

FAT FALLACIES

Stefan Chmelik

About the catastrophic consequences of the campaign against fat and how the government and the food industry has deceived a generation into eating bad food for profit (and how Seventh-day Adventists hijacked your breakfast...)

The wife and I were at a local funfair last summer. Feeling good, we decided to have an ice-cream cone from a van, expecting it to be sugar-laden of course, and realising it would be a departure from our more usual raw dairy intake, but deciding the nostalgic experience would be worth it. Well, our childhood memories of English summers and "Mister Softee" 99s came crashing down upon first lick of what turned out to be essentially white margarine.

What was different about cheap ice cream now versus then? Nobody with any common sense surely ever believed this stuff was made of cream, but back in those days the filler was lard, now it is vegetable fat (incidentally, cheap UK 'chocolate' should be called vegolate as it is mostly vegetable fat). Some research reveals that cheap UK ice-cream (i.e. virtually all UK ice-cream) contains propylene glycol, a cosmetic form of antifreeze [1], that Unilever (Wall's, Magnum, Carte d'Or and Ben & Jerry's), have applied to the Food Standards Agency (FSA) for permission to add to ice-cream a protein created using GM modified eel blood, and that the FSA allows 'dairy ice cream' to contain just of 2.5 per cent of milk protein and 5 per cent of dairy fat [2]. The rest is sugar and industrial palm oil, gums, thickeners, soy etc.

After you've read this, you might lose your craving, but maybe you'll comfort yourself with the thought that your ice cream was reassuringly low on animal fats. But you'd be wrong. Animal fats have been the subject of an array of myths, misinformation and misunderstanding in recent times. Contrary to their devilish reputation, traditional animal fats, cholesterol and solid white fats are positively good for you, low-fat is positively bad, and the obesity epidemic has nothing to do with traditional fats.

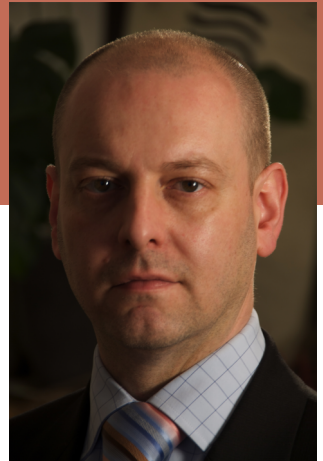
The Work of Weston Price

Heart disease, diabetes and obesity were rare conditions until the 1920s. But the influence of the Industrial Revolution some decades earlier completely altered the process of agriculture, manufacturing, mining and transportation, leading to the advent of packaged and processed foods. As these new grocery products started to spread to

stores around Europe and America, an epidemic of new diseases began to surface. [3]

We owe a special debt to the work of Weston A Price (1870-1948), an American dentist who has been called the "Charles Darwin of Nutrition" and who spent much of his life cataloging the arrival of the modern diet and it's impact on health as it spread. Price undertook his mammoth task after becoming aware of changes to people's bite and teeth over a very short time, and he came to believe that this was due to dietary changes. During the 1930s he travelled the globe to audit the fast disappearing few remaining cultures that ate a traditional diet based on pre-processed food. This culminated in his seminal work *Nutrition and Physical Degeneration* (1939). [4]

Ranging from a remote valley in Switzerland to the Inuit, Polynesian Islanders, Australian Aborigines and First Americans, he found the same story. As roads were built and the modern diet became available in new grocery stores, the shape of peoples jaw changed and modern degenerative diseases arrived, in as little as one generation.



Well formed teeth, bite and jaw of Seminole Indians brought up on a traditional diet



Jaw and teeth deformations in the same tribe just one generation later, after eating a modern diet

The changes to these traditional diets can be summarised as follows:

- Reduction or elimination of local saturated animal fats from the diet
- Introduction of processed grains, sugar and vegetable oils

The role of refined sugars in the onset of modern degenerative diseases was later highlighted in the work of John Yudkin (1910- 1995) a British physiologist and scientist who became internationally well-known with his book *Pure, White and Deadly* (first published 1972), which showed that the consumption of sugar and refined sweeteners was closely associated with coronary heart disease and type 2 diabetes. More recently, after a lengthy period during which it was largely ignored, his work has been championed by Dr Robert H. Lustig, a specialist on paediatric hormone disorders and leader in the field of childhood obesity at the University of California, San Francisco, School of Medicine. Lustig has shown in compelling depth that it is the huge increase in consumption of non-glucose sugars, NOT dietary fat, which has been responsible for the rapid growth in what is known as metabolic syndrome (including obesity, insulin resistance and type 2 diabetes, hypertension and cardiovascular disease). [5]

When did we start believing that fat was bad for us?

Everybody 'knows' that there is an indisputable correlation between cholesterol levels and heart disease. Except that there isn't. The famous **Framingham Study** (original cohort 1948), on which the case for the use of statins largely rests, didn't demonstrate this as is widely claimed. In fact it was admitted but *not disseminated*, that no such correlation was found. But by the time the association began to be questioned, the idea was already entrenched as medical orthodoxy. [6]

In 1956, the American Heart Association launched a nationwide campaign promoting the findings of researcher Ancel Keys. Panelists presented the lipid hypothesis as the cause of the developing heart disease epidemic and launched the "**Prudent Diet**", one in which corn oil, margarine, lean chicken and cold cereal replaced butter, lard, beef and eggs [7]. In the same year, the food industry initiated advertising campaigns that touted the health benefits of their products—low in fat or made with vegetable oils.

The American Medical Association originally opposed the lipid hypothesis and warned "the anti-fat, anti-cholesterol fad is not just foolish and futile. . . it also carries some risk." The American Heart Association, however, was committed. The celebrated 'Seven Countries' study by Ancel Keys

was used heavily to support the lipid hypothesis [11], but this has been subject to strong criticism since then, including the omission of countries where people eat a lot of fat but have little heart disease, and countries where fat consumption is low but the rate of heart disease is high. Lustig has also highlighted a basic flaw in the Ancel study: the failure to test adequately for the role of sugars in the incidence of cardiovascular disease. [5]

However, as Martin Berkhan has pointed out, "The fear of saturated fat had gradually been building up and reached its peak after the results of that study was made public. It was further compounded by studies showing a positive link between dietary fat, obesity and cancers in the early 1990s. By this time there seems to have been a mind shift in the public perception of fat - all fat was basically considered bad." [8]



The Crisco Ladies

The fact is, warnings to avoid saturated fat have frequently been based on flawed studies. A meta-analysis of 21 epidemiological studies in 2010 involving more than 347,000 subjects found absolutely no association between saturated fat and heart disease [20].

Judging from both food data and turn-of-the-century cookbooks, the American diet in 1900 was a rich one—with at least 35 to 40 percent of calories coming from fats, mostly dairy fats in the form of butter, cream, whole milk and eggs. Salad dressing recipes usually called for egg yolks or cream; only occasionally for olive oil. Lard or dripping served for frying. Butter substitutes made up only a small portion of the American diet, and these margarines were blended from coconut oil, animal tallow and lard, all rich in natural saturates. [7]

Equally, the Victorian diet was famously high in cream, lard and beef fat (just have a look at Mrs Beeton's recipes for validation), but with enviable

Fat Fallacies

low rates of degenerative disease. Life expectancy at age 5 in Victorian England was as good or better than exists today, and the incidence of degenerative disease was 10% of ours. [9]

So vegetable fats are better for you?

So you bought that tub of 'olive oil' spread because olive oil is good for you and butter is bad, right? And hey, it's really handy to be able to spread it straight from the fridge. Well, Olivio, which advertises itself as "Made with Olive Oil", actually contains the following ingredients:

Vegetable(s) Oil Blend (Canola Oil Liquid, Soybean(s) Oil Partially Hydrogenated, Olive Oil), Whey from Milk, Salt, Vegetable(s) Mono and Diglycerides, Soy Lecithin, Potassium Sorbate, Citric Acid, Vitamin A Palmitate, Beta Carotene, Flavor(s) Natural & Artificial.

Yum. And of course the "light" or low fat versions actually contain higher levels of vegetable and hydrogenated fats.

The Solid and the Liquid

Most animal fats—like butter, lard and dripping—have a large proportion of saturated fatty acids. Saturated fats are straight chains of carbon and hydrogen that pack together easily so that they are relatively solid at room temperature. Oils from seeds are composed mostly of polyunsaturated fatty acids. These molecules have kinks in them at the point of the unsaturated double bond. They do not pack together easily and therefore tend to be liquid at room temperature.

And a hydrogenated fat is what exactly?

The technology by which liquid vegetable oils could be hardened to make margarine was first discovered by a French chemist named Sabatier. He developed a process whereby the addition of hydrogen to unsaturated bonds make them saturated. The British chemist William Norman developed the first application of hydrogenation to food oils in 1901 and took out a patent. In 1909, Procter & Gamble acquired the US rights to the British patent that made liquid vegetable oils solid at room temperature. [7] Cheap and plentiful liquid vegetable fats could now be easily packaged as solids and distributed in paper, which is much less heavy or expensive than glass bottles.

AKA Trans Fatty Acids (Trans Fats)

The hydrogenation process rearranges the hydrogen atoms at the double bonds, moving one

hydrogen atom across to the other side of the carbon chain at the point of the double bond. In effect, the two hydrogen atoms then balance each other and the fatty acid straightens, creating a packable "plastic" fat with a much higher melting temperature. When one hydrogen atom is moved to the other side of the fatty acid molecule during hydrogenation, the ability of living cells to make reactions at the site is compromised or altogether lost. Trans fatty acids are sufficiently similar to natural fats that the body readily incorporates them into the cell membrane; once there their altered chemical structure creates havoc with thousands of necessary chemical reactions—everything from energy provision to prostaglandin production [7].

The rise of trans fats also led inexorably to a search for even cheaper and more profitable oils to turn into fat. Enter corn oil and by the 1970s soybean oil (note: rapeseed oil is being touted as "English olive oil", but is in fact just canola oil. Avoid, along with other vegetable oils). This is one of the reasons for the misinformation that soy is a healthfood: in fact it is simply one of the most cheap and therefore profitable products of the food industry, and now virtually impossible to avoid in the diet. [14] It is ironic really: Big Farma loves vegetarians and vegans as they are a more profitable consumer than people eating a traditional diet.

The anti-lust breakfast

You are eating this already, you just don't know it! John Harvey Kellogg (1852-1943) is best known for the eponymous cornflakes he bequeathed to the world and which led to the idea of cereal being a normal breakfast. He had a wider agenda than just trying to get you to work more quickly, however.

He was a Seven-day Adventist, and along with other Adventist Naturopaths before him such as Jethro Kloss and Sylvester Graham, believed that bodily purification and avoidance of lust through abstinence were the answers to all health issues.



**John Harvey Kellogg
(1852-1943)**

The purification aspect led to the use of colonics and other procedures at his Battlecreek Sanitarium health farm (which was the subject of the 1994 film

starring Anthony Hopkins, *The Road to Wellville*), the lust-curbing measures centred on a low-protein, high-fibre vegetarian diet. To this day, the Adventists own and run the world's largest soy food meat substitute company, the Sanitarium Health and Wellbeing Company.



Less Lust from Less Protein: Less Fish, Bird, Meat Cheese, Egg, Beans, Peanuts and Sitting

So now you know: that 'healthy' low-fat, grain based breakfast people have been eating for the last few decades is actually designed to reduce your sex-drive. Pass the muesli and soymilk, anyone?

Great leaping Leptins

The normal diet for virtually all people prior to this was based on saturated animal fat, usually pork or dairy and eggs. Leptin is a hormone (Greek *εἰσδύω* (*leptos*) meaning thin) that was discovered as recently as 1994 and along with Ghrelin are referred to as the appetite and satiety hormones. There are a number of things which research shows are important to stabilizing Leptin, but probably the most important is to eat a breakfast that is rich in saturated fat. Leptin is produced mostly in the superficial fascia or white adipose tissue (WAT), which is now known to be an active participant in regulating physiological and pathological processes, including immunity and inflammation. [10] Modern diets which have moved away from saturated animal fat and have featured a huge increase in the consumption of refined sugars, have clearly upset the hormonal balance regulated through WAT, leading to leptin, adrenaline and insulin resistance. It is this which has been responsible in large part for the epidemic of diabetes, obesity and heart disease we are experiencing in what is amusingly referred to as the 'developed' world.

But I eat lots of Extra Virgin Olive Oil?

It is well established that real EVOO is an excellent part of a healthy traditional diet [17]. But it is still very high in Omega 6 [20], and studies have also shown that most of the stuff marketed and sold as EVOO is nothing of the kind (much of it isn't even

olive oil) [18]. In any case, it has been shown that butter leads to lower blood fats than olive oil. [16] [21]

Why low-fat is positively bad for you

Correlation is not causation perhaps, but if one superimposes a chart showing obesity growth with one showing increase in sales of 'low-fat' foods, it can be hard to tell the two apart. So indoctrinated are most people now by the fat-fallacy and Big Farma marketing, that there is a real cognitive dissonance between what people say and what they do. So many people say they follow a real food diet, but then reach for the skimmed milk or take the skin off their chicken, because that is "healthier". But it is demonstrable that eating low-fat not only make people fatter [23] [24], but low-fat foods also cause other health issues, such as nutritional deficiency: this is not just from the nutrient deficient nature of low-fat products, but also because many low-fat foods contain protein; if you consume protein without the co-factors necessary to break them down in the form of fat (especially D, E and K), then your body has to rob your own vitamin stores to find them.

Good and bad animal fats

Not all animal fat is equal, and humans have contrived to manufacture fats as a way of increasing profitability.

"The classic idiom "you are what you eat" applies just as well to cows as it does to humans, and there are some pretty significant differences in the quality of red meat based on how the animal was fed." [12]

Clearly, it is cheaper and easier to keep an animal indoors in a small cage or pen and to feed it cheap soy pellets and grain, to inject it with antibiotics to stop the infections that arise from such a lifestyle, and to slaughter when still young.

But many issues and problems arise from this, both ethical and health related:

- Intensively reared animals lead short and miserable lives, and there is no excuse for this practice, other than profit.
- Few animals are designed to eat grains and soy, and certainly not ruminants like cows.
- Cows are occasional omnivores, and when they are on pasture will consume a large amount of insects as well as the occasional small animal if mineral or protein deficient. This is an important source of Omega 3 in their diet.
- Chickens will happily eat an animal they find dead, and rely on insects to create healthy Omega 3 rich eggs.

Fat Fallacies

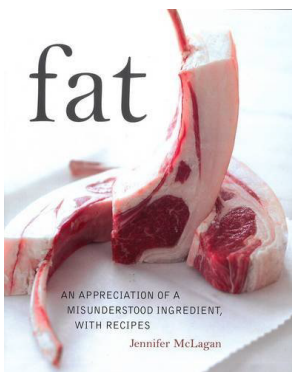
- Indoor raised animals will not have access to sufficient sun and are likely to be vitamin D deficient, which will be reflected in their meat.
- Pastured-raised, grass-fed animals are actually leaner than intensively raised animals, but with an Omega 3 rich fat, known to be anti-inflammatory and heart protective.
- Grain-fed animals will have Omega 6 dominant, PUFA rich fat, which is regarded by many as the primary pro-inflammatory substance in the modern diet. [21]

Essential Fats [3]

- Fats are the foundation for cell membranes – including the cells in our brains. In fact, fat is critical to brain development and maintenance, and provides the building blocks for cell membranes needed for important work to be performed by neurotransmitters which are responsible for regulation of our moods.
- Fats are needed for the manufacturing of hormones and prostaglandins that regulate bodily functions like immune system function, digestion, and reproductive activity.
- Fats keep the digestive tract working smoothly and balance blood sugar levels.
- The myelin sheath around our nerves is comprised of fats; if we don't eat fats, the tissue making up these sheaths becomes damaged and can die.
- Fats are necessary to keep our body temperature regulated, protecting internal organs from damage, and allow us to have continuous levels of energy through the day
- Fats are not only essential to life, but they provide fantastic flavor, too!

Other good fats

- Fish – Anchovies, Bloaters, Carp, Eel, Herring, Kipper, Mackerel, Pilchards, Salmon, Sardines, Sprats, Swordfish, Trout, Tuna, Whitebait
- Fish liver oil, but especially when it has been fermented, which was the traditional way of consuming this nutrient dense sacred food
- Eggs – poultry, but fish eggs as well
- Palm oil (but only from sustainable sources of palm oil)
- Flax oil and hemp oil – but not heated



Jennifer McLagan
Fat: An Appreciation of a Misunderstood Ingredient, with Recipes (2008)

All the solid white natural fats are health foods

So what fat should you eat? Basically, all the stuff you have been told to avoid for the last 50 years, particularly the hard white saturated fats:

- Lard
- Beef dripping
- Goose and duck fat
- Butter (and ghee)
- Double cream
- Coconut oil

But what animals have been fed and how they have lived will affect the fat. So this recommendation to eat only applies to animals raised in a natural environment and outdoors, on pasture, without GM feed or drugs. Source your meat carefully from conscientious farmers who care about their animals. In the case of dairy, this recommendation only applies to raw dairy (see previous articles, The White Stuff Parts 1 & 2).

Fat-soluble vitamins

Some vital nutrients can only be obtained via animal products, most notably Vitamins D and A, B12 (Beta-carotene is not Vitamin A), cholesterol (and by this point you should understand that cholesterol is good for you) and a special class of fatty acids (AA, EPA and DHA) [15].

Lard (from outdoor raised pigs) is probably the main source of food-based Vitamin D. And you need to get it from food, because the sun in the UK is only able to provide enough on a scant number of days a year. 1 tablespoon of lard contains around 1000 IU of Vitamin D. You would need to eat 50 mushrooms (the only plant containing Vitamin D) to get the same benefit [13]. I aim to have a daily intake of around 4000-8000 IUs.

Big Farma and Big Pharma - the food and pharmaceutical industries

We need to ask who benefits from the modern diet, from the stigma against traditional fats and the promotion of trans-fats. Well, follow the money...

It partly about food shelf life – who needs fresh food? Manufacturers and supermarkets benefit from food that lasts months or even years, and trans-fats are a central ingredient in virtually all processed and long-life foods. The shift in dietary emphasis away from perishable and seasonal food has enabled the rise of the mega supermarket and the demise of the small local store.

The modern diet is also about simplification of ingredients and ease of production, again boosting profits for the food industry. A handful of ingredients now make up the majority of food

calories eaten in industrialised countries. These are focused on cheap and easy to mass-produce GM soy, corn (including HFCS) and wheat.

Meanwhile organisations such as the British Nutrition Foundation have been criticised for being a front for the food industry, whilst claiming to be an independent charity [19].

These are just some of the features of the modern food production that we are up against and should be aware of.

References

- [1] Antifreeze in Your Ice Cream. *The Healthy Home Economist*, October 19, 2010.
<http://www.thehealthyhomeeconomist.com/antifreeze-in-your-ice-cream-2/>
- [2] Victoria Moore, The chilling truth about ice cream
<http://www.dailymail.co.uk/health/article-393432/The-chilling-truth-ice-cream.html>
- [3] The Importance Of Dietary Fats. *Agriculture Society*.
<http://agriculture.society.com/healthy-living/the-importance-of-dietary-fats/>
- [4] Weston A Price, *Nutrition and Physical Degeneration: A Comparison of Primitive and Modern Diets and Their Effects* (1939) Paul B. Hoeber, Inc. Medical Book Department of Harper & Brothers
Free download at:
<http://gutenberg.net.au/ebooks02/0200251h.html>
- [5] See R.H. Lustig, UCTV lecture, "Sugar: The Bitter Truth", can be viewed on YouTube:
<http://www.youtube.com/watch?v=dBnniua6-oM>; also Gary Taubes, *New York Times Magazine*, 13 April 2011
- [6] See M.R.Eades, 'Framingham Follies'
<http://www.proteinpower.com/drmike/cardiovascular-disease/framingham-follies/>
- [7] Mary G. Enig and Sally Fallon, *The Oiling of America* 2008
- [8] Martin Berkhan, *Diet Mythology: Ancel Keys and The Fat Fallacy*
<http://www.leangains.com/2010/06/diet-mythology-ancel-keys-fat-fallacy.html>
- [9] Paul Clayton and Judith Rowbotham, How the Mid-Victorians Worked, Ate and Died. *Int J Environ Res Public Health*. 2009 March; 6(3): 1235–1253.
Published online 2009 March 20. doi: 10.3390/ijerph6031235
- [10] Juge-Aubry C, Henrichot E, Meier C, (2005) Adipose tissue: a regulator of inflammation. *Best Practice & Research Clinical Endocrinology & Metabolism* 19(4):547–566
- [11] Malcolm Kendrick, *The Great Cholesterol Con*. 2008
- [12] Chris Kresser, Why Grass-Fed Trumps Grain-Fed,
<http://chriskresser.com/why-grass-fed-trumps-grain-fed>
- [13] The TOP 3 reasons why YOU should be eating LARD
<http://www.weedemandreap.com/2013/02/the-top-3-reasons-why-you-should-be.html>
- [14] Heidi Stevenson, Why Trans Fat Is So Bad – and What Is It, Anyway? <http://gaia-health.com/gaia-blog/2012-11-10/why-trans-fat-is-so-bad/>
- [15] Sally Fallon, Traditional Diets. Presented at the WAPF UK conference 2012
- [16] Butter Leads to Lower Blood Fats Than Olive Oil, *Science Daily*, Feb. 10, 2010
<http://www.sciencedaily.com/releases/2010/02/100209124352.htm>
- [17] Olive oil and health: Summary of the II international conference on olive oil and health consensus report, Jaén and Córdoba (Spain) 2008
Nutr Metab Cardiovasc Dis. 2010 May;20(4):284-94. doi: 10.1016/j.numecd.2009.12.007. Epub 2010 Mar 19.
<http://www.ncbi.nlm.nih.gov/pubmed/20303720>
- [18] Extra virgin olive oil often fails international and USDA standards. UC Davis Olive Center, July 2012.
<http://olivecenter.ucdavis.edu/news-events/news/files/olive%20oil%20final%20071410%20.pdf>
- [19] Confused about dietary fats? Dr John Briffa, 21 February 2013.
<http://www.drbriffa.com/2013/02/21/confused-about-dietary-fats-my-advice-is-to-steer-clear-of-the-british-nutrition-foundation/>
- [20] Meta-analysis of prospective cohort studies evaluating the association of saturated fat with cardiovascular disease. Patty W Siri-Tarino, Qi Sun, Frank B Hu, and Ronald M Krauss. *American Journal of Clinical Nutrition*, 2010.
<http://ajcn.nutrition.org/content/early/2010/01/13/ajcn.2009.27725.abstract>
- [21] Chris Kresser, How too much omega-6 and not enough omega-3 is making us sick. May 8, 2010.
<http://chriskresser.com/how-too-much-omega-6-and-not-enough-omega-3-is-making-us-sick>
- [22] Chris Kresser, For a healthy heart, stick to butter. February 15, 2013.
<http://chriskresser.com/for-a-healthy-heart-stick-to-butter>
- [23] Think Fat-Free Milk is Healthy? *ButterBeliever*, September 6, 2012.
<http://butterbeliever.com/fat-free-dairy-skim-milk-secrets/>
- [24] Rebecca J Scharf, Ryan T Demmer, Mark D DeBoer. Longitudinal evaluation of milk type consumed and weight status in preschoolers. *Arch Dis Child*
doi:10.1136/archdischild-2012-302941
http://adc.bmj.com/content/early/2013/02/13/archdischild-2012-302941.short?g=w_adc_ahead_tab

The Author

Stefan Chmelik has been cooking and making herbal remedies for over forty years, and was brought up in a house where natural medicine was the norm. He is founder of New Medicine Group, an integrated healthcare clinic, and has a special interest in fascia, food, anxiety, pelvic pain and male fertility.