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Improving lifestyle in patients with high cholesterol: daily phytosterol supplementation can be a driver for change

- Results from the RECIPE study show positive impact on nutritional behaviour, lipids and other cardiovascular risk factors

**Gothenburg, Sweden, 27th June, 2011** – Regular intake of a phytosterol-supplemented yogurt, as part of comprehensive lifestyle modification, improved nutritional behaviour in hypercholesterolemic patients in the RECIPE study. There was also improvement in lipids and other markers of cardiovascular risk. These benefits were similar in patients treated with cholesterol-lowering drugs and untreated patients. The results were presented during the 79th Congress of the European Atherosclerosis Society (EAS).¹

Professor Luis Masana, Professor of Medicine and Head of the Internal Medicine Department and Lipid and Cardiovascular Risk Unit, University Hospital Sant Joan, Reus, Spain who was lead author said: ‘A healthy diet is a fundamental component of lifestyle measures for managing dyslipidemia to reduce the risk of cardiovascular events. However, motivation can be a major obstacle to adherence. These findings from the RECIPE study, in a real-life clinical setting, show that improvement in nutritional behaviour, including daily dietary phytosterol supplementation, helps in empowering patients to adopt a healthier lifestyle and also positively impacts lipids.’

Professor John Chapman, President of the EAS, Pitié-Salpétrière University Hospital, INSERM UMR-S939, Paris, France commented: ‘Modification of lifestyle together with nutritional habits are a cornerstone of all strategies to reduce cardiovascular risk in hypercholesterolemic subjects. The RECIPE study is especially innovative in showing that lifestyle advice, including daily phytosterol-supplemented yogurt, translates to a broad range of benefits. Such an approach to prevention of premature cardiovascular disease in patients at high risk may be highly cost-effective over the medium and long term.’

The RECIPE study was an international, prospective observational study conducted in general practice. Each general practitioner provided advice on lifestyle modification, including daily intake of phytosterol-supplemented yogurt (Danacol®, Danone) to five patients with moderate hypercholesterolemia. Patients already treated with cholesterol-lowering therapy and untreated patients were enrolled in the study. Dietary intake was assessed using the self-report Nutritional Lifestyle questionnaire.

This first report of the study included data from 1,048 patients (56.9 percent women, mean age 56 years) enrolled in Spain. One-quarter of patients were overweight or obese and nearly one-half had a high waist circumference.
After 4 months, lifestyle advice, including regular phytosterol-supplementation, improved the Nutritional Lifestyle score by 40 percent. This change was linked with a healthier lifestyle and improved lipids, including a 13 percent decrease in low-density lipoprotein cholesterol. Improvement in the Nutritional Lifestyle score was positively correlated with daily consumption of phytosterol-supplemented yogurt.

The Nutritional Lifestyle self-report questionnaire is a new tool for assessing dietary intake in dyslipidemic patients. According to Professor Eric Bruckert, Professor of Endocrinology and Director of Endocrinology-Metabolism & Prevention of Cardiovascular Disease, Pitié-Salpêtrière Hospital, Paris, France: ‘Implementing dietary advice in dyslipidemic patients is a practical challenge. This should involve assessment of dietary intake, lifestyle recommendations, practical advice and self-monitoring. Self-monitoring is clearly valuable for improving other risk factors such as high blood pressure and blood glucose. Yet, until recently simple, reliable tools that allow patients to monitor their nutritional behaviour have not been available.’ Professor Bruckert presented data from a pilot study which used the Nutritional Lifestyle self-report questionnaire, specifically adapted to dyslipidemic patients. Adherence to dietary advice, including daily consumption of phytosterol-supplemented yogurt, resulted in improvement in the Nutritional Lifestyle score, as well as markers of cardiovascular risk.

In addition, interesting experimental data suggest that taste perception of fatty foods might influence feeding behaviour, as reported by Professor Philippe Besnard, Professor and Head of the Nutrition Physiology & Toxicology Research Unit, National Institute of Health and Medical Research (INSERM) U866, University of Bourgogne, Dijon, France. Humans tend to prefer the taste of fatty foods. This might be enhanced in overweight or obese individuals, because of greater susceptibility to the rewarding effects of fatty foods, and/or linked with inappropriate perception of fatty foods. The main chemicals involved in taste perception of fatty foods are long-chain fatty acids, such as those found in polyunsaturated and monounsaturated foods. A recent study in healthy individuals showed that hypersensitivity to these fatty acids is associated with lower energy and fat intakes and lower body mass index. However, whether changes in sensitivity to these fatty acids are also implicated in nutritional behaviour in overweight individuals is not known. This needs to be investigated in a direct comparative study,’ said Professor Besnard.

Innovative findings from the RECIPE study reinforce the importance of lifestyle modification, including a healthy diet, as key components to reduce cardiovascular risk. Professor John Deanfield, Professor of Cardiology and Head of Cardiovascular Prevention, University College London, UK commented that although cardiovascular complications are usually evident from middle age, the underlying disease pathology of atherosclerosis occurs much earlier. Therefore, targeting lifestyle intervention at a younger age is likely to result in greater health gains. Professor Deanfield said: ‘There is a culture change in cardiovascular disease prevention. Guidelines place renewed emphasis on lifestyle intervention, especially
diet and exercise, to reduce ‘lifetime’ cardiovascular risk. However, to optimise benefit, it is important to ensure that patients comply with lifestyle advice. The RECIPE study shows that new approaches to self-monitoring lifestyle advice, together with daily phytosterol supplementation, can help to motivate dyslipidemic patients to change their behaviour. These findings have important practical implications for reducing the burden of obesity and cardiovascular disease in Europe and beyond.

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References


Notes for editors

About hypercholesterolemia and cardiovascular disease

According to the World Health Organization, cardiovascular disease is responsible for the death of 17.1 million people each year.¹ In Europe, CVD causes about one-half of all deaths (over 4.3 million) and is the main cause of illness and death in Europe, accounting for 23 percent of all disease burden.²

Hypercholesterolemia (elevated total and low-density lipoprotein [LDL] cholesterol) is one of the most important potentially modifiable risk factors for CVD. LDL cholesterol is the primary lipid target in guidelines for the prevention of CVD.³ This is supported by evidence that a 10 percent decrease in LDL cholesterol is associated with a 25 percent decrease in the risk of heart disease.⁴

In treatment guidelines, lifestyle intervention is the fundamental first step for managing high cholesterol. Indeed, new approaches place greater emphasis on early intervention with a healthy lifestyle, including diet and exercise, to reduce key components of ‘lifetime’ cardiovascular risk, such as cholesterol.


2. European Heart Network. Available at www.ehnheart.org