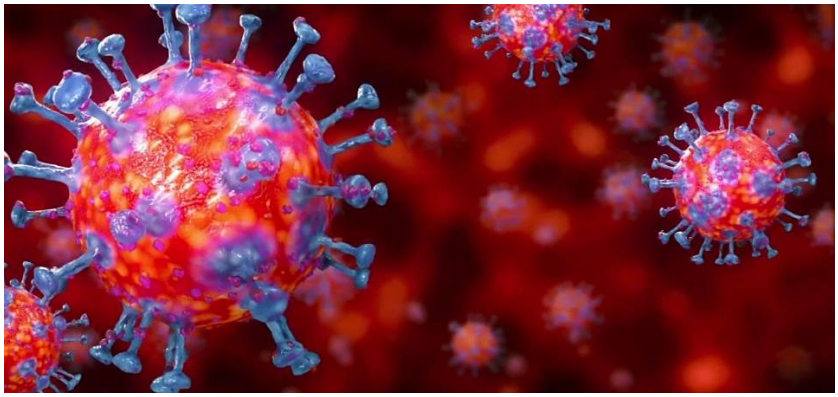
CORONAVIRUS (COVID-19) AND SPIRULINA ALGAE

The following information is not medical advice nor has it been evaluated by the Food and Drug Administration. The information and products discussed here are not intended to diagnose, treat, cure, or prevent disease. They are ONLY meant to inform you of the hundreds of years of research that exists and confirms the importance of nutrition for a strong immune system, the decades of research that confirm the health benefits of algae and the recent research about the COVID-19 so you can make an informed decision about how to protect yourself. All claims made here are backed by science and where possible, links to the science have been provided.

HOW COVID-19 VIRUS WORKS:

The COVID-19 is a virus that contains a single strand of RNA surrounded by a round shell and "tentacles" that protrude from the shell. In order for it to replicate itself, it needs a "host" cell whose DNA it can use so it invade your cells and uses YOUR DNA to do this.

To enter your cells, the COVID-19 uses its "tentacles" to identify "receptor cells" on the outside of your cell walls that it uses to "dock". Once it has landed on your cell, it transmits its virus RNA into your cell where it uses your cell's DNA to replicate itself. Once your cell is fill with the virus, your cell bursts so more of the virus RNA spreads. This cycle repeats itself and allows the virus to spread quickly.



Stopping or slowing the growth of the virus depends on a lot of things but primarily on how strong your immune system is. A strong immune system can identify and disarm/stop the virus BEFORE it has the chance to enter your cells. A weakened immune system may not be able to do this but it still may be able to identify and stop the virus AFTER the virus has invaded your cells. The way it does this is with special immune cells (invisible to you) that include Killer cells, T- cells, B-cells, macrophages white blood cells etc.

A severely weakened immune system may not be able to do either of these things which allows the virus to spread rapidly and unabated, causing so much damage that even medical intervention may not be enough to protect you from eventual organ failure. That's why you need a strong immune system.

To be strong, your immune system needs nutrients to build these immune cells. It gets these nutrients from the food you eat. If you don't eat nutrient-dense food, it can't operate optimally. Spirulina algae is the most nutrient dense food in the world with over forty vitamins and minerals including the anti-viral nutrients your immune system needs. That's why spirulina algae is ROCKET FUEL for your immune system.

.....

HOW COVID-19 ATTACKS YOUR RESPIRATORY SYSTEM:

1. Your lungs become infected and inflamed so they cannot get enough oxygen or remove carbon dioxide. They eventually become so damaged they fail.

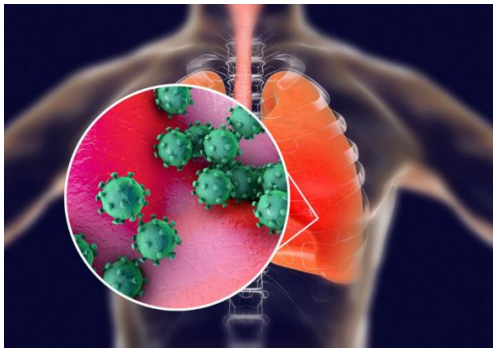
2. The virus appears to kick out the iron atom in your hemoglobin and replace it with itself. This can lead to three extremely dangerous and deadly results:

    a) The iron atom in your hemoglobin is what carries oxygen in your blood. When this iron atom is removed (and replaced by the virus), your hemoglobin can't carry oxygen any longer to your body and this can lead to organ failure. Many COCVID-19 patients die from cardiac arrest because their heart was deprived of oxygen. https://www.nature.com/articles/srep24253

    b) When the virus invades the blood, it changes the pH of the blood so it is more acidic. This causes the hemoglobin to clump and make it even more difficult to carry oxygen to the organs and contribute to cardiac arrest. https://www.ossipinskyhealthacademy.com/blog/2017/06/26/acidic-ph-cells-aggressively-clump-together/

    c) When the virus forces the iron atom out of the hemoglobin, the iron atom doesn't disappear. It remains in the blood stream but since it is no longer safely INSIDE the hemoglobin, but is OUTSIDE of it in your blood plasma, it becomes a dangerous, caustic, acidic molecule that damages everything it comes into contact with – most notably your lungs. This free iron appears to one of the main causes of lung damage. https://www.elsevier.com/about/press-releases/research-and-journals/recent-research-points-the-way-toward-a-practical-nutraceutical-strategy-for-coping-with-rna-virus-infections-including-influenza-and-coronavirus

Scientific studies have shown that nutrients in spirulina algae can help protect you.



HOW SPIRULINA ALGAE CAN HELP YOU

1. Builds a Strong Immune System
2. Helps Stop Growth of Viruses including coronavirus COVID-19

A strong immune system will help protect you from getting the COVID-19 virus or stop it. But to have a strong immune system, you need good sleep, moderate exercise, minimal stress, good water and most importantly, good nutrition.

YOUR IMMUNE SYSTEM

Your skin and mucous membranes are the first line of defense against COVID-19, bacteria, viruses and other foreign substances. These not only act as a physical barrier, but and they also contain immune cells. For example, when your skin has a cut, harmful bacteria or microbes can enter and invade your body if your immune cells weren't triggered so they could destroy them.

When a virus like COVID-19 invades your body, the mucosal surfaces will similarly attempt to identify, remove and kill it using antibodies. If that's not possible like with COVID-19 (which is new so we don't have these antibodies), it will then use other proteins and mechanisms to attempt to kill the virus (T cells, Killer Cells, macrophages etc.). But in order to make all of these killer cells, T cells, macrophages and anti-bodies, your immune system needs "anti-viral" nutrients that it gets from your food. If you do not give your body these nutrients, you will have a weakened immune system which means it may not be able to defend you from pathogens like COVID-19. Spirulina algae tablets are a fast, easy, safe, nutrient-dense plant-based food that provide your body with the optimal, anti-viral nutrition your immune system needs

Your immune system defends your body from COVID-19 or infection using two main systems

1. **VISIBLE** Immune Organs (visible to you)
2. **INVISIBLE** Immune Cells that operate without you knowing Invisible to you)

Visible Immune System:

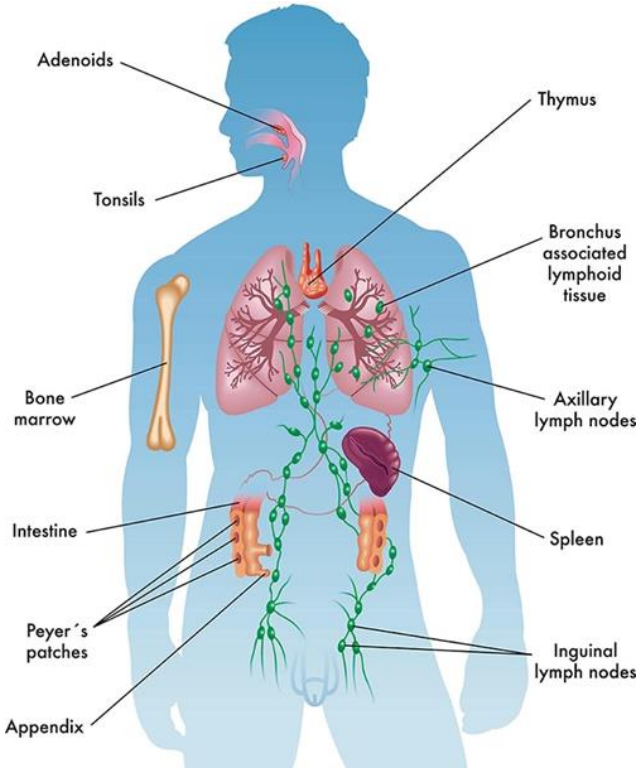
This includes your skin, respiratory system, lymphatic system and most importantly – your mucosal membranes.

The mucosal membranes are the initial contact between your immune system and the outside world and are found in your GUT, (stomach, intestines, digestive tract) as well as in your urogenital tract and your respiratory system (lungs, mouth, nose and throat).

Your Visible Immune System includes:

- skin
- bone marrow
- the thymus, a gland in your upper chest
- white blood cells, which fight infection
- lymph, a milky fluid carrying white blood cells
- the lymphatic system, a network of tiny vessels that carry lymph around the body

- lymph nodes, small lumps in your groin, armpit, around your neck
- the spleen, an organ under your ribs on the left
- mucous membranes, like the lining of the inside your stomach, mouth, lungs, nose



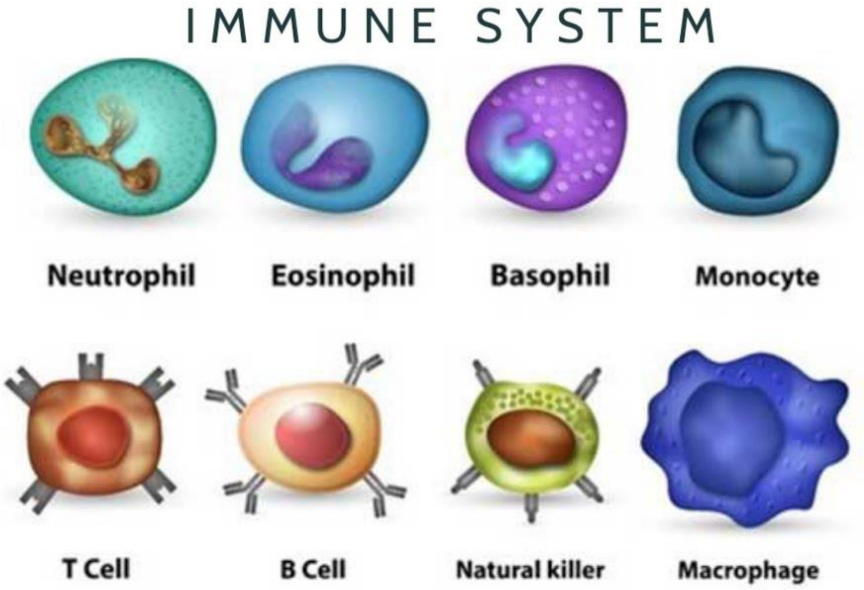
What do your mucosal membranes do?

1. They are the link between your visible and invisible immune system
2. They determine the correct immune response and create the correct cells to defeat, kill and remove any viruses or pathogens it finds.

When a virus like COVID-19 is detected, your immune system is alerted and releases appropriate defense mechanisms to identify, destroy and remove it. The mechanisms it uses include antibodies, white blood cells, T cells, Killer Cells and other proteins. But only if it is strong enough and has the nutrients it needs to make all of these cells to defend you. A weakened immune system can be caused by many things including a diet that is missing the critical anti-viral nutrients it needs to defend you.

Invisible Immune System:

The invisible part of your immune system is the part you can't "see" but it is the most critical part. It includes all the specialized cells your immune system creates to defend you. These cells identify, kill and remove pathogens and viruses like the COVID-1 using T-cells, B-cells, killer cells, white blood cells, macrophages, antibodies etc. But in order for your immune system to create these cells, it must first have the anti-viral nutrients it needs to make them. That's your job - to eat food that gives your immune system what it needs to defend you. Or simply take spirulina algae tablets like ENERGYbits® every day.



Approximately 80% of your immune system is in your gut. This is because your gut is where the food you eat is converted into antibodies, T cells, B-cells, Killer Cells etc. so your immune system can defend you. If you want a strong immune system, you need to provide it with the nutrients it needs to do its job. Or simply take spirulina algae tablets every day https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2515351/

.

SPIRULINA HELPS STRENGTHEN YOUR IMMUNE SYSTEM

A strong immune system needs immune-building nutrients like amino acids, chlorophyll, phytonutrients, vitamins A and B, minerals like iron and zinc. ALL of these immune-building nutrients and forty more are found in algae - the most nutrient dense food in the world (according to NASA). That's why spirulina algae tablets (and chlorella algae) tablets are a safe, easy source of immune support nutrition.

Algae is NOT a supplement – it is a food crop that has been grown in Asia for over fifty years. You can purchase spirulina algae tablets almost anywhere but you need to be careful which brand your purchase because none are grown as safely or carefully as ENERGYbits. We are algae experts. We sell nothing else. Our Founder/CEO Catharine Arnston is also a recognized nationally expert in algae nutrition and is a sought-after speaker at hundreds of wellness podcast and conferences every year. We are trusted for spirulina and chlorella algae's safety, purity, nutrient-density and efficacy. We hope you will trust us too.

Since algae is a food, not a supplement, your body absorbs all of its nutrients quickly and easily (unlike supplements which are made in manufacturing plants from extracts that your body doesn't recognize or absorb well). Algae is so nutrient dense and has so much protein in it, in 1974 the United Nations declared spirulina algae the answer to world hunger and NASA says 1 gram of algae has 1,000 times more nutrition than any other fruit or vegetable. 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."

energybits
add more life to yours one bit at a time

When you take algae tablets every day, you don't need a multi-vitamin (which your body doesn't absorb well anyway) nor do you need to spend hours shopping, cooking or cleaning vegetables to get the concentrated immune-building nutrients found in algae. Simply swallow or chew a handful of tablets each day and you're done. They will help protect and save your time, money and **immune system.**

Nutrients Necessary for a Strong Immune System

(all found in spirulina algae tablets)

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

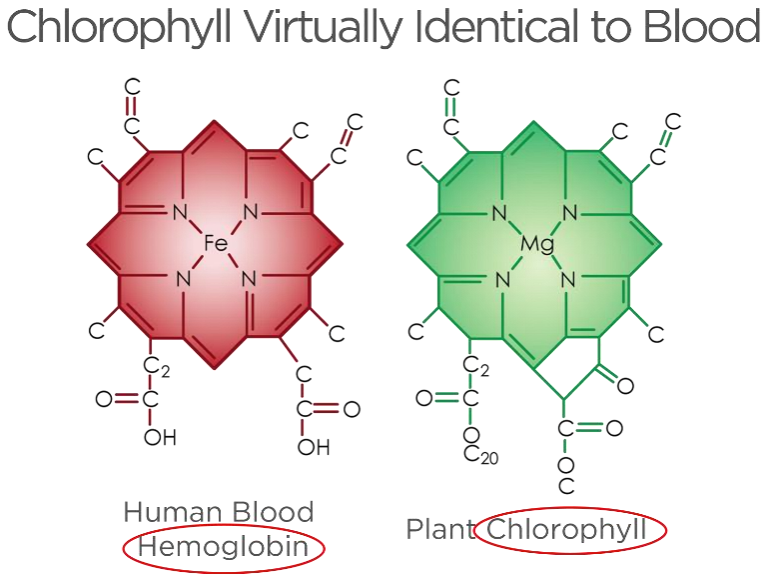
Amino Acids [6,7, 8] activates T cells, cytokines, B cells, natural killer cells and macrophages

Chlorophyll [10, 13] builds white blood cells and red blood cells, reduces oxidative stress, reduces inflammation, kills bacteria, absorbs carcinogens, prevents anemia, builds immune system

Chlorophyll:

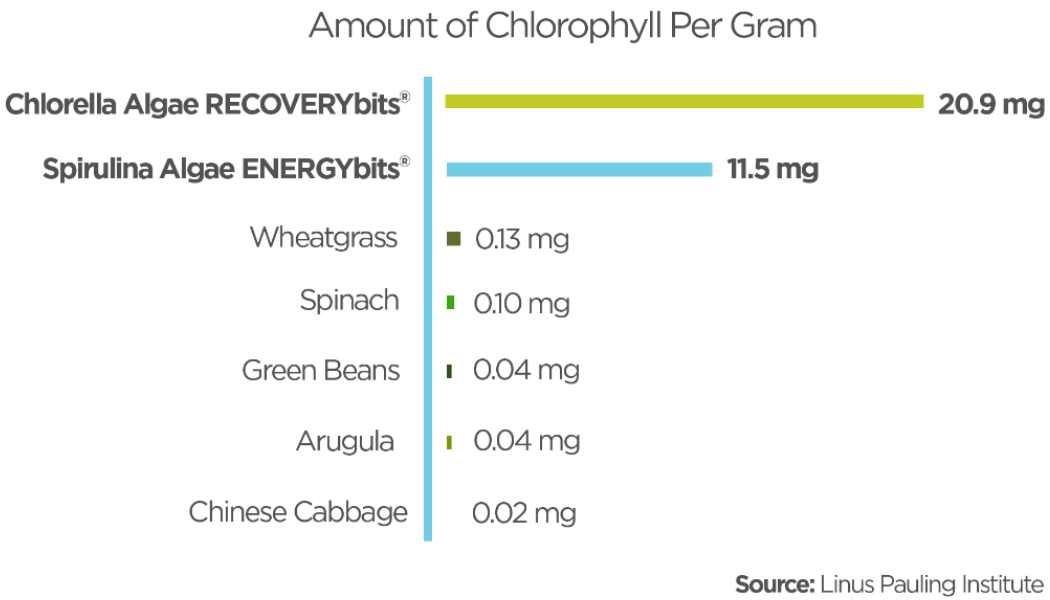
Chlorophyll is quite possibly the most important nutrient found in algae and proven to build the immune system. Chlorophyll is the pigment that makes plants green and is the main reason why your mother told you to "eat your greens" She was right.

1. Chlorophyll is so important to your health and immune system that during WW II if there wasn't enough blood for blood transfusions the injured were given liquid chlorophyll instead and it helped them recover just as fast. The reason is simple. **The chemical composition of chlorophyll is virtually identical to hemoglobin** (see illustration below) so it helps you recover. Algae has the HIGHEST CONCENTRATION OF CHLOROPHYLL In the world – 250 times more than spinach!



energybits
add more life to yours one bit at a time

Algae has Highest Chlorophyll



Source: Linus Pauling Institute

2. Chlorophyll stimulates the bone marrow which is responsible for building white blood cells as a critical part of a healthy immune response. Reduced white blood cells can cause a weakened immune system, opening the door for viral infections and diseases including COVID-19.
https://benefitsofchlorophyll.com/#benefit09
https://visuals.energybits.com/articles/NASA-quote-spirulina-benefits-nutrition.pdf

3. Chlorophyll has been used to treat a wide range of inflammatory conditions from arthritis to pancreatitis. Its anti-inflammatory powers can be attributed to its potent antioxidant properties. These antioxidants help to scavenge free radicals, relieving inflammation and reducing the symptoms that come with it. Years of research have confirmed the protective effects of chlorophyll. A 2012 study found that chlorophyll was able to protect cells from oxidative damage by counteracting harmful free radicals, oxidative stress and inflammation.
https://pubmed.ncbi.nlm.nih.gov/22943759/

4. Chlorophyll has also been shown to increase the excretion of toxins, especially a specific type known as aflatoxin B1. Aflatoxins are poisonous and have been known to cause cancer, but chlorophyll can prevent these toxins from wreaking havoc in our body. Chlorophyll has also been shown to reduce the bioavailability of carcinogens to make them harder to absorb in the body, prevent damage to biomarkers, and even prevent the formation of tumors in animal studies
https://pubmed.ncbi.nlm.nih.gov/19952359/

5. Chlorophyll has strong antimicrobial powers that can work to prevent the growth of bacteria and fungus including candida albicans. Chlorophyll also promotes wound healing by inhibiting bacterial growth.
https://www.researchgate.net/publication/43335937_Antimicrobial_activity_of_chlorophyll-based_solution_on_Candida_albicans_and_Enterococcus_faecalis

6. Chlorophyll also has been used to treat or prevent anemia because its molecular structure is so similar to the hemoglobin in red blood cells. The chlorophyll stimulates bone marrow and white blood cells at the same time it increases the production of red blood cells which together reduce symptoms of anemia.
   https://pubmed.ncbi.nlm.nih.gov/27049084/

Scientific References on How Spirulina Helps Support Immune Function:

1. Spirulina Proven to Provide Immune Support for Elderly
https://www.nature.com/articles/cmi201076.pdf

2. Spirulina Builds Immune System and Increases Killer Cells
https://www.sciencedirect.com/science/article/pii/S1567576901001667?via%3Dihub

3. Spirulina Boosted Immune System and Macrophages
https://pubmed.ncbi.nlm.nih.gov/11962722/

4. Spirulina found to decrease stress hormone and increase immunity
   https://pubmed.ncbi.nlm.nih.gov/28920419/

5. Spirulina has anti-viral properties
https://pubmed.ncbi.nlm.nih.gov/9593452/

6. Spirulina found to have anti-viral properties
https://pubmed.ncbi.nlm.nih.gov/8893054/

7. Spirulina anti-inflammatory
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2907180/

SPIRULINA HELPS STOP VIRUSES LIKE COVID-19

(scientific references provided at the bottom of this section)

Spirulina (and chlorella) algae tablets quickly and safely give you the nutrients your immune system needs to help protect you from viruses like COVID-19. Scientific studies have also confirmed that spirulina can help prevent or stop viruses including coronavirus. Noted below are just a few of the many scientific studies that reported these findings.

Contents lists available at ScienceDirect

Progress in Cardiovascular Diseases

journal homepage: www.onlinepcd.com

SOURCE: https://www.sciencedirect.com/science/article/pii/S0033062020300372

Nutraceuticals have potential for boosting the type 1 interferon response to RNA viruses including influenza and coronavirus

the profound antioxidant and anti-inflammatory effects observed when spirulina, phycocyanin (the prominent spirulina protein incorporating PCB as a chromophore), or PCB itself are administered in rodent models of human pathology.[11,13] Hence, ingestion of spirulina or of spirulina extracts enriched in PCB may have potential for boosting type 1 interferon response in the context of RNA virus infection.

In light of the foregoing, administration of spirulina (or a spirulina extract enriched in PCB), a phase 2 inducer (such as ferulic acid, lipoic acid, or sulforaphane), *N*-acetylcysteine, selenium, and high-dose glucosamine, in adequate doses, might be expected to help prevent and control RNA virus infections by amplifying the signaling functions of TLR7 and MAVS in evoking type 1 interferon production.

Source: https://visuals.energybits.com/articles/spirulina-provides-protection-from-viruses-reduces-lung-inflammation.pdf

Nutrition and Dietary Supplements

Dovepress
open access to scientific and medical research

Open Access Full Text Article

REVIEW

The beneficial effects of spirulina focusing on its immunomodulatory and antioxidant properties

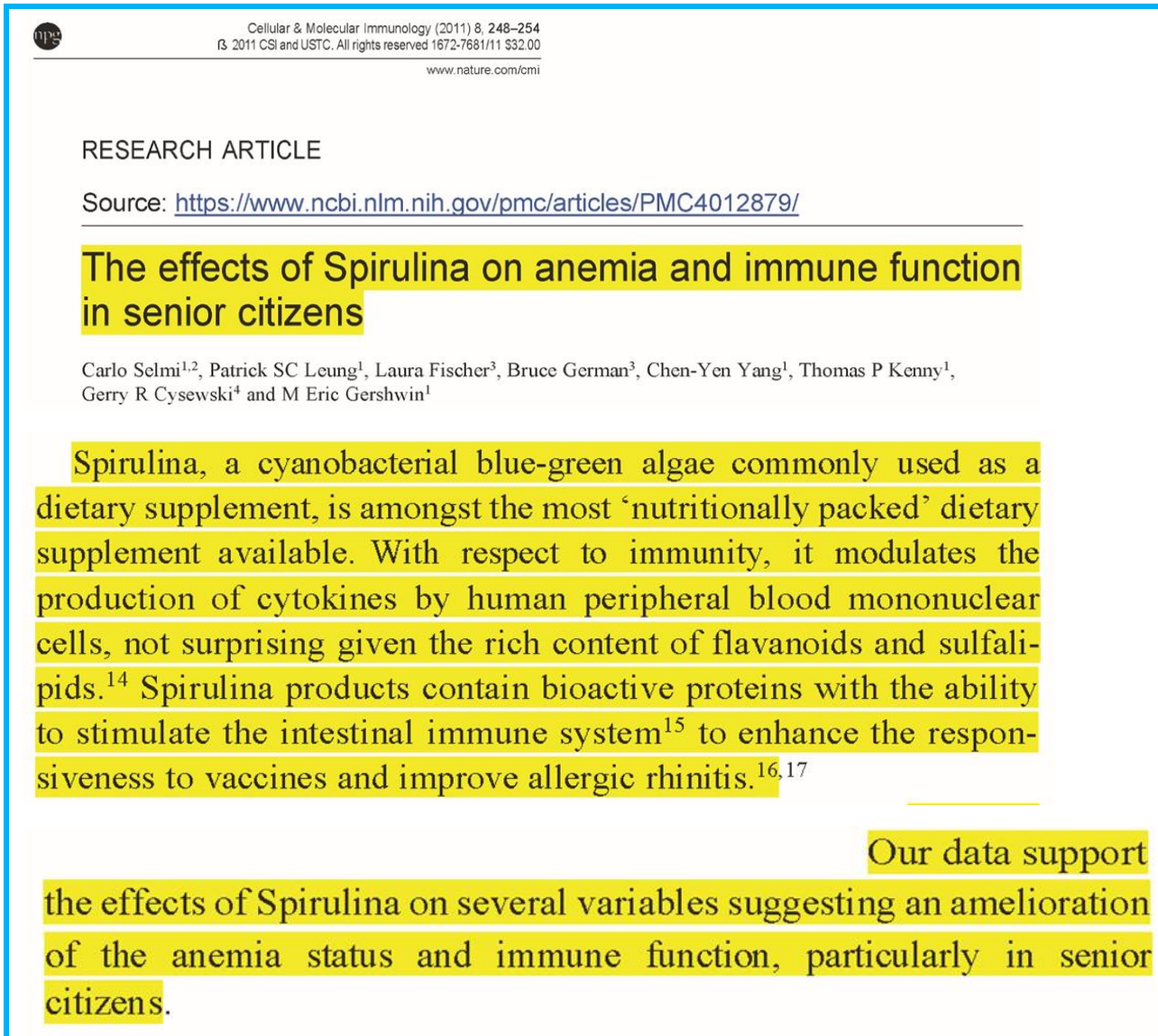
source: file:///C:/Users/User1/Downloads/290710-NDS-9838-the-beneficial-effects-of-spirulina-focusing-on-its-immunomo_072910.pdf

Immunomodulatory properties

The aqueous extract of spirulina was found to have a major impact on the immune system by increasing the phagocytic activity of macrophages, stimulating the NK cells. It also played a role in the activation and mobilization of T and B cells due to its stimulatory effects in the production of cytokines and antibodies.[28] It also was beneficial to the transplant community as this extract causes suppression of CD28 and co-stimulation of human T cells to the extent of the same immunosuppressive effect produced by drugs like cyclosporine which have a lot of side effects.[29] The photosynthetic pigment phycocyanin has a part to play in modulating the immune system.

Spirulina can enhance components of the mucosal and systemic immune system as it activates the cells of innate immune system.

Source: https://visuals.energybits.com/articles/spirulina-supports-immune-system-nasa-quote.pdf



Cellular & Molecular Immunology (2011) 8, 248–254
© 2011 CSI and USTC. All rights reserved 1672-7681/11 $32.00
www.nature.com/cmi

RESEARCH ARTICLE

Source: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4012879/

The effects of Spirulina on anemia and immune function in senior citizens

Carlo Selmi[1,2], Patrick SC Leung[1], Laura Fischer[3], Bruce German[3], Chen-Yen Yang[1], Thomas P Kenny[1], Gerry R Cysewski[4] and M Eric Gershwin[1]

Spirulina, a cyanobacterial blue-green algae commonly used as a dietary supplement, is amongst the most 'nutritionally packed' dietary supplement available. With respect to immunity, it modulates the production of cytokines by human peripheral blood mononuclear cells, not surprising given the rich content of flavanoids and sulfalipids.[14] Spirulina products contain bioactive proteins with the ability to stimulate the intestinal immune system[15] to enhance the responsiveness to vaccines and improve allergic rhinitis.[16,17]

Our data support the effects of Spirulina on several variables suggesting an amelioration of the anemia status and immune function, particularly in senior citizens.

Source: https://visuals.energybits.com/articles/spirulina-improved-immune-function-of-senior-citizens.pdf

Additional Scientific Research on Spirulina And Coronavirus Found Similar Results:

1. Studies showed that spirulina disrupted coronavirus replication **which helped prevent the growth of coronavirus**

2. Studies showed that spirulina inhibited viral plaque formation **which helped reduce the virus coronavirus growth**,

3. Studies showed that spirulina resulted in higher survival rates when spirulina algae was given to influenza virus-infected mice. Those given spirulina **had higher survival rates** compared to controls.

4. Studies showed that spirulina helps stop the clumping of the hemoglobin (hemagglutination) that is caused by the coronavirus. This clumping prevents oxygen from being carried in the blood which can lead to organ failure. Spirulina was found to intercept this process **thus inhibiting the virus infection process.**

5**.** Studies showed that spirulina helped prevent the virus from entering cells during the early stages when the corona virus is looking for cells to attach to. By inhibiting this process **spirulina helped to prevent the viral attachment which helped to slow/stop the coronavirus from growing.**

6. Studies showed that **spirulina helps prevent the COVID-19 virus from getting into the hemoglobin.** When the virus enters blood, it causes the hemoglobin to clump (agglutination) so it can't carry oxygen. This deprives organs like the heart from being properly oxygenated and can lead to heart failure:

> *These results indicate that Spirulina extract likely affects influenza virus directly, rather than priming host cells to prevent viral infection. Considering that the Spirulina extract primarily inhibited the replication of influenza viruses at an early stage, we believed that hemagglutinin could be a potential target for the Spirulina extract, as this surface glycoprotein of the influenza virus is responsible for viral attachment and adsorption during the early phase of infection. Therefore, we conducted a hemagglutination inhibition assay using guinea pig red blood cells (RBCs). The* ***hemagglutinin on influenza viral surfaces can agglutinate RBCs*** *through sialic acid-linked cell surface receptors, while virus particles can also bind to RBCs via hemagglutinin-sialic acid receptor interaction to form distinctive lattices that can be clearly observed in round-bottom microplates. By contrast, RBCs will precipitate to form a spot in the absence of agglutination. We found that concentrations of 0.78 mg/mL or higher of* ***Spirulina extract interrupted viral hemagglutination*** *for the influenza A/WSN/33(H1N1) virus, and similar results were observed for the influenza A/TW/3446/2002(H3N2) and B/TW/70555/2005 viruses as well (Fig. 4e).* ***This indicates that Spirulina extract can inhibit influenza virus strains by affecting hemagglutination at an early stage of virus infection*****.** **Source:** https://www.nature.com/articles/srep24253 .

8. Studies showed that Spirulina has many anti-viral nutrients and abilities that competitively bind on the enzyme site the virus needs for replication. This **can help stop the virus from proliferating** and hold down the fort until your own immune system can eliminate the virus from your system

9. Studies showed that Spirulina is so alkaline it **helps restores blood pH to its neutral state of 7.365** which helps the blood oxygenation to improve. Red blood cells deliver oxygen to your cells and organs. **Proper pH of red blood cells prevent the hemoglobin from clumping**. The iron atom in hemoglobin is what carry's the oxygen in your blood to your tissue and organs.

   There is a proportional relationship between oxygen and pH level. As the pH level lowers (becomes more acidic), the affinity of oxygen in hemoglobin molecules decreases (i.e. makes it more difficult to be carried). Like all viruses, the COIVID-19 virus is acidic and thrives in acidic environments in your body/blood (i.e. where oxygen is low). It has been suggested that as the body and blood become more alkaline from the spirulina, more oxygen is once again able to be carried and delivered to organs and lungs to improve recovery. And as they do, the strength of your immune system improves so it can fight the virus. (Note: the pH scale goes from 0 to 14, with 7 being neutral. Below 7 is acid and above 7 is alkaline. The blood, lymph and cerebral spinal fluid in the human body are designed to be slightly alkaline at a pH of 7.365.)

   In 1931 Dr. Warburg won his first Nobel Prize for proving cancer is caused by a lack of oxygen in cells. He stated "*The cause of cancer is no longer a mystery. We know it occurs whenever any cell is denied 60% of its oxygen requirements*." Poor oxygenation is usually associated with a buildup

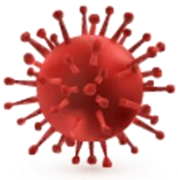
of carcinogens and toxins within and around cells, which blocks and damages cellular oxygen respiration. Clumping of blood cells prevents them from carrying oxygen which leads to cellular mitochondria becoming damaged by lack of oxygen, leading to continued growth of the virus.

Blood clots and heart attacks are also caused by the blood pH becoming too acidic which causes them to clump. This prevents oxygen from being carried to organs like the heart and caused the blood vessels to be blocked.
https://www.ossipinskyhealthacademy.com/blog/2017/06/26/acidic-ph-cells-aggressively-clump-together/

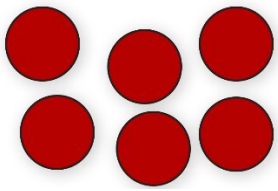
10. Spirulina contains a high amount of iron which is the atom that caries oxygen in your blood. By providing bio-available iron, **spirulina improves the ability of your hemoglobin to carry oxygen** in your blood to your tissue and organs. Approximately 75% of the iron you consume goes to your hemoglobin. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3999603/.
https://selfhacked.com/blog/increase-decrease-red-blood-cells/

The Impact of Clumped Hemoglobin (red blood cells)

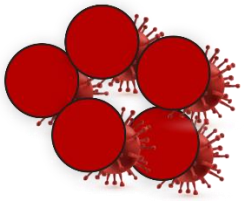
As mentioned above, the COVID-19 virus appears to knock out the iron atom in your hemoglobin and insert itself. This prevents your blood from carrying oxygen to your organs and causes your blood to clump (called agglutination). This clumping leads to additional problems including clogged blood vessels and the stoppage of blood circulation.



COVID-19 VIRUS



HEALTHY HEMOGLOBIN



CLUMPED HEMOGLOBIN

When the hemoglobin in your blood cells clump (agglutinate) they crack and this causes the iron atom to leak out into the body. The COVID-19 virus not only appears to cause this but it then inserts itself into the blood's hemoglobin and replaces the iron atom with itself. This causes the hemoglobin to clump more and also contributes to the following life-threatening outcomes:

A) The blood can no longer carry oxygen to organs like the heart because the iron atom in the hemoglobin has been removed (iron is what carries oxygen). This can lead to cardiac arrest

B) The blood clumps which inhibits blood circulation and oxygenation of organs like the heart. This can lead the cardiac arrest

C) The iron atom that was kicked out of the hemoglobin now circulates freely. And since the iron is no longer safely protected in the hemoglobin, it's is acidity becomes corrosive and damaging to the body. The freely circulating acidic iron enters the lungs, where it causes so much damage the lungs can't function so they become clogged with carbon dioxide. This

causes the immune system to go into overdrive which leads to even more damage and a "cytokine storm". Eventually the lungs become so overwhelmed they may collapse.

11. Spirulina is the safest food in the world, not just the most nutrient dense food in the world. The Dietary Supplements Information Expert Committee (DSI-EC) of the United States Pharmacopeial Convention (USP) assigned a Class A safety rating for Spirulina maxima and S. platensis- the safest rating a food can ever have. https://www.tandfonline.com/doi/abs/10.1080/10408391003721719

Scientific References Documenting How Spirulina Algae Helps Fight Viruses like Coronavirus COVID-19

Spirulina reduces the inflammation in the lungs
https://www.elsevier.com/about/press-releases/research-and-journals/recent-research-points-the-way-toward-a-practical-nutraceutical-strategy-for-coping-with-rna-virus-infections-including-influenza-and-coronavirus

Anti inflammatory benefits of spirulina for lungs
https://www.liebertpub.com/doi/abs/10.1089/jmf.2007.621

Spirulina reduces oxidative stress
https://journals.physiology.org/doi/full/10.1152/ajpregu.00648.2011

Spirulina found to prevent replication of virus
https://www.sciencedirect.com/science/article/pii/S0033062020300372?via%3Dihub#bb0120

https://chemrxiv.org/articles/COVID-19_Disease_ORF8_and_Surface_Glycoprotein_Inhibit_Heme_Metabolism_by_Binding_to_Porphyrin/11938173

https://www.thailandmedical.news/news/must-read-research-reveals-that-covid-19-attacks-hemoglobin-in-red-blood-cells,-rendering-it-incapable-of-transporting-oxygen--current-medical-protoco

IN SUMMARY:

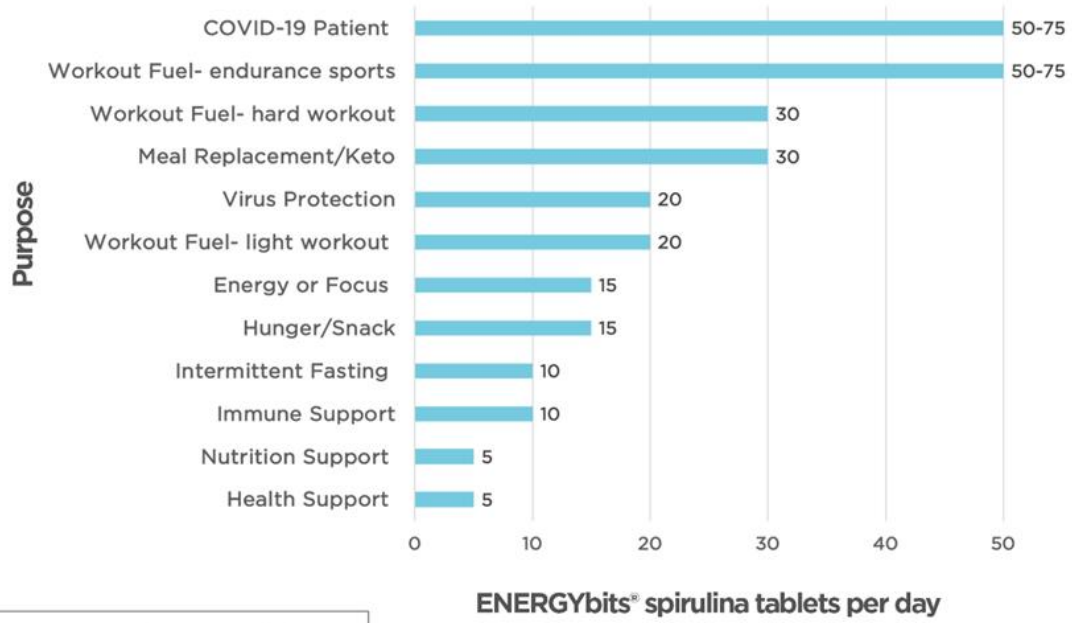
We hope this has helped you understand how your immune system works and why it needs specific anti-viral nutrients to defend you. ENERGYbits® and BEAUTYbits® spirulina algae tablets contain these nutrients (plus forty more) and are a safe, pure, nutrient-dense food that is effortless to take. Just swallow, chew a few every day or add them to smoothies or trail mix. And you're good to go.

Algae is ROCKET FUEL for your Immune System. See below for recommended amounts to take on a daily basis. Thanks for loving your body to bits with algae. Purchase yours at www.energybits.com

energybits
add more life to yours one bit at a time

Note: ENERGYbits ®spirulina algae is carefully grown in triple filtered spring mountain water, air dried without high heat (which preserves the enzymes and nutrients) and pressed into tiny tablets called “bits” because they are nutrient dense “bits of food”. We do not add binders or fillers so they are 100% algae. We conduct third-party lab tests at FDA-approved labs to guarantee it is safe, toxin free and nutrient-dense. Our commitment to purity, safety and quality is why ENERGYbits® algae tablets are the only brand of algae trusted and sold by doctors, nutritionists, homeopaths, naturopaths and spas nationwide.

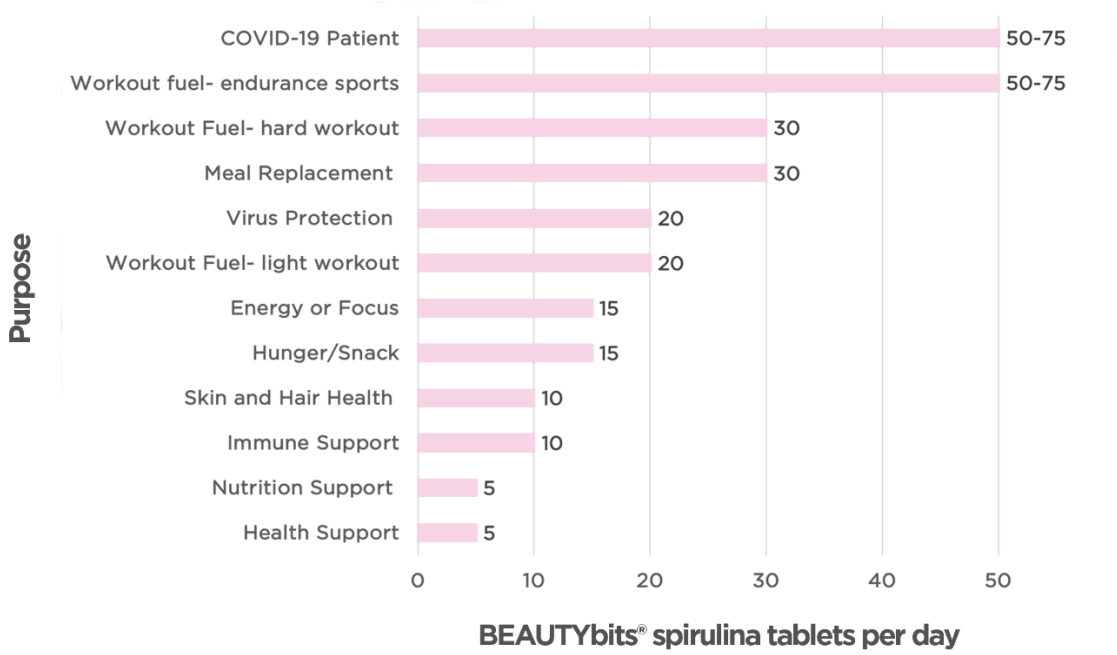
Adult Daily Spirulina Tablet Intake Recommendations



Take more or less as needed.
Algae is food, not a supplement or drug.

energybits
add more life to yours one bit at a time

Adult Daily Spirulina Tablet Intake Recommendations



Take more or less as needed.
Algae is food, not a supplement or drug.

ADDITIONAL SCIENTIFIC REFERENCES

How Specific Nutrients in Algae Support the Immune System:

1. Deficiency in Vitamin A found to increase respiratory infections in children. Pub Med https://www.ncbi.nlm.nih.gov/pubmed/6496388/

2. Vitamin A and D are essential for building the immune system Pub Med https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2906676/

3. Vitamins and Trace Minerals that are required for Immune Functioning. A, B6, B12, C, D, E and folic acid and the trace elements iron, zinc, copper and selenium work in synergy to support the protective activities of the immune cells. Finally, all these micronutrients, with the exception of vitamin C and iron, are essential for antibody production.: Pub Med https://www.ncbi.nlm.nih.gov/pubmed/17922955

4. Vitamins and Minerals Essential for Immune Functioning-. Military Strategies for Sustainment of Nutrition and Immune System in the Field
https://www.ncbi.nlm.nih.gov/books/NBK230968/
https://www.ncbi.nlm.nih.gov/books/NBK230964/pdf/Bookshelf_NBK230964.pdf

5. How Nutrition Impacts the Immune System Pub Med- Vitamins D, E, Zinc
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6340979/
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

7. Amino Cells critical for Immune System, T Cells, B cells etc. Pub Med https://www.ncbi.nlm.nih.gov/pubmed/2105184

8. Amino Acid Glutamine is essential for Immune System including lymphocyte proliferation , cytokine and macrophage production. Pub Med https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6266414/

   https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6266414/pdf/nutrients-10-01564.pdf

9. Chlorella Found to Boost Immunity by Increasing Natural Killer Cells

   https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3511195/

   https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3511195/pdf/1475-2891-11-53.pdf

10. Chlorophyll reduces oxidative stress and extends longevity https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4830245/

11. Chlorella Boosted Immune System and Cytokines Pub Med https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5537823/

12. Spirulina Boosted Immune System in Elderly https://www.nature.com/articles/cmi201076.pdf https://www.nature.com/articles/cmi201076.pdf

13. Chlorophyll Used for Wound Healing in the 1940's https://www.americanjournalofsurgery.com/article/0002-9610(47)90287-0/pdf

14. Microalgae – An Alternative to Supplementation for Humans https://reader.elsevier.com/reader/sd/pii/S2213453018301435?token=D9B16D85627CA2A7C26F7585B509E5E9EF5D08A4C8396EB7288F8B33ACFCCAF8860DF503FC1A1441A390F0CE6414E36A file:///C:/Users/User1/Downloads/1-s2.0-S2213453018301435-main.pdf

15. Spirulina Builds Immune System and Increases Killer Cells https://www.sciencedirect.com/science/article/pii/S1567576901001667?via%3Dihub

16. Spirulina Boosted Immune System and Macrophages https://pubmed.ncbi.nlm.nih.gov/11962722/

17. Spirulina found to decrease stress hormone and increase immunity https://pubmed.ncbi.nlm.nih.gov/28920419/

18. Spirulina confirmed to have anti-viral properties https://pubmed.ncbi.nlm.nih.gov/9593452/

19. Polysacharide in spirulina found to have anti-viral properties https://pubmed.ncbi.nlm.nih.gov/8893054/

20. Algae is the food of the future- according to the British Broadcasting site (BBC) https://www.bbc.com/future/bespoke/follow-the-food/the-green-sludge-that-could-transform-our-diets.html

energybits
add more life to yours one bit at a time

To purchase bags of ENERGYbits four brands of algae tablets please visit www.energybits.com

1. ENERGYbits® are 100% Non-GMO Spirulina algae. ENERGYbits® give you steady energy, physically and mentally. With 64% protein, B vitamins and 40 other nutrients, these bits boost your immune system, performance, energy, focus, satisfy hunger.

2. BEAUTYbits® are 100% Non- GMO Spirulina algae. BEAUTYbits® have a high concentration of protein (64%). A handful can fill you up for hours for just one tiny calorie per tab but 64% protein and forty nutrients. This algae boosts your immune system and skin and hair health and is referred to as “ingestible beauty”. BEAUTYbits and ENERGYbits are exactly the same, just packaged differently

3. RECOVERYbits® are 100% Organically Certified Chlorella algae. RECOVERYbits® help build your immune system, remove toxins including lead, mercury or radiaton, help prevent virus and colds too. Highest concentration of chlorophyll and RNA/DNA in the world supports longevity and anti-aging

4. VITALITYbits® are 50% Chlorella algae and 50% Spirulina algae. VITALITYbits® help improve your vitality thanks to their blend of two algae: spirulina for energy and chlorella for immune support and anti-aging. A great food-based replacement for your multi-vitamin. Simplicity and vitality all in one.

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