

Fats

Fats can be broken down into three different classifications of fatty acid saturation. These are saturated, monounsaturated and polyunsaturated.

Saturated fat and Dietary cholesterol.

Politically correct nutrition, so what that government advertise for you to eat or a typical college educated dietitian would have you eat is based on us reducing our fat intake particularly saturated fat from animal sources.

Saturated fat and dietary cholesterol have been grouped together here because they are presented as the twin villains of the civilized diet. If this were true that saturated fat and cholesterol did cause health problems and death then none of us would be here because studies suggest that our ancestors consumed huge amounts of saturated fat and cholesterol. Studies on North American Indians, Eskimos and other tribes suggest that as much as 80% of their diet was from fat and most of that fat was saturated animal fat but they lived extremely healthy, happy lives.

Like saturated fat, dietary cholesterol has been wrongly blamed for causing heart disease and other health problems. Some of the studies that defend saturated fat and cholesterol with the truth are shown below.

The Framingham Heart Study is the the longest running population based study of American adults ever conducted. In 1948 6,000 people were monitored in two groups, one group consuming small amounts of cholesterol and saturated fat and the other group consuming large amounts of cholesterol and saturated fat. After 40 years the director of the study had to admit 'the more saturated fat one ate, the more cholesterol on ate, the more calories one ate, the lower the persons serum cholesterol....we found that the people who ate the most cholesterol, ate the most saturated fat, ate the most calories, weighted the least and were the most physically active.'

Another example of the politically correct nutrition being forced through the truth is a milit-year British study involving sever thousand men. Half were asked to reduce saturated fat and cholesterol in their diets and to stop smoking and to increase the amounts of unsaturated oils such as margarine and vegetable oils. After one year the two groups were assessed again. The group on the diet consisting of low saturated fat and cholesterol and who stopped smoking whilst consuming more unsaturated fats had 100% more deaths than those on the diet consisting of high saturated fat and cholesterol even though this group carried on smoking. Even though the study showed this the author ignored these results in favour of the politically correct conclusion.

A look at what cholesterol does for our body.

Our blood vessels become damaged in a number of different ways. Through irritation caused by free radicals or viruses or just being structurally weak are a few. When this damage is caused the body's natural healing substance which is cholesterol steps in to repair the damage that has been caused. Some more vital roles that cholesterol plays in the body, these include acting as a precursor to vital hormones that help deal with stress and protect the body against heart disease and cancer. They also help produce sex hormones like androgen, testosterone, estrogen and progesterone. The body produces vitamin D from sunlight and cholesterol acts as a precursor to that making it. Bile salts are made from cholesterol and bile salts are vital for digestion and assimilation of fats in the diet. Cholesterol is an antioxidant which means it protects against heart disease and cancer. Serotonin is the body's natural 'feel good' chemical, cholesterol is needed for proper function of serotonin receptors in the brain. Low serotonin levels have been linked to aggressive and violent behaviour and suicidal tendencies. Mothers milk is especially rich in cholesterol which gives them proper development of the brain and nervous system. Cholesterol plays a vital role in maintaining the health of the intestinal wall. Along with saturated fat cholesterol gives the cell membrane

stiffness and stability.

So now your confused about cholesterol, yes? You now know how cholesterol is vital for the body so let me simplify and explain how cholesterol can be bad. You have probably heard of LDL and HDL cholesterol, LDL and HDL is not actually cholesterol. LDL stands for low density lipoprotein and HDL stands for high density lipoprotein. So cholesterol is just cholesterol not good or bad cholesterol. LDL has managed to get the title of 'bad' and HDL has been given the title 'good'. LDL carry the cholesterol to tissue so that the cholesterol can do its job and HDL carries cholesterol away from tissue back to the liver to be recycled after its been used in the tissue. So they both have uses and they are both good and vital for our bodies. The way that LDL can be bad is when someone were to eat junk, processed food or a very low fat diet and the LDL would be small and dense. This now means that it is able to get stuck between the cells that line the arteries. Then they go rancid and cause problems. But stay away from processed food and eat the correct way and your LDL will be 'light and fluffy' as they should be and wont get stuck and cause problems. So let me be very plain and straight forward with this, cholesterol is good, HDL is good, LDL (light and fluffy) is good, LDL (small and dense) is bad.

Monounsaturated and Polyunsaturated.

These fatty acids are described as unsaturated because some hydrogen is absent from the chain of carbons. This causes two effects which are a double bond being formed between one or more of the carbon atoms and the fatty acid bending at each double bond. Unsaturated fats come into two main categories, these are monounsaturated and polyunsaturated.

Monounsaturated fatty acids are oils that contain only one double bond which means that the molecule has a single bend in it. The body is able to recognise the distinct shape and length of the various monounsaturated fatty acids and utilise them accordingly. The body tissues are able to synthesise monounsaturated fatty acids from saturated fatty acids where necessary.

Polyunsaturated fatty acids are long chains of carbon atoms, with several missing hydrogen molecules so possessing more than one double bond so there is a distinct bend at each of these double bonds which gives a different shape and a different function to monounsaturated.

Polyunsaturates have 2 sub-divisions which are considered essential to the daily diet. They are essential to the diet because the human body cannot synthesise them itself. These sub-divisions are omega 3 fatty acids and omega 6 fatty acids. These are commonly called the essential fatty acids (EFA).

At the beginning of the 20th century most of the fatty acids in the diet were either saturated or monounsaturated primarily from butter, lard, coconut oil and small amounts of olive oil. Today most of the fats in the diet are polyunsaturated from vegetable oils derived mostly from soy, as well as from corn, safflower, canola and sunflower. Modern diets can contain as much as 30% of calories as polyunsaturated oils, but scientific research indicates that this amount is far too high. It has been indicated that our intake of polyunsaturates should not be much greater than 4% of the calorie total. This should be around 1 ½ omega 3 and 2 ½ omega 6. EFA consumption in this range is found in native populations whose intake of polyunsaturated oils comes from the small amounts found in legumes, grains, nuts, green vegetables, fish, olive oil and animal fats but not from commercial vegetable oils. Excessive consumption of polyunsaturated oils has been shown to contribute to a large number of disease conditions including increased cancer and heart disease, immune system dysfunction, damage to liver, reproductive organs and lungs, digestive disorders, depressed learning ability, impaired growth and weight gain. As unsaturated oils tend to become oxidised or rancid when subjected to heat, oxygen and moisture in cooking and processing that is a reason they cause so many health problems. Rancid oils are characterised by free radicals which are single atoms or

clusters with an unpaired electron in an outer orbit.

Another reason that polyunsaturates are doing people harm is that the ratio of omega 3: omega 6 is way off what it should be. In the modern diet people are consuming far too much omega 6 and not enough omega 3. Most of these polyunsaturates that are getting consumed are the commercial vegetable oils in the form of omega 6 with very low omega 3. Research has shown that too much omega 6 in the diet creates an imbalance that can interfere with production of important prostaglandins. This disruption can result in increased tendency to form blood clots, inflammation, high blood pressure, irritation of the digestive tract, depressed immune function, sterility, cell proliferation, cancer and weight gain. Too little of the omega 3 is harmful as omega 3 fatty acids are necessary for cell oxidation, metabolising important sulphur containing amino acids and for maintaining proper balance in prostaglandin production. Deficiencies have been associated with asthma, heart disease and learning deficiencies. In addition to consuming far too much vegetable oils that contain very little omega 3 and large amounts of omega 6, the modern agricultural and industrial practices have reduced the amount of omega 3 fatty acids in commercially available vegetables, eggs, fish and meat. For example, organic eggs from hens allowed to feed on insects and green plants can contain omega 3 and omega 6 fatty acids in the beneficial ratio of approximately one to one. However commercial supermarket eggs can contain as much as nineteen times more omega 6 than omega 3.

They are important because they act as precursors to local hormone like substances called prostaglandins, which act as potent regulators of metabolism within the cells. The combined effects of these prostaglandins are far reaching within the body and deficiency in these particular fatty acids can lead to ill health.

Hydrogenated fats (trans-fatty acids or TFA).

Many processed foods and even those thought to be healthy are laden with TFA. Structurally TFA are closer to plastic than fat.

The process of hydrogenation should turn you off forever. Manufacturers begin with the cheapest oils that are already rancid from the extraction process. They then mix these oils with tiny metal particles which is usually nickel oxide. The oil is then subjected to hydrogen gas in a high pressure, high temperature reactor. To make the oil a better consistency soap like emulsifiers and starches are squeezed into the mixture. This mixture is then again faced with high temperatures when it is steam cleaned to remove the unpleasant odour. At this stage the margarine's natural colour is a grey which is removed by bleach. Dyes and strong flavours must then be added to make it resemble butter. This product is now packaged and advertised as being a healthy alternative to butter. There is plenty of research to show that margarine causes cancer and heart disease. 85,000 women took part in an 8 year study by the Harvard Medical School which linked margarine to heart disease.

Cooking with oils.

Everyone uses oils to cook with but not all oils are the same. Whether refined or not all oils are sensitive to heat, light and exposure to oxygen. Heating an oil changes its characteristic. Oils that are healthy at room temperature can become unhealthy when heated above certain temperatures. Heating an oil causes the carbon bonds to break apart creating dangerous free radicals. Also antioxidants such as vitamin E which protect the body against free radicals are destroyed by heating and pressure. This is why when you choose an oil it is important to choose according to the type of cooking you are doing. When applying the oil to the pan always add the oil first and turn heat up gradually.

Extraction of the oils from fruits, nuts and seeds used to be achieved by slow moving stone presses, but today oils produced in large factories are obtained by crushing the oil bearing seeds and heating them up to 230 degrees. The oil is then squeezed out at pressures from 10 to 20 tones per inch. In order to extract the last 10% of the oil processors treat the pulp with one of a number of solvents- usually hexane. The solvents are then boiled off but up to 100 parts per million still remain. So left in the oil is toxic solvents and the also retain toxic pesticides from the seeds and grains. BHT and BHA both suspected of causing cancer and brain damage are often added to these oils to replace vitamin E and other natural preservatives destroyed by heat. Going for oils that are extracted by a gentle process not using heat can keep the oil in its natural state keeping all of the antioxidants. The gentle processing will preserve the integrity of the fatty acids and the numerous natural preservatives in the oil. Going for a cold press oil such as an extra virgin olive oil packaged in opaque containers and keeping it in a fridge will retain its freshness and precious store of antioxidants for years.

Up to 50°C. These oils can not take any heat and should not be used for cooking.

Flax seed oil

Borage oil

Hemp seed oil

Cod liver oil

Up to 100°C These oils are ok for baking as the moisture inside the bread or muffin keeps the inside under 100°C.

Safflower oil

Sunflower oil

Pumpkin oil

Up to 160°C These oils are fine for light sauteing at low temperatures.

Sesame oil

Pistachio oil

Hazelnut oil

Olive oil

Up to 190°C These oils are far more stable at high temperature and are the best to use for frying.

Coconut oil

Ghee (clarified butter)

Palm oil

Lard