



## Doctor's Overview for Strontium Boost

Dear Doctor,

Your patient is considering Strontium Boost, a strontium citrate supplement for low bone density. Due to common misunderstandings about the different forms of strontium, this brief discusses these 2 misconceptions:

1. Strontium's effects on DXA scans
2. Strontium's safety

### The Main Forms Of Strontium

As you may know, there are multiple strontium compounds:

1. **Strontium Ranelate.** This is the strontium compound responsible for the negative publicity around strontium. Used in Europe as an osteoporosis drug, strontium ranelate appears to be responsible for side effects for some subjects. Indeed, synthetic ranelic acid is used in this form, leading to often severe side effects like: venous thromboembolism, DRESS, skin conditions, and brittle bones.<sup>123</sup> Strontium ranelate is now significantly restricted throughout the EU and has never been approved in the United States or Canada.<sup>4</sup>
2. **Strontium-89** (radioactive strontium). This form is administered intravenously during chemotherapy to treat prostate and advanced bone cancer patients. Being radioactive, this form is not suitable for dietary supplementation.
3. **Strontium Citrate.** This form combines strontium with citrate. It's also the subject of the aforementioned human clinical trials resulting in healthy, increased bone density, without side-effects. The studies are discussed below in the Safety and Efficacy section. Strontium Boost uses strontium citrate in its formulation.

### Strontium Supplementation and DXA Scan Readings

You may have heard about strontium's effects on DXA bone scan readings. Yes, strontium does overestimate a patient's bone mineral density (BMD) on DXA scans (as it's denser than calcium), but all studies show *strontium still increases bone density outright even after accounting for any overstatement* due to the strontium content in bone.

In other words if your patient shows an increase in bone density after taking strontium supplements, part of that increase may be an overstatement but not all of it. Indeed, strontium only overestimates BMD by an average of 10%.<sup>5</sup>

So, if your patient achieves a 5% increase in BMD in their lumbar spine, when you factor out strontium's BMD overestimation, on average that's still a 4.5% increase. Perhaps more importantly, strontium has been shown to reduce fracture risk independent of bone density scores.

### Safety and Efficacy: The Scientific Literature's Case For Strontium Citrate

*Strontium Boost* is the only strontium citrate supplement on the market that has human clinical studies backing its safety and efficacy for bone health:

*Nutritional Journal*<sup>6</sup> - All 216 male and female participants took AlgaeCal Plus (our flagship organic plant-based calcium supplement) over 12 months, while 58 of them took *Strontium Boost* as well. The participants took a 43-chemistry blood test panel, and an

### Strontium Boost

#### Suggested Use:

Take 2 capsules once daily with or without food.

For best absorption, take strontium at least two hours apart from Algae-Cal or calcium-containing meals.



## Supplement Facts

Serving Size 2 Capsules

Servings Per Container 30

Amount Per Serving	% DV
Strontium (from Strontium Citrate)	680 mg*

\*Daily Value (DV) not established.



84-item quality of life inventory at its conclusion.

Result: The *Strontium Boost* participants saw no side-effects, and an average BMD increase of over 2%.

*Journal of the American College of Nutrition*<sup>7</sup> - 172 women in their mid 60s took both AlgaeCal Plus and Strontium Boost over 7 years.

Result: These women gained 7.3% more bone over 7 years– and did so in a linear fashion with about 1% added per year. No adverse effects or safety concerns were established by a panel of 45 blood chemistries drawn at baseline and ending.

As for a non-AlgaeCal funded study of strontium citrate, the landmark Combination of Micronutrient for Bone (COMB) Study<sup>8</sup> had participants take (among other vitamins and minerals) 680 mg of strontium citrate each day over 12 months. The *Journal of Environmental and Public Health* published the study's findings, concluding "a major proportion" of participants saw an increase in BMD of more than 3%. Under the COMB protocol, none of the patients (ranging between "normal", osteopenic and osteoporotic BMD) suffered fractures or reported side effects over the 12 months.

I hope this analysis adequately outlines strontium citrate's ability to safely improve your patient's BMD.

Warm Regards,

Dean Neuls

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CEO, AlgaeCal Inc.

#### References:

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