

Why strontium is not advised for bone health

What is the issue?

Many consumers are being lured by the advertised benefits of strontium for bone health. Supplements are increasingly available over the counter and through the Internet. Strontium is a trace element found in seawater and soil and is similar to calcium. A prescription form of strontium (the ranelate salt), known as Protelos™, is currently approved in Europe for the treatment and prevention of osteoporosis because it has been shown to reduce fracture risk. Strontium ranelate has not been approved in the U.S.

The forms of strontium available over-the-counter in the U.S. or on the Internet are usually strontium citrate or strontium chloride. These forms are different from the ranelate compound and there have been no studies showing that they are safe or effective. Do not be misled by marketing materials that compare them to strontium ranelate.

Importantly, it appears that strontium ranelate may be taken off of the market in Europe. On January 10, 2014 the European Medicines Agency's Pharmacovigilance Risk Assessment Committee (PRAC) recommended that strontium ranelate (*Protelos/Osseor*, Servier) no longer be used to treat osteoporosis because of data demonstrating serious negative side effects. There were significant increases in both heart attacks and blood clots (including pulmonary embolism) in patients taking strontium ranelate compared those who were not. They also found that strontium ranelate is associated with other harmful effects, including serious skin reactions, disturbances in thinking, seizures, liver inflammation, and reduced numbers of red blood cells.

Three good reasons not to take strontium

1. People who take strontium for any period of time are likely to make future bone density tests inaccurate. Strontium is like calcium and will replace calcium as the mineral in bone (Bone naturally contains calcium and phosphorus). Because strontium atoms are heavier than calcium atoms, swapping some of the calcium atoms with strontium atoms will make the bone mineral density appear to increase -- this is not the same as making new bone.
2. New research from Europe suggests that patients on strontium ranelate may have increased risk of heart attacks and blood clots, and it is likely to be removed from the European market.
3. Since strontium citrate and strontium chloride are not regulated, you do not know what amounts your body is getting when you take these supplements. You also do not know whether they can seriously harm you.

What can you do?

Calcium is still the best mineral for bone health. There are many safe food sources and if you are not able to reach your daily calcium requirements through your diet, you may need a supplement. Use the [Calcium Rule of 300](#) to find out if you need a supplement. Several brands of calcium are available on the market in the US.