To saturate, or not to saturate

We've been told since the 1960s that animal-based saturated fats will give us heart disease, while their polyunsaturated fatty acid (PUFA) counterparts, found mostly in vegetable oils, will prevent it. But a recent paper in the *British Journal of Medicine* suggests the exact opposite. The study compared the effects of saturated and polyunsaturated fats on heart disease by applying modern statistical analytical technique to 40-year old data. They arrived at the conclusion that elevated dietary intake of omega-6 PUFAs could kill you even faster than saturated fats. This amounts to one of the stronger arguments yet that the saturated fat theory of heart disease causation is overly simplistic at best.

Omega-6 fatty acids are the most common PUFA in many vegetable oils, especially safflower, corn, sunflower and soy oils. Generally considered healthier than animal fats, the new study is the latest in the growing body of evidence that salad dressing *could* be worse than bacon.

The Sydney Diet Heart Study (SDHS) ran from 1966 to 1973, and involved 458 menwho had recently experienced a "coronary event." They were divided into two groups. Members of the control group were told to keep eating whatever they wanted, while the other group was instructed to replace the majority of its saturated fat intake with safflower oil, the highest dietary source of linoleic acid- which is itself the highest dietary source of omega-6 fatty acids.

Given conventional wisdom on the relative health benefits of saturated fats vs PUFAs, one would expect the safflower group in the SDHS to fare better than the group that ate

more saturated fat. Instead, the safflower group experienced a higher rate of death from coronary heart disease (16.3 percent to 10.1 percent) and cardiovascular disease (17.2 percent to 11 percent. The linoleic acid group also had the highest incidence of total mortality from all causes at 17.6 percent, versus 11.8 percent for the control group.

This is hardly the first challenge to the idea that all we need to remember is that PUFAs are better than saturated fats. A *British Journal of Medicine* editorial that was published concurrent with the new study points out that this is not the only research calling the health benefits of linoleic acid into question.

"The new analysis of these old data provides important information about the impact of high intakes of omega 6 PUFAs, in particular linoleic acid, on cardiovascular mortality at a time when there is considerable debate on this question. The findings underscore the need to properly align dietary advice and recommendations with the scientific evidence base."

But the status quo isn't going anywhere without a fight. Three years ago the American Heart Association doubled down on the idea that we need to increase our daily intake of omega-6 PUFAs, aka linoleic acid. According to the AHA, increased daily linoleic acid intake "... appears to be safe and may be even more beneficial."

This paradigm assumes that omega-6s are essential for heart disease prevention because they lower blood cholesterol, including "bad" or LDL cholesterol. Since LDL is a marker of and contributor to heart disease and atherosclerosis, it's been assumed that we should increase

our intake of omega-6s to help lower those levels. But as the authors of the new study point out, "Clinical benefits of omega 6 linoleic acid have not been established."

Also worth remembering here is that, contrary to popular assumption, most blood cholesterol-LDL and HDL-is made by the body, with very little coming from dietary sources. So while diet certainly plays a role, it's only part of the picture of blood cholesterol regulation.

But even as we call into question excessive levels of omega-6 intake, it's important to remember that some amount is essential for normal growth, development and health. And the effects of the second-most-common PUFA, omega-3 fatty acids have been documented much more convincingly. Having a balance of omega-6s and omega-3s in your diet has been shown to be healthier, which can't be said for omega-6s alone.

The connection between dietary fat and heart disease is a lot more complicated than we've been led to believe. While the re-analyzed data from the SDHS offers some interesting insights into how the body handles different dietary fats, the study was not perfect by today's standards. A modern version, based on newly gathered data, would do a lot to help address these questions.

Knowing what we might know about linoleic acid demands the question: if it does kill people faster then animal fat, when does it become unethical to keep feeding it to folks just to see what happens?

Dietary recommendations on linoleic acid are a lot more cautious in some other countries, like Britain. Are they being too uptight about omega-6 PUFAs, or are the likes of the AHA dangerously exuberant? Even in the clearest of

cases, the lag time between when a new idea becomes established scientifically and when it becomes medical consensus can be years or decades. For omega-6 fatty acids the writing is on the wall.

Among vegetable oils, coconut oil contains the fewest omega-6s. Olive oil is also low. Canola, is low as well. Animal fats contain PUFAs, but not as many as the seed oils like safflower, sunflower, corn and soy oils, and in different form than linoleic acid. Animal PUFAs also contain a balance of omega-6 and omega-3. That said, not all animal fats are created equal. It's buyer beware to come up with a grease that's tasty, fair, clean, and affordable.