



Two major studies conclude that saturated fat does NOT cause heart disease

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One of things I try and do on this blog is right what I see as nutritional wrongs. So, if there's a common perception that artificial sweeteners are better than sugar for weight loss, but there's really no evidence for that, then I'm inclined to write about it. If the evidence suggests that margarine is likely to be unhealthy than butter, I'll write about that too. Similarly, I've been keen to point out that it appears that saturated fat, widely taken as to be artery-clogging and heart disease-provoking, is nothing of the sort.

I have written more than once about this, most recently here. This review of the literature found no evidence that saturated fat causes heart disease. And it's a shame (in my opinion, anyway), that this study got no mainstream publicity.

The same, appears to be true, of a recent report published in the *Annals of Nutrition and Metabolism* [1]. You can read a complete version of this report here. The whole edition of this journal was dedicated to reporting an 'Expert Consultation' held jointly by the World Health Organization (WHO) and Food and Agriculture Organization (FAO) of the US. The consultation took a wide, sweeping look at the relationship between fats, physiology and health, and took place in late 2008. One of the things that was inevitably a focus of the consultation was the link between saturated fat and heart disease.

The 'experts' responsible for assessing this relationship looked at two lines of evidence: epidemiological studies and intervention studies. Let's look at both in turn.

Epidemiological studies look at the relationship between factors (such as smoking and lung cancer, exercise and dementia, saturated fat and heart disease) in populations. These studies can only really tell us about associations between things, but can't generally be used to inform us if one thing is causing another. Nevertheless, if saturated fat does truly cause heart disease (like we've been told for the last few decades), then the epidemiological evidence should show that higher levels of saturated fat are associated with a higher risk of heart disease (also known as 'coronary heart disease' or 'CHD' for short).

Well, according to the WHO/FAO report, there is no association. Here's what the report states:

"Intake of SFA [saturated fatty acids] was not significantly associated with CHD mortality...

and also SFA intake was not significantly associated CHD events [e.g. heart attacks]..."

And now on to intervention studies 

In such studies, individuals are subjected to some sort of intervention (such as a medication, increased exercise or dietary change). The relevant intervention in this area is to put people on a low saturated fat diet, and see how they fare compared to individuals who are not subjected to this change. Unlike epidemiological studies, intervention studies can prove 'causal' links between things. For example, if eating less saturated fat leads to a reduced risk of heart disease, then it's a pretty good bet that saturated fat causes heart disease (all other things being equal).

So, what did the WHO/FAO report find with regard to relevant intervention studies? Here's what:

"...fatal CHD was not reduced by...the low-fat diets..."

Just this week saw the publication of another huge study which assessed the relationship between saturated fat and heart disease [2]. This study was actually an amalgamation (meta-analysis) of 21 epidemiological studies. Taken all together, this review monitored almost 350,000 people over between 5 and 23 years. And here's what it found:

1. No association between saturated fat and risk of heart disease
2. No association between saturated fat and risk of stroke

You know what this all means, don't you? That there really is no evidence that saturated fat causes heart disease or cardiovascular disease generally.

Despite all this evidence to the contrary, I suspect the idea that saturated fat causes heart disease will perpetuate for some time. One reason for this has to do with cholesterol. There is some evidence that saturated fat puts cholesterol levels up, and we all know that cholesterol causes heart disease, right? So, if saturated fat puts cholesterol up, it must increase the risk of heart disease too. Well, this line of argument assumes that cholesterol causes heart disease, and actually the evidence shows this is far from assured. But even if it did, the logic is still faulty. We could use the same logic to claim that if something causes cholesterol to fall it must be good for heart health. So, if arsenic and cyanide reduce cholesterol, should we all be swigging these poisons down every day?

Anyway, while the 'cholesterol causes heart disease' paradigm is prevalent, I think saturated fat is going to be in the firing line. Shame, because at worst it appears an innocent bystander.

Another reason that saturated fat is likely to get a hard time for some time yet has to do with the fact that paradigms do tend to change very slowly. And at least some of this has to do with a reluctance some of us have to changing our minds about things we 'know'. Some of us feel we 'know' saturated fat causes heart disease, because we've been told it so often and consistently we're not even inclined to challenge this notion. And if we happen to be health professionals or academics who, at least in part, define ourselves by our 'knowledge' and 'intelligence', it can be mightily difficult to admit that we were wrong.

Not being a literary type, I'm not really a quote person either. But I do know at least one. It is British economist's John Maynard Keynes' assertion that When the facts change, I change my mind. What do you do, sir? ♦ How I would like to see health professionals and Government departments take a leaf out

of Keynes' book, and make pronouncements regarding saturated fat and other dietary factors based on science fact (not fiction).

References:

1. Fats and Fatty Acids in Human Nutrition. *Annals of Nutrition and Metabolism*, 2009; 55 (1-3).
2. Siri-Tarino PW, et al. Meta-analysis of prospective cohort studies evaluating the association of saturated fat with cardiovascular disease *Am J Clin Nutr* 13 January 2010 [epub ahead of print].