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and stroke

european heart network

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Evidence on saturated fat and heart disease

A new study, published today in *Open Heart*, concludes that dietary fat guidelines introduced in the US and the UK in the seventies and eighties do not merely need review but should never have been introduced.¹

The paper does not refer to the fact that LDL cholesterol levels in blood are causally associated with atherosclerotic vascular diseases. Reduction of LDL cholesterol by diet and drugs (statins) has proven highly effective in the prevention of coronary heart disease (CHD). The authors also seem to ignore that dietary guidelines are based on a multitude of evidence, not just randomised controlled trials. Replacing saturated animal fat with polyunsaturated vegetable oil has been shown convincingly to reduce LDL cholesterol levels² and risk of CHD.^{3,4}

However, what we really need to bear in mind is that there is wide agreement about what a healthy diet does look like: more fresh fruits and vegetables and whole grain cereals, and fewer energy-dense snacks and beverages. Let us hope that the new paper does not detract from this message – we would not want people to eat more dairy fats and processed meats.

¹ Harcombe Z, Baker JS, Cooper SM, *et al.* Evidence from randomised controlled trials did not support the introduction of dietary fat guidelines in 1977 and 1983: a systematic review and meta-analysis. *Open Heart* 2015;2:e000196.doi:10.1136/openhrt-2014-000196

² Mensink, R.P., Zock, P.L., Kester, A.D.M., Katan, M.B., 2003. Effects of dietary fatty acids and carbohydrates on the ratio of serum total to HDL cholesterol and on serum lipids and apolipoproteins: a meta-analysis of 60 controlled trials. *Am J Clin Nutr* 77, 1146–1155. <http://ajcn.nutrition.org/content/77/5/1146.full>

³ Mozaffarian, D., Micha, R., Wallace, S., 2010. Effects on coronary heart disease of increasing polyunsaturated fat in place of saturated fat: a systematic review and meta-analysis of randomized controlled trials. *PLoS Med* 7, e1000252. DOI: 10.1371/journal.pmed.1000252

<http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1000252>

⁴ Farvid, M.S., Ding, M., Pan, A., Sun, Q., Chiuve, S.E., Steffen, L.M., Willett, W.C., Hu, F.B., 2014. Dietary linoleic acid and risk of coronary heart disease: a systematic review and meta-analysis of prospective cohort studies. *Circulation* 130, 1568–1578. doi:10.1161/CIRCULATIONAHA.114.010236

<http://circ.ahajournals.org/content/130/18/1568>