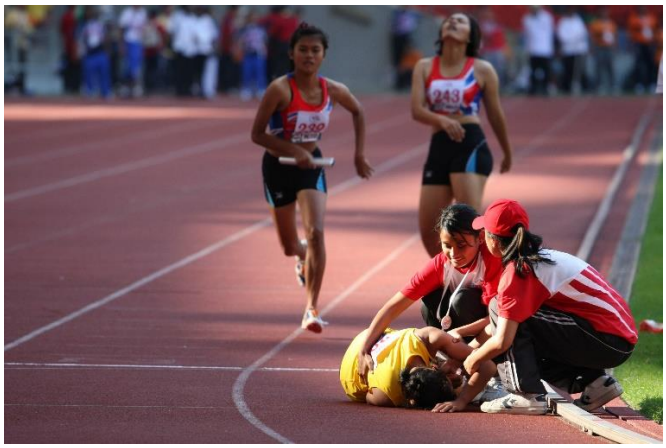
Good Nutrient is Like an Orchestra Performance
The Result is a Strong Immune System

Your body works like a relay team. A relay team relies on each member of the team to carry the baton for a portion of the race and if each member does their job, the team crosses the finish line and wins the race. Your body operates in a similar way. YOU are the first member of the relay team because YOU decide what goes into your mouth so YOU decide what nutrients you are giving your body. The next member of the relay team is your digestive tract which digests and converts this food into smaller sized molecules for different parts of your body to use. Your immune system is next member of the relay team. If the food you ate contained the nutrients your immune system

needs, it will convert them into the specific anti-viral molecules, proteins and processes it needs to protect and defend you from pathogens and viruses like Coronavirus.

However if you eat proessed food, fast food or other foods that do NOT contain the nutrients your immune system needs, it can stumble and fail you. When a member of a relay team stumbles and falls, they simply lose the race. However, when your immune system stumbles and falls, the outcome can be far more tragic and fatal. To give your immune system the chance to protect you, it needs the right nutrition or it can't perform its duties. That's why your body is like a relay team. If you want to cross the finish line by staying healthy and surviving this virus, you need a strong immune system. To do that, you need to have the right nutrients.

It's that simple.



Missing Key Nutrients is like Losing the Race
The Result is a Weak Immune System

Having the Key Nutrients is like Winning the Race
The Result is a Strong Immune System

HOW DOES YOUR IMMUNE SYSTEM WORK :

A strong immune system will either kill a virus BEFORE it infects your cells or kill the virus AFTER it has infected your cells. Strong immune systems perform both functions but weak immune systems perform neither or do them poorly.

A) IT PROTECTS YOU **BEFORE** CELLS ARE INFECTED WITH COVID-19

A strong immune system will release antibodies to neutralize, kill and remove the virus before it can invade and infect your cells. It does this through a number of processes :

a) **Antibodies neutralizes the virus** so it can no longer infect your cells. One of the way it does this is by BLUNTING the protrusions on the virus cell wall. This prevents the virus from being able to locate the receptors on your cell walls which PREVENTS the virus from being

able to “dock” and invade YOUR cells This forces the VIRUS to stay INERT until it is eventually is moved out of your body by your immune system which has identified it as something that shouldn’t be there. At this point your immune system has successfully DISARMED the virus (literally) so it is flushed out of your body without doing any damage.

b) **Antibodies can cause the virus to stick together** which makes them an easier target for your immune system to recognize them and neutralize them

c) **Antibodies can engulf and destroy the virus** by releasing cells (called phyagocytes)

B) **IT PROTECTS YOU AFTER** CELLS ARE INFECTED WITH COVID-19:

Once a virus has penetrated your cell, if you have a strong immune system, it can still protect you. This is because your immune system has special molecules that reveal which cells are infected so it can kill them before the virus spreads to your other cells. It does this using a variety of proteins, each of which have a different function. But in order for these molecules to perform, you must first have the nutrients in your body that allow your immune system to create these molecules. Without these molecules, your immune system simply cannot protect you effectively or kill the virus :

a) **T CELLS :** T-cells and T-cell receptors kill any cells already infected with the virus. They do this by using special proteins that help them recognize where the virally-infected cells are. The T cells then release molecules called « cytotoxic factors » that kill the infected cell to prevent the virus from infecting other cells (similar to how social distancing helps prevent the spread of a virus)

b) **NATURAL KILLER CELLS :** (NK Cells). If the T Cells are not able to identify which of your cells have been infected with the virus, your immune system releases Natural Killer Cells (NK cells) which are a toxic substance that kills any cell already infected wtih the virus.

c) **PERFORIN** : Perforin is a protein that drills holes into cells infected with the virus so the T Cells, NK Cells and other molecules can penetrate the infected cell to kill the virus (similar to how firemen break into a burning home with fire hoses to protect the home).

d) **ENZYMES** : There are special enzymes called Granzymes that enter these holes drilled by Performin to help kill the virus and initiate a process called aptosis which causes the cell to kill itself (and take one for the team).

e) **CYTOKINES** : Cytokines are proteins that send a signal to the infected cell and other neighboring cells letting them know they are infected. This prompts the infected cell to initiate aptosis (kill itself). Cytokines also warn your other cells that there is a virus in the neighborhood and to protect themselves (like a national weather service alert !) Some cytokines are interferon-γ and tumour necerosis factor-α

f) **INTERFERONS** : Interferons are small proteins released by infected cells that interfere with the virus's ability to replicate itself. Interferons also act as signalling molecules so the infected cell can warn nearby cells of a viral presence (like an Amber Alert !)

For more information refer to this source :
file:///C:/Users/User1/Downloads/Immune%20responses%20to%20viruses%20(1).pdf

https://www.immunology.org/public-information/bitesized-immunology/pathogens-and-disease/immune-responses-viruses

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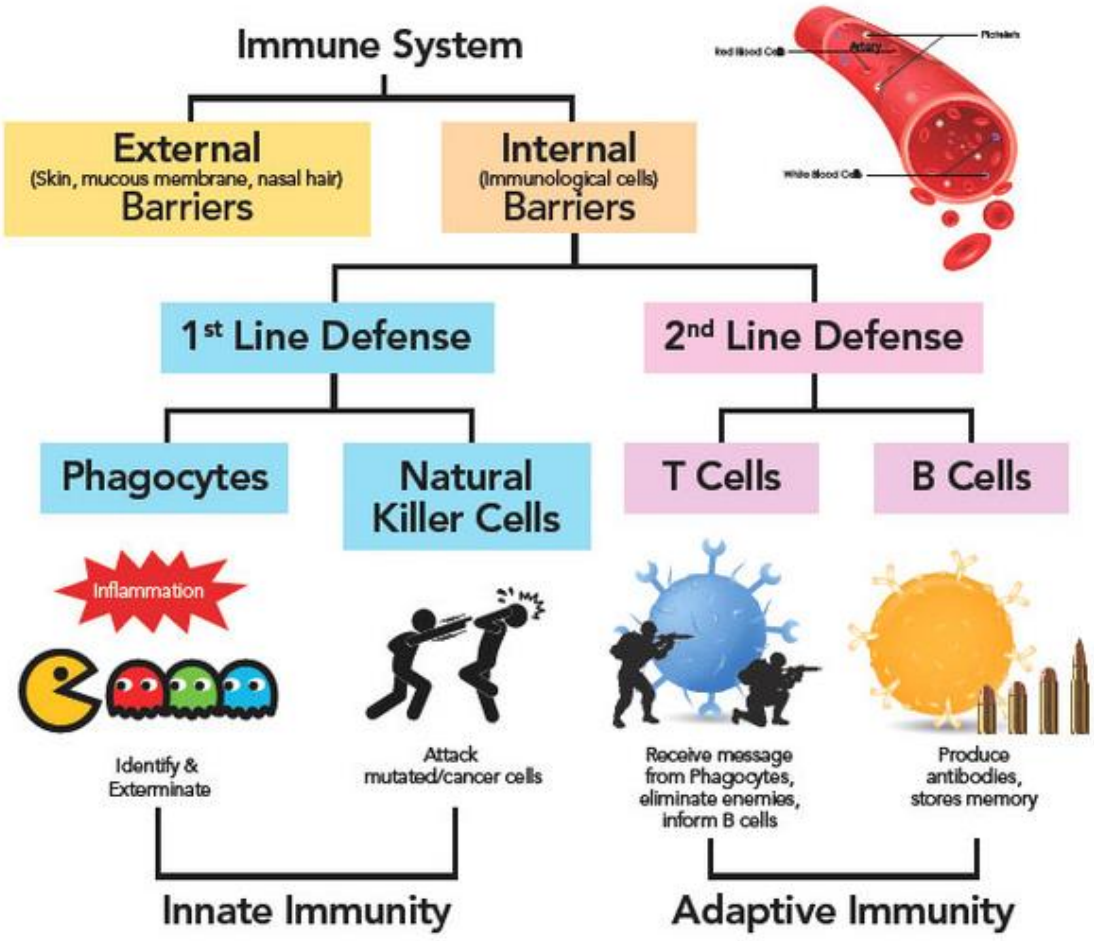

The summary above explains how a strong immune system is **supposed to work.** The problem is that many of us do NOT have a strong immune system due to our poor nutritional habits.

There are other things like poor sleep, stress or lack of exercise that also weaken your immune system but **poor nutrition is the biggest factor.** The food you put in your body directly affects your cellular health, immune health and overall health/longevity. Everything you eat either harms or helps you build a strong immune system. Fast food, processed food, or foods containing sugar,

vegetable oil or pesticides will leave your body crying for the critical immune-building nutrients it needs like amino acids, chlorophyll, phytonutrients, vitamins and minerals.

The COVID-19 crisis has made it abundantly clear that we need to change our eating habits and modify our lifestyle so we can give our bodies and immune systems the nutrients they need to protect us.

WHY ALGAE IS THE ANSWER

Algae contains all the nutrients that build a strong immune system. Our spirulina algae tablets ENERGYbits® and BEAUTYbits®) and chlorella algae tablets (RECOVERYbits) both contain all the nutrients necessary for a strong immune system. In fact, our algae tablets are so nutrient dense, that one bag of 1,000 tablets contains the same nutrient value as 551 pounds of fruits or vegetables. That's why we refer to our algae tablets as « Efficient Nutrient »

But even better, you don't have to spend hours shopping, cooking or cleaning to get this conentrated nutrition. Simply swallow or chew a few tablets or a handul each day and you're done. They will save you time, money and most importantly will help build your immune system and possibly save your health.

The Nutrients Your Immune System Needs to be Strong

SPRIULINA [12], [14], [15], [17]

Vitamin A [1, 2,3, 4] Increases T cells and B cells, reduces respiratory infection

Vitamin B6, B9, B12 [3] boosts immune response and builds antibodies

Vitamin D [2,2, 3, 4, 5] boosts immune system, builds antibodies

Vitamin E [1, 2, 3, 5] boosts immune system and builds antibodies

Iron [3, 4] boosts immune system

Zinc [3, 5] boosts immune system, builds antibodies

Copper [3] boosts immune system, builds antibodies

Essential Fatty Acids [5]– reduces inflammation, boost T cells, support immune function

Amino Acids [6,7, 8] activates T cells, cytokines, B cells, natural killer cells and macrophages

Chlorophyll [10, 13] reduces oxidative stress, builds blood and increases longevity

CHLORELLA [9], [11], [14]

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ALGAE HAS THE HIGHEST CHLOROPHYLL IN THE WORLD

Once of the most important nutrients found in algae is chlorophyll (the pigment that makes plants green). Chlorophyll is so critical to your health and immune system that during WW II it was given to the injured when there wasn't enough blood for transfusions. The liquid chlorophyll helped them recover just as fast as if they had been given a blood transfustion. The reason is simple. The chemical composition of chlorophyll is virtually identical to hemoglobin blood (see illustration on the next page)

Algae has the highest concentration of chlorophyll in the world especially chlorella algae (RECOVERYbits) which has 1,000 x more chlorophyll than Chinese greens, 250 x more chlorophyll than spinach and 25 x more chlorophyll than liquid chlorophyll (source: Linus Pauling Institute).

That's why taking algae is the fastest, easiest way to get chlorophyll into your body where it can help build and protect your immune system and is a fast, easy replacement for greens if you or your family aren't eating enough vegetables.

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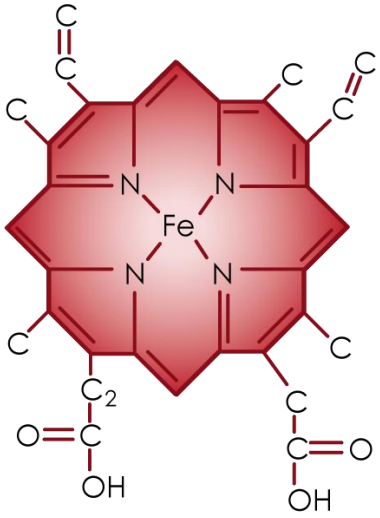
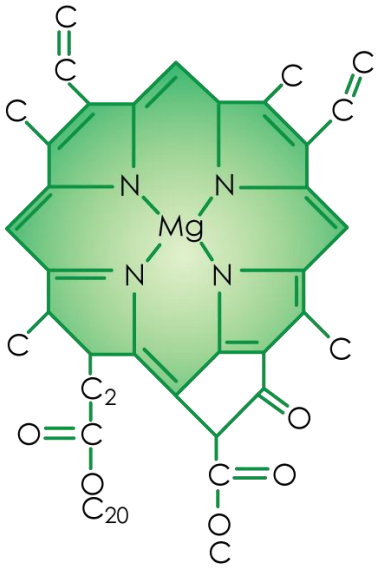


Human Blood Hemoglobin



Plant Chlorophyll

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spirulina

one ingredient

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Non-GMO spirulina algae

A single serving of 30 tablets contain:

General
Calories 28
Protein 5.25 g
Fat <1 g
Dietary Fiber 2 g
Carbohydrate 2 g
Net Carbohydrate 0 g
Sugar 0 g

Essential Fatty Acids
Omega 6 Family
Dihomogamma Linolenic 4 mg
Essential Linolenic 86 mg
Gamma Linolenic (GLA) 75 mg
Omega 3 Family
Alpha Linolenic 0.1 mg
Docosahexaenoic (DHA) 0.1 mg
Monoenoic Family
Erucic 0.9 mg
Oleic 1.2 mg
Palmitoleic 15 mg

Phytonutrients
Chlorophyll 68.6 mg
Phycocyanin 1425 mg
Superoxide Dismutase (SOD) 24,800 units
Total carotenoids 35 mg
Zeaxanthin 2.4 mg

Vitamins
A (Beta-Carotene) 1.4 mg
B1 Thiamin 50 mcg
B2 Riboflavin 41 mcg
B3 Niacin 1300 mcg
B5 Pantothenic Acid 30 mcg
B6 Pyridoxide 6.3 mcg
B8 Inositol 5.1 mg
B9 Folate 8.2 mcg
B12 15.1 mcg
Biotin 2.4 mg
Vitamin E 90 mcg
Vitamin K1 92 mcg
Vitamin K2 10.4 mcg
Total Vitamin K 102.4 mcg

Minerals
Boron 75 mcg
Calcium 13.2 mg
Copper 7.5 mcg
Iron 4 mg
Magnesium 28.8 mg
Manganese 186 mcg
Molybdenum 7.5 mcg
Phosphorous 78 mg
Potassium 102 mg
Sodium 35.9 mg
Zinc 123 mcg

Amino Acids
Alanine 374 mg
Arginine 329 mg
Aspartic Acid 446 mg
Cystine 40.2 mg
Glutamic Acid 699 mg
Glycine 234 mg
Histidine 73.6 mg
Isoleucine 270 mg
Leucine 439 mg
Lysine 220 mg
Methionine 105 mg
Phenylalanine 213 mg
Proline 173 mg
Serine 230 mg
Threonine 229 mg
Tryptophan 68 mg
Tyrosine 215 mg
Valine 278 mg

No sugar
No dairy
No gluten
No caffeine
No chemicals
No metals/toxins

Keto, Paleo, Vegan

chew swallow

energybits.com
add more life to yours one bit at a time

chlorella

one ingredient

recoverybits
add more life to yours one bit at a time

organic chlorella algae

A single serving of 30 tablets contain:

General
Calories 28
Protein 5 g
Fat <1 g
Dietary Fiber 1 g
Carbohydrate 1 g
Net Carbohydrate 0 g
Sugar 0 g

Essential Fatty Acids
Saturated 0.16 g
Unsaturated 0.45 g

Nucleic Acids
RNA 287 mg
DNA 63 mg

Phytonutrients
Chlorophyll 160 mg
Chlorella Growth Factor 16%
Lutein 18 mg

Vitamins
A (Beta-Carotene) 1.3 mg
B1 Thiamin 13 mcg
B2 Riboflavin 19 mcg
B3 Niacin 2170 mcg
B6 Pyridoxide 83 mcg
B7 Biotin 30 mcg
B8 Inositol 11.7 mg
B9 Folate 94 mcg
B12 23.2 mcg
Vitamin D 14 mcg
Vitamin E 526 mcg
Vitamin K1 146 mcg
Vitamin K2 19.2 mcg
Total Vitamin K 165.2 mcg

Minerals
Calcium 27.4 mg
Iron 12.3 mg
Magnesium 23 mg
Manganese 391 mcg
Phosphorous 10 mg
Potassium 68.3 mg
Sodium 1.3 mg
Zinc 84 mcg

Amino Acids
Alanine 357 mg
Arginine 294 mg
Aspartic Acid 409 mg
Cystine 53.1 mg
Glutamic Acid 501 mg
Glycine 262 mg
Histidine 91.2 mg
Isoleucine 189 mg
Leucine 391 mg
Lysine 279 mg
Methionine 102 mg
Phenylalanine 229 mg
Proline 226 mg
Serine 185 mg
Threonine 222 mg
Tryptophan 99.2 mg
Tyrosine 174 mg
Valine 278 mg

No sugar
No dairy
No gluten
No caffeine
No chemicals
No metals/toxins

Keto, Paleo, Vegan

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IN SUMMARY

If nothing else, the coronavirus is teaching us we need to show our bodies, our communities and our environment more love and selfcare. Taking algae every day is the easiest, safest, most cost-effective way to do this. Your body will thank you. And so will Mother Earth.

WHAT DOES THE SCIENCE SAY ?

Decades of research has confirmed that the nutrients found in algae (including chlorophyll, phytonutrients, antioxidants, amino acids, vitamins, minerals etc.) build your immune system and have anti-viral properties. Noted below are a few of the thousands of these studies.

SCIENTIFIC REFERENCES

How Specific Nutrients or Algae Support the Immune System :

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5. How Nutrition Impacts the Immune System Pub Med- Vitamins D, E, Zinc https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6340979/ and PDF version https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6340979/pdf/fimmu-09-03160.pdf
6. Amino Acids support Immune Functioning by activating T cells, B lymphocytes, natural killer cells and macrophages. Pub Med https://www.ncbi.nlm.nih.gov/pubmed/17403271 PDF version https://www.cambridge.org/core/services/aop-cambridge-core/content/view/B1A9C1587A8602613F6447BA8404D8E1/S000711450769936Xa.pdf/amino_acids_and_immune_function.pdf
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17. Spirulina found to decrease stress hormone and increase immunity
https://pubmed.ncbi.nlm.nih.gov/28920419/

We hope this has helped explain the nutritional value of algae. Taking just a few algae tablets per day can help support your immune system. Algae does a lot of other things too but during these challenging times, the most important function it may offer is supporting your immune system. To purchase yours visit www.energybits.com. Be well.

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Real. Food.
100% algae

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*Please note : These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease. If you are pregnant, nursing, taking medication, or have a medical condition, consult your physician before using this product.

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