Abstract

Title: Does high intake of hard cheese affect LDL cholesterol? – A systematic review
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Background: Cheese is one of the main sources of calcium and provides us with other vitamins and minerals. Cheese is also a big source of saturated fats and contains a lot of energy. To decrease the intake of saturated fats, the Swedish national food administration recommends to choose products marked with the green keyhole.

Objective: The objective of this review is to evaluate the scientific evidence whether a higher intake of fatty hard cheese shows changes in the LDL-cholesterol compared with butter.

Search strategy: Searches for literature were performed in the databases PubMed and Scopus. Terms like Cheese, Cheese-intake, Lipoproteins LDL, Cholesterol LDL, and Bloodlipsids were used in different combinations. Snowballing was used to further find articles.

Selection criteria: Inclusion criteria were RCT studies on healthy human adults and original articles written in English. The studies had to include LDL cholesterol as a composite outcome, the intervention should be at least two weeks and have a cheese intake of at least 100 g fatty hard cheese per day. Exclusion criteria were total cholesterol over 6.2 mmol/l, diseases that could affect total cholesterol, BMI >30 kg/m², studies including only men or women, sheep or goat cheese, other milk products included in the intervention group, and low fat cheese.

Data collection and analysis: Three RCT studies were included and examined for quality using SBUs grading template for randomised studies. A study subsequently excluded due to low study quality. Afterwards the template “GRADE” by University of Gothenburg was used to compile the results.

Main results: In the first study the participants LDL cholesterol decreased with 0.07 mmol/l after the cheese period, and after the butter period the participants LDL-cholesterol increased by 0.15 mmol/l. There was a significant difference between the two diets in the first study. In the second study the participants LDL cholesterol increased by 0.3 mmol/l after the cheese period, and by 0.5 mmol/l after the butter period. The difference between the diets in the second study was not significant.

Conclusions: According to the studies in this review there is low evidence (++) that a high intake of fatty hard cheese affect LDL cholesterol less when compared to butter.

Keywords: Cheese, LDL and Cholesterol