

# 5 Body Signs of Nutritional Deficiencies



by  
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## 5 Body Signs of Nutritional Deficiencies

Nutritional deficiencies gone undetected or without cause for alarm over long periods can lead to life altering health complications. Different areas of your body can present with signs signaling to you that something is physiologically wrong. Being in tune with your body's needs and aware of these signs of nutritional deficiencies are critical to whole body wellness.

Optimal vitamins and minerals are required by the body to properly eliminate toxins from the body, promote the health needs of your digestive system, cardiovascular system, metabolism and total body strength. Signs can be both external and internal and can be caused by the over consumption of one vitamin or mineral which can leave your body out of balance and deficient in another mineral.

Learn these 5 body signs of nutritional deficiencies so that you can better detect how your body is functioning and to enable you to heal faster if you notice something is wrong. These small signs today are fixable and can prevent you from long term health problems.

# SIGNS OF NUTRITIONAL DEFICIENCIES



## EYES

**Dark circles or bags under the eyes:** Allergies, food intolerances, dehydration  
**Poor night vision:** Vitamin A  
**Ruptured blood vessels in the eyes:** Vitamin C  
**Nearsightedness:** Vitamin D, Zinc  
**Pale lower eyelid:** Iron



## TEETH & GUMS

**Bleeding gums:** Vitamin C, Folate  
**Crowded teeth:** Calcium, Vitamin K



## HAIR

**Hair loss:** B2, B5, Biotin, D, Zinc  
**Dry hair:** Vitamin A, E, Omega 3, Protein, Iodine, Selenium, Biotin  
**Dandruff:** Selenium, Omega 3, Vitamin A



## NAILS

**Spoon shaped nails:** B12, Iron  
**White marks:** Calcium or Zinc  
**Pale nails:** Iron, Biotin  
**Brittle nails:** Calcium, Magnesium, Iodine  
**Cuticles tear easily:** Protein



## MUSCLES & JOINTS

**Muscle cramping:** Magnesium, B1, B2, B6  
**Twitching:** B1, B2, B3, B6, B9, Vitamin D, Magnesium, Calcium  
**Edema/Swelling:** B1, B6, Potassium  
**Numbness or tingling:** B12, B5  
**Clicking Joints:** Manganese



## MOUTH

**Canker sores:** B3, B12, Folate, Calcium  
**Cracks in the corner of the mouth:** B2  
**Weak tooth enamel:** Vitamin A, D, K, Calcium  
**Painful tongue:** B2, B3, Folate  
**Loss of smell or taste:** Zinc



## SKIN

**Bumps on the back of the arms:** Vitamin A  
**Dry or rough skin:** Vitamin A, E  
**Unusual nosebleeds:** Vitamin C  
**Easy bruising:** Vitamin C  
**Acne during menstruation:** B6  
**Dermatitis:** B2, B3, Biotin  
**Red stretch marks:** Zinc



## EMOTIONAL/MENTAL

**Depression:** B1, B5, Biotin, PABA  
**Dementia:** B1, B3, B12, Folate  
**Nervousness/Irritability:** B1, B6, B5  
**Insomnia:** B3, B5, B6, D3  
**Dizziness:** Iron, B2, B12

## Sign #1: Hair Loss and Skin Rash

Nutritional deficiencies affect a person's entire life. Not only do these nutritional deficiencies lead to a decline in physical health but many problems influence an individual's ability to maintain a quality work and social life.

Hair loss and face rashes may impact one's desire to feel comfortable in public settings and may be the first indicator that there is a hormonal imbalance or other physiological concern stemming from inadequate nutrient intake.

# 13 Hair Problems and What They Mean

- 1 Lack of Protein
- 2 A Lack of Vitamins and Minerals
- 3 Iron Deficiency
- 4 Dehydration
- 5 Lack of Quality Fats
- 6 Stress
- 7 Pregnancy or Menopause
- 8 Thyroid Issues
- 9 Polycystic Ovary Syndrome (PCOS)
- 10 Poor Sleep
- 11 Aging
- 12 Autoimmune Disorders
- 13 Low Stomach Acid and Leaky Gut

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## Related Nutritional Deficiencies

The body is unable to store the water soluble B7 vitamin called biotin. This makes it critical for a steady supply of biotin to be delivered to the body for optimal levels. Biotin is involved in several essential enzymatic reactions necessary for metabolism of glucose, amino acids and is especially critical in omega fatty acid metabolism (6, 7).

When biotin levels are depleted, a deficiency can result in alopecia or the loss of hair follicles in spots or patches on the head and body. Biotin deficiency is also associated with the appearance of an inflammatory **skin** condition characterized by a scaly, red rash around the body's orifices. Biotin deficiency has been shown to be a key player in individuals with chronic liver diseases and is a sign that should not go untreated especially during infancy and early childhood. (6, 7)

You can test for a biotin deficiency through an **organic acid test**

## The Comprehensive **Organic Acid** Test



### Remedy

Treatment for biotin deficiency lies in understanding a variety of potential causes and preventing the problem. Individuals who take anticonvulsant drugs and antibiotics are susceptible to biotin deficiency. Avoiding antibiotic treatment when possible is an essential strategy to maintaining biotin levels and supporting one's health. (7)

Other individuals with intestinal malabsorption complications such as those with leaky gut syndrome or another inflammatory gut disorder should consider treatment to repair the intestinal tract and improve the ability of cells to receive biotin and other nutrients.

Eggs contain a protein called avidin that when consumed raw inhibits the ability of the body to effectively absorb biotin. Cooking eggs destroys the avidin protein disabling it from affecting biotin absorption. Eat foods rich in biotin such as almonds, sweet potatoes, raspberries, nuts, mushrooms, avocados, cauliflower and wild caught salmon.

# BIOTIN OR VITAMIN B7 RICH FOODS



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## Supplements:

When working with clients I often see low biotin levels using a home urine test called the organic acid test. When biotin levels are low, I almost always see other B vitamins low such as B2, B6, folate and often B12. I use a methylated B vitamin supplement that has the preactivated forms of all the B vitamins to help improve the utilization rate of the nutrients.

For general maintenance a supplement with 300-400 mcg (100-133% of RDA) of biotin daily is great. For slight deficiencies of biotin, I use 1 cap of **B Strong** – 2 times daily, which provides 800 mcg all together, 266% the RDA. For advanced cases of extreme biotin deficiency I will suggest supplementing with 2500-5000 mcg daily.



## Key Benefits of B Strong

- ✓ Supports Carbohydrate Metabolism
- ✓ Balances Blood Sugar
- ✓ Supports a Healthy Nervous System
- ✓ Supports Adrenal/Immune Function
- ✓ Supports Cardiovascular Health
- ✓ Supports Healthy Mental Function and Mood

## Sign #2: Oral Health Problems

Oral health reflects the relationship you have with consuming proper nutrients in your diet considering many of vitamins and minerals are responsible at protecting the oral cavity. Nutritional deficiencies can manifest in various ways in the oral cavity and develop into more severe health challenges down the road. For instance, consider the following nutrients and their effects on supporting structures in the oral cavity: (1, 2, 3, 4, 5)

- *Vitamin A & D*: Supports tooth enamel formation and oral epithelium, aids in absorption of calcium and phosphorus deposit in teeth, assist in wound healing, supports salivary gland function
- *Vitamin C*: Fights infection, speeds up healing to stress on tooth cavity and gums, supports dentin and collagen formation, aids in calcium and iron absorption
- *Vitamin B2 (Riboflavin) & Vitamin B3 (Niacin)*: Aids in breakdown of carbs, proteins, fat and **ketone** bodies.
- *Vitamin B1 (Thiamine)*: Helps convert energy from carbohydrates
- *Vitamin B6*: Aids in synthesis of red blood cells and assist in metabolism of proteins, fats and carbs
- *Vitamin B12*: Supports gum health and wound healing
- *Iron*: Supports salivary gland function, supports tooth, tongue and gum structure, regulates inflammation and is associated with ability to taste
- *Zinc*: The role involving zinc's therapeutic effects on oral health is unclear but is an important mineral essential for a healthy immune response and prevention of



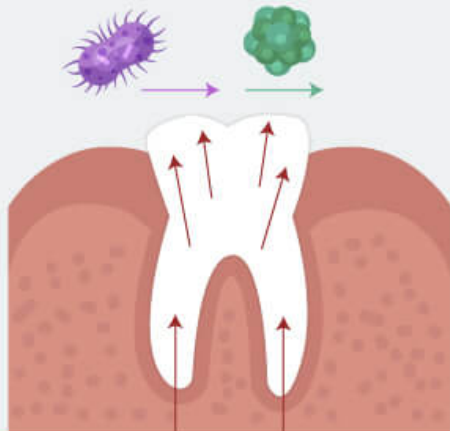
## complications to tongue

These symptoms of nutritional deficiencies are often associated with vegetarians who do not consume enough essential nutrients through diet because animal products contain many of the fat soluble vitamins needed to maintain oral health (1).

Individuals also susceptible to nutritional deficiencies in which symptoms manifest in the oral cavity include people with gastrointestinal diseases, [thyroiditis](#), autoimmune disorders, and people who consume proton inhibitor medications (3).

# The Formation of Dental Cavities

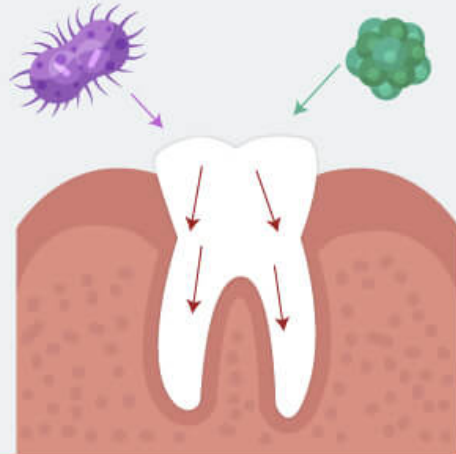
## STRONG TEETH



Blood carrying nutrients to the teeth

In a healthy body, vital fluids are constantly flowing outward to remineralise the tooth enamel.

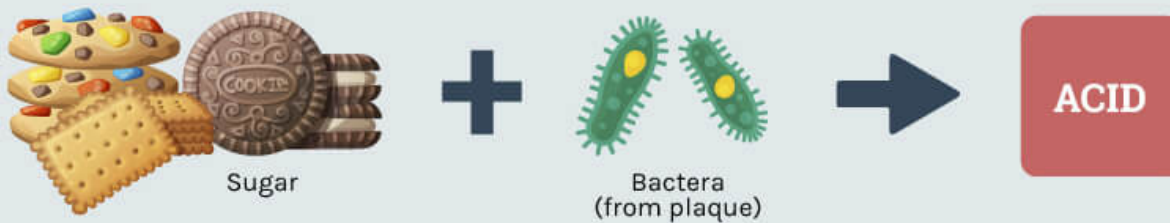
## WEAK TEETH



Bacteria from the mouth enters the bloodstream

In an unhealthy body, bacteria and toxins from the mouth flow into the enamel and cause cavities.

## DECAY EQUATION



Bacterial biofilms (plaque) develop and produce acid, which dissolves tooth enamel.





## Related Deficiencies

Common vitamin and minerals associated with poor oral health include a complex of **B vitamins** including riboflavin (B2), B12 and niacin (B3) as well as minerals like iron and zinc. The effects of nutritional deficiencies for each nutrient listed above can result in the following problems: (1, 2, 3, 4, 5)

- *Vitamin A & D*: Deficiency results in thinning enamel
- *Vitamin C*: Deficiency leads to bleeding gums and slow wound healing associated with gingivitis
- *Vitamin B2 (Riboflavin) & Vitamin B3 (Niacin)*: Deficiency causes inflammation of tongue, cracked lips, and burning or dryness of oral cavity
- *Vitamin B1 (Thiamine)*: Deficiency results in cracked lips and inflammation of mouth such as burning tongue or muscle weakness
- *Vitamin B6*: Deficiency can lead to burning sensation in mouth and periodontal disease
- *Vitamin B12*: Deficiency can cause inflammation in oral cavity, ulcers in the mouth and periodontal disease
- *Iron*: Deficiency causes inflammatory conditions of mouth, anemia, painful and burning sensation of tongue as well as dysfunction of the salivary gland
- *Zinc*: Deficiency can cause BMS or burning mouth syndrome



# NATURAL SUPPORT STRATEGIES FOR ORAL HEALTH



**Change Your Diet**



**Increase Your Vitamin D Intake**



**Limit Phytates in Your Diet**



**Drink Bone Broth**



**Probiotics Improve Oral Health**



**Drink Green Tea**



**Use High Quality Supplements**



**Reduce Sugar and Flour Intake**



**Develop a New Oral Care Regimen**


## Remedy

Nutritional deficiencies in any of these nutrients can result in weakened immunity and a higher risk for infection. Unless you have specific dietary restraints, excellent protein sources containing iron, zinc and B vitamins are found in wild caught salmon and tuna, free-range poultry and organic and free range sourced eggs.

Watch out for phytate containing foods such as grains, legumes and nuts. These phytic acids bind to minerals like zinc and iron and reduce our ability to absorb them. Soaking and sprouting nuts and seeds removes the phytic acids and enhances the bioavailability of the nutrients in the nut or seed. Additionally, be sure to use fermented foods which have a higher amount of B vitamins and good bacteria and enzymes to enhance the digestive process.

Add more vegetables to your diet high in **vitamin C** to boost the availability of iron into the body. Such foods include kale, cruciferous vegetables like cauliflower and broccoli, tomatoes, red bell peppers and citrus fruits like lemons and limes. Especially if you follow a specific diet, it is crucial to receive B vitamins from foods like avocados and dark leafy green vegetables.

The infographic below has some additional helpful nutrition tips to improve your oral health.



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### Top 9 Nutrients For Healthy Teeth and Gums

- **Vitamin D3**
- **Vitamin K2**
- **Magnesium**
- **Vitamin C**
- **BioFlavonoids**
- **Collagen or Bone Broth Protein**
- **Omega 3 Fatty Acids**
- **Trace Minerals**
- **Probiotics**

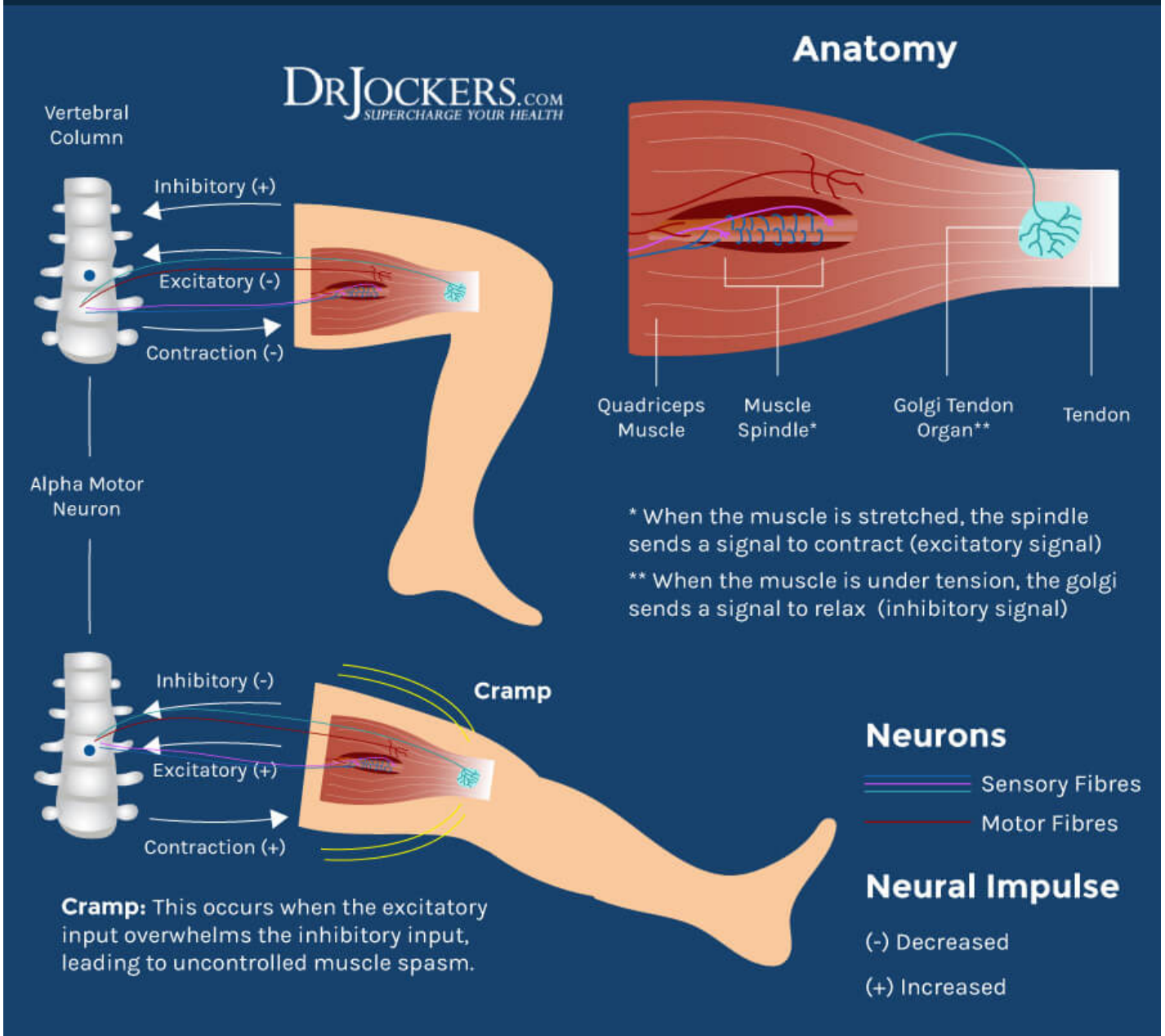
### Sign #3: Muscular Cramps in Legs

Frequent muscle cramping in the calves, arches of the feet and a stabbing sensation in your toes may be a sign that you are deficient in one of the critical nutrients that work in balance to control other ions.

You may just be working up a sweat more often than before which increases your loss of electrolytes. However, whether your **cramps** occur over short or long term periods this symptom should be treated accordingly.

# The Neuromuscular Theory of Muscle Cramps

New evidence suggests that cramps result when the balance between excitatory and inhibitory input to motor neurons in the spine is disrupted. Muscle fatigue and damage, family history and even pickle juice can affect this delicate balance.



## Related Deficiencies

Magnesium deficiency is one of the most common nutrients we are deficient in. It is also one of the most critical minerals in supporting healthy nerve function in the body aiding in muscle relaxation and contraction, and acting as an electrolyte in bodily fluids amongst other life-giving functions. Depleted magnesium levels can lead to the imbalance in calcium ion channels throughout the body which manifest as a number of health symptoms. (8)

Along with magnesium, a potassium deficiency can cause cramping in leg muscles. Potassium is also involved in maintaining the integrity of cellular fluid and works closely with other minerals like calcium to support nerve function and smooth muscle tone (10).

Inadequate calcium absorption or deficiency may also be to blame for those tight muscles. Calcium is involved in muscle contractions and assists in generating nerve impulses. Vitamin D is critical to regulate and increase the absorption of calcium and may be an underlying cause or another underlying issue of your calcium deficiency. However, because the three nutrients play a role in preventing muscle cramping, any one deficiency in magnesium, potassium or calcium should not be ruled out. (12)

## 10 *Signs of* Magnesium Deficiency

- Poor Cognitive Processing
- Headaches and chronic migraines
- Constipation and related disorders like IBS
- Fatigue (physical, mental and emotional)
- Insomnia
- Muscle spasms and cramping
- Chronic Pain and
- Fibromyalgia
- Heart arrhythmias
- Numbness and tingling
- Mood and Behavioral Disorders



### Remedy

Excellent sources of magnesium in foods are found in avocados, pumpkin seeds and unsweetened cacao while Brazil nuts and almonds contain high amounts of both magnesium and potassium (9, 11). Both calcium and magnesium can be received in combination with a



healthy ratio of vitamin D3 to regulate calcium absorption in fermented foods like kefir, yogurt and milk from 100% grass-fed animals. Coconut water and coconut water kefir are great sources of potassium.

The most effective combination I have found includes doing 3 Epsom salt baths each week, 3 days of sunbathing at least 30 minutes with 40% or more of the body getting high quality [sun exposure](#) (or taking 10,000 IU of vitamin D3/K2 daily), using fermented foods and drinks like coconut water kefir and an avocado daily. In addition, I recommend using generous amounts of pink Himalayan salts on food and hydrating well throughout the day. Consume some dark green leafy veggies each day for calcium and anti-oxidants.

Many essential oils have natural antispasmodic qualities, which help inhibit problems associated with spasms, cramps and muscle pulls. Some good ones include lavender, chamomile, rosemary or cypress. You can massage these onto your legs, diffuse them in your home and put them into your Epsom salt bath.

Finally, for individuals under more stress, I recommend doing 1-2 scoops of [Brain Calm Magnesium](#) in water daily. I have found this protocol to work great!



# Leg Cramp

## Remedy Protocol

- |   |  |  |   |  |  |
|---|--|--|---|--|--|
| 1 | Consume 1 avocado and 1 bottle of coconut water kefir daily. |   | 5 | Stay well hydrated, at least half your body weight in ounces of water. |   |
| 2 | Do 3 or more Epsom Salt baths each week.                     |   | 6 | Stay off sugar and consume minimal carbs                               |   |
| 3 | Use pink salts generously.                                   |   | 7 | Take 1 -2+ scoops of Brain Calm Magnesium in water                     |   |
| 4 | Consume dark green leafy veggies daily.                      |  | 8 | Use essential oils – lavender, chamomile, rosemary or cypress          |  |

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## Sign #4: Itchy Red Rashes, Acne & Blemishes

Several skin problems are associated with nutritional deficiencies. Skin conditions such as psoriasis, **eczema**, severe acne and even skin pigmentation disorders may have you trying to alleviate the problem with skin moisturizers and anti-inflammatory drugs.

However, understanding the cause will help you find a cure. Learning if your skin blemishes are caused by a lack of adequate nutrients in your diet may be the first step to fixing to your problem. The most common nutritional deficiencies with these conditions include fat soluble nutrients such as vitamin A, vitamin D and vitamin E. Also, omega 3 fatty acids and gamma linoleic acid (GLA) are key for healthy skin.

Most people wouldn't realize this, but if I don't consume a healthy diet and have a lot of stress, I develop a lot of skin blemishes. To remedy this, I load up on foods rich in vitamin A and E such as **grass-fed butter** and vegetables and I supplement with a high quality omega 3 supplement with added GLA each day. Now, I have outstanding skin and I plan to keep it that way for life!



## Related Deficiencies

The World Health Organization (WHO) recognizes that vitamin A deficiency is a public health concern affecting more than half of the globe and vitamin D is virtually an epidemic considering 90% of the population is deficient in this critical nutrient (13, 14).

Most people are also deficient in the long chain omega 3 fatty acids EPA and DHA as well and this can result in more inflammation in the skin and sebum glands and the development of **acne**.



### ***Vitamin A Deficiency***

Vitamin A, also referred to as retinol in skin care products, is critical to be maintained at normal levels. Vitamin A is necessary for a healthy immune response in the skin and can inhibit **inflammatory** skin reactions like persistent acne.

Perhaps more severe than acne, vitamin A supports the integrity of cells that make up epithelial tissue and a lack of vitamin A in diet can cause dry, scaly skin that stimulates premature aging. (19)

### ***Vitamin D Deficiency***

The Vitamin D Council summarizes the latest news and research on vitamin D and estimates that individuals who experience skin issues like eczema are commonly found to be deficient in this nutrient (15). Furthermore, studies show that individuals with the lowest levels of **vitamin D** exhibit more severe eczema symptoms than those with higher concentrations (16).

Eczema involves inflammation of the skin and can appear anywhere on the body. A rash can be characterized by dry and flaky skin but can also be more severe causing extreme redness that

is itchy and looks infected. Similar to eczema, psoriasis causes skin irritation and redness that is commonly treated with synthetic vitamin D3 ointments (17).

# GRASS-FED BUTTER BENEFITS

## 1) Contains CLA

Contains CLA conjugated linoleic acid which helps to reduce belly fat helps to protect against cancer and supports muscle growth.

## 2) Great Source of Butyrate

Great source of butyrate (a short-chain fatty acid), which reduces inflammation

## 3) Contains Vitamin A - Retinol

Contains vitamin A- which is good for the thyroid, adrenals, and cardiovascular health

## 4) Great Source of Vitamin D & K2

Great source of vitamin K2- may reverse arterial calcification and helps to increase bone density

## 5) Contains Essential Fat

Butter is rich in omega 3 fatty acids

## 6) Additional Beneficial Nutrients

- Lecithin
- Selenium
- Magnesium
- Zinc
- Copper
- Iodine
- ...and more!

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## Remedy

Foods rich in vitamin A include liver, organic eggs from pastured chickens, dark green vegetables, carotenoid containing produce like carrots and sweet potato as well as milk from 100% grass-fed cows. One of my favorite sources of vitamin A is [grass-fed butter](#) or ghee. I recommend use these generously each day.

Although the sun is the primary origin of vitamin D synthesis for your skin, grass-fed butter is also high in vitamin D. You may consider supplementing your diet with cod liver oil as this provides a healthy balance between vitamin A and D. (18) Be sure to to keep all sugar out of your diet and look out for other triggers like dairy proteins and gluten.

I would also recommend adding in probiotics to support gut health and applying coconut oil and gentle essential oils like lavender to your face to help improve the skin's microbiome and reduce inflammation on the surface of the skin. You can also find non-toxic facial cleansers with agents like activated charcoal that can be very helpful.

A great source of the long-chain omega 3 fatty acids EPA and DHA is through a purified fish oil. I personally recommend [Nordic Naturals Cod Liver Oil](#) because it has high amounts of fat soluble vitamin A, 1000 IU of vitamin D and a healthy dose of EPA and DHA.

# Cod Liver Oil Benefits

**Promotes Heart, Skin and Brain Health\***

**Added Vitamin D3 for strong bones and a healthy immune system\***

**Great source of Vitamin A for Brain, Thyroid, Skin and Eye Health**

## #5: Abnormal Sensations in Hands or Feet

Have you ever experienced a tingling in your toes? How about a numbness in your hands or the sensation of pins and needles in your feet? These minor and seemingly insignificant symptoms can be a sign of a serious health problem. Symptoms may be slow to develop but become more severe and lead to serious health consequences over time.

### Related Deficiencies

**Vitamin B12 & Folate (Vitamin B9):** Since the intrinsic relationship between vitamin B12 deficiency and disease was first recognized in 1849, researchers have fought to understand the many metabolic roles this vital nutrient plays in maintaining health. Vitamin B12 is involved in a key reaction that regulates nerve function, supports DNA synthesis and helps regulate specific amino acid levels like homocysteine from becoming toxic. (21, 24)

Folate is another B vitamin involved in similar neurological pathways. A deficiency in vitamin B12 and folate are associated with inflammatory conditions throughout the body. However, severe problems that can arise from a vitamin B deficiency like Crohn's Disease may be masked



by less problematic symptoms early on. One of these early body signs is neurological damage manifested as numbness or tingling in areas of the body such as hands and feet. (21)

# Symptoms of Vitamin B12 Deficiency

- Mental Problems**  
Problems such as brain fog, Alzheimer's and dementia are symptoms of low B12
- Fatigue**  
The most classic B12 Deficiency Symptom
- Hair Problems**  
Thinning hair and grey hair can be symptoms too
- Chronic Pain**  
Fibromyalgia, back pain, neuropathy and more
- Infertility**  
In both women and men
- Blood Disorders**  
Blood disorders such as elevated MCV are symptoms

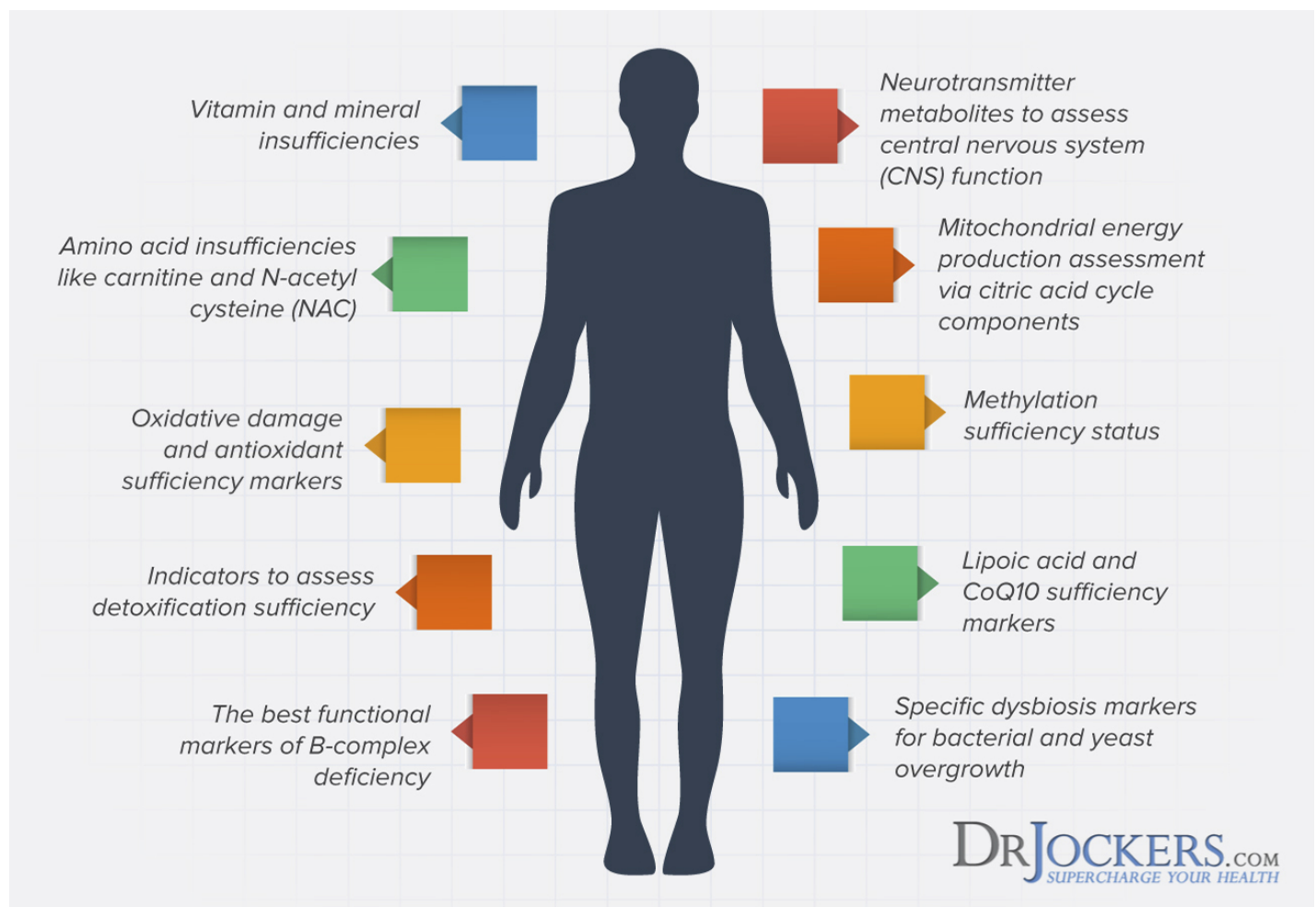
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*Vitamin B6:* Although vitamin B6 is present in many food sources and many people in developed countries have healthy levels, there are risk factors that can increase vitamin B6 deficiency. For instance, vitamin B6 deficiency is more common in the elderly, women and smokers.

Even in a margin of the population, vitamin B6 deficiency is still a concern as it assists in many metabolic functions including neurotransmitter function and the metabolism of carbs, fatty acids, amino acids and organic acids. (22, 23)

Vitamin B6 is also involved in nerve conduction and impulse due to its many interactions with other nutrients (23). A lack of vitamin B6 can trigger nerve damage if gone untreated over a lengthy duration.

I routinely test for B6, folate and B12 status as well as other key B vitamins through an Organic Acid test that you can find [here](#)



## Remedy

Foods containing a complex of B vitamins are primarily of animal origin such as meat, eggs, dairy and poultry. This is why vegans and vegetarians are at an increased risk of vitamin B deficiency (20). Although vitamin B12 is bound in protein in animal products, vitamin B6 can be obtained from meat as well as green leafy vegetables.

Some individuals have genetic issues such as [pyroluria](#) that cause them to need much higher B6 levels. Other people have a dysbiotic gut and the bacteria are unable to produce adequate B6 levels. This is where fermented foods can be especially helpful sources of highly absorbable B6.

If I see low B6, folate and B12 levels on lab testing, I will use B Strong, 1 cap – 2x daily for mild deficiencies. Some individuals will need a methylated B12 that bypasses the digestive tract and gets right into the blood stream. For these cases I use B12 Power, 1 cap – 1x daily away from meals for individuals with moderate nutritional deficiencies and 1 cap – 2x daily for individuals with severe B12 deficiencies.



## Key Benefits of B12 Power

- ✓ Ideal Methyl Form for Optimal Absorption
- ✓ Supports Neurological and Immune Health
- ✓ Improves Neurotransmitter Production
- ✓ Key for Red Blood Cell Formation

## Reasons for Nutritional Deficiencies

There are several reasons why someone may have nutritional deficiencies. These include a diet that is low in micronutrients and high in sugar and processed foods. The lesser known reasons include low stomach acid and leaky gut syndrome which cause poor nutrient absorption.

Additionally, poor blood sugar balance and chronic stress deplete key nutrients and lead to nutritional deficiencies. All of us have had one or more of these factors for a period of time in

our life and it is quite possible you are struggling with one right now that is contributing to nutritional deficiencies in your body.

## Reasons For Micronutrient Deficiencies

- 1) Low Stomach Acid Levels
- 2) Leaky Gut Syndrome
- 3) Poor Diet
- 4) Blood Sugar Imbalances
- 5) Chronic Stress

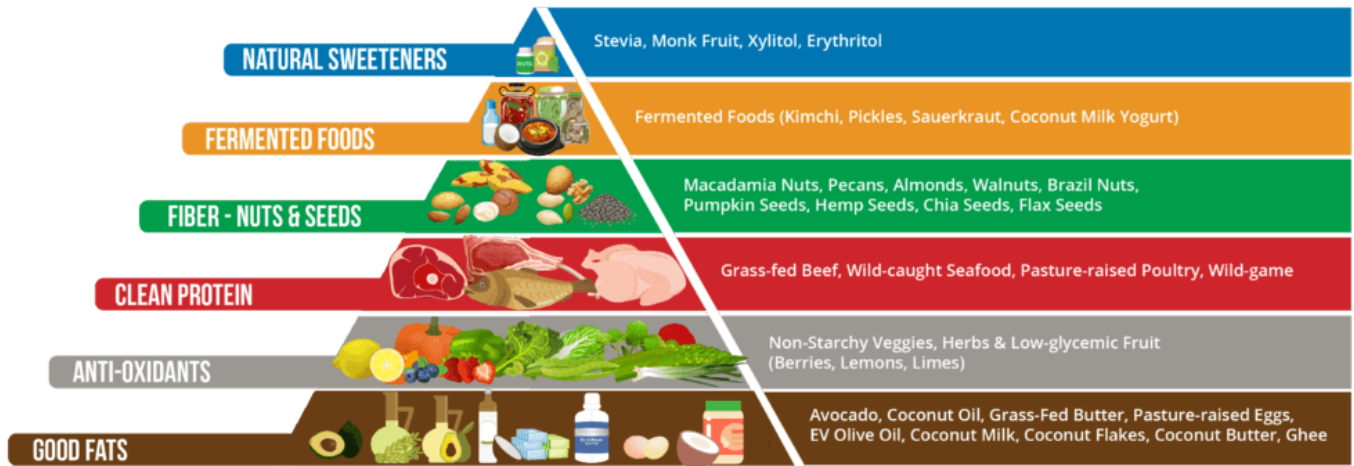


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### 1. Poor Diet

Making wise dietary choices is the first step to fine tuning the nutritional deficiencies that your body is facing. Without optimal nutrients, the body is less able to absorb and utilize what nutrients it does consume and increases the risk for systemic dysfunction.

Experts recommend consuming lean protein to acquire your body's nutritional needs for both essential and non-essential amino acids. Non-animal proteins are high in folate and fiber but generally lack essential amino acids. Healthy fats such as coconut oil, grass-fed butter, ghee, avocados and olive oil should be used generously. Cod liver oil is an excellent source of vitamin D as well as omega fatty acids.



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## Key Nutritional Tips:

Above all, consuming a wide variety of nutritional antioxidants sourced from all the colors of the rainbow in fruits in vegetables can help prevent nutritional deficiencies. Consider eating a superfood every day and choose to have a salad as one of your meals. Be sure to choose organic produce to consume foods with the highest nutritional density.

**AVOID:** Processed and commercialized meats should be avoided all together. When choosing to eat red meat, make the choice to consume only grass-fed red meat. You should also consider the following dietary recommendations:

- Avoid unhealthy fats high in trans-fats or partially hydrogenated oils found in butter substitutes, ice cream, vegetable oil and generally all processed foods.
- Avoid, if not limit your intake of fermentable carbohydrates from processed foods.
- Avoid simple sugars including high fructose corn syrup and table sugar which feed carcinogenic bacteria and create metabolic disturbances.
- Do choose to drink purified water, probiotic beverages like coconut water kefir and herbal teas in replacement of your soda, juice and energy drinks

# Anti-Inflammatory Foods



Grass/pasture Fed Meat, Poultry, And Wild Game



Sweet Potatoes and Other Root Vegetables



Raw Nuts



Green Tea



Vegetables and Fruits



Turmeric



Wild-caught Fish



Bone Broth and Vegetable Broth



Apple Cider Vinegar



Ginger



Organic Extra Virgin Olive Oil, Organic Coconut Oil, Organic Grass-fed Butter



Dark Chocolate



Organic Omega 3 Eggs



**Herbs**  
Mint, Cumin, Cinnamon, Fennel, Rosemary, Thyme, etc.



Garlic

# Pro-Inflammatory Foods



Refined Grains, Whole Grains, Grain/flour Products



Deep Fried Foods, Processed Foods, Most Packaged Foods



Grain-fed Meats/eggs, Fast Foods, Soda Pop



Most Commercial Salad Dressings, Trans Fats, Margarine, Some Oils (Corn, Safflower, Sunflower, Soybean)

## 2. Chronic Stress

Everyday stress to the body can create a vicious cycle which can cause nutrient deficiency and induce symptoms of stress such as depression and anxiety which further depletes the body storage of vital vitamins and minerals (8). Especially as you age, the body becomes less efficient at absorbing nutrients and detoxification pathways are further hindered.

Nutrients are one of several environmental influences that can either support or impede epigenetic gene expression. From this perspective of gene regulation, diseases may not only be inherited but modified and expressed through changes in an individual's environment. Researchers have recently begun to show how the intake of nutrients and their bioavailability is essential to maintaining health especially under stressful conditions. (25)

The stress response is another influencing factor for epigenetic gene regulation which reduces the availability of bioactive food compounds and uses up antioxidant supplies. Quality nutrition is critical to combating the damage to cells and tissue in the body resulting from stress responses.

# EFFECTS OF STRESS ON DIGESTION



When we are under stress, we get a rise in stress hormones and excitatory neurotransmitters that reduce parasympathetic activity. Good parasympathetic tone is key to good digestive health.

Stress also leads to poor sleep which compounds and further reduces gut motility and healthy microbial flora. These leads to gut inflammation and intestinal permeability (leaky gut), which causes systemic inflammation that can impact our joints, skin, glands and vital organ systems.

## 3. Digestive Disturbances

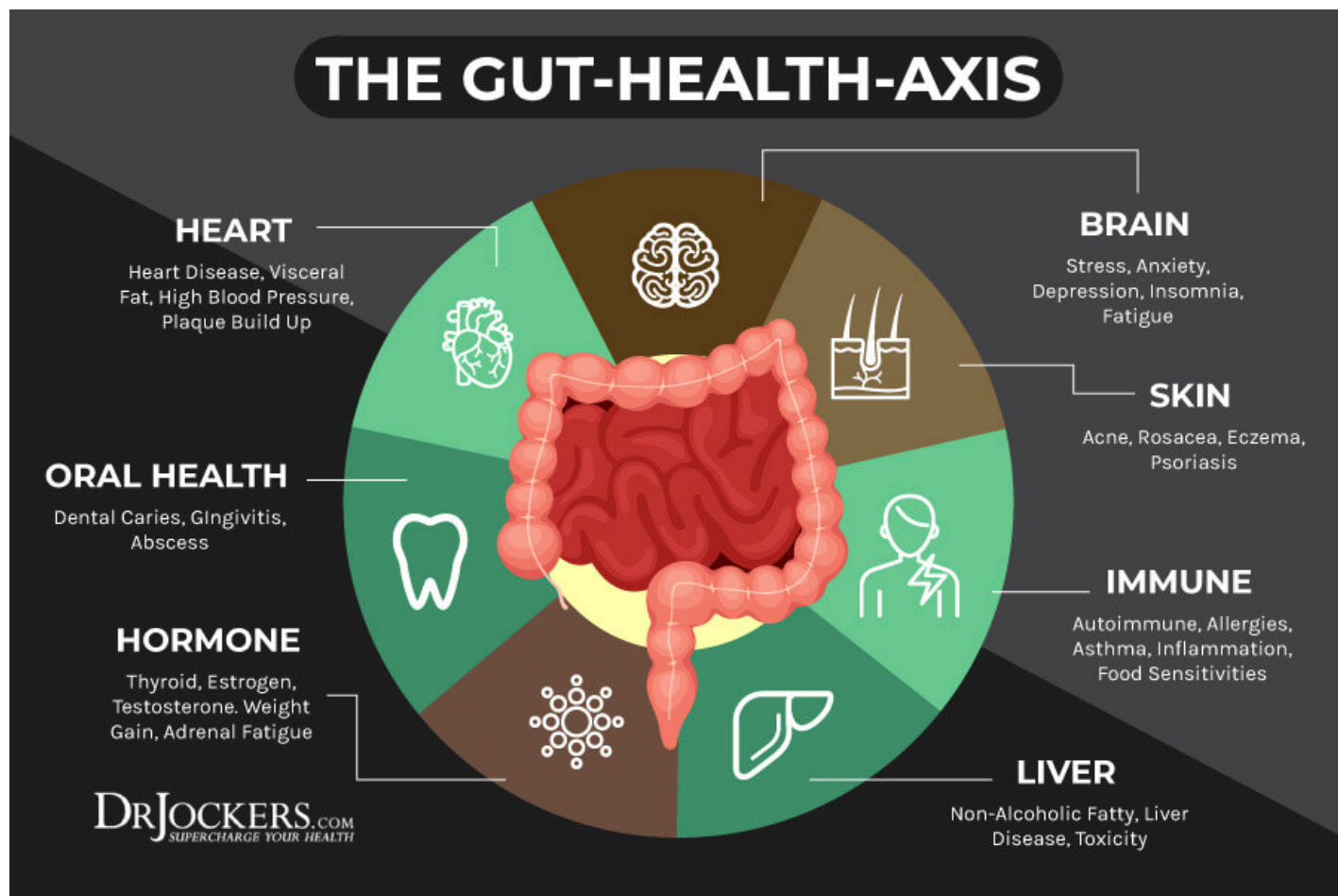


The health of the gut microbiota is a significant contributor to the body's ability to effectively absorb nutrients from food. Different species of bacteria inhabit the gut providing a variety of benefits for health. Amongst these duties includes their ability to breakdown food into micronutrients which can be easily taken up and transported to cells (27).

The gut is a common site further impacted by chronic stress. Stress creates **inflammation** on the gastrointestinal tract reducing the ability of hair-like projections called microvilli from absorbing nutrients (26).

Inflammatory gut conditions further provide an environment for carcinogenic bacteria like *Candida* and *E. coli* to thrive (28). These bacteria can be found in small concentrations resulting from food contaminants but can promote intestinal infection and nutritional deficiencies resulting from their overgrowth. Consuming probiotic and prebiotic foods such as sauerkraut, pickles and kimchii can help keep these harmful bacterial colonies at bay (29).

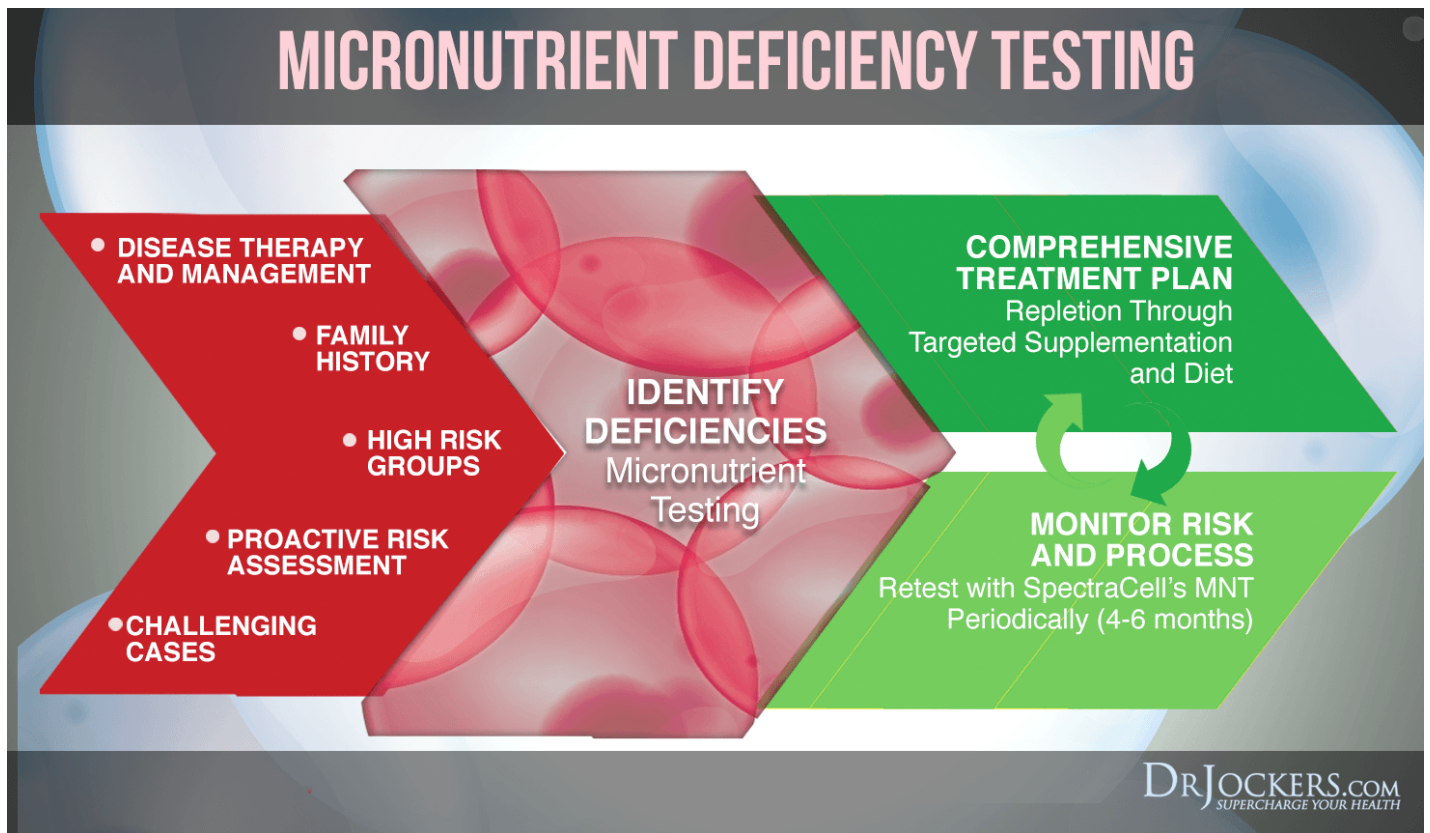
If you are not producing enough **stomach acid**, you may not be optimally absorbing nutrients such as B12, zinc and iron. A chronic inflammatory stomach condition known as atrophic gastritis is a major cause for the lack of vitamin B12 absorption in the gut. This results in the loss of glandular secretions and a reduction in enzymes that metabolize nutrients such as pepsin. (21)



## How to Test Micronutrient Levels

The best way to test Micronutrient levels is with the [SpectraCell Micronutrient test](#). This test measures functional nutritional deficiencies at the cellular level giving the most comprehensive nutritional analysis available.

Spectracell's Micronutrient test assesses how well the body utilizes 33 vitamins, minerals, amino and fatty acids, antioxidants, and metabolites. This test can be helpful for anyone with arthritis, cancer, heart disease, diabetes, immunological disorders, metabolic disorders, and nutritional deficiencies.

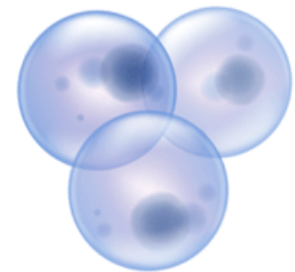


## SpectraCell Micronutrient Testing

The SpectraCell Micronutrient test can help with the identification and mitigation of nutritional risk factors that contribute to many degenerative disease conditions. It is helpful for people with a family history of chronic disease and certain high risk groups that are more susceptible to **vitamin**, mineral, and antioxidant deficiencies.

This test is also beneficial for proactive people who want to prevent health issues with early detection of nutritional deficiencies as well as those with no apparent specific disease who need insight into generalized complaints and treatment options.

# Micronutrient Testing



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*Your host*  
**Dr. Michelle Sands**

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## WHY ATTEND?

Your host, Dr. Michelle Sands, decided to pursue her natural medicine degree after a long struggle with her hormonal health, digestive distress, acne, weight issues and depression.

Growing up in an emotionally and physically toxic household that did not understand the importance of health and wellness, she was very sick as a child. On the journey to health recovery, she found that conventional medicine had no solutions, so she tackled the task of creating (and perfecting!) her own protocol to restore her health.

She now helps women all over the world harness the power of natural medicine to overcome chronic conditions through her signature program, The GLOW Protocol.

She's here to help you by sharing what she learned. You will also want to check out my interview on Intermittent Fasting as Medicine.



The graphic features a man in a blue polo shirt on the right, smiling. In the center and left are two glasses of green smoothie with yellow and white striped straws. The background includes fresh produce like lemons and avocados. A green banner across the middle contains the title 'How To Use Intermittent Fasting as Medicine'. A red banner at the bottom contains the name 'Dr. David Jockers DNM, DC, MS' and the logo 'DRJOCKERS.COM SUPERCHARGE YOUR HEALTH'.

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Dr. David Jockers DNM, DC, MS

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## Sources for this Article Include:

1. Dental Care: Nutrition & Oral Health: Eating Well for a Healthy Mouth [Link Here](#)
2. Zong G, et al. Serum vitamin B12 is inversely associated with periodontal progression and risk of tooth loss: a prospective cohort study. *J Clin Periodontol.* 2016 Jan; 43(1): 2-9. PMID: **26613385**
3. Hatipoglu H, et al. Severe periodontal destruction in patient with advanced anemia: A case report. *Eur J Dent.* 2012 Jan; 6(1): 95-100. PMCID: **3252802**
4. Sheetal A, et al. Malnutrition and its Oral Outcome- A Review. *J Clin Diagnosis Res.* 2013 Jan; 7(1): 178-180. PMCID: **3576783**
5. Cho GS, et al. Zinc deficiency may be a cause of burning mouth syndrome as zinc replacement therapy has therapeutic effects. *J Oral Pathol Med.* 2010 Oct; 39(9): 722-7. PMID: **20618611**
6. Mock DM. Skin manifestations of biotin nutritional deficiencies. *Semin Dermatol.* 1991 Dec; 10(4): 296-302. PMID: **1764357**
7. Zempleni J, Hassan YI, and Wijeratne SSK. Biotin and biotinidase deficiency. *Expert Rev Endocrinol Metab.* 2008 Nov; 3(6): 715-724. PMCID: **2726758**
8. Eby GA and Eby KL. Rapid recovery from major depression using magnesium treatment. *Med Hypotheses.* 2006; 67(2): 362-70. PMID: **16542786**

9. USDA National Nutrient Database for Standard Reference Release 27 **Link Here**
10. Sesti F. Oxidation of K<sup>+</sup> Channels in Aging and Neurodegeneration. *Aging Dis.* 2016 Mar; 7(2): 130-135. PMID: **4809605**
11. Nutrition Data **Link Here**
12. Sultana N, et al. Restricting calcium currents is required for correct fiber type specification in skeletal muscle. *Development.* 2016 May; 143(9): 1547-1559. PMID: **4909858**
13. World Health Organization: Micronutrient deficiencies **Link Here**
14. Holick MF. Vitamin D Deficiency. *New Eng J Med.* 2007; 357: 266-281. DOI: **1056/NEJMra070553**
15. Vitamin D Council: Eczema **Link Here**
16. Litonjua AA. Vitamin D deficiency as a risk factor for childhood allergic disease and asthma. *Curr Opin Allergy Clin Immunol.* 2012 Apr; 12(2): 179-85. PMID: **22266772**
17. Mayo Clinic: Vitamin D **Link Here**
18. Colorado State: Vitamin A (Retinol) **Link Here**
19. The Weston A. Price Foundation: Skin Deep **Link Here**
20. Gilsing AMJ, et al. Serum concentrations of vitamin B12 and folate in British male omnivores, vegetarians, and vegans: results from a cross-sectional analysis of the EPIC-Oxford cohort study. *Eur J Clin Nutr.* 2010 Sep; 64(9): 933-939. PMID: **2933506**
21. O'Leary F, and Samman S. Vitamin B12 in Health and Disease. *Nutrients.* 2010 Mar; 2(3): 299-316. PMID: **3257642**
22. Gregory JF, et al. Metabolomic Analysis Reveals Extended Metabolic Consequences of Marginal Vitamin B-6 Deficiency in Healthy Human Subjects. *PLoS One.* 2013; 8(6): e63544. PMID: **3679127**
23. Zhao M, et al. Vitamin B-6 restriction impairs fatty acid synthesis in cultured human hepatoma (HepG2) cells. *Am J Physiol Endocrinol Metab.* 2013 Feb; 304(4): E342-E351. PMID: **4478945**
24. Bailey LB, et al. Biomarkers of Nutrition for Development- Folate Review. *J Nutr.* 2015 Jul; 145(7): 1636S-1680S. PMID: **4478945**
25. Remely M, et al. Therapeutic perspectives of epigenetically active nutrients. *Br J Pharmacol.* 2015 Jun; 172(11): 2756-2768. PMID: **4439873**
26. Sekirov I, et al. Gut microbiota in health and disease. *Physiol Rev.* 2011 Jul; 90(3): 859-904. PMID: **2066407**
27. Sandrini S, et al. Microbial endocrinology: host-bacteria communication within the gut microbiome. *J Endocrinol.* 2015 May; 225(2): R21-34. PMID: **25792117**
28. Elamir AA. Effects of konjac gluconmannan hydrolysates on the gut microflora of mice. *Nut & Food Sci.* 2008 Sep; 38(5): 422-429. DOI: **1108/00346650810906930**
29. Bowe W, et al. Acne vulgaris, probiotics and the gut-brain-skin axis: from anecdote to translational medicine. *Benef Microbes.* 2014 Jun; 5(2): 185-99. PMID: **23886975**



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Dr. Jockers

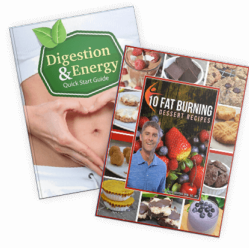
Dr. David Jockers is a doctor of natural medicine, functional nutritionist and corrective care chiropractor. He currently owns and operates Exodus Health Center in Kennesaw, Georgia. He has developed 6 revolutionary online programs with thousands of participants.

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## Comments

2 comments

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**Dr. Jockers**

August 15, 2018 at 2:22 pm

I would recommend reading this article Angela!

<https://drjockers.com/glutathione-levels/>

Reply

**Liz**

August 14, 2018 at 6:17 pm

Hi Doc,

This article has really blown me away!!!

I've always loved all your articles, but this one is just so detailed, so precise, & describes soooooo many common ailments, I'm going to print it out & keep it in a file next to my right elbow at my computer desk, for easy reference.

Thankyou again.

Liz

Reply

**Dr. Jockers**

August 15, 2018 at 2:26 pm

Hey Liz! Thanks for reading, I'm glad you found value in it!

Reply

**Pamela Rasey**

May 5, 2020 at 11:20 am

## 2 Comments

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**Wendy Allen**

Hair loss ....low Fe/gluten. Dandruff..yeast. Hang nails...after tea...B vitamins drained out? Clicking jaw...heavy metals. Canker sore...gluten. Tongue swollen...Th2 is high due to onion etc. Bad dreams..low B vitamins. No sleep...low oxygen in the brain due to gluten etc. Dizzy...gluten/low progesterone/Lyme.

Like · Reply · 3y

**Richard Principal**

Absolutely, Dandruff is a vitamin or mineral deficiency.

I used to get 'speed bumps' on my finger nails until I took Iodine, (from dried seaweed) or now "Iodine Oral Drops"

I used to ask myself why is my LDL cholesterol always high when I am not having a cholesterol provoking diet? It was the Vitamin B12 was low (could also be Folate) it showed up in a Homocysteine blood test.

A extra Bonus:

Too much bad fats and not enough good fats will make you use too much toilet paper. Why is it monkeys etc do not need toilet paper? they do not eat from a fast food outlet!

Like · Reply · 4d

**Richard Principal**

Oh correction, it might be selenium that causes 'speed bumps' on finger nails, I got into dried seaweed & Brazil nuts about the same time.

Like · Reply · 4d

**Jaay Mun**

I have discomfort on both sides of upper abdomen....sometimes in the back....it will also radiate to my chest from time to time. Could this be due to a mineral deficiency or perhaps something internal?

Like · Reply · 2y

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**Comments****Angela Ott**

August 14, 2018 at 3:24 pm

Do you have any information on what L-Cysteine and Glutamic Acid can do for our Health?

I was advised by a friend who advised me to take this. He said it cleanses out Toxins and helps the Brain.

Brilliant content connecting dots – love it and all the information you provide.

Pamela

[Reply](#)

**Dr. Jockers**

May 5, 2020 at 3:25 pm

Thanks Pam! Blessings to you!

[Reply](#)

**elly**

May 5, 2020 at 11:24 am

VERRRRY INTERESTING!! Thank you!

[Reply](#)

**Gwen**

May 5, 2020 at 4:00 pm

Is avidin in the yolk or the white? The reason I ask is I love eggs over easy but have thinning hair. Could this be a reason? ...my yolks aren't cooked? Thank you in advance for all the knowledge!!!

[Reply](#)

**Louise**

May 6, 2020 at 1:35 am

Hi Gwen,

Avidin is in the white and it does a good job of binding up biotin. You may want to

supplement with vitamin B complex and extra Biotin. We no longer get much of our Bs from our microbiome or our foods. Additionally, our toxic world requires us to increase our fluid consumption, which further depletes our Bs.

[Reply](#)

**Dr. Jockers**

May 7, 2020 at 8:04 am

It is in the egg white. If you are eating the yolks than you shouldn't have an issue here. The hair thinning is most likely a thyroid or female hormone issue.

<https://drjockers.com/13-hair-problems-mean-regards-health/>

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**r**

May 6, 2020 at 6:45 pm

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**Dr. Jockers**

May 7, 2020 at 8:10 am

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[Reply](#)

**Molly**

September 22, 2020 at 3:36 pm

I LOVE the print option at the top of each article! This makes it easy to keep them intact for referencing. Thank you!

[Reply](#)

**Dr. Jockers**

September 22, 2020 at 3:58 pm

Great to hear that Molly!

[Reply](#)

**Rachel Colorado**

September 23, 2020 at 1:05 am

For Leg Cramp protocol, Why coconut water? (I avoid ferments because I am healing from histamine intolerance and not yet ready to eat ferments).

Why avocado? I'm wondering if I can substitute anything for that one.

For Dark leafy greens, what are the nutrients you're after? Some greens are high in oxalates and I'm considering a carnivore diet—any advice for mineral supplementation on carnivore?

[Reply](#)

**Betsy Ben**

September 24, 2020 at 4:39 am

What food would you recommend for an ESR 31mm/hr for a 59yrs old woman. Thanks.

[Reply](#)

**Dr. Jockers**

September 24, 2020 at 11:00 am

I would recommend working on reducing inflammation levels.

<https://drjockers.com/5-ways-reduce-inflammation-quickly/>

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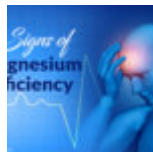
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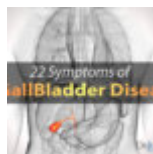
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