

Oil and Fat

First of all, there are three important fat definitions:

- >Saturated fats are usually solid at room temperature (butter, lard, etc. It is generally believed that this is the type that Ellen White referred to as grease.)
- >Mono-unsaturated fats are liquid at room temperature (olive oil)
- >Polyunsaturated fats are liquid oils (corn oil)

What is Hydrogenation?

Unsaturated vegetable oils are reacted with hydrogen under pressure. The vegetable oil becomes saturated with hydrogen and a solid fat is produced. This improves the shelf life or may give a more suitable solid consistency. However, the beneficial poly-unsaturated feature with its serum cholesterol lowering ability is now lost in direct proportion to degree of hydrogenation.

"You should keep grease out of your food. It defiles any preparation of food you may make."

CDF 354

Fat Facts

This statement from the World Health Organization's Executive Board in 1969 is very revealing: Coronary heart disease (CHD) has reached enormous proportions, striking more and more at younger subjects. It will result in coming years in the greatest epidemic mankind has faced unless we are able to reverse the trend by concentrated research into its cause and prevention.

What are the greatest risk factors in CHD?

- diet high in saturated (solid) fats
- high blood lipids (cholesterol and triglycerides)
- family history of CHD in early life (prior to age 50)
- high blood pressure
- cigarette smoking
- obesity
- diabetes mellitus
- sedentary living

God's Plan

As God designed, in nature there is an abundance of natural fats available in nuts, seeds, avocado, vegetables and grains. Our bodies were designed to subsist on a low fat diet. When

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extra fats and free oils are added to the diet, not unlike other highly specialized machinery, the system begins to clog up.

Digestion of free oils and fats takes much longer than the digestion of other foods. A raw salad can be digested within two to three hours. When salad oils, such as corn, sesame, peanut, or other vegetable free fats are added to the salad, digestion is delayed for another two or three hours. When our food is coated with free oils the natural digestive processes are inhibited by preventing digestive juices access to these foods until the oils are digested -- consequently, by the time the fats and oils are digested, the elementary carbohydrates or proteins in the vegetables have begun to ferment.

"The salads are prepared with oil and vinegar, fermentation takes place in the stomach, and the food does not digest, but decays or putrefies; as a consequence, the blood is not nourished, but becomes filled with impurities, and liver and kidney difficulties appear." CDF 345

Free oils do not begin to digest until they get into the intestines; then it is too late for the food, with its coating of oil to digest, because the enzymes for digesting the food are found in the stomach.

"The grease cooked in the food renders it difficult of digestion." CDF 236

Naturally occurring oil, such as ***"the oil, as eaten in the olive"*** (CDF 350, 359) is digested as a whole food. The rule is, the closer to the "original packaging," the more beneficial it is for health. The further away from the "original packaging" the further into the digestive system it has to pass until it can be broken down.

"When properly prepared, olives, like nuts, supply the place of butter and flesh meats. The oil, as eaten in the olive, is far preferable to animal oil or fat." CDF 350

Cheese, which is extremely high in fat, passes beyond the digestive enzymes and literally has to rot or putrefy in the intestines before the body can pass it. Often the cheese becomes a hardened mass in the intestines ulcerating the delicate lining of the intestines. (More about cheese in the "dairy" section in another article.)

Refined Oils

The fat content of extracted oils is 100%. No proteins or carbohydrates are found in these oils. Very few minerals are present and only Vitamins E and F are present in any amount. Extracted oils are very lopsided nutritionally. They supply oil, but little else. They may be likened to white sugar or white flour as refined. Also, many of the free vegetable oils have chemicals added to them to prevent them from becoming cloudy or going rancid. Almost all free oil undergoes a certain amount of oxidation (regardless of being stored in dark bottles, cans or refrigeration), and they become rancid regardless of the preservative methods used.

Olive oil, a type of oil which has been around for centuries, is not free from processing. Unless obtained from strictly organic sources, olive oil can be mixed with other oils and sometimes petroleum products. These additives are considered normal by the government and no labeling

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of their presence is required. Olive oil shipped from Greece or Italy is not heated, but the US laws require pasteurization of such oil when it reaches our shores.

In biblical days mankind ate some extracted oils, but it was not oil processed in the manner we know it to be done today. Oil in biblical times was pressed fresh on a daily basis and the oil that was not used within a day or two was discarded and a new batch was prepared.

Traditionally, oil pressing was done by the individual families. Home pressed oil was made slowly and pressed without heat. A hand-hammered wedge press was used and the seeds were poured into a wedge-shaped container and a wooden wedge was driven into it. The homemaker would then hit the wedge with a wooden hammer every hour or so and, as this procedure was repeated all day long, the oil would slowly drip hour after hour.

Until the turn of the century in Europe oil pressing was a cottage industry. Every small town had its own oil mill. Just before World War 2, fresh flax oil was sold door to door and was delivered in small bottles. People knew that good oil should be purchased in small quantities and used while fresh because it is alive and spoils quickly just like fresh fruits and vegetables. The fresh oil was known for its delicate, nutty taste.

Cold Pressed

Today some oils are advertized and sold as "cold pressed," leading the public to believe that heat has not been used. The term "cold pressed" is very misleading. It really means that no external heat has been applied during the heating process (see attached diagram) but it does not guarantee that no heat was applied before or after the actual process. In fact there are some cases where oil that has been heated to very high temperatures during oil making is still called "cold pressed" because no external heat was applied to the seed during pressing.

It's almost impossible to press oil commercially from seeds without some heat. In some European countries it is illegal to label an oil "cold pressed" if the highest temperature the oil has reached in the entire process exceeds 50C (122F). In the US, there are no such restrictions.

There are several processes for extracting oils. Generally, as shown on the enclosed diagram, extracted oils today are heated and treated with strong chemicals and bleaching agents. These oils are known as refined oils. It takes only a small amount of oxygen to create rancidity in the oils. And light is worse than oxygen, it destroys oil 1000 times faster than oxygen. Even refrigeration does not prevent this spoilage -- it only slows it down to about 1/3 the rate when stored at room temperature.

Processed oils do not keep well because light, oxygen and heat destroy the delicate essential fatty acids (EFA) so important to our bodies. Even cold temperatures do not protect oils from destruction by light and oxygen. Destroyed oil is foreign matter to our bodies. When eating whole raw nuts and seeds, it is very important that they be fresh, not old and rancid. Even oil in grains (flour, etc.) can become rancid in a short period of time.

Our Creator made everything that lives to contain some fats and oils. Everything that lives is made up of cells, and all cells are surrounded by a membrane which contains phosphatides

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(fatty acids). Even the cells of green plants were created to contain small amounts of fats. Cucumbers, potatoes, beets, celery, etc., contain 1% fat. Cabbage, carrots, lettuce contains 2% fat. The fats in the green parts of the plants are of a high quality especially if eaten raw rather than cooked. More than half of the fatty acid of dark green leaves is the essential unsaturated linolenic acid. These essential fatty acids degenerate rapidly when the cells die and so it is more healthful to eat as much as possible of the fruits and vegetables while fresh.

Grains usually contain between .1% and .3% fat. The oils contained in grains are of good quality but this oil can spoil rapidly when the grains are broken, pressed or ground into flour. For example, store bought flours and rolled oats are often rancid, especially during summer months.

Nuts and seeds vary widely in oil content, though most are between 40% and 60% fat. Whole nuts and seeds (especially in the shells) are nature's way of excluding light and air from oils and in their casings they can keep much longer without spoiling. Broken nuts and seeds have lost this protection.

Oil Consumption

Not surprising, statistics show that oil consumption continues to rise. In 1994, the average American consumed:

67 lbs of added fats

25 lbs of cooking/salad oil

24 lbs of shortening

9 lbs of margarine

5 lbs of butter

2 lbs of lard

In the early 1900's cancer ranked number three of the top 5 killers and killed one person in every 30. Today it kills one in five. In the early 1990's cardiovascular disease accounted for 1 death in every 7. Today it ranks first, accounting for 1 death in every 2. Twenty million people diagnosed each year with cancer. The similar rate has risen for other diseases such as diabetes, multiple sclerosis, liver and kidney degeneration. Because of the great increase in fat and oil consumption in recent years, conditions have been set up in the human body known as fatty degeneration. Many different conditions have pointed the finger to the underlying cause -- the excess of refined oils (and sugar) in our diets.

Over \$30 billion is spent each year looking for a cure for cancer and still there is none. It is estimated that 80% of all cancers worldwide is caused from food and eating habits and could be reduced significantly by a change in diet.

Potatoes

A potato contains .1% oil. If the potato is cut into sticks and French fried, it now contains 13.2% oil. A potato cut into thin slices and turned into a crunchy potato chip contains 40% partially hydrogenated fat.

Over 25% of the vegetables consumed by children are french fries. French fries, potato and corn chips are laden with oil -- up to 4 tablespoons of oil per bag (as much as 40 to 70% of the calories of each serving can come from oil!), and have little or no food value. With all that deep fried oil, is it any wonder 10% of all children's deaths are due to cancer?

"We do not think fried potatoes are healthful, for there is more or less grease or butter used in preparing them. Good baked or boiled potatoes, served with cream and a sprinkling of salt are the most healthful. The remnants of Irish and sweet potatoes are prepared with a little cream and salt and rebaked, and not fried; they are excellent." CDF 354

Butter & Margarine

Margarine, which is produced by the hydrogenation of oil, is an artificial product and is full of additives, emulsifiers and chemicals that were never intended for human consumption. The next time you spread that big slab of butter or margarine on your toast, think about this -- you may be getting a little more than you bargained for. Here are just a few of the chemical additives that can be found in butter and margarine:

Benzoyl peroxide: can cause dermatitis and eye irritation, and is a mutagen (changes inherited characteristics) and a possible carcinogen (causes cancer) that caused tumor growth in animals.

BHT: can cause skin irritation in humans. In animals it has been proven to cause skin and eye irritation, cancer, and reproductive defects (infertility, or sterility, or birth defects). Use is permitted by USDA within specific limitations as to amounts of additive.

Butyric Acid: Strong irritant to skin and tissue. Corrosive material.

Decyl Alcohol: A severe skin and eye irritant to humans. A possible carcinogen (may cause cancer); produced tumors in animals.

Disodium EDTA: moderately poisonous when swallowed; in animal studies caused reproductive defects (infertility or sterility or birth defects) teratogenic (abnormal fetal development) and mutagenic (changes inherited characteristics).

FD&C Yellow No. 5: Suspected to be the cause of many allergies. A human mutagen (changes inherited characteristics). Effects on the body by swallowing excessive quantities are paresthesia (abnormal sensation of burning and tingling) and changes in teeth and supporting structures.

FD&C Yellow No. 6: A possible carcinogen (may cause cancer) in gross amounts. Could cause allergic reaction.

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Sodium Hydroxide: A mutagen. A corrosive irritant to skin, eyes, nose and throats. This material, both solid and in solution, has a markedly corrosive action upon all body tissues causing burns and frequently deep ulceration, and ultimate scarring. Mists, vapors and dusts of this compound cause small burns and contact with the eyes rapidly causes severe damage of the delicate tissue. Swallowing causes very serious damage to the nose and throats or other tissues with which contact is made. (Also sold under the name of Lewis-Red Devil Lye.)

"Butter is less harmful when eaten on cold bread than when used in cooking; but, as a rule, it is better to dispense with it altogether." "Let the people be taught how to prepare food without the use of milk or butter." CDF 349

Now What?

What can we do? First, we can start by taking a close look at our personal dietary habits. While oil can be an important and beneficial part of our diet, it would be wise to live by God's Laws of Health, which includes abstinence from things which are harmful, and temperance in the things which are good. Health food stores may offer alternatives to margarine or butter. There are many recipe books available which have lots of healthful, tasty spreads and salad dressings, etc. Do yourself a favor.

"Disease never comes without a cause. The way is prepared, and disease invited, by disregard of the laws of health." MH 234

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