

Effects of supplementation with a calcium-rich marine-derived multi-mineral supplement and short-chain fructo-oligosaccharides on serum lipids in postmenopausal women

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Background: Existing evidence on whether calcium supplementation can benefit cardiovascular health (along with known positive effects on bone health) is inconsistent, with some authors reporting a protective effect, and others reporting no benefit, or an increased risk of adverse events. To further investigate this area, cardiovascular health data from 300 post-menopausal women who consumed Aquamin (both with and without scFOS) for 2 years was evaluated and this study contains the results. The publication by Slevin *et al* (2014) describes the positive effects that Aquamin and Aquamin+scFOS had on delaying bone loss in this at-risk population.

Study Details:

300 post-menopausal women enrolled in a 2-year randomized, placebo-controlled study.

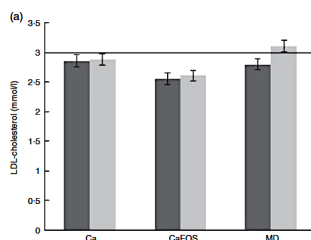
3 treatment groups: 1. Aquamin (800mg Calcium) 2. Aquamin + scFOS (800mg calcium + 3g FOS) 3. Placebo (maltodextrin)

BMI, body composition, blood pressure, blood lipid profile, blood inflammatory markers, were measured at the start, and at the end of the trial.

A cardiovascular health questionnaire was completed by all study participants 4 years after the trial.

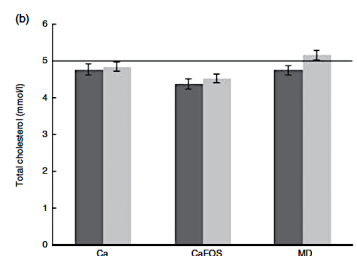
Results:

- **LDL cholesterol** was significantly lower in the Aquamin and the Aquamin+scFOS groups than in the placebo group at the end of the trial, and was maintained within the normal range.
- **Total cholesterol** was significantly lower in the Aquamin and the Aquamin+scFOS groups than in the placebo group at the end of the trial, and was maintained within the normal range.
- Blood pressure, BMI and body composition were not different between groups.
- **IL-4** (an anti-inflammatory marker) was significantly higher in the Aquamin+scFOS group at the end of the trial.
- **Incidence of stroke, heart attack** did not differ across groups 4 years after the trial.



A. LDL cholesterol before (dark grey) and after (light grey) the trial. Aquamin (Ca) and Aquamin+scFOS (CaFOS) maintain LDL cholesterol below 3 mmol/L, whereas an increase above 3 is observed in the placebo group.

B. Total cholesterol before (dark grey) and after (light grey) the trial. Aquamin (Ca) and Aquamin+scFOS (CaFOS) maintain total cholesterol below 5 mmol/L, whereas an increase above 5 is observed in the placebo group.



Conclusions:

Long-term supplementation of Aquamin alone, or Aquamin+scFOS prevented increases in LDL and total cholesterol in post-menopausal women, and kept these parameters within normal ranges.