

Supplement Facts

Older Adults Probably Do Not Know

~ Joe Cannon, MS, CSCS, NSCA-CPT

As a personal trainer, my oldest “client” is my 104 year old grandmother – that’s not a typo. She really is 104 and I really do get her to exercise most days of the week. While she managed to reach this age without the use of supplements, I know from the emails I get that older adults have many questions about which supplements might be right for them. Truth be told, there are some good supplements out

there. I use a few myself and I’ve even added one or two to my grandmother’s regimen over time. Two problems are knowing which ones are grounded in fact and which might be right for your particular situation. As a supplement investigator and educator, here are what I feel are five of the most important facts about supplements for older adults.

FACT #1. *Natural vitamins are not better than synthetic vitamins.* For some, this is the hardest pill of all to swallow. There are many marketing gurus who would like people to believe that natural vitamins are superior to synthetic vitamins; however, the fact is that they are not. There are several reasons for this.

1. The chemical structure of synthetic vitamins is no different from that of natural vitamins. As such the body cannot tell the difference between them.
2. While there are some differences in absorption between synthetic vitamins and their natural counterparts, the differences do not always favor natural nutrients. For example, take the B vitamin, folic acid. This is actually the synthetic version of folate. The multivitamin that you used today probably contains folic acid because it is better absorbed than folate.
3. A popular argument often mentioned as support of the superiority of natural vitamins over synthetic is the case of vitamin E (alpha tocopherol). Some research does show that natural vitamin E is better absorbed than synthetic vitamin E. Here is the reason why: many of you reading these words are right handed while others are left handed. It turns out that vitamins also come in left handed and right handed versions.

Natural vitamin E is called “d” (dextrorotatory) while the synthetic version is called “L” (levorotatory). These names are given because in some instances molecules will rotate light that is shined on them, to the right (d) or to the left (L). Humans appear to absorb only the right handed (d) version of vitamin E. If you look at your multivitamin, you may see that it lists vitamin E as “dl” alpha tocopherol, an indication that it is a mixture of both right-handed and left-handed versions. So, the type of vitamin E that the body favors has less to do with being natural and more to do with how the molecule reacts



in the laboratory. It's important to keep in mind that not only vitamin E exhibits this trait. For example, all the muscle building amino acids in your body are left handed. This is why you see the letter "L" on all the amino acid supplements.

4. Lastly, it is important to remember that the word "natural" has no legal definition in the US. Unlike words such as "organic" or "light" the FDA has not imposed any official definition for the word "natural."

For those who want to use natural vitamins, this is fine. Just make sure you deal with reputable companies because studies sometimes find natural vitamin products that contain synthetic vitamins.

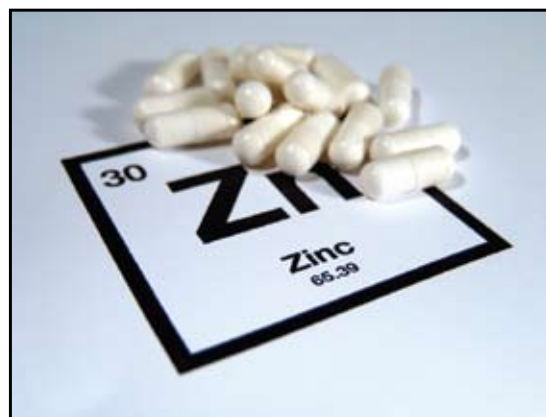
FACT #2. *Vitamin D is not just for bones anymore.* Most people know that vitamin D assists with calcium absorption and as such can help offset the development of osteoporosis. This is why both nutrients are found together in supplements. However new research on vitamin D suggests that it may do much more than this. With respect to older adults, vitamin D appears to reduce the risk of falling. One study noted that vitamin D supplementation decreased falls in older adults by as much as twenty-two percent! This has huge implications for improving the quality of life as we grow older. Normally vitamin D is made when we are exposed to sunlight. Unfortunately, many of us spend more time indoors as we grow older, limiting our exposure to this vital nutrient.

Compounding this is the fact that vitamin D is only found in a few foods, so it may be missing from the diet as well. How vitamin D appears to reduce falls in older adults is still being studied but it does not appear to be because it makes bones stronger. Studies show many older adults in nursing homes are deficient in vitamin D.

Advise older adults to consult their physician about vitamin D supplements because in theory it may interfere with some of the medications they are taking.

FACT #3. *Zinc supplements may do more harm than good.*

Some older men may use high potency zinc supplements in the hopes of strengthening their immune system, boosting testosterone levels and sexual potency. However, research shows that high levels of zinc may actually reduce levels of HDL – "good cholesterol." This might accelerate the rate of heart disease! While it is true that diets low in zinc lead to lower testosterone levels and reductions in some aspects of male fertility, zinc is relatively easy to get in the diet being found in meat, multivitamins and other supplements men might be taking. When taken at the onset of a cold, zinc gluconate lozenges might modestly reduce the severity and duration of cold symptoms. However, some evidence suggests that zinc-laced nasal sprays might interfere with the sense of smell – sometimes permanently.



FACT #4. *Glucosamine may help arthritis – but which type?*

Several studies over the last several years find that glucosamine may help reduce arthritis-related pain. Having worked with hundreds of seniors over the years, I am of the opinion that many older adults are not aware of the conditions they have. For example, it has been my observation that older adults routinely confuse osteoarthritis with osteoporosis, calling both conditions simply "osteo." Glucosamine only appears to work for osteoarthritis, the most common form of this condition where the cartilage cushioning between bones wears away. Studies tend to show that 4-8 weeks of glucosamine supplementation may be needed to impact pain levels, so this is generally not something where people will see results overnight. Also and equally interesting, some research also suggests that glucosamine may slow the rate of cartilage breakdown in those with osteoarthritis. One study noted a reduction in disease progression by as much as fifty-four percent! This does not mean that taking glucosamine reduces the risk of getting osteoarthritis all together. The answer to that question is unknown at this time. Also, the effectiveness of glucosamine might be dependent on the length of time one has had the disorder, as well as how severe it is. Thus, two people who have different degrees of osteoarthritis-related pain may experience differences in how much this supplement helps them.

Another aspect of glucosamine that older adults may not be aware of is that glucosamine supplements are not created equally. Glucosamine sulfate is the type that has most of the evidence supporting its use. Other types of glucosamine found in supplements include glucosamine HCL and "NAG." While these other types may help some, their effects appear to be less than that of glucosamine sulfate. Because, in theory, glucosamine might interfere with insulin levels and possibly heart disease, I advise clients with these conditions to consult their physicians prior to using this supplement.

FACT #5. *Natural does not always mean safe.* A common mantra repeated on many websites is that because supplements are natural, they are automatically safe for everyone. For example, who has not heard the phrase, "A safe, natural alternative." Truth be told, many supplements, if used by the wrong people may have significant side effects. For example, St. John's wort,

“Fact #5.
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which is typically used for depression may interact with not only antidepressant drugs but also those used to treat cancer and AIDS. Vitamin E, a common nutrient used by many, can reduce the blood's ability to clot. This is the reason that doctors typically tell their patients to stop using vitamin E (and all supplements) before surgery. It is because of the side effects associated with supplements that many physicians now quiz their patients about their supplement habits before prescribing medications.

Bottom Line: Yes some supplements may in fact help us as we grow older but the list is probably less than what you are currently taking. Only by staying educated on this topic, maintaining a close relationship with your personal physician, and working out can you help ensure you're doing all you can to reach 104 years of age and beyond.

Supplement Questions To Ask Yourself

1. Is there any scientific research behind the product?
2. Was the research conducted on the product – or ingredients? Studies on the ingredients are not necessarily the same as that conducted on the product itself.
3. Has the product specifically been tested on older adults?
4. Does the product have any known side effects?
5. Does your doctor know you are taking this supplement?



Joe Cannon, MS, CSCS, NSCA-CPT, is an exercise physiologist, personal trainer, and health educator. He is the author of *Nutritional Supplements: What Works and Why. A Review from A to Zinc and Beyond*, which evaluates the claims and evidence for over 100 popular supplements. Joe certifies personal trainers both locally and nationally via AAAI/ISMA, has written for several publications and has been a content consultant for Dateline NBC. Contact him at jcannon@phillyfitmagazine.com.

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