

# Trans Fats - A Global Problem?



By *Chuck Dinerstein, MD, MBA* — October 10, 2018



Our Castle Made from TransFats  
Courtesy of Vorzinek [1]

A diet high in trans fatty acids or trans-fats has been associated with cardiovascular disease and death. These noncommunicable diseases have displaced neonatal deaths and pneumonia as the number one and two causes of global health concerns [1] so concern about prevention is warranted even while attribution to specific products is far from settled.

## **Trans fats are natural - or not**

There are two sources for trans-fats, those found naturally in meat and dairy products of our ruminant friends (cattle, sheep, goats, and camels among others) and industrially produced sources found in fried foods, baked goods and cooking oils – the overwhelming majority of trans-fats in diets in other countries comes from these industrial sources. But their consumption by various populations vary. A 2010 report in the [British Medical](#) [2] Journal indicated that relatively few countries consume more than 2% of their food from trans-fat; primarily North America, North Africa/Middle East, and South Asia. The FDA has effectively legislated trans-fats out of our food [2], except for things like donuts and pie crusts; most high-income countries have instituted similar bans. WHO has now targeted low and middle-income countries where trans-fats come primarily from vegetable oil use in homes and by street vendors. Moreover, the use of these cooking oils is scattered with some populations using much more than others – if you want to generalize it would be populations with lower socioeconomic status.

## **WHO makes recommendations**

The WHO recommendations are to lower trans-fat consumption to less than 1% of their diet because they believe, based on meta-analysis of epidemiology papers, that it will reduce

cardiovascular deaths and disease.

*“The recommendation to reduce trans-fatty acid intake in those whose trans-fatty acid intake is above 1% of total energy intake (first recommendation) is based on the totality of evidence reviewed, including low quality evidence of an association with lower all-cause mortality, moderate quality evidence of an association with fewer coronary heart disease events and lower coronary heart disease mortality in adults, and high quality evidence for reduced LDL cholesterol in adults.”*

A moment of translation is in order – what they are saying is that there is good evidence that LDL’s will be reduced so case closed. But concerning cardiovascular disease, moderate evidence means “further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate. ”

This is science’s way of saying we are not sure.

The media have reported that WHO’s meta-analysis of statistics shows a “substantial” reductions in cardiovascular death and disease roughly 20%. But as you know, numbers are deceiving, and this is a relative risk reduction. For those of you who prefer absolute reductions, the WHO numbers are a reduction of 0.4% in cardiovascular deaths and 0.65% in cardiovascular disease. There is no impact on strokes or diabetes. There are no comparable figures for children, they were included in the recommendation based upon extrapolation of adult data, but as my colleague Dr. Jamie Wells continuously points out, children are not just small adults.

### **The devil in the details – Implementation and Caveats**

Trans-fat consumption is an issue for lower and middle-income countries. Vegetable oil is cheaper than animal fat and epidemiology papers in advanced countries decades ago told them animal fat was the problem and told them to use vegetable oil instead. It is common for purchasers of street food. Removing these sources of trans-fats, specifically cooking oil, will more than likely result in substituting inexpensive palm oil, which is high in saturated fats. So like our taxes on sugary beverages, where less soda resulting in more juice and calories, replacing trans-fat with saturated fats does little to meet the goal of better health. As the WHO warns

*“The effect on equity and human rights might also be affected by how the recommendations are translated into policies and actions...”*

There are several approaches to policy to consider. Outright bans are the most effective, no surprise there. Labeling is far less effective because of lower rates of literacy and education in low and middle-income countries. [3] Or countries can subsidize “healthier” cooking oil to the at risk, lower socioeconomic population but if you are a low or middle-income country do you have those financial resources or priorities?

If these measures do not result in the health benefits they predict, the WHO does have a backup position.

*“While current intakes are generally low, ruminant trans-fatty acids may become a more important dietary source of trans-fatty acids in populations where industrially-produced trans-fatty acids are being phased out of the food supply.”*

So I suppose we can expect again to give up dairy products, just like we did when we were told to eat more margarine, that excellent source of trans-fats.

[1] They have displaced these former causes because of increases in cardiovascular disease **and significant reductions** in neonatal mortality and pneumonia. Somedays I wish we would celebrate our successes as much as we wail about our fears.

[2] The FDA determined that trans-fats were no longer “generally recognized as safe” in 2015 requiring manufacturers to justify their safety effectively removing them from food. But you can see the flaw in that. They blamed trans fats in pies and donuts rather than the foods.

[3] A interesting side note to this WHO review of the efficacy of labeling is that mandatory labeling, as a common policy approach in the US, results in product reformulation. “The impetus for product reformulation often comes from consumers who value and demand products low in [ in this case, trans-fatty acids].” A clear demonstration of the value of signaling our beliefs as any strictly Whole Foods shopper can attest.

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[2] <https://www.bmj.com/content/348/bmj.g2272>