

Low-fat or No-Fat is the way to go! or is it? Looking at Good fats and Bad fats

Fatty deposits are found internally in blocked up arteries and externally as a result of the growing problem of obesity. On the basis of this obvious evidence we are advised to reduce our fat intake. In particular to reduce saturated fats and favour the lighter, industrially processed polyunsaturated fats. The diet industry presents 'fat grabbing' compounds as an approach to controlling obesity. Yet there is another point of view, which is rooted in centuries of experience that suggests we *need to eat more* of the naturally extracted fats and oils. This is the point of view I would like to present in this article.

What is the role of oils and fats in the human physiology

Fats are source of concentrated energy. Some fats are more suited to supplying energy supply than other. Each of the billions of cells in our body is lined by a fatty membrane that maintains the cellular integrity as well as regulating what substances go in and out of the cell. Fats are the building blocks for many of the controlling biochemicals that regulate the function of the body e.g. hormones and prostaglandins. For example, Prostaglandins regulate the inflammatory/ anti-inflammatory response, which explains why Evening Primrose Oil is sometimes useful to treat arthritis.

Fats serve as an absorption vehicle for fat soluble vitamins A, D, E, K. and certain minerals e.g. calcium. From Indian holistic healing (Ayurveda) perspective there is the bio-energetic concept of Kapha, which is built up by eating adequate quantities of substantial foods (including good quality fats and oils). Sufficient and balanced Kapha in a person is evidenced by good strength, body structure, effective immunity and emotional contentment. These examples show why a no or too low fat diet can be injurious to your health. Interestingly depression was a major problem with people who followed Nathan Pritikin's fat free diet in 1970s. But not all fats are equal. How can we distinguish between the good ones and the bad ones?

What are 'good' and 'bad' fats and oils?

We cannot depend on the scientists to answer this question because they are divided and keep changing their minds. Interest groups such as the Oil Seed Processors can dig up supporting research on the healthy properties of Margarine (Heart Foundation Literature), while the Dairy Board can do the same for Butter (**Booyens, J. and C. F. van der Merwe (1992). "Margarines and Coronary Artery Disease." Med. Hypotheses 37: 241-244.**)

I suggest we learn to discover what is good for us by ourselves. I think modern science is moving too fast for safety sake. I would rather use the time-tested science of cultural experience. Our ancestors from various parts of the world have safely used different fats and oils for centuries. Culturally useful practices are retained when the current and future generations experience benefits without drastic side effects. For example, butter is widely used in temperate northern Europe, Olive oil in warmer southern Europe. Butterghee (clarified butter) has better keeping properties than butter so it is popular in India. In tropical southern India, Coconut Oil with its cooling and excellent heat withstanding properties is the main oil used. Why are these natural fats so maligned today?

The anti-fat campaign

The 'epidemic' of Coronary Heart Disease (CHD) is largely blamed on saturated fat and cholesterol consumption. Before the 1920s CHD was a rare disease, now it accounts for 40% of deaths in industrialized world.

The other risk factors for CHD include:

- smoking
- stress
- high blood pressure
- obesity
- diabetes

The rapid increase in CHD could also be attributed to other lifestyle changes in modern era viz. Reduced contentment, higher stress and less physical exercise.

According to the mainstream medical knowledge the increase in CHD is due to an increase in saturated fats and cholesterol, which are primarily derived from animals. Yet between 1900 and 1950 in the USA, animal fat consumption fell from 83% to 62%, butter consumption from 18 to 4 pounds per person per year. At the same time there was a 400% increase in industrial vegetable oils: corn, safflower, sunflower, canola, margarines etc., and a 60% increase in sugar and processed foods. Could these changes in dietary lifestyle be contributing to the rash of modern degenerative diseases?

An alternative view of the cause of Coronary heart disease

A diet high in processed foods and oils, including left over foods, and low in natural anti-oxidants results in the formation and buildup of dangerous oxidizing ('rusting') molecules known as 'Free radicals'. Normally the cells lining the arteries of the heart can defend themselves against free radical damage (by producing and using anti-oxidants) but when overwhelmed by sheer volume of free radicals, then damage to the cells ensues. In the wake of this emergency the body calls up its last reserve of anti-oxidants: **CHOLESTEROL!** which is partially obtained from the diet but mostly made in the liver. Cholesterol quenches the free radicals but becomes oxidized in the process and also starts to build up, forming a fatty plaque in the arterial wall. If there is ongoing trauma (e.g. free radical damage) to the arterial walls, then there is likely to be ongoing cholesterol deposition. Eventually the coronary arteries are blocked off, starving the heart muscle of blood and oxygen, and we experience the problems of angina (chest pain) and heart attacks. Blood cholesterol levels can be lowered by drugs, but people treated in this way may be more susceptible to cancer! So an alternative way to reduce cholesterol is to reduce the oxidizing/rusting condition in the body e.g. eat more fresh food and fibre, perhaps take supplemental anti-oxidants, avoid refined, processed foods and oils, lose weight, exercise, and get involved in active stress management routines. What are the options as far eating healthier oils?

Industrial oil production Vs. Cold pressed oils

The practice of industrially extracting oil from seed, using excessive heat and solvents, creates a cheap, standardized product which is commonly known as 'cooking oil'. However this process results in much damage to the oil which then needs to then be degummed, refined, bleached, deodorized etc. to make it acceptable to human taste buds. With each of these 'cleansing' steps vital nutrients such as lecithin, minerals, chlorophyll, vitamins especially vitamin E are lost. In a sense we are fooled by a bland product with very little taste and odour, which appears to be acceptable. If these cleansing steps were left out the oil would smell foul, taste rancid, and look dark and cloudy. Totally unacceptable.

On the other hand the process of cold pressing oils is very simple procedure. Good quality seeds (or fruits in the case of Olive Oil) are feed into a mechanical press. The pressure is increased up to a point where the extracted oil temperature is kept between 20 and 40 degrees C. The extracted oil is then stored in dark containers in a cool room to allow the sediment to settle out and then bottled. Because this oil has not undergone any filtration or other 'cleansing processes' it has a kind of sensual authenticity: What you see, feel, taste and smell is what you get! Well processed oils are characterized by pleasant texture, odour and taste. If there is has been a problem in the pressing or storage of the oil your nose and tongue will let you know right away!

Cold pressing is not as economically efficient as industrial extraction. Only a portion (30 to 60%) of the oil can be extracted by a genuine first cold press. The residue from the first press is generally fed to farm animals. In order to maintain the quality of the oil, cold pressing is very labour and management intensive. Thus expect to pay much more for a natural, high quality, unrefined cold pressed oil.

Practical issues with the use of natural oils

Because of their higher costs we need to find ways to use these natural/cold pressed oils more effectively. We use the following method as an alternative to wasteful and unhealthy deep frying. Cut potatoes into slices and steam them until soft. Then coat the cooked slices with a high quality saturated (coconut/butterghee) or mono-saturated (extra virgin olive) oil, add some natural sea salt

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and thyme and bake at about 190 degrees C until the 'chips' are lightly browned. Delicious and nutritious, and although one has used a premium quality oil, no more costly than deep frying with 'cooking oil'.

There are many different wonderful natural fats and oils to include in your diet. Look at the table and you will see some of the different properties. In general the more saturated the oil the more robust it is for high temperature cooking. At the other end of the scale the super polyunsaturated Flax oil is *not* suitable for cooking. Instead make a sauce with this oil and then add it to your cooked food.

I am often asked which are the best fats and oils to eat. Instead of coming up with a categorical answer, I would first suggest that you eliminate as much as possible the industrially extracted refined oils. Then try a variety of natural fats and cold pressed oils in your diet. Experiment with cooking with them. How do they taste to you? Use a particular good quality oil for a while and try and notice what effects it has on your energy and feeling of well-being. By becoming aware of your responses to different natural oils you are honing up your senses. In time you will notice a craving or desire for a particular oil. This means that you need that oil (or one of its components) now. For example, people who have developed a taste for Flax oil by using it for 2-3 months may then lose interest in the taste, only to have desire for the oil in the next winter season. Perhaps this is the body's intelligence signifying its need for more Omega-3 fatty acids.

Information Resources

Enig, M. (2000). Know your fats: the complete primer for understanding the nutrition of fats, oils and cholesterol. Silver Spring, Bethesda Press.

Erasmus, U. (1993). Fats that Heal, Fats that Kill. Burnaby, Alive Books, is praised as an authoritative and accessible book. See the Millbrook website (www.millbrook.co.za) links page for a range of interesting articles on fats and oils.

Look up the following on the web: Weston A. Price eg.
http://www.westonaprice.org/facts_about_fats.htm