Saturated Fat Intake Does Not Increase Risk of Coronary Disease

Chowdhury R et al. Association of dietary, circulating, and supplement fatty acids with coronary risk: a systematic review and meta-analysis. *Ann Intern Med* 2014; 160:398-406.

Study Design

- Systematic review and meta-analysis of observational and intervention studies
- Research from **Harvard, Cambridge and Oxford**
- Studies published before 1 July 2013 were identified through electronic searches of MEDLINE, Science Citation Index and Cochrane Central Register of Controlled Trials

Eligibility Criteria

- Prospective observational studies (≥ 1 year of follow-up, involving general populations or participants with stable cardiovascular disease) or randomized controlled trials (RCTs)
- Reported on associations between dietary fatty acid intake, fatty acid biomarkers or fatty acid intervention and the risk for coronary disease

Included Studies

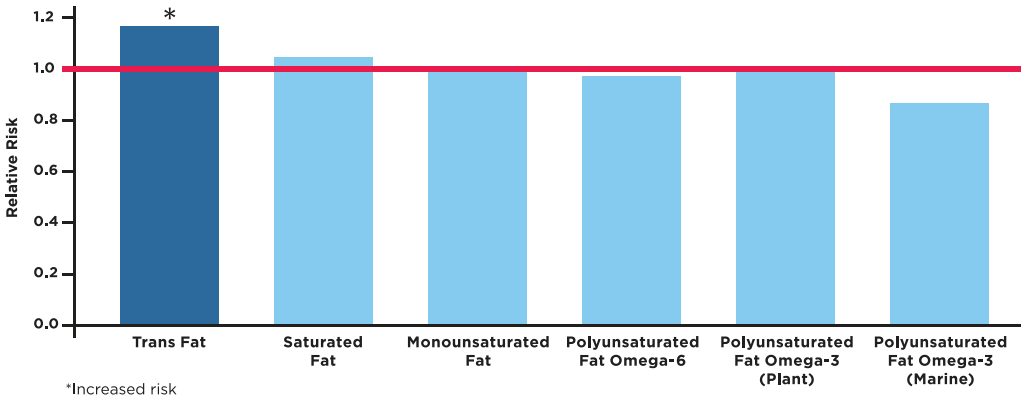
- 32 prospective cohort studies on association between dietary fatty acid intake and coronary risk
  - **512,420 participants**
  - **Follow-up of 5 to 23 years**
- 17 prospective cohort studies on association between fatty acid biomarkers and coronary risk
  - **25,721 participants**
  - **Follow-up of 1 to 31 years**
- 27 RCTs on effects of fatty acid supplementation on coronary outcomes
  - **105,085 participants**
  - **Follow-up of 0.1 to 8 years**

Objective

To summarize evidence about associations between consumption of different fatty acids and risk of coronary disease.

Results

- Total saturated fatty acids were not associated with coronary outcomes.



*Increased risk

- Circulating margaric acid (17:0), a type of saturated fat found in dairy products and which is considered to be a "biomarker" of dairy fat intake, was associated with a 23% reduced coronary risk.
- In RCTs, supplementation with polyunsaturated fatty acids (alpha-linolenic, omega-3, omega-6) had no effect on coronary risk.

Conclusion

The findings do not support cardiovascular guidelines that encourage reduced saturated fat intake.

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