



# FACTS on FATS

*Some fats are better than others*

**A**ll natural fats are good. However, even good fats can become bad if they are adulterated by man or consumed in excess.

Some fats are better than others. Some can be consumed in larger amounts than others. Some need to be eaten in balance with others. Some fats, those that are adulterated or man-made, should not be eaten at all. The problem is that most of us are confused as to which is which.

Most saturated fats, and particularly palm oil, are some of the healthiest you can eat. Natural fats which have undergone as little processing and adulteration as possible are the healthiest, regardless of whether they are saturated or unsaturated. In contrast, many polyunsaturated fats are so far removed from their natural state and often chemically altered as to become a serious health threat.

Fats are vital nutrients that the human body relies on to achieve and maintain good health. An adequate amount of fat is necessary for proper digestion and nutrient absorption. Fats delay the movement of food through the stomach and digestive system. This allows more time for foods to bathe in stomach acids and stay in contact with digestive enzymes.

As a consequence, more nutrients, especially minerals which are normally tightly bound to other compounds, are released from our foods and absorbed into the body. Low-fat diets are actually detrimental because they prevent complete digestion of food and limit nutrient absorption.



Low-fat diets can promote mineral deficiencies. Calcium, for example, needs fat for proper absorption. For this reason, low-fat diets encourage osteoporosis. It is interesting that we often eat low-fat foods including non-fat and low-fat milk to get calcium; yet, by eating reduced fat milks, the calcium is not effectively absorbed. This may be a reason why people can drink loads of milk and take calcium supplements, and still suffer from osteoporosis.

Fat is also required for the absorption of fat-soluble vitamins. These include Vitamins A, D, E and K and important phyto-nutrients and antioxidants such as beta-carotene. Too little fat in the diet can lead to deficiencies.

Getting too much fat is less of a problem than getting too little. We are always encouraged to eat less fat because fat is believed to make us fat. This is just not so. Recent studies actually show that people eating the same amount of calories can lose more excess weight on moderate- and high-fat diets than they can on low-fat diets.

In most countries, fat consumption ranges from 20-40% of total calories. Health

authorities often recommend limiting fat calories to 30% to reduce risk for heart disease. However, studies on populations that exceed this limit do not show any higher incidence of heart disease than those that eat less total fat.

A healthy diet should include an adequate amount of good fat. The question is: which fats are good and which aren't?

### Polyunsaturated fats

We hear a lot about how 'good' unsaturated fats are for us. What consumers don't know is that polyunsaturated vegetable oils can be more harmful than saturated fats. Over the past two decades, mountains of research have confirmed this.

## Comparison of DIETARY FATS.

Researchers have found that the consumption of polyunsaturated vegetable oil exceeding only 10% of total calories can lead to blood disorders, cancer, liver damage and vitamin deficiencies. Excessive consumption has been linked to:



- 1** Lower resistance to infectious disease by depressing the immune system, killing white blood cells which defend us against harmful micro-organisms and cancerous cells
- 2** Higher risk for heart disease because the linoleic acid content increases inflammation, elevates blood pressure and encourages blood clotting; government agencies recommend limiting consumption to 10% of total calories
- 3** Increased incidence of asthma, eczema and allergic rhinitis since the 1980s, which mirrors the decline in use of saturated fats and corresponding switch to polyunsaturated fats
- 4** Impaired brain functions such as learning ability, memory, cognitive functions, and behaviour, leading to Alzheimer's disease, Parkinson's disease, senile dementia, dyslexia and perhaps even attention deficit disorder
- 5** Skyrocketing incidence of blindness due to age-related macular degeneration in the US, Canada, Australia and most other industrialised countries
- 6** Development of allergies, psoriasis, defective blood glucose regulation, migraine headaches, and autoimmune and inflammatory conditions including rheumatoid arthritis, irritable bowel syndrome, multiple sclerosis, lupus nephritis, and certain inflammatory kidney conditions

### Avoiding free radicals

Polyunsaturated fats are highly vulnerable to oxidation. When exposed to heat, light or oxygen, they spontaneously oxidise and form destructive free radicals that attack unsaturated fats and proteins. In turn, these become oxidised and generate more free radicals. It is a self-perpetuating process.

When oil is extracted from seeds, the oxidation process is set in motion and continues right through to bottling and even during distribution. When used in cooking, oxidation is greatly accelerated.

Oxidation occurs inside the body as well. Our only defence against free radicals is antioxidants, which stop the chain reaction that depletes nutrients such as Vitamin A, C and E, zinc and selenium.

In contrast, saturated fats are very resistant to oxidation. They act as protective antioxidants because they prevent oxidation and the formation of free radicals.

Monounsaturated fatty acids are more stable than polyunsaturated fatty acids but less stable than saturated fatty acids.

Replacing polyunsaturated fats with saturated and monounsaturated fats can help reduce the risks associated

with free radicals. Eating a diet rich in antioxidant nutrients such as Vitamin E and beta-carotene will help against oxidation of polyunsaturated fatty acids in the body.

### Heat-damage and vegetable oils

Most cooks recommend polyunsaturated vegetable oils in cooking and food preparation as a 'healthy' alternative to butter, palm oil or other saturated fats.

Ironically, these unsaturated vegetable oils, when used in cooking, form a variety of toxic compounds that are far more damaging to health than any saturated fat could. As it turns out, polyunsaturated vegetable oils are the least suitable for cooking.

Any unsaturated vegetable oil can become toxic when heated. And even a small amount, especially if eaten frequently over time, will affect health. Oxidised oils have been found to induce damage to interstitial tissues and blood vessel walls and to cause numerous organ lesions in animals.

Researchers are now beginning to recognise that heated vegetable oils are far more harmful to the heart and circulatory system than excess cholesterol or animal fats.

Monounsaturated fatty acids are chemically more stable and can withstand higher temperatures, yet they too can be oxidised and form toxic by-products if heated to high temperatures.





Saturated fatty acids are very heat stable and can withstand relatively high temperatures without oxidation. Therefore, saturated fats are the safest to use for day-to-day cooking and baking.

### **Saturated fat**

Yet, we have been led to believe that saturated fat is detrimental to health. If so, why is it in just about everything we eat? Meat, milk, and eggs contain the largest amount, but saturated fats are also found in nuts, seeds, grains and beans. Even broccoli, carrots, and peas contain some saturated fat. Furthermore, every cell in the human body consists of at least 50% saturated fat.

The truth is that saturated fat is a vital nutrient for optimal health. It serves as an important source of energy and aids in the absorption of vitamins and minerals. As an ingredient, fat provides taste, consistency and stability, and helps us feel full.

Saturated fat is necessary for proper growth, repair and maintenance of body tissues, and for good lung function. It is the preferred source of energy for the heart muscle. It also helps protect the unsaturated fats in our body against free radicals.

The primary reason why saturated fat is criticised is because some forms can raise cholesterol levels, which is a *sign* of increased risk for heart disease, but not the *cause*. There are many risk factors. Being male or being physically inactive is also a risk factor but does not in itself cause heart disease.

Saturated fat is so essential to health that the body is programmed to make it out of other nutrients. Getting an adequate amount of saturated fat is so important that it is not left to chance. Researchers are learning that too little saturated fat in the diet can adversely affect health.

Some may argue that, since saturated fat (and monounsaturated fat) can be made by the body from other fats and carbohydrates, we don't need to include it in our diet. But relying on the body alone would create a great deal of stress and cause a fatty acid imbalance.

We don't need to look too far for a solution. Nature has provided practical assistance by way of palm oil – the ideal all-purpose dietary oil. Its fatty acid content is remarkably similar to that of the human body – 50% saturated, 40% monounsaturated and 10% polyunsaturated.

Not only does it provide a natural balance of all three fat types, it is also very heat stable and therefore makes excellent cooking oil.

Dr Bruce Fife  
Author, *The Palm Oil Miracle*

*This is an edited version of a chapter from the book published in 2007.*

