

Supplements: When, Why, & How...

By Marina Savelyeva, RD



About This E-book: Supplements: Why we should take them and how to choose quality supplements, and when to use precautions.



The following information addresses micronutrient supplementation. Micronutrients refer to the vitamins and minerals your body needs.

Micronutrients are essential because your body cannot make them or make enough of them to satisfy your requirement.

Beyond eating a well-balanced diet, taking supplements is beneficial for meeting nutrient requirements and preventing deficiencies.



Frequently mentioned reasons for not taking vitamins and minerals:

- Supplements Can Be Expensive
- I Feel Good, Why Do I Need Supplements?
- Remembering To Take Supplements Is Too Hard.
- My Blood Work Looks Good, So Why Do I Need Supplements?
- My Doctor Said I Don't Need Any Vitamins/Minerals.

Supplements Can Be Expensive



- Yes, supplements can be pricey. To reduce costs and improve satisfaction, consider contacting companies that manufacture the supplements you are considering buying. Ask the company for samples and to send you coupons and discounts.
- In some cases, supplements may be covered by your insurance.
- Consider the purchase of supplements as risk reduction and cost savings because treating deficiencies and complications will ultimately be far more expensive.

I Feel Good, Why Do I Need Supplements

Vitamin and mineral deficiencies are not always obviously felt. The consequences may become evident over time. For example, osteoporosis is a disease that takes decades to create weaker bones that can make a hip, wrist, or spine fracture more inevitable. It is hard to imagine that your mind and body instinctively think: "Hmm, I feel I am low in calcium and vitamin D. I crave some calcium and vitamin D-rich milk and sardines."

When you start having signs and symptoms of vitamin and mineral deficiency, sometimes it is too late to treat and reverse the symptoms.

One example is B12 deficiency. When B12 deficiency is severe, a person may experience neurological symptoms such as tingling and numbness in their hands and feet, problems with vision, confusion, memory, and difficulty walking and speaking. Once neurological problems develop they may not be reversible.

Remembering To Take Supplements Is Too Hard



To make it easier to remember to take your supplements regularly, you can:

- set up reminders or alerts on your phone
- use pill organizers or caps with time reminders
- stick post-it notes in visible places like your screens at home and in the office
- keep your supplements in sight and within reach at work or by your bedside
- establish a regular routine such as taking them in the morning consistently with your first meal of the day



Become Your Own Advocate!

My Bloodwork Looks Good, So I Don't Need Supplements

Remember that while blood work is a valuable tool for identifying some vitamin and mineral deficiencies, it may miss other ones.

A healthcare professional cannot assess some vitamin and mineral deficiencies with a blood draw. For instance, we can't check if you have enough calcium in your bones by doing blood work. A bone density scan is the best test to determine the need for calcium. However, osteoporosis can be at an advanced stage by the time osteoporosis is diagnosed.

Some doctors may not order all the necessary blood tests due to insurance coverage limitations or a lack of knowledge about which tests are needed to assess deficiencies accurately. One example is magnesium. About 70% of people are low on magnesium, but magnesium levels are rarely checked.

My Doctor Said I Don't Need Any Vitamins/Minerals

How did the doctor determine your micronutrient status? It's important to note that doctors may not have the time to conduct a detailed micronutrient analysis based on your usual daily dietary intake. Additionally, blood work may not always provide a comprehensive picture of your micronutrient status. If you're not taking any vitamins or mineral supplements, it's important to discuss this with your doctor. Sometimes, doctors may not mention the need for supplementation unless specifically asked by the patient. Registered dietitians can recommend supplements based on intake assessments such as a food recall or food frequency.



When To Consider Taking Supplements

01 You may be unable to eat various foods for various reasons.

Avoiding certain foods or food groups daily due to personal preferences, food allergies, sensitivities, and intolerances can contribute to vitamin and mineral deficiencies.

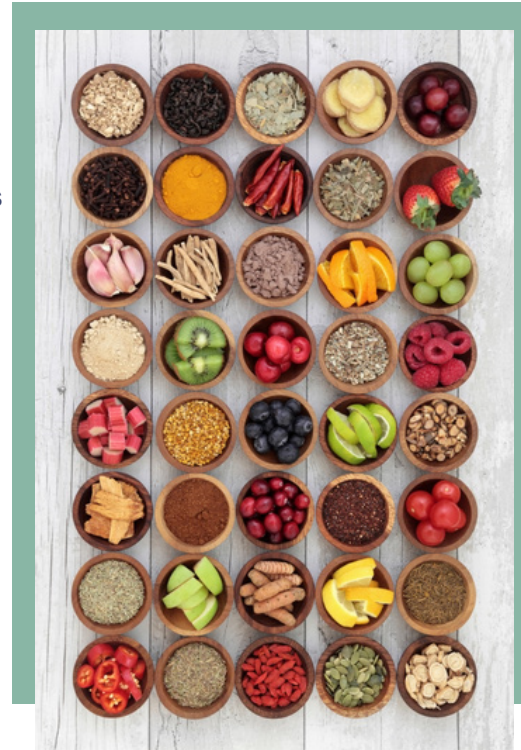
Intake of micronutrients may be inadequate if a person restricts calories for weight loss or during an extended illness. Many individuals try a fad diet and eliminate certain food groups for several months, which can lead to deficiencies.

Consumers of a vegan, vegetarian, or plant-based diet will benefit from a vitamin B12 supplement, since vitamin B12 is exclusively found in animal products.

Patients with chronic or autoimmune diseases such as celiac disease, Crohn's, and ulcerative colitis may experience deficiencies in micronutrients due to both malabsorption and elimination of certain food groups. These individuals commonly have micronutrient deficiencies (iron, folic acid, vitamins B6 and B12, vitamin D, copper, and zinc). These patients need to be aware of their potential health risks and can seek protection with micronutrient supplements.

Some people avoid dairy for personal reasons (animal, environmental causes, lactose intolerance, etc.) and do not adequately replace lost micronutrients with dairy alternatives that are fortified with the same levels of micronutrients found in dairy. One example is clients who avoid dairy assume they get enough calcium from non-dairy alternatives, nuts, and vegetables. However, they never calculated their total calcium intake and rarely know how much they need. Some dairy alternative drinks and plant-based yogurts may contain minimal amounts of calcium (less than 100 mg); when the goal is 1000-1300 mg of calcium daily.

Most individuals do not consume a variety of colorful fruits and vegetables daily, and some avoid all fruits and vegetables for months. While traveling, people may sacrifice variety and rely on ultra-processed and fast foods. Due to life stressors and busy schedules, an individual may even skip meals, eat 1-2 meals daily and snack on less nutritious foods.



02

Medications can interfere with absorption, metabolism, or excretion of some micronutrients.



Some Examples:

Proton Pump Inhibitors (PPI)

Individuals who take proton pump inhibitors should consider B12 supplementation as PPI slows the release of gastric acid into the stomach which has the potential to interfere with B12 absorption from food.

Proton pump inhibitors include: Omeprazole (Prilosec), Esomeprazole (Nexium), Lansoprazole (Prevacid), Rabeprazole (AcipHex), Pantoprazole (Protonix), Dexlansoprazole (Dexilant), Zegerid (omeprazole with sodium bicarbonate)

Certain antibiotics and proton pump inhibitors can affect magnesium status.

Ask your doctor to check your magnesium level if you take these medications or consider a magnesium supplement.

Medications such as sulfasalazine and methotrexate for IBD and cancer treatments may interfere with the absorption of folic acid, so folic acid supplementation is recommended.

Polypharmacy, the simultaneous use of multiple medications by a single patient to treat one or more diseases, can increase the likelihood of drug-nutrient interactions and influence the need for specific micronutrients.

Patients taking medications regularly should discuss their micronutrient supplements with their healthcare providers.

See the detailed list for drug-induced nutrient interactions. Here is the link:
<https://pharmacysolutionsonline.com/drug-induced-nutrient-depletion.php>

Corticosteroids

Consider additional calcium and vitamin D when taking steroids since they may deplete calcium and impair vitamin D metabolism. Taking calcium with vitamin D is the most effective.

Corticosteroids include: cortisone, prednisone, prednisolone, methylprednisolone, dexamethasone, betamethasone, hydrocortisone

03 Lifecycle & Age

Throughout life, depending on age, micronutrient supplementation is highly recommended. Here are some examples.



Infants:

The American Academy of Pediatrics suggests iron supplementation if a baby is exclusively breastfed. And until the infant begins eating iron-containing foods such as iron-fortified cereals. This may occur around age 4-6 months.

The American Academy of Pediatrics also recommends that exclusively or partially breastfed infants receive an additional supplement of vitamin D daily beginning the first few days of life (400 international units).

Women of Childbearing Age:

Women who may become pregnant should consume folic acid from fortified foods and/or supplements daily.

The Elderly:

The Food and Nutrition Board (FNB) recommends that people over 50 get the additional B12, mainly from the crystalline form found in fortified foods and supplements. Age is associated with conditions like atrophic gastritis that may decrease a person's ability to digest food-bound vitamin B12.



04

Medical Conditions

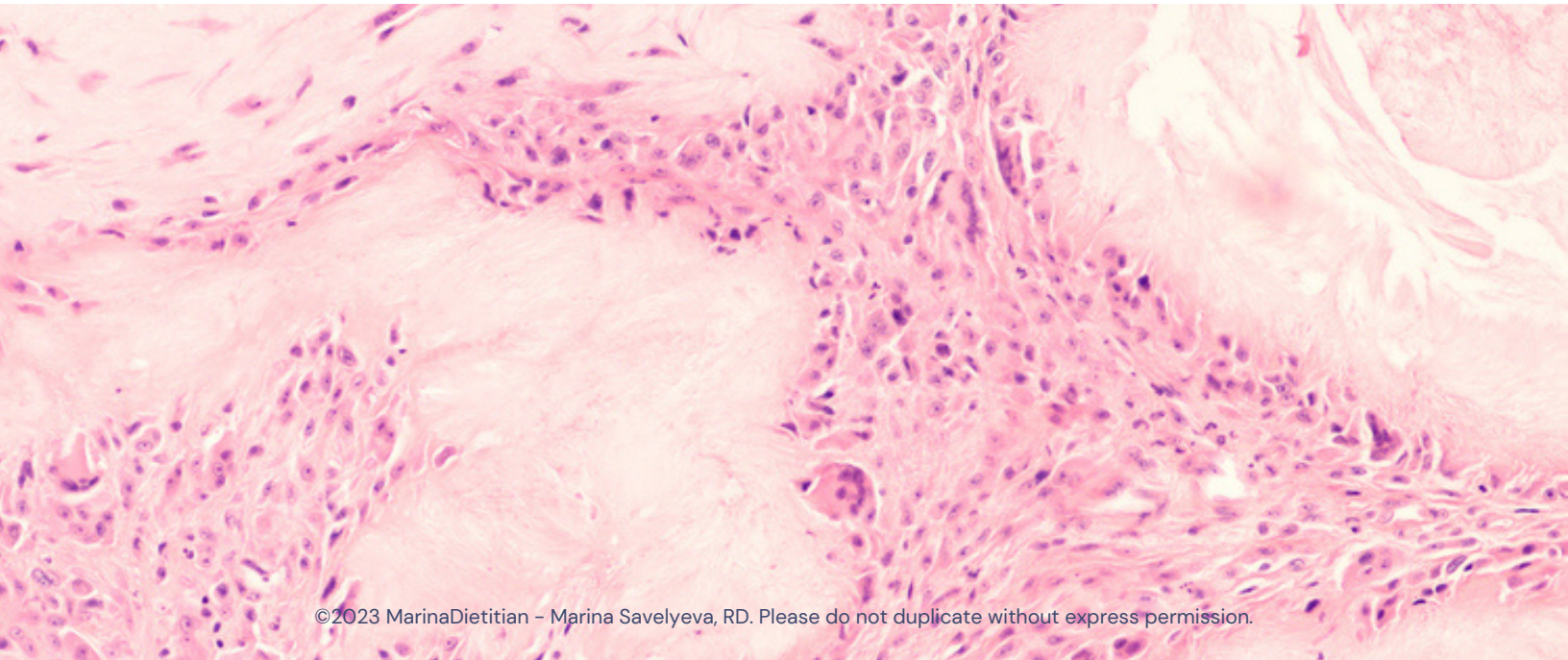
The American Academy of Ophthalmology suggests antioxidant vitamin and mineral supplementation. According to the Age-Related Eye Disease Study, patients with intermediate or advanced age-related macular degeneration can take supplements to slow the progression of the disease.

Antioxidant vitamins and minerals such as vitamin C, vitamin E, beta carotene, zinc, and copper supplements can help. Beta carotene, lutein, and zeaxanthin supplements also protect your vision. However, beta-carotene supplementation is not advised for smokers since it was associated with an increased risk of lung cancer in smokers.

Patients who have had gastrointestinal surgeries may be at risk for deficiencies. This is because micronutrients are absorbed in the stomach and the intestines and must take at least a general multivitamin, calcium, and vitamin B12 supplement.

According to the clinicians' guide to prevention and treatment of osteoporosis published in 2022, an adequate diet would supply a total calcium intake of 1000 mg/day for men aged 50–70 years; 1200 mg/day for women \geq 51 years, and men \geq 71 years.

If intake is insufficient, supplements are recommended. Also, serum 25-hydroxyvitamin D levels should be monitored. If vitamin D level is greater than or equal to 30 ng/mL but below 50 ng/mL, supplemental vitamin D3 (800–1000 units/day) should be initiated for individuals aged 50 years and older to achieve a sufficient vitamin D level. Higher doses may be necessary for some adults, especially those experiencing malabsorption.

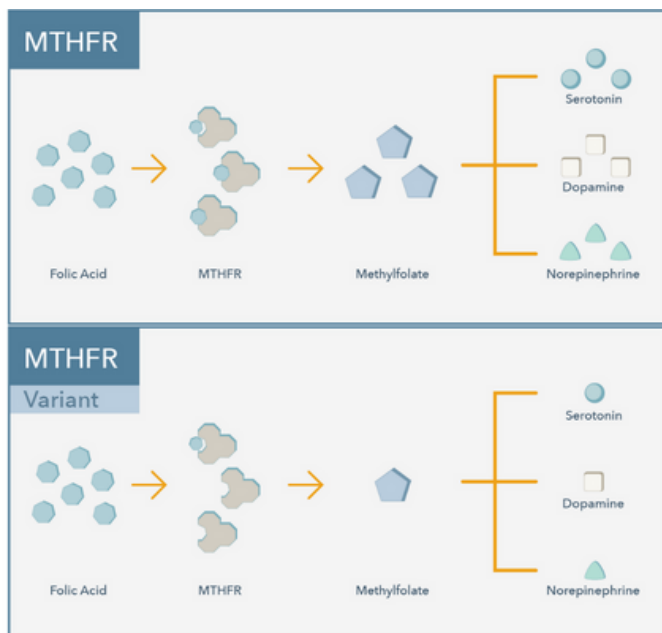


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Genetic Predispositions

Genetic Predispositions and Disorders:

Individuals with a genetic predisposition that impairs digestion, absorption, or metabolism should consider micronutrient supplementation under the care and direction of a healthcare provider. One example of a genetic disorder is a variant of the gene MTHFR. About 1/3 of individuals have this and it can make it interfere with utilizing folic acid, a synthetic form of folate that is typically used by food manufacturers to fortify foods and is commonly included in multivitamin supplements. A methylated form of folate is a better option for these individuals.



06

Lifestyle Food Choices

Consumption of excess cola beverages, meat, alcohol, and caffeine can interfere with calcium absorption. If you're not obtaining sufficient calcium from your diet, it is prudent to consider calcium supplementation.

Caffeine and phosphorus are commonly found in colas. Calcium and phosphorus are part of the bones. When you look at the ingredients in cola, you will see the ingredients "phosphate" or "phosphoric acid." When there is more phosphorus than calcium in the blood, the body draws out stored calcium in bones and other parts of the body. This can lead to low brittle bones and cause dental problems. A balance of dietary calcium and phosphorus can lower the risk of brittle bones.

High protein diets consisting of large quantities of meat protein at every meal can also cause the body to leach calcium.

Furthermore, it can lead to constipation.

High alcohol intake can lead to bone loss. The current Dietary Guidelines for Americans recommends a limit of 1 drink for women and 2 drinks for males. One drink is equivalent to 12 ounces of beer or 5 ounces of wine.

Adults with a high intake of alcoholic beverages may benefit from taking supplements such as folate and thiamine.

Drinking more than three cups of coffee daily may interfere with calcium absorption and cause bone loss.

The main source of vitamin D is from our own production in the skin. Sun rays are needed to begin the process. However, the consequences of sun exposure raise the risk for skin cancer. The Skin Cancer Foundation recommends getting your vitamin D from oily fish, fortified dairy products and cereals, and supplements. Also, if you live in a geographic area with limited sun exposure, consider additional vitamin D.

Children are often picky eaters and may not like a variety of foods. They can be at risk for a deficiency, and supplementation may be beneficial.



13 Tips For Taking Supplements:

1 If you do not like or cannot swallow pills, consider chewable capsules that you can open or liquid supplements. Some vitamins are also available in injectable form.

2 Gummies can be a good alternative; however, some have sugar. If you take ten gummy vitamins, the exposure to sugar may cause dental cavities and the sugar also contributes to extra calories.

3 Check if supplements need to be taken with food or without, and follow instructions. For example, calcium carbonate has the highest calcium concentration but requires stomach acid for optimal absorption. Thus, it must be consumed with meals. However, calcium citrate can be taken with and without food. It is ideal for those with or absence of stomach acid, or those who had gastric bypass, or for patients after gastric sleeve surgery with a stomach resection.

4 Vitamin C improves the absorption of iron. If you are taking iron, take it with vitamin C-rich foods (bell peppers, oranges) or vitamin C supplements.

5 Do not break, split or open the supplement if it is an extended-release, timed-release. They are made to be released over a prolonged period, the mechanism for slowing absorption may be damaged if the pill is crushed or broken.

6 Enteric-coated or containing special coating should not be broken or crushed: (to protect the contents from stomach acid, to be absorbed in the intestines or to avoid an unpleasant aftertaste). One example is probiotic supplements.

7 Do not take calcium with your iron supplement. Calcium can interfere with iron absorption. Take no more than 500 mg of calcium at any one time because your body can only absorb so much at a time.

8 Beans and wheat bran contain high levels of phytates, which can prevent your body from absorbing calcium. If you take calcium supplements, consider taking them two or more hours before or after consuming wheat bran.

 **nutrilite**



9 Avoid taking iron with acid-reducing medication, calcium supplements, milk, calcium-fortified drinks, coffee, or tea – they decrease iron absorption. Wait 2–3 hours to consume iron after taking calcium.

10 For some people, it is hard to swallow pills. They may consider capsules. Capsules are usually two-part shells, with their open ends facing one another. Twisting the capsule will separate the two.

11 Pill cutters are a low-cost way to help break a pill. A pill crusher or mortar and pestle can be purchased to help to crush a pill to be mixed with food and drinks.

12 If instructed to take the tablet on an empty stomach, don't mix the crushed tablet with anything other than water.

13 While you won't want to break a soft gel in half, you can puncture the capsule, squeeze out the contents, swallow the liquid directly, or add it to food or a drink. However, some pill contents can taste unpleasant, so they were put in a soft gel. For example, fish oil can have a very fishy taste. If you can't swallow soft shell, consider fish oil in a different preparation.



Supplement Regulation

Dietary supplements are regulated by the U.S. Food and Drug Administration (FDA) but the process is very different from the regulation of retail foods and prescription drugs.

Q. Who holds the responsibility for supplying quality, effectiveness, and safety of supplements?

A. Supplement manufacturers are responsible. They operate on the honor system. Consumers need to buy from reputable companies.

However, some independent third-party organizations test supplements, and their seal of testing will appear on the container labels. Third-party testing is voluntary. The most respected independent certification organizations today are valued by consumers worldwide.

Here are some examples of third-party verifications and their various seals.

National Sanitation Foundation (NSF)

The NSF certification mark on a product means that the product complies with all standard requirements.



NSF Certified for Sport® on supplements specifically intended for use by athletes. This verification guarantees that only the ingredients in the labeled potencies are actually contained in the product.

NSF screens supplements for more than 165 substances banned by most major athletic organizations. These include banned stimulants, narcotics, steroids, diuretics, beta-2-agonists, masking agents, and other substances.

For more information, check out: <https://www.nsf.org/>

The United States Pharmacopeia (USP)

This independent group of scientists is a nonprofit organization that is federally recognized. It is common to see the USP seal because they set quality standards for prescriptive medicines and dietary supplements.



The USP Verified Mark on the label indicated that the product:

Contains the ingredients listed on the label and in the listed potency and amounts.

Do not contain harmful contaminants.

Will break down, be released into the digestive tract, and be absorbed within a logical amount of time.

Follow FDA current Good Manufacturing Practices regarding sanitary and well-controlled procedures.

For more information, check out: <https://www.usp.org>

Informed-Choice/Informed-Sport

If you are an athlete, this is a quality assurance program you want to look for. It is a program that certifies that supplement products and /or raw supplies for sport nutrition products and the supplement manufacturing facilities have been tested at least monthly for banned substances by LGC's world-class sports and anti-doping lab. LGC provides a comprehensive assessment of supplement manufacturing. Athletes are strongly advised to cross reference the tested batches listed on the product pages with the batches they consume.



For more information, check out: <https://www.wetestyourtrust.com>



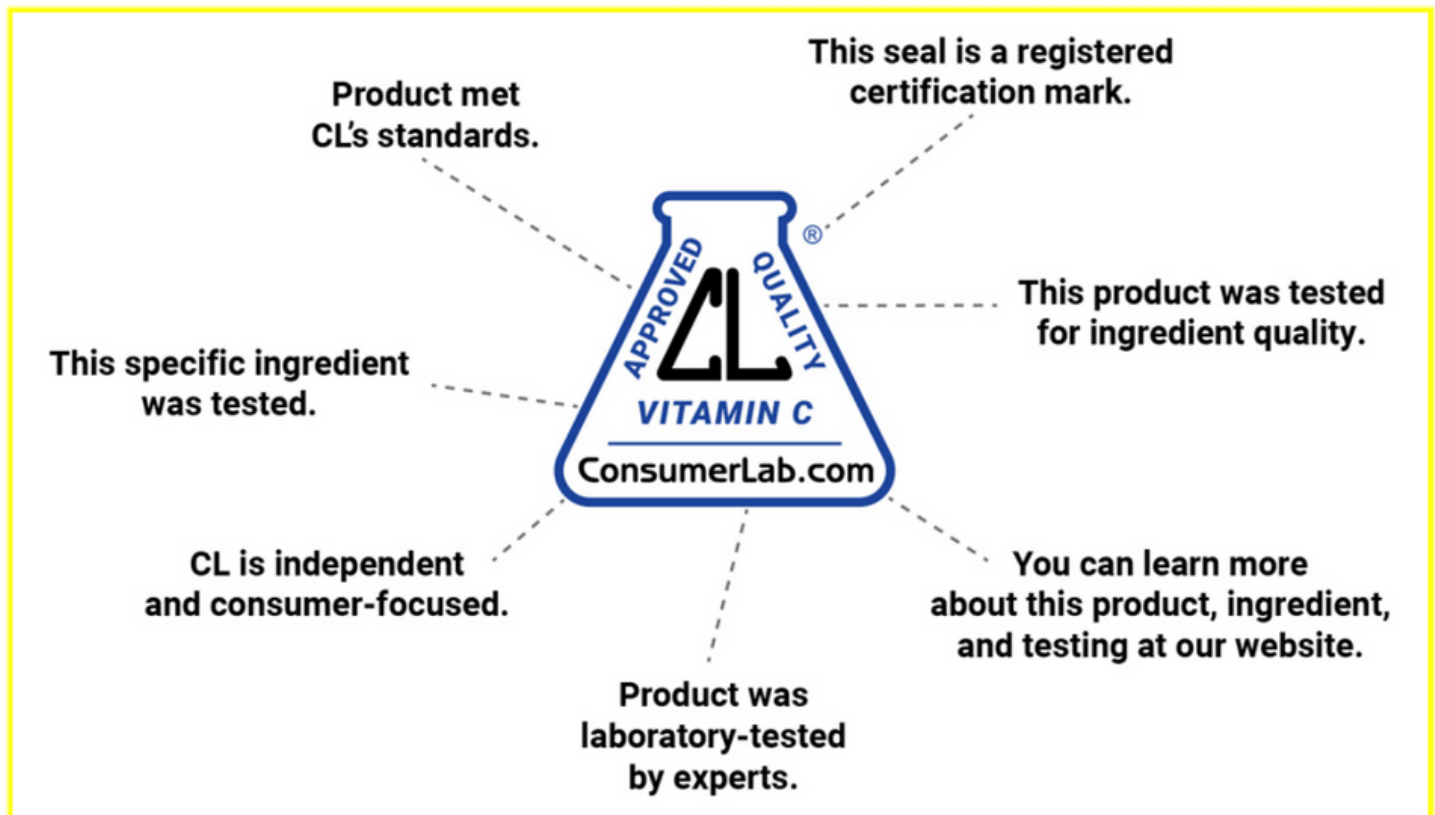
Consumerlab.com

ConsumerLab is a registered trademark company that provides verification services to supplement manufacturers for a fee. It can be expensive, so not all supplement companies can afford this service.

The ConsumerLab Seal of Approval indicates that the product contains the ingredients listed on the label contains the ingredients in the amounts and in the potency indicated passed safety tests confirming the absence of harmful contaminants passed performance tests demonstrating that the product meets USP standards for disintegration and dissolution rates. This is important because it is not how much you consume, but how much is absorbed in your body!

For more information check out: <https://www.consumerlab.com/>

How to Read a ConsumerLab.com Approved Quality Product Seal:



Testing methods and standards are based on USP, the World Health Organization, and California Proposition 65 standard practices. While all results are exclusive proprietary information for the manufacturer, ConsumerLab maintains an archive of the tested products that pass the tests on its website and may post Product Reviews. To access these Product Reviews, ConsumerLabs charges a fee.









Contraindications of Micronutrient Supplementation

Smokers should avoid supplementations with beta carotene due to an increased risk of lung cancer and heart disease.

Synthetic vitamin A can lead to birth defects. Women children barely age and pregnant should avoid taking this form of vitamin A.

Healthy postmenopausal women, adult men, and individuals with hemochromatosis should avoid iron supplementation.

Caution:

-  Excessively high supplemental intake of vitamin B6 has been reported to result in sensory neuropathy characterized by loss of control of bodily movements.
-  High doses of iron supplements can decrease zinc absorption, and high amounts of zinc can inhibit copper absorption.
-  Calcium supplements inhibit the absorption of iron and should be taken separately.
-  Supplements may interfere with medications, alcohol, and other supplements.
-  High doses of more than 400 IU vitamin E supplements can inhibit platelet aggregation and interfere with anticoagulant blood thinning medications such as Coumadin. Vitamin K supplementation can also interact with blood thinning medications thus, supplementation should be avoided or used with caution and under the care of healthcare providers because a consistent intake of the vitamin is crucial.
-  The FDA warned that supplements containing biotin (vitamin B7) can falsely lower troponin-based lab results, an important biomarker used to help diagnose heart attacks.

Check Us Out...

<https://www.marinadietitian.com>

As part of our customized service to our clients, we offer many highly recommended companies & products; a few of which are listed below:



Please visit our website to order these and more of your Nutralite Supplements!



Order through FullScript on our website and SAVE 20%!

Direct link is

<https://us.fullscript.com/welcome/msavelyeva>



***Consider taking at least a Multivitamin with mineral supplements to ensure you are covered from head to toe.**

<https://www.marinadietitian.com>

For patients who had bariatric surgery, bariatric supplement brands are recommended. These companies also offer a variety of protein powders, drinks, and snacks. Here is a list of bariatric supplements:



Bariatric Advantage <https://www.bariatricadvantage.com/>. They have a variety of supplements and protein nourishments.



Bari Melts <https://www.barimelts.com/>. These are "chewables" that you don't have to chew...the tablets melt in your mouth.



Celebrate <https://www.celebratevitamins.com/>. Large assortment of supplements, protein drinks, snacks, and treats.



Opurity <https://www.unjury.com/>. A few options for supplements, bars, ready-to-go drinks, and one of the best quality unflavored protein powders.



Bariatric Fusion <https://www.bariatricfusion.com/>. Variety of supplements, protein drinks, and bars.



Fit For Me <https://www.fitforme.com/>. Made in Europe, very affordable and mainly sell multivitamins with minerals and calcium.



Procare <https://www.procarenow.com/>. They offer a variety of chewable capsules and meal replacements and even have dark chocolate calcium supplements.



Learn About Marina



Marina Savelyeva, RD, is an experienced and dedicated professional in nutrition and dietetics. With a passion for promoting healthy lifestyles and helping individuals achieve their wellness goals, Marina has become a trusted resource for evidence-based nutrition advice.

After receiving a Bachelor of Nutrition and Food Science from California State University in San Bernardino in 2005, Marina began positively impacting people's lives through nutrition.

Marina's expertise spans a wide range of areas, including weight management, disease-specific nutrition, gastrointestinal surgeries, and healthy eating for all stages of life. Through one-on-one consultations, workshops, and educational materials, she empowers individuals to make informed choices about their nutrition and adopt sustainable habits.

Marina's compassionate approach and ability to connect with her clients set her apart. She takes the time to understand their unique needs, preferences, and challenges, tailoring her recommendations to their specific circumstances.

Beyond her practice, Marina is also an advocate for community nutrition. She actively engages in public speaking, writes articles, and collaborates with various organizations to raise awareness about the importance of proper nutrition and its impact on overall wellness.

Marina's commitment to evidence-based practice, passion for helping others, and ability to simplify complex nutrition concepts make her a trusted and respected authority. With her guidance and expertise, individuals can achieve optimal health and lead fulfilling lives through nutritious food choices.

Marina brings enthusiasm and passion to all work that she provides. She is also great at planning educational events, prioritizing networking, and collaborating with healthcare professionals.

In her free time, Marina loves to stay active, cook, develop new recipes, and travel to different countries to gain more knowledge about various cultures and cuisine. Nutrition has always been a passion of hers. She enjoys reading and learning the latest nutrition trends, even during her time away from work.



Check Out My Two Published Books:

[THE PLANT-BASED Weight Loss Solution](#)

[EASY GASTRIC SLEEVE COOKBOOK](#)

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Please review my website for more information.

Warmest Regards,

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