

Examine.com

Vegetarians & Vegans

Medical Disclaimer & Important Note

This guide is a general health-related information product, intended for healthy adults over the age of 18.

This guide is for educational purposes only. It is not medical advice. Please consult a medical or health professional before you begin any exercise, nutrition, or supplementation program, or if you have questions about your health.

Participating in exercise activities or using products mentioned in this guide may pose risks for people in poor health or with pre-existing physical or mental health conditions.

Do not use any products or participate in any activities if you are in poor health or have a pre-existing mental or physical health condition. If you choose to participate, you do so of your own free will, and you knowingly and voluntarily accept the risks.

While we will mention major known drug interactions, it may be possible for any supplement to interact with medications or other drugs. If you are currently taking medication, consult a health professional prior to using any supplement in this guide.

Specific study results described in this guide should not be considered representative of typical results. Not all supplements provide the exact amount of compounds as listed on the label. Always investigate supplement companies, as well as the supplement itself, before purchasing anything. Herbs, rather than isolated compounds, may also have some variability from one batch to the next that can alter the efficacy.

To read the evidence supporting claims mentioned in this guide, please visit [Examine.com](https://www.examine.com).

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How to use this Guide

The team at Examine.com has been publishing research on nutrition and supplementation since March 2011. In that time, we've learned a great deal about supplements, especially how they can work together to help you with health goals.

This stack guide help you figure out which supplements can help you and which will hinder and/or be a waste of your money for your desired goals.

The following four sections present information on supplements that are relevant to *Vegetarians & Vegans*:

1. Base Supplements
2. Proven Options
3. Unproven Options
4. Cautionary and Overhyped Options

Base Supplements are recommended for the majority of people with this goal. They are either effective on their own or are required to boost the effects of another supplement. These are the first supplements to consider for your stack. Base Supplements are more researched and have less adverse drug interactions than options.

Proven Options are supplements that will provide a lot of benefits, but only in the right context. They cannot be recommended for everyone, but if you read the entry and find that you meet the criteria, feel free to add the supplement to your stack.

Unproven Options are another group of potentially beneficial supplements, but they lack evidence for their effects. They cannot be recommended with the same confidence as proven options. They could work or be a waste of your money - there is not enough evidence to know for sure. Keep unproven options in mind, but approach them cautiously when incorporating them into your stack.

Cautionary and Overhyped Options are supplements that are claimed to provide benefits but have been shown to be ineffective. If a supplement is deemed too risky to be used, it will also be found in this section. **Do not** add these compounds to your stack; they tend to be a waste of money or potentially harmful to your health.

Once we have explained the various supplements that you need to be aware of, the **Assembling your Supplement Stack** section will outline how different supplements can be combined, based on your objectives.

After that, we follow up with the **Stack Modification FAQ**, in which we cover common questions that may arise when assembling your stack.

Lastly, we include information on **Precautions and Troubleshooting**.

With all this combined, you should be able to identify and assemble a supplement stack best suited for your goals and objectives.

Creatine

Why you should take it

Creatine is an organic acid that can provide cells with energy. Creatine is supplemented for its ability to improve power output and muscle growth. Vegetarians and vegans will benefit more from creatine supplementation than an omnivore.

Vegetarians and vegans supplementing creatine will also experience an increase in memory formation and attention span.

Creatine is found in meat and is a vital energy source for brain cells, which is why supplementation can provide neural benefits for people that don't eat meat. A lack of creatine in the diet will not cause any negative effects, but it does make creatine supplementation more effective.

Creatine may be more potent when supplemented alongside [L-carnitine](#) and [beta-alanine](#), though stacking these supplements may not necessarily improve creatine's effects in the brain.

Creatine supplementation is safe. Side-effects include minor water retention in the first few weeks of supplementation, as well as cramping and nausea if creatine is taken in too large a dose. Water weight will be replaced with muscle mass in active people, after a few weeks of supplementation.

How to take it

To supplement creatine, take 5 g with a meal, once a day. The lowest effective dose for creatine is 2 g a day.

Loading creatine, which means taking five times more creatine than the standard dose to start supplementation, before dropping to down to 5 g a day after five days, is not mandatory. People loading creatine may experience creatine's benefits a little faster, but effects normalize very quickly.

Supplementing creatine with carbohydrates will only improve creatine absorption and uptake during the first day of supplementation.

The best way to supplement creatine is through creatine monohydrate. People with sensitive digestive systems should consider supplementing micronized creatine monohydrate, which can be gentler on the stomach.

Creatine can be added to a warm liquid, like tea or coffee, but it must be drunk quickly after mixing, to avoid clumping. Liquid creatine products are not stable, which makes them ineffective for supplementation.

If creatine supplementation causes gastrointestinal upset or nausea, split the dose into several throughout the day. This will not reduce the benefits of creatine supplementation.

L-Carnitine

Why you should take it

L-Carnitine is an amino acid found exclusively in meat products. It is important for fat metabolism, sports performance, and cognition. Up to 75% of carnitine stores in omnivores can be attributed to their diet, so vegetarians and vegans should consider L-carnitine supplementation.

L-Carnitine supplementation can reduce the symptoms associated with muscular and cognitive fatigue for vegetarians, vegans, people undergoing chemotherapy, and the elderly. L-carnitine, when supplemented by elderly people, may also play a role in fat loss.

L-Carnitine is cheap and safe, making it a good base supplement for vegetarians and vegans.

How to take it

To supplement L-carnitine for cognitive benefits, take 250 mg of acetyl-L-carnitine (ALCAR), once a day. Slowly increase your dose to 500 mg, taken once a day.

To supplement L-carnitine for physical benefits, take 2,000 mg of L-carnitine or L-carnitine L-tartrate (LCLT), once a day.

Glycine propionyl-L-carnitine (GPLC) is not recommended for supplementation because it is more expensive and clumps easily in moist environments.

L-Carnitine should be supplemented alongside carbohydrates to improve the rate at which L-carnitine is absorbed by the muscles.

Vitamin B12

Why it is a proven option

Vitamin B12 is found in meat products and nutritional yeast. It is a popular dietary supplement among vegetarians, vegans, and seniors. Vitamin B12 supplementation is recommended for vegans because sources of vitamin B12 are all animal based. Vegetarians who eat eggs and dairy products do not need to supplement vitamin B12.

Supplementation of vitamin B12 will reduce the risks of a vitamin B12 deficiency, which reduces cognitive ability and causes anemia.

People with diabetic nephropathy or kidney problems related to diabetes should talk to their doctor before supplementing vitamin B12.

How to take it

To supplement vitamin B12, take 25 – 100 mcg a day. Higher doses, even as high as 1,000 – 10,000 mcg, are not toxic because the body will not absorb more than it needs.

Vitamin B12 can be supplemented through the vitamin B12 forms cyanocobalamin, methylcobalamin, or S-adenosylcobalamin.

Iodine

Why it is a proven option

Iodine is a dietary mineral. Iodine is unique in that too much or too little of it can cause goiter, which is characterized by neck swelling.

Iodine is important for cognitive development and a properly functioning thyroid.

The two biggest sources of iodine are sea vegetables, like seaweed, and iodized salt. Iodine is stored in body tissues, which is why animal products contain iodine.

Iodine supplementation is rarely necessary. Vegetarians and vegans that avoid iodized products like table salt and processed foods and do not frequently consume sea products like seaweed may need to supplement iodine.

Women that plan to have children in the near future should keep an eye on their iodine intake, since iodine is important for early childhood development.

Iodine supplementation cannot increase metabolic rate or induce weight loss, despite its interactions with the thyroid. Superloading iodine is not recommended because it can cause a decrease in thyroid hormone production.

Iodine can also counteract goitrogens, which are plant-based compounds found in cruciferous vegetables like broccoli and kale that can reduce thyroid hormone production.

People on blood pressure medications that raise potassium levels should not supplement iodine. Ask your doctor if iodine is a concern if you are on blood pressure medication.

How to take it

To supplement iodine, take 75- 150 mcg (micrograms) with a meal or an empty stomach, once a day. Do not take more than 500 mcg of iodine.

Vegan Protein Supplements

Why it is a proven option

Dietary protein doesn't just contain important amino acids. It also provides a variety of health effects.

Vegetarians and vegans should pay particular attention to their dietary protein intake because most non-animal protein sources have low bioavailability of protein. This means that less protein is absorbed by the body after consumption.

Protein supplements can help vegetarians and vegans consume adequate amounts of protein without significantly impacting the diet.

Protein supplements are all vegetarian, even if they are called 'beef protein concentrate' because those are made from isolated amino acids. Creating protein supplements from animal tissues is cost prohibitive. Whey, casein, milk, and egg proteins are not vegan-friendly.

Vegetarian and vegan protein sources include soy, [hemp](#), pea, and rice protein. [Spirulina](#) should not be supplemented as a protein supplement.

How to take it

The [amount of protein you need per day](#) depends on your activity level, weight, and fitness goals. Sedentary people should aim for 0.8 grams per kilogram of bodyweight, while athletes need 1.0-1.5g/kg. Athletic people that are trying to lose body fat while preserving lean muscle mass should aim for 1.5 - 2.2g / kg.

Soy protein should be supplemented carefully due to its isoflavone content, which can interact with steroid receptors.

Hemp protein has a higher dietary fat and carbohydrate content than other sources. It also contains low amounts of cannabinoids. Further research is needed to determine the effects of cannabinoid supplementation through hemp protein.

Pea and rice protein is often used as a dairy protein replacement, since it has a similar texture. Rice protein and whey protein have similar amino acid profiles. Pea and rice protein form a complete protein source, which makes them a popular supplemental option.

Though spirulina is sometimes recommended as a dietary protein option, it should not be supplemented as a protein supplement because it is very active in the body after supplementation of 25 g or more.

Beta-Alanine

Why it is an unproven option

Beta-alanine is a nonessential amino acid found exclusively in meat products. It binds with the essential amino acid called L-histidine to create carnosine. Carnosine buffers acidity during exercise, which delays the onset of muscle fatigue.

The human body cannot produce enough beta-alanine to compensate for a dietary deficiency, so vegetarians and vegans may benefit from beta-alanine supplementation.

Beta-alanine supplementation is popular among athletes. Vegetarians and vegans supplementing beta-alanine will experience more benefits than omnivores.

Carnosine has anti-aging and antioxidant properties, though more research is needed to confirm if these effects should be expected after supplementation.

Beta-alanine supplementation can cause paresthesia, which is a tingling effect felt on the skin. Paresthesia is harmless, if unpleasant. Taking smaller amounts of beta-alanine or using a time-release capsule can prevent paresthesia.

How to take it

To supplement beta-alanine, take 2 – 5 g a day, with meals. Beta-alanine can be split into multiple doses to avoid paresthesia.

Vegetarian ‘Greens’ Products

There are many dietary supplements and products aimed at vegetarians and vegans. These include barley, [hemp](#), [chlorella](#), and [spirulina](#).

Some of these products may be useful supplement options. For example, preliminary evidence suggests spirulina can fight inflammatory diseases.

However, none of these supplements benefit vegetarians and vegans more than omnivores. With the exception of spirulina, none of the aforementioned products are good sources of protein for vegetarians and vegans. Spirulina should not be supplemented as a protein sources due to how active it is in the body in large doses.

Assembling Your Supplement Stack

The following outlines how to incorporate this supplement stack into your daily nutrition habits.

Incorporating Base Supplements

The base supplements in the Vegetarian & Vegan stack include **creatine** (2 – 5 g), **L-carnitine** (250 – 500 mg, taken twice a day). Creatine and L-carnitine should be taken with a meal.

Acetyl-L-Carnitine (ALCAR) is an alternate form of L-carnitine that can be supplemented for its benefits for cognition.

Incorporating Supplement Options

For vegetarian and vegan athletes

Take the base **L-carnitine** (250 – 500 mg), twice a day and **creatine** (2 – 5 g), alongside **beta-alanine** (5 grams), taken with a meal. L-carnitine or **ALCAR** can be taken before physical exercise.

For vegetarians and vegans who want to add more protein to their diet

If changing your diet to add protein is not practical, start by adding 25 grams of a [vegetarian or vegan protein](#) source. Slowly increase the dose as needed.

For vegetarians and vegans avoiding salt

Take iodine (75 – 150 µg) a day. People that do not avoid salt, processed foods, and sea products do not need to supplement iodine.

How do I add supplements to my stack that are not covered in this guide?

Before adding a new supplement to your stack, supplement your current stack for a few weeks to determine if you need to make a new addition. If you want to make multiple changes to your stack, pick one supplement to add at a time. Identify the stack change that you think will be the most effective, and do your research:

1. Use [Examine.com](https://www.examine.com) to determine if that supplement would have a negative interaction with your current stack. Talk to your doctor about including a new supplement in your stack.
2. Introduce the new supplement at half of the regular dose.
3. After a week with the new supplement, slowly increase the dose to the recommended dose if you are not experiencing the effects you want.

Stacks are intended to be synergistic, which means taking two supplements together may provide more effects than the supplements by themselves. New supplements should be added carefully, since even low doses can be powerful if other supplements in your stack improve their effects.

Can I modify the recommended doses?

If a supplement has an established advised dosage range, stay within that range. If a supplement has a recommended dose, and not a range, stay within 10% of that dose. Halving or doubling an advised dose could be ineffective or even dangerous.

The safest way to add dietary supplements to your life is one at a time. If you are considering purchasing several supplements, purchase only one and add the others after a week or two of supplementation. This will limit the risk of new supplements, and it will also make it easier to figure out what supplements are providing you with your newfound benefits.

Precautions & Troubleshooting

The safest way to add dietary supplements to your life is one at a time. If you are considering purchasing several supplements, purchase only one and add the others after a week or two of supplementation. This will limit the risk of new supplements, and it will also make it easier to figure out what supplements are providing you with your newfound benefits.