



#01 | 05th March 2009



eda

DAIRY Nutrition Digest

SCIENTIFIC NEWSLETTER ON NUTRITION AND HEALTH

The «*Dairy Nutrition Digest*» is EDA's quarterly scientific newsletter providing the latest science-based information on dairy-related nutrition and health topics. Scientific articles are summarized in user friendly language for a broad audience.

Symposium "Scientific Update on Dairy Fats and Cardiovascular Diseases"

A scientific symposium organised in the UK investigated the link between health and diet with a special focus on fat. The findings are presented in the December 2008 issue of the *Journal of the American College of Nutrition Supplement*.

The concept of healthy eating has almost become synonymous with avoiding dietary fat, cholesterol and saturated fat. The perception that a food containing saturated fat cannot offer a health benefit needs to be addressed. High quality foods, such as dairy, contain saturated fat as well as many essential nutrients that are important for health and well-being. As individuals do not consume saturated fat or milk fat as a dietary entity, their impact on health when consumed within a food and overall diet needs to be highlighted. The scientific evidence in this area does not support the conclusion that consumption of dairy products can increase your risk of cardiovascular disease. The symposium highlighted that despite contributing to saturated fat intakes, dairy food consumption is consistently not associated with a higher risk of cardiovascular disease, and recommendations to reduce dairy food consumption should be made with caution.

Introduction to the Proceedings of the Symposium «Scientific Update on Dairy Fats and Cardiovascular Diseases», Adam L. Lock, Frédéric Destailats, Jana Kraft, and J. Bruce German, J Am Coll Nutr 2008. 27: 7205-7225.

The survival advantage of milk and dairy consumption

Due to a focus on blood cholesterol, the debate on drinking milk has never achieved a reasonable balance in the evaluation of risks and benefits.

Based on the results of a literature search for studies on milk and dairy consumption as predictors of vascular disease and diabetes, Prof. Elwood and his colleagues from Cardiff University conclude that "There is a fairly clear evidence of a reduction in vascular disease and type 2 diabetes by milk and dairy consumption". Concerning cancer, available studies that were looked at in the recent report by the World Cancer Research Fund and American Institute for Cancer Research, are less clear. Some show a positive association with a significant reduction in colon cancer, some others show an increased risk of prostate cancer. Nevertheless, with a reasonable balance in the evaluation of risks and benefits, there is overall fairly convincing evidence that milk and dairy consumption is associated with an increase in survival in Western communities.

The Survival Advantage of Milk and Dairy Consumption: an Overview of Evidence from Cohort Studies of Vascular Diseases, Diabetes and Cancer, Peter C. Elwood, D. Ian Givens, Andrew D. Beswick, Ann M. Fehily, Janet E. Pickering, and John Gallacher, J Am Coll Nutr 2008. 27: 7235-7345.

Dairy foods are more than dairy fat

Studies of dietary effects on cardiovascular disease risk often look at the effects of different fatty acids, mainly saturated fatty acids, have on lowering “bad” LDL-cholesterol and/or increasing “good” HDL-cholesterol. However, looking at isolated effects of single fatty acids hardly gives the overall picture. This review shows that dairy foods are more than dairy fat and that dairy fat is not only saturated fat.

Increased intake of saturated fat is considered as a risk factor of cardiovascular disease. However, when analysing scientific data for individual saturated fatty acids, science shows that only certain saturated fatty acids seem to be related with increased cardiovascular disease risk. Myristic acid (about 10% of dairy fat) and palmitic acid (about 25% of dairy fat), the so-called longer-chain saturated fatty acids, adversely impact LDL-cholesterol. Shorter saturated fatty acids in dairy fat appear not be linked with cardiovascular disease risk. As regards to the effect of trans fatty acids naturally occurring in milk and dairy products, amounts eaten with dairy products at levels normally found in the diet do not increase LDL-cholesterol and have no impact on cardiovascular disease risk factors.

Consideration of individual dairy foods is likely to be of greater importance than that of dairy fat itself as effects of dairy foods on blood lipids also vary between different dairy food groups. Different dairy foods have different compositions and some foods such as cheese, milk and yoghurt are complex foods. Several studies show that milk intake is not linked with cardiovascular disease risk or stroke, and some studies even suggest a protective effect of milk consumption via a reduction in LDL-cholesterol. It also appears that consumption of cheese has apparently no link to cardiovascular disease risk. Cheese does not raise LDL-cholesterol, despite a relatively high amount of saturated fat in some cheeses, which might be due to lipid or protein constituents of cheese produced during fermentation or changes made on vitamin K2 during fermentation.

Effects of Dairy Fats within Different Foods on Plasma Lipids, Paul J. Nestel, J Am Coll Nutr 2008. 27: 735S-740S.

Dairy foods are good for heart health

Dairy foods have beneficial effects on health. High intake of dairy products could reduce several risk factors of cardiovascular disease: high blood pressure, inflammation, type 2 diabetes and the metabolic syndrome. Dairy products per se and some of their components show cardiovascular benefits beyond the effect of dairy fat on blood cholesterol. The beneficial impact of dairy on cardiovascular disease factors is promising.

There is clear evidence that high blood pressure is associated with a higher risk of cardiovascular disease. Several studies have shown that the intake of dairy lowers high blood pressure, thereby reducing cardiovascular disease risk. Calcium is thought to be one of the main nutrients for the impact of dairy products on blood pressure, but studies also suggest effects of milk protein derived bioactive peptides. Other studies suggest that diets high in dairy may reduce inflammatory reactions and cell-damaging compounds in fat tissues that are additional risk factors of cardiovascular disease and associated with obesity. Some studies exist that suggest a positive effect of dairy on type 2 diabetes, another risk factor for cardiovascular disease. Dairy foods may have anti-diabetes properties which are probably based on vitamin D and calcium intake. Dairy consumption is also thought to beneficially affect the risk of having the metabolic syndrome, a combination of several metabolic disturbances including abdominal overweight, type 2 diabetes and impaired blood lipid levels (high triglycerides and low HDL cholesterol). For example, dairy calcium is thought to promote weight loss and facilitate weight management. Weight management and physical activity are the key instruments to control this complex disorder. In conclusion, the beneficial impact of dairy on cardiovascular disease factors is promising but further investigation is required.

Review of the Effect of Dairy Products on Non-Lipid Risk Factors for Cardiovascular Disease, Benoît Lamarche, J Am Coll Nutr 2008. 27: 741S-746S.

Dairy foods in food patterns for old age

This review revealed that the nutrient contributions of dairy products are associated with the prevention of age-related functional losses. The evidence was reviewed from the perspective of the impact on disease, quality of life and mortality in selected elderly populations in Europe.

Dietary advice on dairy products intake by the frail elderly should primarily aim at adequate supply of energy, protein and micronutrients rather than on general recommendations to limit intakes, mostly of fat. Moderate intake of dairy products is not associated with an increased cardiovascular disease risk in these age groups. Given the nutrient density of dairy products, a balanced dietary advice for the aged population should take into account the nutritional status, the risk profile of elderly people and the place of dairy foods in their dietary pattern. Dairy products provide significant to substantial amounts of protein and a number of minerals and vitamins relevant for healthy ageing.

Dairy Products as Essential Contributors of (Micro-) Nutrients in Reference Food Patterns: An Outline for Elderly People, Wija A. van Staveren, Jan M. Steijns, and Lisette C.P.G.M. de Groot, J Am Coll Nutr 2008. 27: 747S-754S.

The next issue will be out in May 2009.

14 rue Montoyer
1000 Brussels
Belgium

Tel +32 2 549 50 40
Fax +32 2 549 50 49
eda@euromilk.org



www.euromilk.org

The European Dairy Association represents
the interests of dairy processors in the European Union