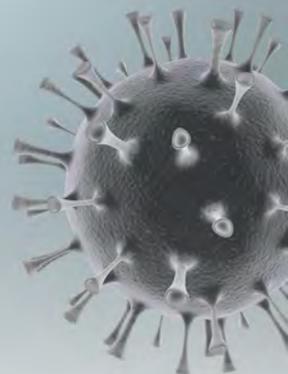
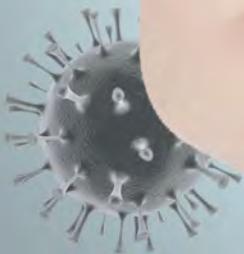


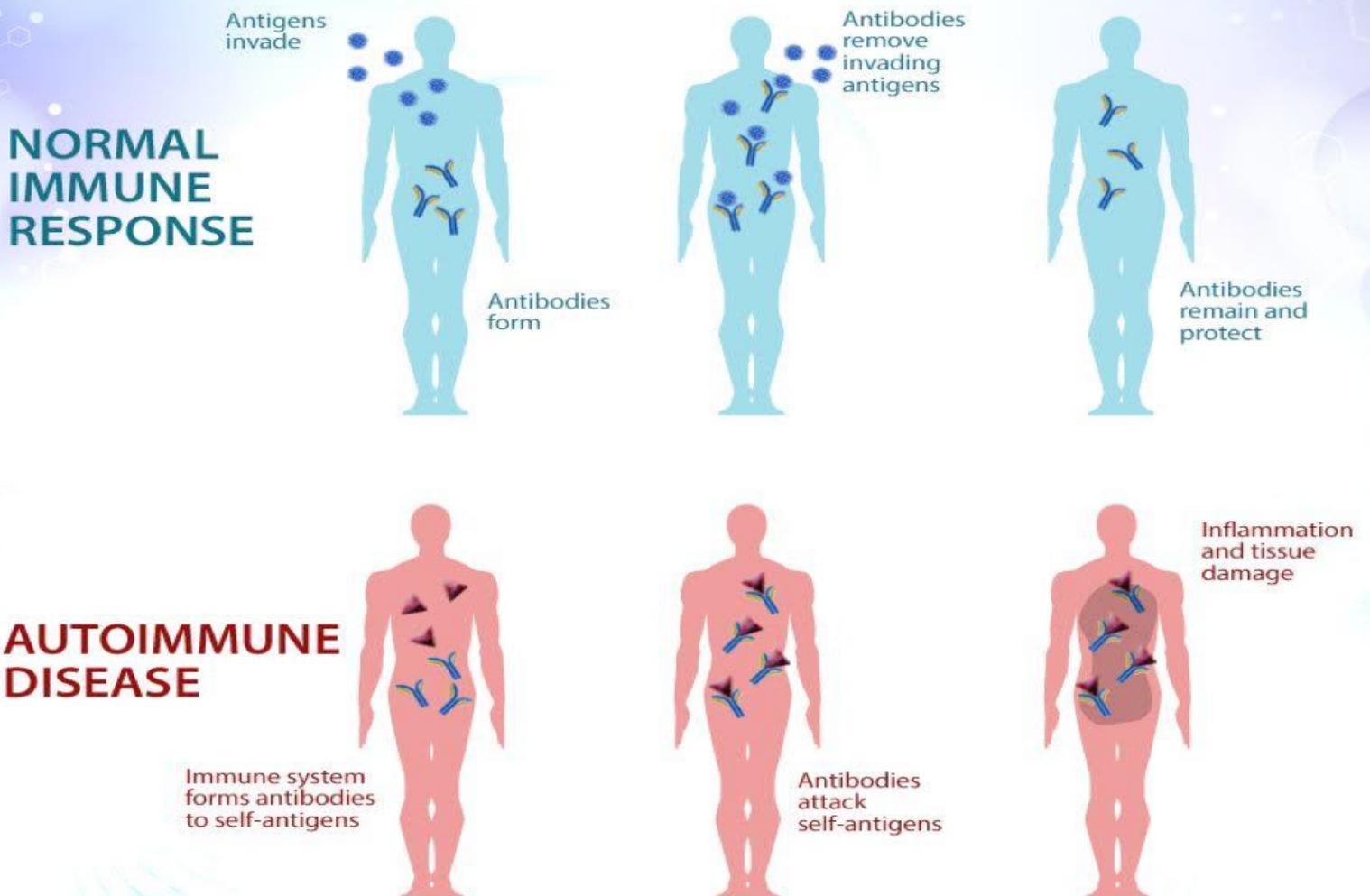
The 3 Most Important Nutrients for
Healing Autoimmunity



The 3 Most Important Nutrients For Healing AutoImmunity

AutoImmunity is a condition where the body's own immune system attacks itself. In these cases, the body perceives that it is under a "high alert," and uses very little discretion on what it attacks. We have an infographic on the next page with all the tissues the body may attack in an autoimmune scenario.

This is analogous to a police force that is running around blind-folded with sirens blaring. They cannot accurately see or hear, so they fire all over the place and hit many unintended targets.



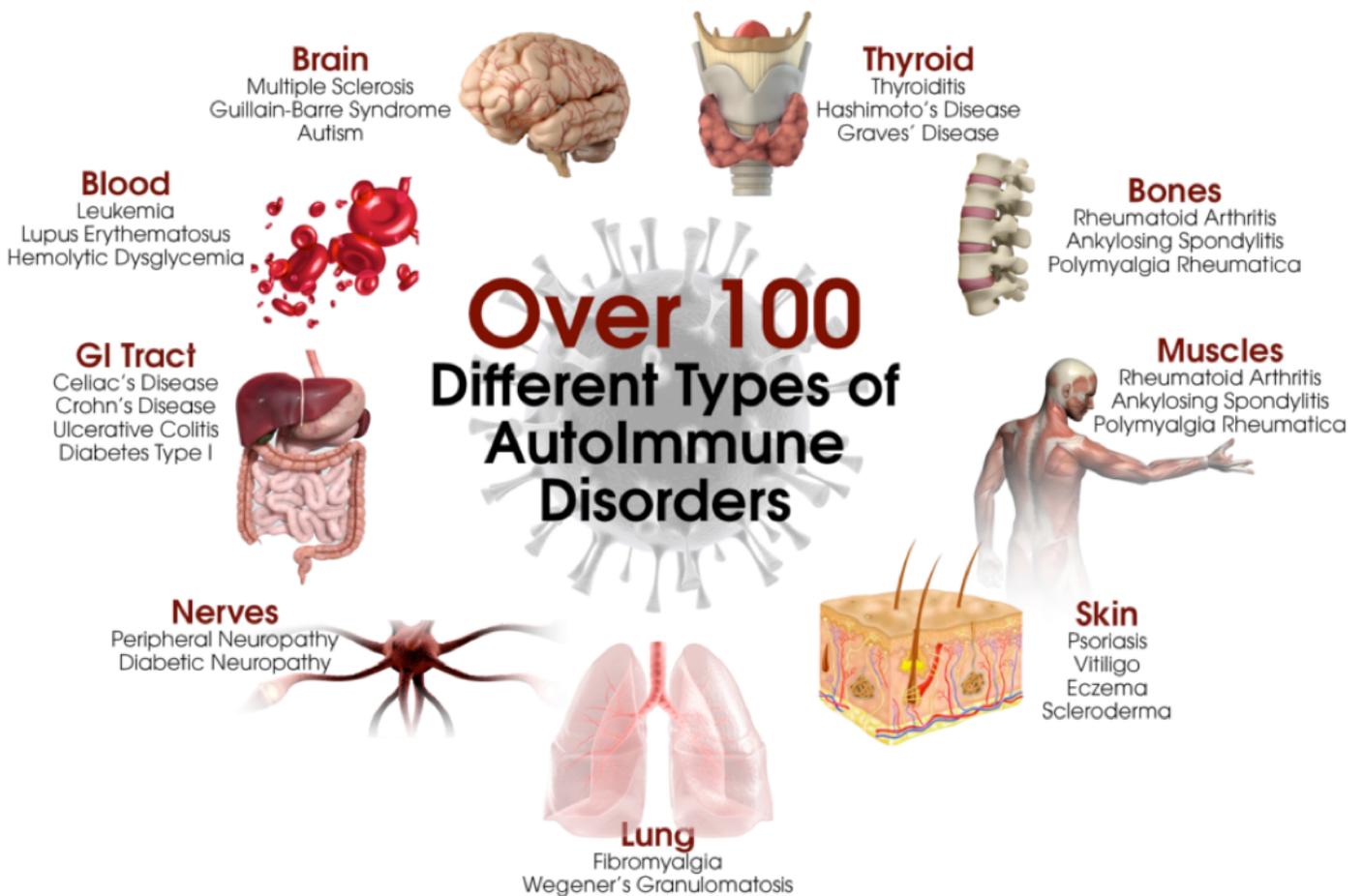
Chronic Inflammation vs. AutoImmunity

Chronic inflammatory processes and autoimmunity have a lot of similarity but also some differences. Autoimmunity is usually associated with an overall chronic inflammatory process. However, one could have a chronic inflammatory condition without having autoimmunity.

A chronic inflammatory process is when some sort of trigger (pollen, food particles, etc) initiates a strong inflammatory process that causes collateral damage to other tissues of the body such as the gut lining, blood vessels, the sinuses, the lungs, the joints, etc. This would create conditions such as inflammatory bowel disease, heart disease, allergies, asthma, osteoarthritis, etc.

An autoimmune condition is when the bodies white blood cells produce a specific antibody to target a particular tissue or enzyme within a tissue of the body. For example, in Hashimoto's thyroiditis the body will produce an anti-body to attach certain enzymes such as thyroid peroxidase or thyroglobulin that work to produce thyroid hormone.

AUTOIMMUNE DISEASES



The big difference between chronic inflammatory conditions (CIC) and autoimmunity is that in CIC's we have tissue damage resulting as an indirect effect of the inflammatory process. While in autoimmunity we see tissue damage as a direct effect of the inflammatory process.

If you are suffering with chronic inflammation and/or autoimmunity than it is imperative to improve the coordination of the immune system and you can do this through diet, lifestyle and supplementing with certain Immune Toning nutrients.

These nutrients that have a very strong effect at toning the immune system. This improves the overall coordination of the immune attack so they we prevent the development of bacterial, viral or parasitic infections while also keeping inflammation and autoimmunity under control. We call these super nutrients the **Immune Toners**.

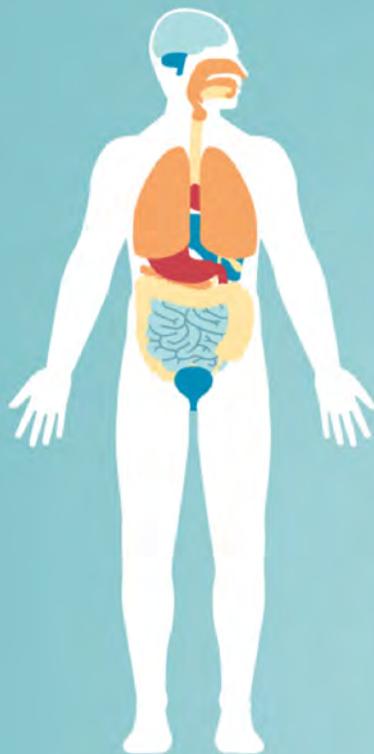
While I could list quite of few things that impact your immune system, I have found these 3 key nutrients to be commonly deficient in individuals suffering with autoimmunity and chronic inflammation.

- 1) **Vitamin D3**
- 2) **Zinc**
- 3) **Glutathione**

In the pages below, I will explain these key nutrients, how we become deficient and the best food and lifestyle strategies to support your levels of these vital immune toners.

How Inflammation Affects the Body?

"Inflammation is at the root of practically all known chronic health conditions"



BRAIN

Pro-inflammatory cytokines cause autoimmune reactions in the brain, which can lead to depression, autism, poor memory, Alzheimer's disease and MS.



CARDIOVASCULAR

Inflammation in the heart & arterial & venous walls contributes to heart disease, strokes, high blood sugar (diabetes) and anemia.



MUSCLE

Inflammatory cytokines can cause muscle pain and weakness. Can manifest as carpal tunnel syndrome, or polymyalgia rheumatica, to name a few.



BONES

Inflammation interferes with the body's natural ability to repair bone mass, increasing the number of fractures & leading to conditions like osteoporosis.



SKIN

Chronic inflammation compromises the liver & kidneys, resulting in rashes, dermatitis, eczema, acne, psoriasis, wrinkles & fine lines.



THYROID

Autoimmunity as a result of inflammation can reduce total thyroid receptor count and disrupts thyroid hormone function.



LUNGS

Inflammation induces autoimmune reactions against the linings of airways. Can result in allergies or asthma.



GI TRACT

Chronic inflammation damages our intestinal lining and can result in issues like GERD, Chron's disease and Celiac disease.



KIDNEYS

Inflammatory cytokines restrict blood flow to the kidneys. Complications like edema, hypertension, nephritis & kidney failure can result.



LIVER

Build-up of inflammation leads to an enlarged liver or fatty liver disease. Increased toxic load build-up in the body.

1. Vitamin D3

Individuals with low vitamin D3 levels (below 40 ng/ml) are at significant risk for developing chronic inflammation and auto-immunity (1).

Vitamin D is one of the most important immune system modulators. This means that it helps to coordinate the immune system to help it identify self vs non-self tissue. This is a HUGE FACTOR in autoimmunity and research has shown that people with autoimmunity are typically vitamin D deficient.



BENEFITS OF VITAMIN D

- ✓ Reduces Inflammation
- ✓ Reduces Auto-Immunity
- ✓ Improves Brain Function
- ✓ Reduces Cancer Cell Growth
- ✓ Improves Immunity
- ✓ Enhances Mood & Sleep
- ✓ Reduces Risk of Heart Disease



Best Food Sources of Vitamin D:

	1 Wild-Alaskan Salmon (cooked)	350 IU per 3.5oz serving
	2 Wild Mackerel (cooked)	345 IU per 3.5oz serving
	3 Sardines (canned in oil, drained)	250 IU per 1.75oz serving
	4 Albacore Tuna (canned)	200 IU per 3oz serving
	5 Egg Yolk	20 IU per yolk
	6 Beef Liver (cooked)	15 IU per 3.5 oz serving
	7 Swiss Cheese	12 IU per 1 oz serving

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Best Lifestyle Strategies:

The ideal amount of sun exposure should produce somewhere in the range of 10,000 – 20,000 IU of vitamin D3. This depends upon the amount of body parts exposed, the strength or angle of the sun and the color of the individual's skin.

This is the approximate amount of time each individual skin type needs of sun exposure to get the appropriate 10,000 – 20,000 IU considering that at least 60% of the body is exposed to sunlight. This would be equivalent to intentionally sun bathing. They should get this amount at least three times weekly in order to fully optimize vitamin D3 levels.

1. Approximate Sun Exposure Times:

Light skin = 15-20 minutes daily
 Medium Skin = 25-30 minutes daily
 Dark Skin = 40-45 minutes daily

2. **Natural Moisturizers:** Use coconut oil, aloe vera and/or green tea extract as a moisturizer before and after sun exposure for added anti-oxidant protection

Supplementation

If adequate sunlight is not available or attainable than supplement with 10,000 IU of vitamin D3 daily. If your levels are very low, under 30 ng/ml than I would recommend supplementing with 20,000 IU daily for 30 days and then dropping to 10,000 IU daily for 60 days and retest. Here are some Vitamin D supplementation principles:

- 1) Nutrient Balance:** Always take Vitamin D3 with a small amount of vitamin K2 (about 90 mcg for every 5,000 IU of D3) for optimal nutritional balance.
- 2) Take With Food:** Always take Vitamin D3 with food as it is fat soluble
- 3) Take Early in the Day:** Always take D3 earlier in the day as it is mildly stimulating.

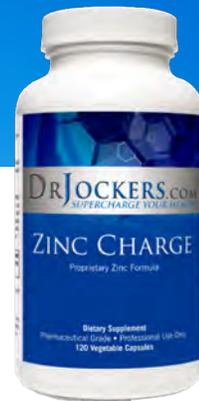


CLINICAL BENEFITS OF D3/K2 POWER

- ✓ Supports Healthy Digestion of Macronutrients and Enhances Nutrient Absorption*
- ✓ Supports Breakdown of Polysaccharides in Beans and Cruciferous Vegetables*
- ✓ Helps Support Pancreatic and Brush Border Enzyme Function*
- ✓ Supports Breakdown of Lactose*

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2. Zinc



Experts predict that almost 2 billion people which is roughly 25% of the world's population is deficient in zinc (2). Zinc is a foundational mineral and one of the most common deficiencies in the world.

Zinc is essential to human and animal growth patterns and has an essential role in the development of hormones and immune molecules.

Most Common Reasons for Zinc Deficiency

- 1 Leaky Gut & Digestive Disorders
- 2 Medication usage (NSAIDs, Acid Blockers, Antibiotics, etc)
- 3 Poor Diet & Blood Sugar Imbalance
- 4 Chronic Stress
- 5 High Toxin Exposure



Depleting Our Zinc Stores:

When we have poor blood sugar signaling due to a diet that is high in sugar and carbohydrates we are unable to adequately absorb zinc. Individuals with leaky gut syndrome are often deficient in zinc from poor absorption.

Consuming high amounts of phytic acids in grains and legumes can adversely affect zinc levels. The regular use of non-steroidal anti-inflammatory drugs (NSAIDs) depletes zinc levels in the body as well. Here are the most common symptoms associated with a zinc deficiency.



Zinc is a mineral required by the body to support immune function and assist in various cellular activities.

ZINC DEFICIENCY SYMPTOMS

- Spots on Fingernails
- Low Energy
- Insomnia
- Infertility
- Loss of Taste or Smell
- Skin Rashes / Eczema
- Loss of Appetite
- Lowered Immunity
- Poor Memory
- Sinus Problems and Allergies
- Breast and Prostate Cancer
- Loss of Libido
- Frequent Colds or Flus
- Abnormal Hair Loss
- Slow Thinking Process

FUNCTIONS

- Decreases inflammation
- Suppresses abnormal tissue growth
- Boosts healthy Immune function
- Supports progesterone production, essential for balancing estrogen
- Reduces risk and development of any cancers including esophageal, bladder, breast, skin, prostate and head and neck cancers
- Supports the p53 Gene, which protects against breast and prostate cancer
- Inhibits angiogenesis
- Stimulates apoptosis

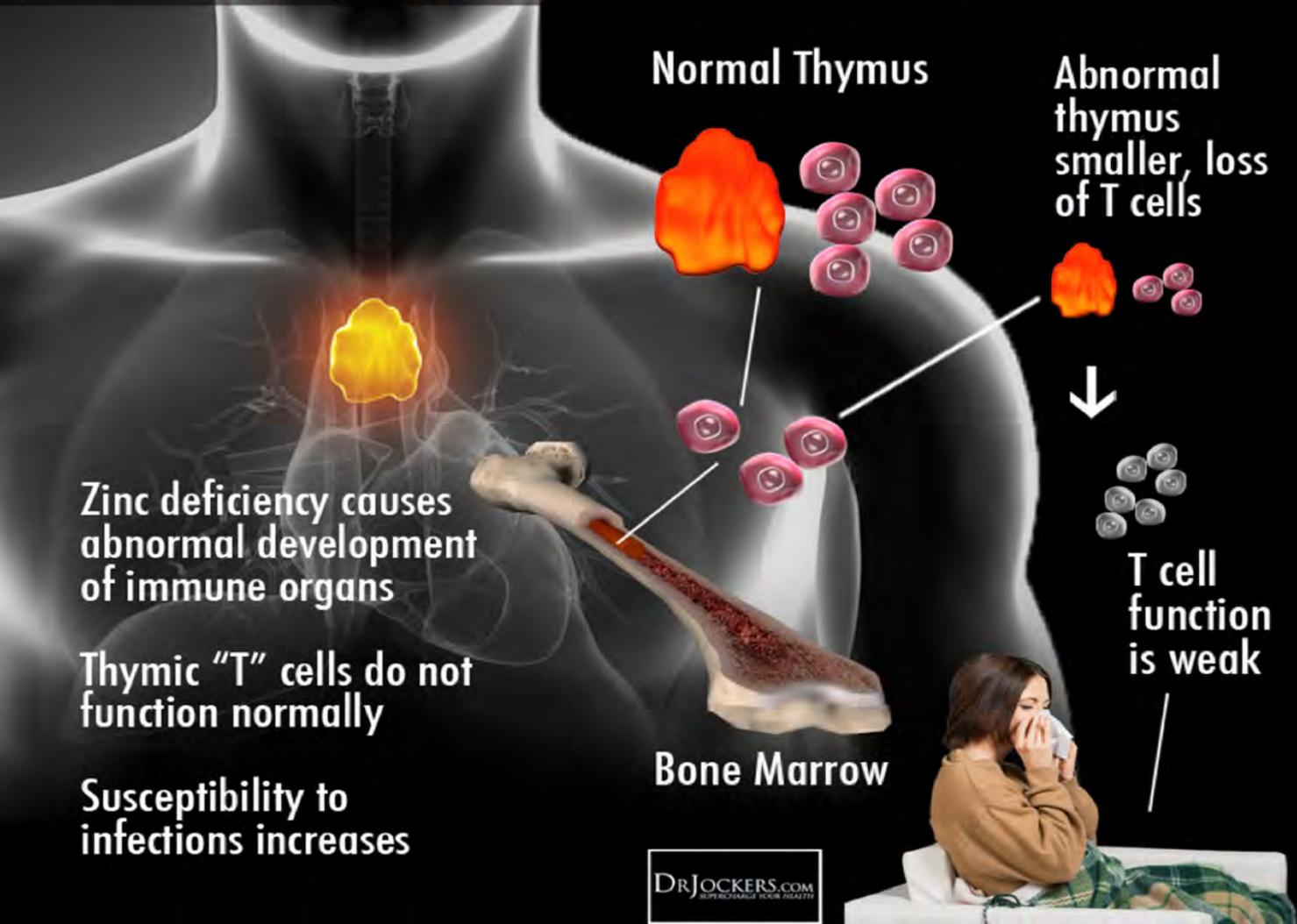


Zinc is Critical For Immune Health:

Zinc is critical for balancing the immune system and keeping the Th-1 and Th-2 systems in check. Zinc potentiates the action of the human cytokine interferon alpha, a protein that inhibits viral replication. This reduces immunological stress and improves the immune coordination, thus reducing inflammation and autoimmunity (3).

Zinc is also a very specific component of specific enzymes in the body including superoxide dismutase enzymes (SODs). SOD is a powerful intracellular anti-oxidant that protects the cellular genomics and prevents against viral infection and toxic debris accumulation within the cellular matrix.

HOW ZINC DEFICIENCY AFFECTS THE IMMUNE SYSTEM



How To Test

There are several ways to test your zinc levels through blood testing, including a [micronutrient test](#). If you are looking for a simple to do, home test, then I would recommend the zinc sulfate taste test.

All you do purchase a bottle of zinc sulfate liquid ([this a good one](#)), place a capful in your mouth, and observe the sensations in your mouth.

Below are the possible outcomes and indications:

You Notice No Metallic Taste: Zinc Deficiency

You Notice A Delayed Metallic Taste: Slight Zinc Deficiency

You Notice Slight Metallic Taste: Zinc Levels Are Adequate, But Could Be Higher

You Notice Very Strong Metallic Taste: You Likely Have Optimal Zinc Levels

Zinc Level		Taste Response
Optimal	zinc 30	An immediate, unpleasant, obviously adverse taste, at which the patient normally grimaces.
Adequate	Zn	A definite but not strongly unpleasant taste noted immediately and tends to intensify with time.
Quite Deficient	65.38	No taste noted initially, but develops in 10-15 seconds
Very Deficient		Tasteless or "tastes like water"

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Zinc Rich Foods:

The RDA for zinc is 8 mg per day for children and 12mg per day for adults, however, most functional nutritionists agree that dosages ranging from 20-30 mg for children and 30-60 mg for adults are much more effective. Here are the best food sources.

The Best Food Sources for ZINC

	1	Oysters	29.75 mg in 3.5oz
	2	Pumpkin Seeds (raw)	7.81 mg in 3.5oz
	3	Liver (cooked)	5.3 mg in 3.5oz
	4	Lamb (lean and cooked)	4.8 mg in 3.5oz
	5	Grass-fed beef (lean & cooked)	3.9 mg in 3.5oz
	6	Wild Caught Salmon (cooked)	3.1 mg in 3.5oz
	7	Chicken (lean & cooked)	1.7 mg in 3.5oz

Zinc Supplementation:

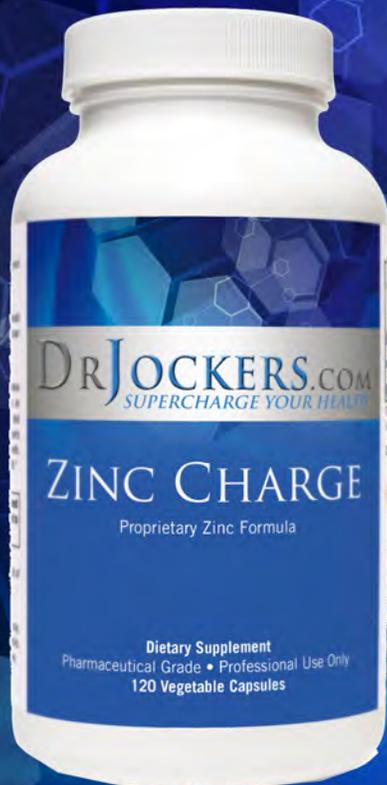
Individuals with chronic inflammation and autoimmunity can benefit greatly from 20-40mg of zinc supplementation. When it comes to quickly balancing zinc levels in the body, supplementation is very helpful. Just as with many supplements, zinc comes in many forms.

My favorite is zinc glycinate because it is what's called a chelated form. This is important because it is very easily absorbed by the body unlike many other forms.

The recommended daily allowance for zinc is between eight to eleven milligrams for most adults. However, for functional health most progressive nutritionists and doctors recommend between 20-40 mg/daily. You can use your results from the Zinc Sulfate taste test to determine how much supplemental zinc to consume.

If your results indicate a slight or complete zinc deficiency, 40 mg daily is likely more suitable for you while 20 mg daily may be more suitable for someone who is trying to maintain optimal levels.

The preferred form of zinc is in an amino acid chelate such as glycinate chelate. Take it with food. You can find my favorite form [here](#)



CLINICAL BENEFITS OF ZINC CHARGE

- ✓ Supporting Enzymatic Reactions and Protein Metabolism*
- ✓ Promoting Immune and Reproductive Health*
- ✓ Supporting Antioxidant Activity*
- ✓ Enhancing Overall Sensory Perception*

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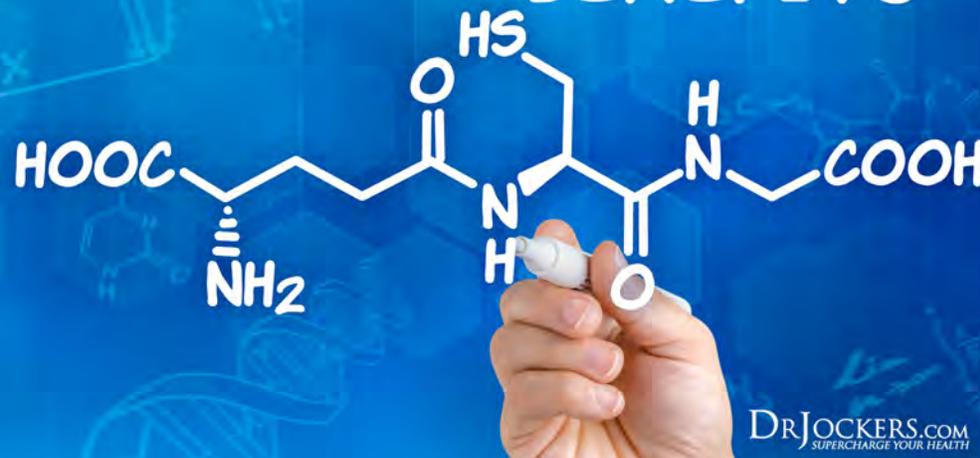
3. Glutathione

Glutathione is the major anti-oxidant within every cell of the body. It is critical for white blood cell (WBC) function as the WBCs encounter tremendous amounts of free radical and oxidative stress every second of the day. Low glutathione leads to chronic inflammation and in many cases; it will lead to auto-immunity (4).



All cases of autoimmunity should work to support their glutathione production. This can be done through diet, lifestyle and supplementation.

GLUTATHIONE BENEFITS



- ▶ INCREASES ENERGY
- ▶ SLOWS DOWN THE AGING PROCESS
- ▶ REDUCES MUSCLE & JOINT DISCOMFORT
- ▶ STRENGTHENS IMMUNE SYSTEM
- ▶ DETOXIFIES THE LIVER & CELLS
- ▶ IMPROVES MENTAL FOCUS & CLARITY
- ▶ IMPROVES QUALITY OF SLEEP
- ▶ IMPROVES THE SKIN
- ▶ ATHLETIC PERFORMANCE & RECOVERY

Top 10 Foods:

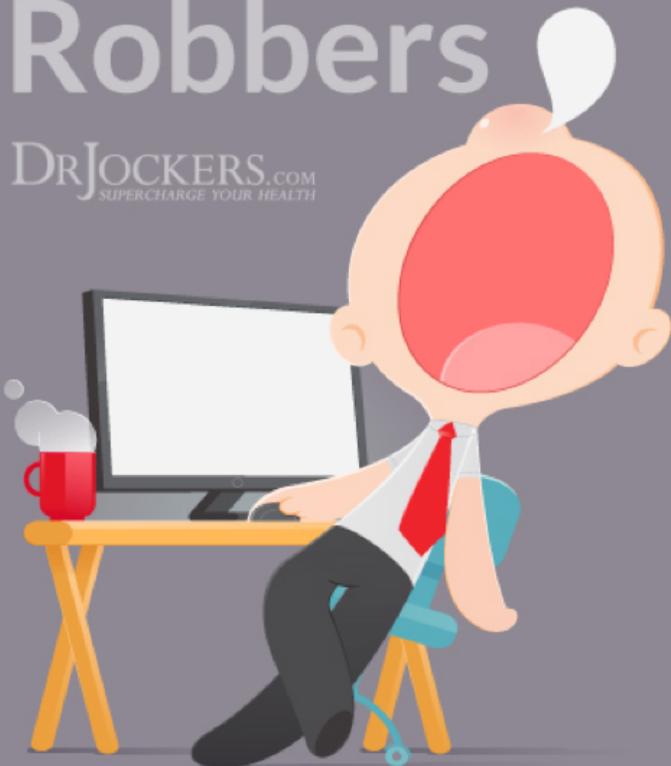
- 1) **Whey Protein:** Must be non-denatured and grass-fed
- 2) **Organ Meats:** Organic animal liver and heart (chicken, grass-fed beef, etc)
- 3) **Herbs** – Turmeric, ginger and milk thistle are best
- 4) **Fermented Vegetables** – sauerkraut, kimchi, fermented ginger
- 5) **Sprouts** – Broccoli sprouts, Kale sprouts, Watercress sprouts, Radish sprouts
- 6) **Sulfur Foods:** Garlic, onions, cruciferous veggies (kale, collards, broccoli, etc)
- 7) **Eggs:** Must be organic and ideally pasture-raised
- 8) **Animal Meat:** Organic and grass-fed animal muscle meat
- 9) **Avocados:** Not a lot of glutathione but a great dietary staple
- 10) **Spinach:** Use this in salads throughout the week.

Lifestyle:

- 1. Good Sleep:** Sleeping well helps the body to regenerate its glutathione stores. I recommend sleeping 8 hours per night and going to bed around 10pm for an optimal glutathione boost.
- 2. Good Exercise:** High intensity, short time period exercise helps to boost up glutathione levels. Doing a 10-15 minute high intensity workout such as sprint intervals or a squat, push-up and pull-down circuit without rest will boost glutathione levels. Give yourself a rest day in between workouts to effectively recover.
- 3. Deep Breathing:** Breathing in more oxygen helps to improve glutathione levels and cellular repair processes. Take 5 mins every 3 hours and do a deep breathing meditation.
- 4. Healthy Sun Exposure:** Sunlight exposure not only drives up vitamin D levels but it also boosts glutathione levels ([5](#)), helping the body to quench free radicals and coordinate immunity. Follow the healthy sun exposure tips under Vitamin D.
- 5. Avoid Alcohol, Smoking & Medications:** Alcohol, smoking and most medications deplete our glutathione stores. Avoid these if possible and follow a healthy lifestyle.

Energy Robbers

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- **Alcohol**
Depletes B1, Palate, B12, CoQ10, magnesium, potassium, vitamin C, zinc and glutathione
- **Excessive Caffeine**
Depletes B-vitamins, potassium, magnesium and zinc
- **Sugar and Refined Non-Fermented Flour Based Foods**
Depletes B-vitamins, calcium, magnesium and zinc
- **Medications**
Your medications may be depleting CoQ10, B-vitamins, magnesium, zinc or more
- **Sedentary Lifestyle or Overtraining**
Avoid extremes for high energy
- **Excessive Stress**
Depletes 13-vitamins, electrobrtes, vitamin C, zinc and many more
- **Dehydration**
Coffee/alcohol dehydrate, but water without electrolytes won't properly hydrate
- **Low Stomach Acid**
Results in poor absorption of iron, B12, dietary protein and zinc

Supplements

There are many supplements that act to boost up glutathione levels. I recommend glutathione precursors such as N-Acetyl Cysteine and Alpha Lipoic Acid as great everyday support.

In more tough cases where people are facing a health challenge rooted in chronic inflammation, using supplemental glutathione can be powerful. The problem with supplemental glutathione however is that most simply do not absorb through the gut barrier.

I recommend using an acetylated glutathione as it has been shown to survive the digestive tract and improve blood levels of glutathione. Additionally, the form I carry ([Super Glutathione](#)) is encapsulated with acid-resistant technology to support optimal absorption in the gut. Here are my favorites:

For Optimal Absorption I Like



Super Glutathione: This is an outstanding Acetylated Glutathione product for reducing anti-body formation, enhancing detoxification and improving resistance to stress by improving intracellular anti-oxidants and calming the immune system. You can find this [supplement here](#)

Normal Protocol: 2 caps – 1x daily (away from food)

Advanced Protocol: 2 caps – 2x daily (away from food)

For Advanced Detoxification I Like:



Thyro-Liver Protect: Powerful array of glutathione boosting anti-oxidants, selenomethione which helps to down regulate inflammation and anti-body formation and milk thistle which detoxifies the liver. Healthy thyroid hormone conversion is dependent upon healthy liver function. You can find this [supplement here](#)

Normal Protocol: 1 cap – 2x daily with or without food

Advanced Protocol: 2 caps – 2x daily with or without food

For Brain and Energy Support I Like:



Brain SuperCharge: This is a super-high quality glutathione boosting anti-oxidant that helps to improve adrenal output and improve circulation throughout the body. It acts to boost to enhance mental clarity and energy levels. You can find this [supplement here](#)

Normal Protocol: 2 caps – 2x daily with food

Advanced Protocol: 4 caps – 2x daily with food

For Powerful Anti-Inflammatory Support I Like:



Pro Omega CRP: This unique formulation combines concentrated omega-3s plus optimized curcumin and the potent antioxidants L-Glutathione and N-Acetylcysteine (NAC) to achieve complete functional support for long-term health. You can find this [supplement here](#)

Normal Dosage: Take 3 caps with food daily

Advanced Dosage: Take 3 caps with food – 2x daily



About Dr. David Jockers DNM, DC, MS

Dr. David Jockers is a doctor of natural medicine, a functional nutritionist and corrective care chiropractor. He currently owns and operates Exodus Health Center Kennesaw, Georgia and runs one of the hottest natural health websites in DrJockers.com with over 1 million monthly visitors.

Dr Jockers is a world-renowned expert in the area of ketosis and the ketogenic diet. He is the developer of the best selling [“Navigating the Ketogenic Diet” E-course](#) and the lead formulator of the revolutionary new product KetoEdge.

KetoEdge is a revolutionary product designed for the high achiever who wants to improve their health and get the most out of life. This proprietary formula of exogenous ketones, adaptogens, amino acids and phospholipids will help you get an extraordinary edge in life.

He has developed 6 revolutionary online programs with thousands of participants. These programs include E-guides, recipe guides, meal plans and video instructions including “The Sugar Detox,” “The Cancer Cleanse,” “Navigating the Ketogenic Diet,” “The Digestive Health Restoration Program,” “The AutoImmune Elimination Program,” and “The Super Brain Program.”

Dr Jockers is also a sought-after speaker around the country on such topics as weight loss, brain health, healing leaky gut, thyroid function, natural detoxification and disease prevention.



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