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Seniors

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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 *Seniors*:

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.

Blueberry

Why you should take it

Blueberries are one of the few fruits with strong evidence for its health effects.

A diet high in blueberries can improve memory formation and verbal skills. These benefits can occur after just six weeks of eating blueberries consistently.

Blueberries increase growth factors in the brain, which allows brain cells to grow and have an easier time communicating. This is a rare effect among food products.

Other dark berries can provide similar benefits when ingested. Blackberries, chokeberries, and black raspberries can all take the place of blueberries.

Blueberries are an excellent base supplement for seniors because they are safe, delicious, readily available, and provide cognitive benefits.

How to take it

Blueberries can be supplemented by eating fresh fruit, drinking juice made from blueberries, or through a blueberry extract.

Eating 60 – 120 g (about 0.5 - 1 cup) of fresh blueberries a day is as effective as the supplementation described below.

To supplement blueberries, take 500 – 1,000 mg of blueberry anthocyanins[<http://examine.com/supplements/Anthocyanins/>], once a day.

To supplement a blueberry extract that is not concentrated for anthocyanins, take 5.5 – 11 g.

Drinking 500 ml of pressed blueberry juice a day is as effective as the supplementation described above. The first ingredient of blueberry juice should be blueberries or a similar dark berry without any added sugars. Any juice made primarily from sugar with added flavoring will not provide cognitive benefits.

Vitamin B12

Why you should take it

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 seniors because as people get older, it becomes harder for them to absorb vitamin B12. Vitamin B12 is bound to protein, which can be difficult to digest.

Supplementation of vitamin B12 will reduce the risks of a vitamin B12 deficiency, which can reduce cognitive ability and result in anemia, a condition characterized by low red blood cell count.

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.

Acetyl-L-Carnitine (ALCAR)

Why you should take it

L-Carnitine is a nutrient found in meat products. It is also produced by the body as fuel for cells. A variant of L-carnitine, acetyl-L-carnitine (ALCAR), can benefit the brain after supplementation.

As people age, their bodies produce less L-carnitine. Due to this, L-carnitine supplementation seems to be more effective in seniors, and some unique benefits may only occur in seniors.

ALCAR improves blood flow and promotes efficient energy use in brain cells. This effect is especially potent in seniors. Preliminary evidence also suggests ALCAR may also improve muscular control and help with fat loss when supplemented by seniors.

Vitamin K can interact negatively with some pharmaceuticals, including vitamin K antagonists like acenocoumarol. It may also have a negative interaction with some anticancer drugs, like taxane.

How to take it

To supplement ALCAR, take 250 mg, twice a day. After a week of twice-daily supplementation, increase the dose to 500 mg, taken twice a day, for a total daily dose of 1,000 mg.

Supplementing ALCAR on an empty stomach will result in more potent cognitive benefits.

ALCAR has a tart taste, but it can be dissolved in tea or coffee and still retain its effects when supplemented.

Creatine

Why it is a proven option

Creatine is a popular supplement among athletes because it can increase power output and muscle growth. This effect also applies to seniors. By improving muscular strength and control, creatine can reduce the risk of a fall.

Studies on seniors supplementing creatine have confirmed that creatine may reduce the risk of falls and improve mobility and fitness.

More research is needed on the long-term effects of creatine supplementation in the context of preventing falls. This is why creatine is a proven option instead of a base supplement.

Creatine may also provide cognitive benefits to elderly people similar to how it can provide benefits to vegetarians and vegans. Young omnivores supplementing creatine will not experience any cognitive benefits.

Creatine should not be supplemented by people taking diuretic medication, since creatine can cause water retention.

How to take it

To supplement creatine, take 2 g of creatine monohydrate. After two weeks of supplementation with no side-effects, increase the dose to 3 – 5 g.

A water soluble form of creatine, micronized creatine, can be added to tea or coffee, though it should be consumed quickly to avoid clumping. Micronized creatine may be gentler on the digestive system.

Other forms of creatine, including liquid creatine products, are not more effective than creatine monohydrate, but they are more expensive.

CDP-Choline

Why it is a proven option

CDP-choline is a source of dietary choline. CDP-choline can increase

acetylcholine levels in the brain since it can effectively transport choline there, subsequently influencing memory formation and attention span. Cholinergic supplements in general can protect against cognitive decline.

CDP-Choline is recommended over other cholinergic supplements like [alpha-GPC](#) and [huperzine-A](#) because CDP-choline is also a source of [uridine](#). Uridine could improve cognitive functioning when supplemented by seniors, but more research is needed before it can be recommended for supplementation by itself.

Preliminary evidence suggests CDP-choline may improve vision when supplemented by people suffering from glaucoma.

How to take it

To supplement CDP-choline, take 250 mg, once a day in the morning. If there are no side-effects after one day of usage, take 250 mg twice a day, once in the morning and once in the afternoon. If, after two weeks, no side-effects occur, increase the dose to 500 mg, taken twice a day, for a total daily dose of 1,000 mg.

Protein Supplements

Why it is a proven option

The amount of dietary protein an individual needs varies based on age, activity level, and fitness goals. When it comes to supplementing in old age, high levels of protein intake are associated with various benefits, including increased longevity.

Protein supplements, like [whey](#) or [casein](#) protein can be used to increase dietary protein intake. Protein supplements are convenient, do not need to be chewed, and come in a variety of flavors.

How to take it

Senior citizens should aim for 1 - 1.2 g of protein per kilogram of bodyweight. Very active seniors should aim for 1.5 g/kg of bodyweight.

This is approximately:

- 45-70 g for a 100 lb person
- 70-102 g for a 150 lb person
- 90-136 g for a 200 lb person

Protein supplements are recommended because they are cheap and convenient, but if enough protein can be acquired through diet alone, supplementation is unnecessary.

Seniors with chronic conditions (excluding kidney issues) should also aim for 1.5g of protein per kilogram of bodyweight. Seniors with chronic kidney conditions should talk to their doctor before supplementing protein.

Vitamin E

Why it is an unproven option

Vitamin E is recommended for a variety of different effects, and often at higher doses than it should be. Though most of vitamin E's potential benefits have not been fully explored, it is safe and reliable to use by seniors to boost the immune system.

As people age, their immune systems are less likely to respond to foreign invaders or stressors, which is why seniors are more likely to get sick. Seniors at risk for illness who then supplement vitamin E may reduce the risk of getting sick from an infectious disease. More research is needed to determine the role vitamin E plays in sickness severity or in seniors who do not get sick frequently, as preliminary evidence suggests symptoms may worsen if higher doses of vitamin E are taken by those with robust immune systems.

Though more research is needed to fully understand vitamin E's direct effect on infection rates and illness, current evidence supports vitamin E supplementation.

High doses of vitamin E can interact negatively with blood thinning pharmaceuticals like warfarin. If you are taking a blood thinner, talk to your doctor about vitamin E supplementation.

How to take it

To supplement vitamin E, take 200 IU, once a day, with a meal containing dietary fat. Both natural and synthetic vitamin E supplements have been found to be effective for supporting the immune system.

Do not take more than 400 IU of vitamin E a day.

Pycnogenol

Why it is an unproven option

Pycnogenol is the brand name for pine bark extract, which is a source of compounds called procyanidins. Procyanidins can improve blood flow.

Supplementing a procyanidin source has been shown to reduce blood pressure for people with high blood pressure.

As people age, their risk for joint pain and erectile dysfunction increases. Preliminary evidence suggests Pycnogenol supplementation can alleviate these issues and even improve skin quality.

Pycnogenol is an unproven option in this stack because it has not been researched specifically in the frame of age-related blood flow issues.

Pycnogenol is the best researched procyanidin source. Other sources include [grape seed extract](#) and [cocoa polyphenols](#). Either of these supplements can be considered as cheaper alternatives to Pycnogenol. Cocoa polyphenols can be supplemented through dark chocolate consumption, making them a popular option.

Note: Unbranded pine bark extract is another cheaper alternative to Pycnogenol supplementation.

How to take it

To supplement Pycnogenol, take 60 – 200 mg, once a day, in the morning, with food.

To supplement grape seed extract, take 90 – 300 mg, once a day, in the morning, with food.

To supplement cocoa polyphenols, take 500 – 1,000 mg, once a day, or eat 25 g of pure dark chocolate a day.

Maca

Why it is an unproven option

Maca is an herb, used in traditional medicines to improve vitality, libido, and sexual wellbeing. Maca is one of the few libido enhancing herbs that affects both men and women. It has strong human evidence to support its effects.

Maca can also reduce anxiety and depression without affecting hormones. It is an unproven option in this stack because maca supplementation has not been specifically researched in seniors. It is reliable for all ages.

How to take it

To supplement maca, take 1,500 – 3,000 mg once a day, with food.

Calcium

Though calcium supplementation was recommended for a long time to support bone mass during aging, there are much better options for bone mass supplementation, including [vitamin D](#), [vitamin K](#), and [magnesium](#). Supplementing vitamin D, for example, increases the rate at which calcium is absorbed from food products, which may make calcium supplementation unnecessary.

Calcium supplementation is not inherently harmful, but it is overrated.

Calcium may also prevent the absorption of some pharmaceuticals, including various blood pressure medications, which is of special concern to seniors.

Folic Acid

Folic acid is the synthetic form of the B-vitamin known as folate. It is often included in multivitamin formulas at higher doses than the recommended daily intake (RDI). High doses of folic acid have been successfully used by pregnant women to prevent birth tube defects. This is one of the reasons foods, especially bread, are fortified with folic acid.

Unfortunately, research has shown that high doses of folic acid can increase the risk of colon cancer in seniors, and may exacerbate pre-existing colon cancer. Supplementation of folic acid is not recommended for seniors. Multivitamin supplements are also not recommended, since they often contain more than the RDI of folic acid.

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 this stack are **acetyl-L-carnitine** (ALCAR), **vitamin B12**, and **blueberries**, which can either be eaten or supplemented.

ALCAR (250 – 500 mg, twice a day) and vitamin B12 (25 mcg a day) can be taken together, in the morning, with breakfast. This meal can also contain blueberries or blueberry juice. The second dose of ALCAR should be taken in the afternoon, and it does not need to be taken with food.

Incorporating Supplement Options

For people supplementing for increased energy and stamina

Take the base supplements as described above. Add **Pycnogenol** (90 - 200 mg) and **maca** (1,500 - 3,000 mg). Both of these supplements can be taken once a day with breakfast.

Adding **creatine** (2 - 5 g) is optional.

For people supplementing for improved cognition

Take the base supplements as described above. Add **creatine** (2 g) and **CDP-choline** (250 - 500 mg, twice a day). Creatine should be taken once a day, with a meal. CDP-Choline should be taken once in the morning and once in the afternoon. It does not need to be taken with a meal.

Assembling Your Supplement Stack (cont.)

For people supplementing for improved immunity

Take the base supplements as described above. Add **vitamin E** (200 IU), taken once a day with a meal.

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.

Why are there no preventative supplements in this stack?

Preventative measures are an effective way to ward off age-related issues like osteoporosis. Physically and mentally active people with a healthy diet containing plenty of calcium are less at risk for many age-related problems. Preventative measures take place over a lifetime. They are not supplements.

The supplements included in this stack are meant to provide specific benefits. Supplementing them throughout your life will not have a preventative effect.

Why are dietary minerals like calcium, zinc, and magnesium not included in this stack?

Dietary minerals deficiencies, particularly [calcium](#) and [magnesium](#), are more likely to occur in older people due to the dietary changes that people undergo as they age. This may be related to reduced mineral absorption seen during the aging process.

Vitamin B12 is included in this stack because aging directly hinders its absorption process, which makes it easier to supplement.

Protein supplements, like [whey](#) or [casein](#) protein can provide dietary calcium. Whey provides 20% of calcium's recommended daily intake per scoop, while casein provides 60% per scoop.

If your diet lacks zinc, add more shellfish and nuts. If that is impractical, consider supplementing [ZMA](#), a mix of dietary zinc, magnesium and vitamin B6.

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.