

Exposure and effectiveness of phytosterol/-stanol-enriched margarines. N de Jong *et al.* Eur J Clin Nutr 2007;61(12):1407-1415.

Background: Studies on effectiveness of phytosterol/-stanol-enriched margarines in the community have received low priority. For postlaunch monitoring purposes including risk-benefit analyses, it is needed to investigate both exposure and effectiveness of these margarines. **Objective:** To study the use and effectiveness of phytosterol/-stanol-enriched margarine. **Design, setting and subjects:** The study population consisted of 2379 subjects that participated in a community intervention study ('Hartslag Limburg') aged 28–76 years. In 1998 and 2003, blood samples for total and high-density lipoprotein (HDL) cholesterol were obtained. A general questionnaire and food frequency questionnaire (FFQ) were administered. From 1999 onwards, phytosterol/-stanol-enriched margarines were introduced on the Dutch market. On the basis of 2003 data, subjects were classified in users of (a) phytosterol/-stanol-enriched margarine, (b) cholesterol-lowering drugs, (c) the combination (both enriched margarine and drugs) and (d) neither enriched margarines nor cholesterol-lowering drugs. **Results:** Mean (\pm s.d.) daily intake of phytosterol-enriched margarine ($n=99$) and phytosterol-enriched margarine ($n=16$) was 14 ± 9 g. From 1998 to 2003, total serum cholesterol concentration changed significantly different among the four groups: in the combination users -2.04 ± 1.50 mmol/l (-29%), in cholesterol-lowering drug users -1.09 ± 1.17 mmol/l (-17%), in the enriched margarine users -0.24 ± 0.75 mmol/l (-4%) and in non-users $+0.10\pm 0.72$ mmol/l (+2%) ($P<0.05$). **Conclusion:** Recommended doses are not consumed, but phytosterol/-stanol-enriched margarines can modestly reduce serum total cholesterol in the community. These margarines cannot equal the effect of cholesterol-lowering drugs, but may act additively. Further investigation of the health effects that may occur during simultaneous cholesterol lowering drugs and phytosterol- or -stanol-enriched margarines usage is important, as well as community education about the cholesterol lowering foods and drugs. **Sponsorship:** Netherlands Organization for Health Research and Development (ZonMW) (data collection of Hartslag Limburg and further data- analyses). **Keywords:** phytosterol, phytosterol, margarines, postlaunch monitoring, effectiveness, exposure.

The effect of a combination of plant sterol-enriched foods in mildly hypercholesterolemic subjects. Martin B. Madsen *et al.* Clin Nutr 2007;26(6):792-798.

Background & aims: The purpose of this study was to evaluate the effect of low-fat products enriched with plant sterols in addition to a National Cholesterol Education Program step 1 diet on serum lipids and lipoproteins. **Methods:** This study was a double-blind, randomised, placebo-controlled cross-over design with a run-in period and 2 intervention periods, each lasting 4 weeks. A total of 46 mildly hypercholesterolemic subjects (age 50.6 ± 9.8) completed the trial. The study products consisted of 20 g low-fat margarine (35% fat) and 250 ml low-fat milk (0.7% fat), in total delivering 2.3 g plant sterols/d. **Results:** Serum total and low-density lipoprotein cholesterol were significantly reduced by 5.5% ($p<0.001$, 95% CI: 2.5; 8.3) and 7.7% ($p=0.001$, 95% CI: 3.4; 11.9), respectively, by plant sterol-enriched products compared to placebo. Serum apolipoprotein B was significantly reduced by 4.6% ($p<0.05$, 95% CI: 1.7; 7.5), and apolipoprotein B/apolipoprotein A-I by 3.4% ($p<0.05$, 95% CI: 0.1; 6.6) after plant sterol intake compared to the placebo supplement. **Conclusions:** A combination of low-fat margarine and milk enriched with plant sterols significantly reduced low-density lipoprotein cholesterol, apolipoprotein B and the ratio of apolipoprotein B to apolipoprotein A-I in mildly hypercholesterolemic subjects, but had no effect on C-reactive protein and lipoprotein (a) concentrations. **Sponsorship:** Unilever Denmark A/S. **Keywords:** LDL cholesterol; Apolipoprotein B; Apolipoprotein A-I; Phytosterols; Coronary heart disease.