

New study: The cholesterol-lowering ingredient of Benecol products, plant stanol ester, shows double maximal cholesterol-lowering efficacy compared to plant sterol ester

A new meta-analysis¹ shows that the maximal LDL-cholesterol reduction achievable with plant stanol ester is double that seen when plant sterol ester is used. Plant stanol ester is the cholesterol-lowering ingredient unique to Benecol[®] products. In addition, plant stanol ester produces additional and dose-dependent reductions in LDL-cholesterol with intakes above current recommendations (2 g plant stanols/sterols per day). For plant sterol ester, no such effect was evident. These new data were published in the scientific journal *Prostaglandins, Leukotrienes, and Essential Fatty Acids*.

The meta-analysis by Musa-Veloso et al.¹ was based on a large number of scientific studies and included 182 data sets in total. The analysis showed that the estimated maximal LDL-cholesterol reduction was 18.2% for plant stanol ester versus 9.1% for plant sterol ester, with the difference between the two reaching statistical significance. The findings of the new meta-analysis are supported by two recently published independent clinical studies showing LDL-cholesterol reductions of approximately 17% with a daily consumption of 9g plant stanols^{2,3}.

"It is known that plant stanols and plant sterols have different structures and that they behave differently in the body, and so it was important to study the LDL-cholesterol-lowering effects of the two substances separately", says Kathy Musa-Veloso PhD, the principle author of the article. "The results of the meta-analysis indicate that intakes of plant stanols in excess of 2 g/day – in fact, up to 9 g/day – are associated with further and dose-dependent reductions in LDL-cholesterol. For plant sterols, however, we did not find a dose-response."

Several scientific and authoritative bodies recommend a daily consumption of plant stanols or plant sterols for improving blood cholesterol levels. The new data may have significant implications for current practices: *"The relationship between reductions in LDL-cholesterol and a reduced risk of coronary heart disease is near to linear. In other words, the lower the LDL cholesterol, the lower the risk. These new results are clinically very important as the boosted effect of plant stanol ester with elevated daily intakes may further intensify the coronary heart disease risk reduction at a population level", concludes MD, professor Helena Gylling from the University of Helsinki in Finland. "No other single dietary means has proven to be as effective and easy in reducing cholesterol as the daily intake of sufficient amounts of plant stanol ester-containing Benecol foods."*

"The new findings are great news for consumers and for Benecol, as all Benecol products are made with plant stanol ester. Benecol consumers can now be confident that they have selected the most effective food ingredient to lower their cholesterol. In the cholesterol-lowering foods category, the efficacy of the products has a huge influence on consumer choices. With these superior results Benecol can further strengthen its position in the market as well as enter new market areas", says Matti Rihko, CEO of the Raisio Group.

Benecol is one of the world leaders in cholesterol-lowering foods and only Benecol products contain plant stanol ester. Plant stanol ester is the cholesterol-lowering food ingredient patented globally by Raisio and Benecol[®] is a global trademark owned by Raisio. Benecol products are sold and marketed by Raisio's wide network of partners on five continents and in more than 30 countries. The most popular Benecol products include yoghurt drinks, margarine-type spreads, and yoghurts. Raisio Nutrition Ltd. provided funding for the meta-analysis.

References:

- 1) Musa-Veloso K et al (2011). A comparison of the LDL-cholesterol lowering efficacy of plant stanols and plant sterols: Results of a meta-analysis of randomized controlled trials. *Prostaglandins, Leukotrienes and Essential Fatty Acids*; doi [10.1016/j.plefa.2011.02.001](https://doi.org/10.1016/j.plefa.2011.02.001)
- 2) Gylling H et al (2010). The effect of a very high daily plant stanol ester intake on serum lipids, carotenoids, and fat-soluble vitamins. *Clinical Nutrition*; 29: 112-118.
- 3) Mensink R et al (2010). Plant stanols dose-dependently decrease LDL-cholesterol concentrations, but not cholesterol-standardized fat-soluble antioxidant concentrations, at intakes up to 9 g/d. *American Journal of Clinical Nutrition*; 92: 24-33.

More materials on the results of the new meta-analysis can be found here:

www.benecol.net/double_efficacy

- A graphical presentation of the main results of the meta-analysis
- The original publication by Musa-Veloso et al.
- Pictures of Benecol products
- Video clips with comments on the new research results

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