Is Saturated Fat Really the Dietary Bogeyman?

By Elaine Watson - NutraIngredients-USA

The debate about just how bad saturated fats really are for our health - and whether what we are replacing them with is potentially worse - raged on at the IFT expo earlier this month.

In a lecture exploring the basis for public health advice on fat consumption, Dr Rozenn Lemaitre from the cardiovascular health research unit at the University of Washington, said reducing saturated fat intakes had been the *"cornerstone of dietary guidelines"* for years.

However, the evidence linking saturated fat and risk of cardiovascular disease was *"not conclusive",* she said, and must be evaluated in the context of its replacement by other macronutrients.

The *"real enemy"* said Lemaitre, is trans fat, but if we are determined to replace saturated fat as well, we should replace it with polyunsaturated fatty acids (PUFAs) and not poor quality refined carbohydrates, which could *"actually increase [cardiovascular disease] risk"*.

What should saturated fat be replaced with?

Dr Pramod Khosla, associate professor at the department of nutrition and food science at Wayne State University in Detroit, added: *"Saturated fat per se is not really doing anything when it comes to cardiovascular disease risk. What's more crucial is to look at what people are replacing it with."*

Their comments will feed into the debate sparked by a high-profile meta-analysis led by Ronald Krauss and published in the *American Journal of Clinical Nutrition* (AJCN) last year, which found *"no significant evidence … that dietary saturated fat is associated with an increased risk of coronary heart disease or cardiovascular disease"*.

A second study led by Krauss and published in the AJCN concluded that replacing saturated fats with PUFAs could benefit the heart, but replacing them with refined carbs could increase risk factors for heart disease.

Scientists gathered at a symposium in Copenhagen last May to discuss the findings also pointed out that individual saturated fatty acids may have different cardiovascular effects, which meant looking at total saturated fat levels might not be very useful anyway.

Similarly, it was also clear that major food sources of saturated fat such as milk also contained other constituents that could reduce the risk of coronary heart disease, they said. As for replacing sat fats with monounsaturated fatty acids (MUFAs), there was *"insufficient evidence to judge the effect on coronary heart disease risk of replacing saturated fatty acids with MUFAs"*.

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Not all PUFAs are equal …

To complicate matters further, even official advice, which says saturated fats should be replaced by MUFAs and PUFAs, has raised eyebrows, with some academics urging health experts to be more specific.

For example, the 2010 dietary guidelines for Americans advise people to consume *"less than 10 percent of calories from saturated fatty acids by replacing them with MUFAs and PUFAs"*.

This was all very well, argued Captain Joseph Hibbeln, acting chief, section on nutritional neurosciences at the National Institutes of Health.

However, it would have been *"more helpful"* if the guidelines had been specific about which PUFAs to use, given that high intakes of the omega-6 PUFA linoleic acid at the expense of the more beneficial omega-3 PUFAs EPA and DHA could do more harm than good, he argued.

He added: *"A clear distinction should be made between omega-6 and omega-3 PUFAs in future advice."*

Omega-6: omega-3 ratio way out of kilter

Meanwhile, the ratio of omega-6 to omega-3 fatty acids in the modern diet was now way out of kilter, he said, with Americans now getting almost 10 percent of their calories from omega-6 fats due to high consumption of vegetable oils.

But not only did linoleic acid have pro-inflammatory effects, it also made it more difficult for the body to convert shorter chain omega-3s such as alpha linolenic acid (ALA) into the long-chain omega-3s EPA and DHA that delivered cognitive and cardiovascular benefits, he said.

Frustratingly, claims about the benefits of omega-6 fatty acids made by some scientists were based on clinical studies in which participants had been supplemented with omega-3 and omega-6, which meant their results were unreliable, he added.

"If you pool results of trials just looking at omega-6 PUFAs you see no heart benefit; they actually signal harm."