DIFFERENT TYPES OF OIL

Groundnut Oil/ Peanut Oil
This is one of the most commonly consumed oils in India, particularly in the rural areas. It contains Heart-friendly MUFA that lowers the level of bad cholesterol in our body without lowering the Levels of good cholesterol. In the market, it is available in refined form as well as filtered form. Although the filtered oils are nutritionally superior, they often contain toxic compounds or other Adulterants. The oil is suitable for all types of cooking – frying, grilling seasoning, etc.

Olive oil
Olive oil is good for salad dressing. Although more expensive than other oils, olive oil has many Health benefits. Studies have found that consumption of olive oil can lower the risk of coronary Heart diseases. When buying olive oil, it is best to select the extra virgin variety. In order to get Maximum benefits. Olive oil should be used to prepare salad dressings, as a seasoning for soups, or for sautéing vegetables. It is generally not advisable to use this oil for frying and heating since it has a low smoke point. It is not suited for Indian frying conditions because we mostly oils for frying and not as dressing.

Rice Bran Oil
It is relatively new oil that is extracted from rice-bran, the most nutritious part of rice. Rice bran oil is gaining popularity across the world.

Rice bran oil is unique edible oil with many nutritional benefits, as compared to other edible oils. It has magical cholesterol-lowering properties due to the presence of a component called Oryzanol. It also contains squalene, which is good for the skin. It is probably the only oil that reduces bad Cholesterol, at the same time increasing the much required good cholesterol.

It is the ideal cooking oil since it has good stability (it does not decompose at high temperatures to form toxic compounds) and is suitable for deep-frying. Studies have shown that snacks prepared in rice bran oil absorb 12-25 per cent less oil than those prepared in groundnut oil. It is the best oil for deep-frying and everyday cooking.

Mustard Oil
This oil is traditionally used in West Bengal and is prized for its characteristic flavor (pungent and sharp). Mustard oil has a higher proportion of MUFA and is also a rich source of the PUFA. However, it also contains erucic acid, a fatty acid that has undesirable effects on health when consumed in large amounts. Mustard oil should be used along with other cooking oils to reduce the erucic, acid content. Mustard oil is sometimes adulterated with argemone oil, which is toxic.

Sunflower Oil
It is popular cooking oil available under many brand names. Extracted from the seeds of the Sunflower, sunflower oil is good all-purpose oil. This oil is rich in PUFA, particularly linoleic acid that lowers the levels of both good and bad cholesterol. Hence, this oil cannot be used as the only Cooking oil.

Safflower/ Kordi Oil
This is light all-purpose oil extracted from the seeds of the safflower. It has a more oily texture and a nuttier flavor than sunflower oil. It is suitable for deep-frying. It also contains PUFA in the form of linoleic acid. Like sunflower oil, this oil too should be used in combination with other oils.

Soya Bean Oil
Extracted from soybeans, soybeans oil contains PUFA, particularly linoleic acid and alpha-linoleic acid and alpha-linolenic acid (ALA) in the right balance, which are essential for human health. Soyabean oil is suitable for all types of cooking methods except trying. PUFA gets oxidized at frying Temperatures to form toxic compounds. It is not recommended for salad dressings because of its slightly fishy flavor.
**Palm Oil**
Bright orange waxy oil, it is used in the manufacture of vegetable oils and fats. It has a nutty flavor and is high in saturated fats. It contains MUFA and is low in linoleic acid, hence it is healthy to use in combination with other oils.

**Coconut Oil**
Solid at room temperature, coconut oil is white and buttery in texture; it has a distinctive coconut flavor and is widely used in South India. It is high in saturated fats. However it contains saturated Fats that are different from those present in animal fats. It can be safely consumed as part of a balanced diet, in combination with other cooking oils.

**Butter**
It is made from milk fat and contains a high proportion of saturated fats and increases cholesterol when consumed, both of which are risk factors for developing heart disease. Hence, it is wise to Consume less amount of butter.

**Ghee**
Prepared from milk fat, ghee or clarified butter is an essential item in Indian cuisine. According to Indian medical systems, ghee contains several medicinal properties. Nutritionally, like butter, it also contains saturated fats and cholesterol which, when consumed in excess, leads to heart diseases. Using small amount of ghee to season foods is not harmful. Just avoid sweets and other dishes Prepared with large quantities of ghee.

**Vanaspati**
It is nothing buta mixture of vegetable oils that have been converted to solid form by the addition of Hydrogen. Hydrogenated fat is used as a ghee substitute in cooking as well in the production of bakery products, sweets and snack items.

When Vanaspati is made, Trans fatty acids are also produced; these increase the risk of heart disease when consumed in excess and are best avoided.

**What is Rice Bran Oil?**
Rice Bran Oil (RBO) is obtained from the most nutritious part of rice – the golden brown layer which covers the white rice? It forms about 5% of the paddy and is enriched in oil to the extent of 10-25%. Bran from parboiled paddy yields more oil than the bran from fresh paddy. Rice Bran Oil offers several unique properties that make it special. With a very neutral taste, it is very stable at higher temperature and has prolonged shelf life.

However, its most notable feature is its high level of components with nutraceutical value such as Gamma-oryzanol, tacopherol and tocotrienol. It also contains vitamins, antioxidants, nutrients and is trans-fat free. Perhaps the only oil that helps lower cholesterol LDL (bad cholesterol) and increase HDL (good cholesterol), RBO helps the body fight diseases, enhance the immune system and fight free radicals.

**Micro Nutrient profile of Rice Bran Oil**
Among the many nutrients present in the unsaponifiable fraction of rice bran oil, Oryzanol and Tocotrienol are two distinctly different component groups that have been intensively studied for their health benefits.

**Oryzanol**
Oryzanol is a nutraceutical present only in Rice Bran Oil. It is known to reduce bad cholesterol (LDL), improve good cholesterol (HDL) and bring down the total cholesterol. Crude rice bran oil contains about 4 to 5% or more gamma-oryzanol. Physically refined rice bran oil has higher oryzanol content than the chemically refined rice bran oil.

**Tocotrienols**
Rice bran oil is the only readily available oil, other than palm, that contains significant levels
(Approximately 500 ppm) of Tocotrienols. They belong to the vitamin E family and are powerful natural antioxidants. The protective benefits of dietary antioxidants in the prevention of cardiovascular diseases and some forms of cancer have been widely publicized.

The other components of RBO are listed below in a tabular form:

<table>
<thead>
<tr>
<th>Micro-nutrient in RBO</th>
<th>Advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tocopherol (vitamin E)</td>
<td>0.02-0.08 Antioxidant, free radical scavenger Reduces Risk of cardiovascular diseases, Arthritis Cancer, Cataract, Antitumour activities.</td>
</tr>
<tr>
<td>Squalene</td>
<td>0.3-0.4 Antioxidant, Helps ski nutrition, Maintains integrity &amp; tone of the Skin with anti wrinkle action.</td>
</tr>
<tr>
<td>4 hydroxy 3 methoxy Cinnamic acid</td>
<td>Simulates hormonal secretion and Rejuvenates health.</td>
</tr>
<tr>
<td>Lecithin</td>
<td>Provides nourishment for the brain.</td>
</tr>
<tr>
<td>Unsaponifiable Matter</td>
<td>Contains high value of nutraceuticals which Promotes good health and nutritional benefits.</td>
</tr>
</tbody>
</table>

**Health Benefits of Rice Bran Oil**
Rice Bran Oil exerts hypocholesterolemic activity in relation to more commonly used vegetable oils and is characterized by a relatively high content of non fatty acid components known to have beneficial health effects. Some of its key benefits are mentioned below:

1) Rice Bran Oil is the only oil that contains Oryzanol. A powerful antioxidant, it is most effective in reducing bad cholesterol (LDL). No just that, it also maintains the good cholesterol (HDL) Levels in the body. This makes it the healthiest cooking oil to use.
2) Rice Bran Oil has one of the highest smoke points amongst oils, even higher than Olive oil. This makes RBO much better oil for deep-frying and everyday cooking.
3) Naturally rich in vitamin E (Tocopherols and Tocotrienols) it protects the human body from ailments and maintains the balance of nervous system. Tocotrienols are known to have anti cancer, anti-thrombotic and anti-ageing properties.
4) Interestingly, RBO absorbs 15%-20% less into food hence making the food less oily! Lesser oil means reduced calorie intake and better heart. It also means lesser oil consumption.
5) RBO is Tran’s fatty acid free when compared to any other oil. This reduces the chances of Coronary Heart Diseases.

**Cooking Benefits of RBO & Smoke Points of Various Oils**
Rice Bran oil is a superior salad, cooking, and frying oil which leaves no lingering aftertaste. The high smoke point prevents fatty acid breakdown at high temperatures. Its light nature allows less oil to be absorbed into food while cooking, reducing overall calorie intake. It mixes better in salad dressings and improves the taste of baked goods, helping in cholesterol reduction, adding nutritional and anti-oxidant value. A hypoallergenic, it is best for those who have intolerance to other cooking oils.

**Cost Effectiveness:** Foods fried in Rice Bran Oil are found to be non-greasy and surprisingly easy to digest. What's more, it absorbs 15% less oil when compared to foods fried in other oils. Thus you end up enjoying the double benefit of not only saving 15% oil
but also consuming lesser amount of calories through fried foods. Also, it takes lesser time to fry food in RBO. So you end up saving time, money and effort!

<table>
<thead>
<tr>
<th>OIL</th>
<th>SMOKE POINT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conola Oil</td>
<td>107 degree C</td>
</tr>
<tr>
<td>Coconut Oil</td>
<td>232 degree C</td>
</tr>
<tr>
<td>Corn Oil</td>
<td>160 degree C</td>
</tr>
<tr>
<td><strong>Rice Bran Oil</strong></td>
<td><strong>254 degree C</strong></td>
</tr>
<tr>
<td>Cottonseed oil</td>
<td>216 degree C</td>
</tr>
<tr>
<td>Olive oil</td>
<td>160 degree C</td>
</tr>
<tr>
<td>Safflower oil</td>
<td>107 degree C</td>
</tr>
<tr>
<td>Sesame oil</td>
<td>177 degree C</td>
</tr>
<tr>
<td>Soybean oil</td>
<td>160 degree C</td>
</tr>
<tr>
<td>Sunflower</td>
<td>107 degree C</td>
</tr>
</tbody>
</table>

**Conclusion:** Smoke point is temperature at which the oil begins to smoke. Imagine what happens to butter when you heat it! That is because it has a very low smoke point. Natural antioxidants within oil increase the smoke point. RBO has the highest number of antioxidants, which is why it has one of the highest smoke points. High smoke point prevents fatty acid breakdown and makes the oil usable even after multiple frying.

**Cholesterol lowering ability of RBO vis-à-vis other oils**
Rice Bran Oil is known to have a well balanced proportion of Saturated Fatty Acids, Mono Unsaturated Fatty Acids, Poly Unsaturated Fatty Acids and poly Unsaturated Fatty Acids. The presence of Oryzanol in it effectively lowers serum cholesterol by promoting HDL and lowering LDL.

American Heart Association indicates that Rice bran oil has the unique ability to lower harmful LDL cholesterol levels up to 30% without reducing HDL or good cholesterol that protects against heart attacks. The research finding also states that people should consume less than two tablespoons of the oil in a day to get the full benefit. These health benefits are solely due to rice bran oil’s natural balance of Mono and poly Unsaturates, Unsaponifiables and plant Sterols which reduce cholesterol absorption, Gamma Oryzanol which reduces the absorption and increased excretion of cholesterol and a significant amount of naturally occurring Tocopherols (Vitamin E).

**HOW DIFFERENT OILS INCREASE OR DECREASE CHOLESTEROLS**

<table>
<thead>
<tr>
<th>OIL</th>
<th>CHOLESTEROL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groundnut Oil</td>
<td>+5</td>
</tr>
<tr>
<td>Soya Bean Oil</td>
<td>+3</td>
</tr>
<tr>
<td>Sesame Oil</td>
<td>+2</td>
</tr>
<tr>
<td>Cotton Seed Oil</td>
<td>0</td>
</tr>
<tr>
<td>Sunflower Oil</td>
<td>-12</td>
</tr>
<tr>
<td>Corn Oil</td>
<td>-15</td>
</tr>
<tr>
<td>Safflower Oil</td>
<td>-16</td>
</tr>
<tr>
<td>Rice Bran Oil</td>
<td>-17</td>
</tr>
</tbody>
</table>

(+) and (-) indicate increase and decrease in cholesterol level

**Conclusion:** Regular use of Rice Bran Oil will considerably reduce bad cholesterol while maintaining good cholesterol in the body.

**Cholesterol**
Cholesterol is a soft waxy substance present in all parts of our body. It is a type of fat made by the liver. Approximately 80% of it is made by the body itself and the rest is derived from the diet. We obtain it by two sources. Body organ-liver produces cholesterol and through consumption of animal product such as eggs (egg yolk), meat, poultry, fish, dairy products, better and lard.
Plant products such as margarine, cooking oil, and food from plant origin such as grains, dry beans, peas, vegetables do not contain cholesterol.

**Do we need it?**
The body produces enough cholesterol for its needs. So we do not have to consume too much of dietary cholesterol. The reason why the body needs some cholesterol is:
- Cholesterol transports essential fatty acids.
- It is needed to produce hormones.
- It insulates nerves.
- It forms cell membrane.

Cholesterol does not mix well with blood—similar to oil and water. To help cholesterol travel through blood to get where it is needed, the body wraps it within water-soluble proteins. This mixture of fatty cholesterol and protein is known as a lipoprotein.

All of us have two types of Cholesterol in our body.

**HDL- High Density Lipo-Protein (Happy Cholesterol)**
These are composed mainly of proteins with only small amounts of cholesterol HDLs are goods because they remove cholesterol from artery walls and transport it to the liver for elimination from the body. Higher HDL levels actually protect against cardiovascular diseases.

**LDL-Low Density Lipo-Protein (Lousy Cholesterol)**
These are composed mainly of cholesterol and have very little protein. They are bad because they deposit cholesterol on the walls of your arteries. High LDL levels increase the risk for cardiovascular diseases.

**Key Points to remember**

<table>
<thead>
<tr>
<th>Dietary Habit</th>
<th>How it effects us</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthy amount of Unsatuated fat</td>
<td>Reduces LDL and increases HDL</td>
</tr>
<tr>
<td>Too much of saturated fat</td>
<td>Increases LDL</td>
</tr>
<tr>
<td>Trans fat</td>
<td>Increases LDL and reduces HDL</td>
</tr>
<tr>
<td>Too much of any type of fat</td>
<td>Increases LDL and reduces HDL</td>
</tr>
<tr>
<td>Diet rich with Essential Fatty Acids With proper ratio of omega-3 and Omega-6 fats</td>
<td>Lowers triglycerides, lowers Blood pressure, increases HDL</td>
</tr>
</tbody>
</table>

** could lead to increase in blood sugars blood pressure as well as cholesterol. Good cholesterol levels are desirable for health. It is a necessary substance that the human body needs, playing a role in hormonal functioning and in brain health.

**HDL Cholesterol: What Job Does It Do? Why Should It Be Raised?**

High-density lipoprotein (HDL) travels in the blood streams, packing up a passenger’ (cholesterol) and transporting it to the liver where it is then broken down and excreted. Because it can remove cholesterol plaque within arteries, it is considered beneficial.

The HDL molecule, it is thought, scourcs the walls of blood vessels, cleaning out excess cholesterol. It is believed that the cholesterol being transported by HDL is the undesirable kind. A higher HDL just accelerates the process. Reduced levels of HDL put you at high risk for heart diseases.

Losing weight, quitting smoking, high levels of physical exercise, these are all activities that increase HDL. Even the diet plays a major role in HDL levels. Unfortunately, Tran's fatty acids are present in many prepared foods these days. Check for hydrogenated vegetable oils. Removing them from your diet will almost certainly impact on raising HDL.
**LDL Cholesterol: Why Should It Be Minimised?**

Your low-density lipoprotein (LDL) level greatly affects your risk of heart attacks or stroke and is considered a better gauge of risk than the total blood cholesterol.

LDL is believed to be dangerous because of how it affects the body. One variety in particular, Lipoprotein (A) is thought to promote plaque formation that thickens and stiffens arterial walls, causing them to narrow. In fact, large deposits could completely block an artery resulting in a heart attack or stroke. When we hear about bad cholesterol, this is what is being referred to.

A first step of lowering LDL might be taking a look at how much meat and dairy products you consume. Saturated fats are derived primarily from meat and dairy product and can raise blood cholesterol levels. Certain vegetable oils, made from coconut, palm, and cocoa are also high in saturated fats. The latest research suggests that certain foods play a key role in lowering LDL levels. Avocados and almonds, olive oil, soybeans and garlic, mushrooms, rice bran, oat bran, Beans (kidney, pintos, black, and navy), onions, fatty fish, and flax seed can reduce LDL levels.

If you are wondering how to lower LDL, losing unwanted weight is another step. Did you know that every time you exercise, you could lower LDL cholesterol? The admonition, “get moving” is good advice—especially if your LDL levels are not where they should be.

Smoking is another habit that contributes to undesirable levels of LDL cholesterol.

Studies have shown that heart attack risk is decreased by as much as 25% for every 10% drop in cholesterol level.

When evaluating good and bad cholesterol, the ratios of total cholesterol to HDL cholesterol, as well as the ratio of LDL to HDL are the cardiac risk factor rations. They give important clues as to whether cholesterol is being deposited into the tissues or broken down and excreted.

**Fats- Types and Effects**

Fat is heterogeneous mixture of lipids, predominantly triglycerides but also include phospholipids, glycolipids and sterols. More than hydrogen atoms connected to the carbon chain, higher the fat with saturation. All naturally occurring fats are mixture of SFA, MUFA, PUFA, although any one type dominates in most foods. The nutritional quality of dietary fats is determined by the nature of fatty acids, their chain lengths, degree of unsaturation, and orientation of double bonds.

**Role of fatty Acids**

For is an important ingredient of human diet. It is the most concentrated source of energy. One gram of fat gives 9kcal of energy as compared to carbohydrates and proteins, which provide only 5kcal of energy per gram. Fat carries out the following functions in our body.

- Fat provides calorie density to the diet.
- Fats are essential in the diet for the absorption and mobilization of fat soluble vitamins such as vitamin A, vitamin E and fat-soluble antioxidants. These vitamins are not utilized by the body if fat is not available in the diet. Thus fat works as a vehicle to carry the fat-soluble vitamins, nutrients and antioxidants in the body.
- Vegetable oils are the only source of Essential Fatty Acids (EFA) to the body which the body cannot synthesize and needs to be supplied through diet.
- Fat also helps in raising HDL (High Density Lipoprotein), the good cholesterol. Low fat diets can result in reduction of HDL.
- Fat in the diet impart certain textural qualities, taste and palatability to the food. Fats and oils are integral lubricants of food in two ways; through use as release agents as part of the cooking process and as a lubricant during mastication (chewing).
- Fats and oils modify flavor release and improve palatability.
There are 4 types of fats, each with a different chemical composition:

1) Saturated Fat (SF)- The Bad Fat
2) Mono Unsaturated Fats (MUF)- The Good Fat
3) Poly Unsaturated Fats (PUF)- The Good Fat
4) Trans-Fat (TF)- The Ugly Fat

**Saturated Fat (SF)... The Bad Fat**

SF is fat that consists of triglycerides containing only saturated fatty Acids (SFA). SFAs have no double bonds between the carbons atoms of the fatty acid chain; hence, they are fully saturated with hydrogen atoms. Foods that contain a high proportion of saturated fat are butter, ghee, coconut oil, cottonseed oil, and palm kernel oil, dairy products (especially cream and cheese), meat, and some prepared foods. Saturated fatty acids raise total cholesterol and LDL cholesterol.

This fat has high melting point. SF contains fatty acids like stearic acid, palmitic acid, and butyric acid. Processed food products like biscuits, cakes, tarts, pastries, chocolates, ice creams, coffee creamers made using hardened or hydrogenated vegetable oil are also the source of saturated fat.

**Mono Unsaturated Fats (MUSF)....The Good Fat**

MUSF are fatty acids with one double-bonded carbon in the molecule, with all of the others single-bonded carbons.

At room temperature MUSF stays in the liquid form. It runs cloudy when kept in refrigerator. You may obtain it by consuming plant sources like canola oil, peanut oil, olive oil and rice bran oil. Olive oil has highest monounsaturated fat. It is also found in margarine with vegetable oils high in MUSF.

Foods containing monounsaturated fats lower LDL cholesterol, without lowering HDL cholesterol. They are called as the GOOD FAT for various reasons like:

- It increases HDL (Happy or good Cholesterol)
- It reduces triglycerides level (triglyceride is a kind of circulating fat found in cholesterol and plaque)
- It slows down the process of plaque formation in coronary arteries.

When we replace saturated fat with unsaturated fat in our diet, we lower the risk of heart disease. Eg. Replace butter (animal product) with as spread having olive oil, rice bran oil or canola oil.

Cook in oils that are high in MUSF such as canola oil, olive oil or rice bran oil.

**Poly Unsaturated Fat (PUSF) .....The Good Fat**

Poly unsaturated fats are a fatty acid in which more than one double bond exists within the representative molecule. Polyunsaturated fat, along with monounsaturated fat are, ‘healthy fat’ however some studies, have also shown that consuming high amount of polyunsaturated fat may increase the risk of an individual developing cancer. This is because polyunsaturated fat is prone to oxidation, which leads to the generation of free radicals polyunsaturated fat may lower both LDL and HDL cholesterol.

At room temperatures as well at cold temperatures it stays liquid. It has lower melting point in comparison to MUSF and SF. primary sources for PUSF are vegetable oils like Conola oil, Sunflower oil, Nuts and seeds, Cold water fish such as Salmons (they are rich in Omega-3 fatty acids). It is also observed that commercial processing of vegetable oils rich in PUSF loses its health promoting properties.

PUSF rich oils are also reactive in cooking. When subjected to routine frying or cooking, PUFAs can generate high levels of toxic aldehyde products that promote cardiovascular disease and cancer.

**Trans Fat (TF).... The ugly fat**

Trans fat is the common name for a type of unsaturated fat with trans isomer fatty acid. Trans fats may be monounsaturated or polyunsaturated. Unlike other dietary fats, Tran’s
Fats are neither required nor beneficial for health. TF stays solid at room temperature. TF is used in fast foods, fried foods and/or commercially processed foods because it enhances the food flavor, taste and texture and also increases the shelf life of the food products available on the shelf such as biscuits, cookies to name a few. Eating Tran’s fats increases the risk of coronary heart disease. That is why health authorities worldwide recommend that consumption of Tran’s fat should be reduced to negligible amounts. According to the latest government rules, it is now mandatory for companies to list the amount of transfat present in the food on the packaging. Umbrella Rice Bran Oil is trans-fat free and thus safe for consumption.

**Why are Trans-fat called the ugly fats?**

TF increases LDL (Lousy or bad Cholesterol) and triglycerides. The worst is that it reduces the HDL (happy or Cholesterol).

Such an imbalance of HDL and LDL increase the risk of cardiovascular disease, cancer, and arthritis.

Rice Bran Oil has the most desirable combination of SFA, MUFA and PUFA as shown in the table below. RBO comes closest to the recommendations of World Health Organization (WHO) in terms of its composition of SFA, MUFA and PUFA.

**Rice Bran Oil does not have Trans fat.**

<table>
<thead>
<tr>
<th>Edible Oil</th>
<th>SFA</th>
<th>MUFA</th>
<th>PUFA</th>
<th>Essential Fatty Acids</th>
<th>Antioxidants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended</td>
<td>Below 33%</td>
<td>Above 33%</td>
<td>About 33%</td>
<td>5 to 10</td>
<td>Maximum</td>
</tr>
<tr>
<td>Olive Oil</td>
<td>14</td>
<td>77</td>
<td>9</td>
<td>57</td>
<td>Tocopherols</td>
</tr>
<tr>
<td>Sunflower Oil</td>
<td>12</td>
<td>21</td>
<td>67</td>
<td>69</td>
<td>Tocopherols</td>
</tr>
<tr>
<td>Kardi Oil</td>
<td>10</td>
<td>15</td>
<td>75</td>
<td>10</td>
<td>Tocopherols</td>
</tr>
<tr>
<td>Palm Oil</td>
<td>51</td>
<td>39</td>
<td>30</td>
<td>32</td>
<td>Tocopherols</td>
</tr>
<tr>
<td>Groundnut Oil</td>
<td>20</td>
<td>50</td>
<td>60</td>
<td>10</td>
<td>Tocopherols</td>
</tr>
<tr>
<td>Soya bean Oil</td>
<td>16</td>
<td>24</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>45</td>
<td>37</td>
<td>15</td>
<td>Oryzanol</td>
</tr>
</tbody>
</table>

Essential Fatty acids (EFA).... They are the other kind of Dietary Fatty Acids. They are essential for us because

- They are important for a healthy immune system.
- They help us in breaking down and in getting rid of SFAs.
- They adjust cholesterol metabolism rate.
- Our bodies cannot make them. So, we have to obtain then by consuming MUSFs and PUSFS.

Two most important groups of EFAs are:
1. OMEGA-6 (N6 EFA)
2. OMEGA-3 (N3 EFA)

<table>
<thead>
<tr>
<th>Type--→</th>
<th>Omega-3 (N3 EFA)</th>
<th>Omega-6 (N6 EFA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sources</td>
<td>Olive, flaxseeds, walnuts soybeans, And freshly ground wheat germ, Rice Bran</td>
<td>Safflower, Rice Bran oil sunflower corn, and evening primrose oils</td>
</tr>
<tr>
<td>Other Information</td>
<td>The chief of the N3 EFA family is Alpha Linolenic acid (ALA)</td>
<td>The primary chief of the N6 EFAs family is Linoleic acid.</td>
</tr>
<tr>
<td>Why are They required?</td>
<td>Critical for eye, brain, and neurological function N3 EFAs is also a blood thinner that prevents platelet forming a cluster and strokes</td>
<td>It is important is the texture and appearance of the skin and blood vessel structure</td>
</tr>
<tr>
<td>Deficiency</td>
<td>Can cause impaired brain function and decreased IQ</td>
<td>Has a bad effect on the circulatory system. May result in increase triglyceride, cholesterol, and blood pressure; hardening and obstruction of arteries abnormal hair loss; increased urination and skin disorders.</td>
</tr>
<tr>
<td>What if</td>
<td>It worsens diabetes and bleeding</td>
<td></td>
</tr>
</tbody>
</table>
DIABETES AND CHOLESTEROL CONNECTION
According to the American Diabetes Association, people with diabetes have higher rates of cholesterol abnormalities than the rest of the population and this contributes to the higher rate of heart disease in people with diabetes. Glucose (or sugar) attaches to LDLs in the blood LDLs coated with glucose stay in the blood stream longer. This causes sticky plaques to form and those with diabetes get more damage form there types of LDLs than those without diabetes. People with diabetes often have low levels of HDL and higher levels of triglycerides. Together these can raise the risk of heart attack or stroke.

FAQS

Lighter the colour of oil, the healthier it is.
It is a myth that colourless oil is healthier compared to dark coloured oils. The fact remains that once the oil has been refined, it is safe to use. So one should chose the cooking oil based on the health benefits rather than the color of the oil. Rice Bran Oil has a golden yellow colour and it has a much higher number of natural antioxidants like Oryzanol, Tocopherols and Tocotrienols.

Why is Rice Bran superior compared to other oils?
Rice Bran Oil is naturally enriched oil comprising of essential nutrients like Oryzanol, Tocopherols and Tocotrienols hence offering a complete health package. It also has the right percentage of fatty acids compared to other popular oils. Moreover, it is probably the only oil that reduces your bad cholesterol and increases the good cholesterol. And since it has no Tran’s fats, it is very safe for regular consumption.

What about the quality factor of Umbrella Rice Bran Oil?
Umbrella Rice Bran Oil is manufactured in a state-of- the-art plant and since the manufacturing and the packaging unit is in the same location, it ensures better quality than most other oils. There is no chance of any adulteration or leakages.

Is Rice Bran Oil used only in India?
Rice Bran Oil is extensively used world over and it is popularly known as ‘Heart Oil’ in Japan and ‘Health Oil’ in western countries.

Has Rice Bran Oil been accorded the necessary certifications by renowned health bodies?
Rice Bran Oil comes closest to the stringent recommendations by World Health Organisation (WHO) & American Heart Association. Sanjay Veg oil Products Pvt Ltd has recently got the AGMARK also. So you can be assured about the quality of Umbrella and RBO.

Does Rice Bran Oil alter the taste of the food?
No. Rice Bran oil is a superior cooking and frying oil which leaves no lingering aftertaste. It doesn’t have a taste of its own and hence doesn’t interfere with the taste of the good.

Is Rice Bran Oil cost effective?
Rice Bran Oil absorbs up to 15% less oil into food while cooking, therefore it is more economical as the oil required for cooking is much less when compared to other oils. Also, Umbrella is very competitively priced, making it one of the largest selling Rice Bran Oils in the market.

Does Rice Bran Oil protect or enrich your skin?
Yes. Rice Bran Oil contains Squalene, which is an anti-wrinkling agent. It also contains Vitamin E, which enriches your skin. In fact, women in Japan use RBO on their skin to make it more supple and radiant.

How good is the shelf life of Rice Bran Oil?
Rice Bran Oil has a very high oxidative stability, thereby a good shelf life.
Can Rice Bran Oil be reused after cooking or frying?

Rice Bran Oil has a high smoke point (254c), thereby preventing fatty acid breakdown and makes the oil useable even after multiple cooking or frying. However it is recommended that oils should not be reused.

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Consult your physician or a qualified doctor on any matters regarding your health and well being or on any opinions expressed in the content above. The information provided is believed to be accurate based on the best judgment of the authors but the reader is responsible for consulting with their own health professional on any matters raised within. In addition you should understand that medical information changes rapidly. Therefore some information may be out of date or even possibly inaccurate and erroneous.

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