

It's time for a global *trans* fats ban

The scientific community has known about the dangers of trans fats for a quarter of a century yet millions around the world still consume dangerously high amounts on a daily basis. *Trans* fats are cheap and delicious, but they offer no nutritional benefit, massively increase the risk of heart attacks and strokes, and can be replaced with health-promoting alternatives. Recent decision from the US and European Commission are finally making a global ban look possible.

The *trans* fat story starts with the experiments of Nobel laureate [Paul Sabatier](#). His work on hydrogenation laid the groundwork for artificially produced *trans* fats at the turn of the twentieth century. The process was quickly commercialised by [Procter and Gamble](#) as hydrogenation of vegetable oils extends shelf life and engenders advantageous melting characteristics, better taste, and superior texture.

Trans fats are a special type of [unsaturated fatty acid](#) where the hydrogen atoms associated with carbon double bonds exist in the *trans* configuration, facing each other across the bond. Whilst regular *cis* unsaturated fats are health promoting, consuming as little as 5g of trans fat per day increases [risk of death from heart disease](#) by 23%. *Trans* fats have also been [implicated](#) in diabetes, various cancers, Alzheimer's disease, endometriosis, gallstones, and infertility.

There are only two sources of *trans* fats in the human food supply. Bacterial isomerases within the rumen of [grazing animals](#) produce *trans* fats that are present in meat and dairy products.

Interestingly, these ruminant-derived fats are [not](#) harmful to health. The other source is artificially produced *trans* fats, most commonly in the form of partially hydrogenated vegetable oils (PHVO). These can be found in baked goods, pastries, donuts, fried food, frozen pizza, and margarine.

Ironically the widespread adoption of artificial *trans* fats was spurred by [public health](#) agencies in the 1960s who were trying to shift food manufacturers away from animal fats. By the time researchers had recognised the dangers in the [1990s](#), millions around the globe were consuming hazardous amounts, defined as [>1% energy intake](#) by the WHO. Levels vary significantly by manufacturer, product and country as a [2006 survey](#) demonstrated: a typical fast food meal in Germany contained negligible amounts of trans fats whilst the same meal in Hungary topped 24g - literally a heart attack in a bun.

Efforts to protect the public have been slow and patchy. The [Danish](#) legislative ban set the bar in 2003, but [many countries](#) with relatively low levels of baseline consumption (including the US, Australia, and Canada) decided to permit continued use of *trans* fats, provided they are clearly

labelled. This approach [only works](#) for educated, health-conscious consumers who take the time to read nutrition labels. As a result labelling can increase health inequalities because they are largely ignored by the majority of people who consume [high amounts of junky food](#). Other countries have simply relied on industry to take the initiative. Whilst this has worked surprisingly well in [Britain](#) and the [Netherlands](#), it is still possible to [exceed safe levels](#) of consumption in these countries.

[Bans are the most effective](#) way of eliminating *trans* fats from the food supply and they benefit all members of society. Legislation forces manufacturers to reformulate their products with healthier alternatives which can be costly for small and medium businesses, however the experience of over 20 countries shows that it is possible. Healthy alternative oils are relatively expensive compared to PVHO derived from harmful [palm](#) and [coconut](#) oils, but a concerted global pivot would exert considerable market forces to redress this balance. Hardcore libertarians have resisted bans on the basis that they [curtail freedom](#), but in practice it is impossible to distinguish between foods that do or don't contain *trans* fats. Nobody seems to want to bring back asbestos or leaded paint in order to uphold the right to make bad choices.

The [USA](#) has decided to ban all *trans* fats by 2018, a move that will prevent [20,000 heart attacks and 7,000 deaths](#) every year. The [European Commission](#) has also recommended a union-wide ban. An orchestrated global ban is the only way to completely eliminate *trans* fats from the human food supply. Such a ban would save millions of lives, reduce international health inequalities, and expedite investment in health-promoting alternative oils. The WHO is the best candidate for brokering an international agreement, but individual countries would have to incorporate the measures into domestic legislation, as with the [highly-successful](#) Framework Convention on Tobacco Control.

Continued inaction is an international embarrassment. We are currently allowing industry cost considerations to take precedence over millions of human lives. Denmark shouldn't be the only place where the Danish pastries are safe to eat.