

What's up with calcium supplements? ^[1]

Dear Alice,

What is the difference between and the pros and cons of the three types of calcium: oyster shell, calcium carbonate, calcium citrate? Does one stand out for osteoporosis?

Curious about calcium

Answer

Dear Curious about calcium,

Clearly, you've made no bones about your interest in osteoporosis prevention. Calcium is certainly one of the hottest buzzwords when it comes to osteoporosis. Out of the three types of calcium supplements you mentioned — oyster shell, calcium carbonate, calcium citrate — there isn't one that stands out as a superior choice for bone health. Choosing whether or not to take a calcium supplement and which type to take depends on the individual.

Some people are able to meet their calcium needs through diet alone. [Foods](#) ^[2] are considered the best source of calcium because they provide many other nutrients needed for bone health and blood pressure regulation — two key functions of calcium. However, some people may need to take supplements to get enough calcium for good health and osteoporosis prevention. For more information on daily calcium recommendations and calcium-rich foods, read [Calcium, milk, and osteoporosis](#) ^[3]. Now, let's get back to the specific calcium supplements you asked about, Curious about calcium. There are benefits and drawbacks to each type:

- **Oyster shell supplements** are on the less expensive side of the spectrum of calcium supplements and provide more elemental calcium per tablet (this means fewer tablets need to be consumed each day to get the desired amount). A possible drawback of oyster shell supplements is that they need to be taken with food. Another is that some people worry about oyster shell supplements containing lead. Though there is a risk, the lead content is minimal. If you're concerned, look for labels on the bottles that certify that the supplements do not contain harmful levels of lead. Not all products that may be acceptable bear the label, because the testing necessary to bear the label is expensive and voluntary. It's also good to note that the label doesn't mean that the product is safe or effective.

- **Calcium carbonate supplements** are also relatively inexpensive and provide more elemental calcium per tablet than calcium citrate. Drawbacks of taking calcium carbonate supplements include the fact that they need to be taken with food and that they can cause constipation and bloating in some individuals.
- **Calcium citrate supplements** don't need to be taken with food, but they are more expensive and require taking more tablets to reach the desired level of calcium intake.

Here are some things you may want to consider when deciding what type of calcium supplement (if any) to take:

- **Pay attention to how the supplement affects your body.** It's recommended to begin by taking no more than 500 mg of elemental calcium per day to see how it affects you, if at all, and then to increase after a week or so to meet your calcium needs. If the kind you are taking causes gas or constipation, you may consider trying another type.
- **Test the supplement to see how well it may be absorbed.** To test how well a particular supplement will be absorbed by the stomach, The New York State Department of Health ^[4] recommends placing a tablet in a glass of lemon juice, which mimics stomach acid in this experiment. Occasionally stir the lemon juice and tablet concoction over the course of 30 minutes. If the tablet completely dissolves by the end of the 30-minute period, this is a good sign that it will be absorbed well into your body. If it doesn't completely break down, consider trying a different supplement. When you're finished, you can pour the glass of lemon juice and calcium down the drain.
- **Take supplements in small doses.** Calcium, in any form, is better absorbed when taken in smaller doses — 500 mg or less of elemental calcium from a supplement at one time. If you need more calcium than that, take small doses four hours apart throughout the day.
- **Be aware of other medications/supplements you are taking.** Specifically, it's recommended that calcium supplements not be taken at the same time as tetracycline (an antibiotic), iron supplements, thyroid hormones, or corticosteroids, because calcium binds to these substances, interfering with their effectiveness and also its own absorption. Calcium supplements also may interact with a number of other medications (both prescription and over-the-counter), so it's recommended that you speak with a health care provider about what medications you're currently taking and if calcium supplements are right for you.

Again, one form of calcium won't prevent osteoporosis better than another — it's up to you to determine what the best source is for you. Sufficient calcium consumption alone is not enough to prevent osteoporosis. In addition to adequate calcium, bone health has been shown to improve when individual regularly participates in weight-bearing and resistance exercises in addition to eating a balanced diet. Also, vitamins C, D, and K; the minerals boron, potassium, and magnesium; and, adequate protein are also recommended for strong bones — all the more reason to eat a variety of foods. It's also recommended to stay away from excessive sodium, protein, smoking, and caffeine — the "bone robbers" of calcium.

Here's to a lifetime of good bone health!

Alice!

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