OIL PALM FIBRE

Oil Palm Fibre (OPF) is extracted from fibre enriched oil palm trunk. Many years, scientists and researchers were aware of oil palm trunk containing substantial amount of dietary fibre. However, it was difficult to extract dietary fibre from trunks since parenchyma cells, dietary fibre and adheres are around the vascular bundle within trunk.

After 12 years of study, finally scientists have developed an advance technology on extraction of OPF. With this technology, it is proven that oil palm trunk contain more than 70% of dietary fibre. Table below shows the typical specification of OPF.

Why you should choose Oil Palm Fibre (OPF)?

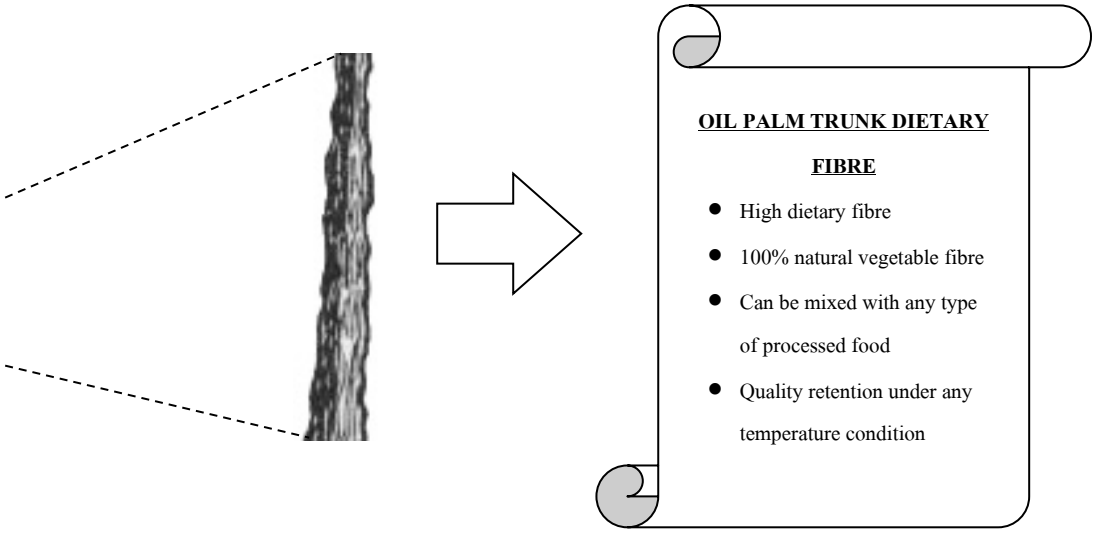
OPF uses old oil palm trunk that are high in lignin. The high content of lignin in OPF is one of the main reasons why it is so special. In dietary fibre, lignin is particularly invaluable. It is a component of fibre that undergoes minimal changes in the body. It is invaluable for its binding ability – binding cholesterol, bile salts, fats, carbohydrates and toxins.

Sufficient intake of fibre, which is rich in lignin, is proven to help reduce the risk to infectious agents and cancer. Breast cancer patients, and others at high risk for colon and breast cancer, excrete far fewer lignans (produced by the beneficial bacteria in our intestine from lignin) than healthy people. This implies that they have fewer lignans present in their bowel than do people without these types of cancers.

Thus, when talking fibre supplements of food, one should choose product that is high in lignin to truly benefit from the effect of dietary fibre. However, not all source of dietary fibre contains lignin, as it is only found in mature tree trunk. OPF only uses oil palm that are more than 20 years old, and large quantity of lignin is available in OPF. The use of old oil palm has drastically reduced the production cost of OPF, as other source of lignin will be far too expensive.

OPF has a wide range of beneficial properties when included into our diet and its benefits include,

- Preventing and curing constipation
- Maintaining a healthy digestive system
- Normalizing the balance of beneficial and pathological bacteria in the colon
- Normalizing blood sugar level
- Lowering blood cholesterol level
- Preventing colon cancer
- Lowering breast cancer risk



OPF AND HEALTHY DIGESTIVE SYSTEM

A healthy digestive system will ensure optimum food and water absorption. It is believed that the health of a person can be determined from the health of their digestive system. In order to maintain good health, we need good food, good sleep, good exercise and good passage of stool.

Unlike the body, we cannot go to the gym and exercise the digestive system to maintain its health. The only way, which we can maintain a healthy digestive system is through good food. OPF is the best way to maintain a healthy digestive system.

Constipation

Perhaps the most frequently reported bowel problem that people experience is constipation. The best way to tackle the problem is with dietary fibre, and it is the natural way to solve this problem without medication and laxatives.

Insoluble fibre, softens faecal matter by retaining moisture and increases the bulk and consistency of the faecal matter. This stimulates the intestine and facilitates the movement of the faecal matter. Poorly formed faeces will lengthen the time faeces stay in the rectum as it does not stimulate the rectum enough, this have three significant consequences:

a) Water content in the faecal matter is extracted and the faeces become very hard and cause constipation. These hard faeces might even damage the intestinal wall.

b) Bacteria in the colon will feast on these over staying faeces and produces toxins. These toxins will be absorbed by the body, and is a major health issue.

c) Retained faeces even after opening the bowel. As the faeces are poorly formed, some can be left behind in the rectum, giving an uncomfortable sensation of incomplete voiding. Bacteria will feast on these retained products and produce toxins.

During evacuation, hard stools place a strain on the colonic muscles and on the lining of the lower portion of your large intestine, rectum and anus. Straining causes many problems, such as:

- Formation of haemorrhoid
- Diverticula's disease of the colon (formation of pouch in the wall of the intestinal wall, which can be infected and even rupture, causing peritonitis that is potentially lethal)
- Varicose veins
- Hernias
- Toxic mega colon

These are all surgical problems, which can only be dealt with by some form of surgical intervention.

- Your system can also become polluted by poisonous gases caused by stagnation in your bowel. These gases can enter your bloodstream, irritating your organs and joints.
- Alternating constipation and diarrhea alone are also indications of foulness in your intestines.

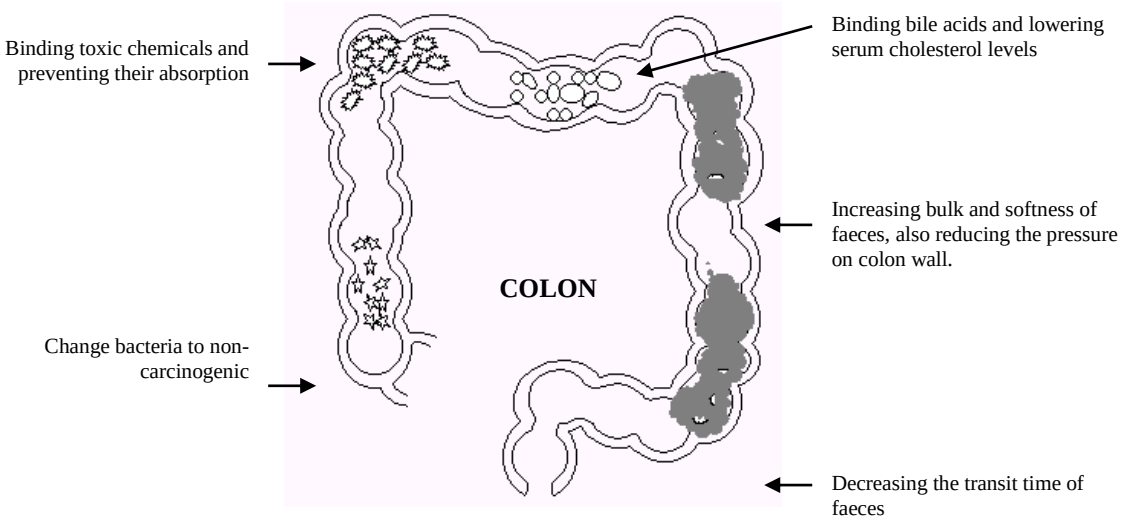
Finally, the much more serious and life-threatening problems of cancer and immune system disorders may begin inside a toxic bowel.

Bowel transit time

OPF also plays an important role in normalizing bowel transit time. The longer the toxic waste matter sits in the bowel, allowing proteins to putrefy, fats to become rancid, and carbohydrates to ferment. The longer your body is exposed to rotting food in your intestines, the greater your risk of developing disease.

Because a lack of fibre causes slower movement of faeces through your bowel, it allows carcinogenic substances to be in contact with your intestine wall longer. This could lead to possible formation of colon cancer. Frequently, a blocked or slow-moving bowel can cause problems like:

- Lower back pain
- Neck and shoulder pain, wrist and hand pain
- Skin problems
- "Brain fog", fatigue, sluggishness
- Cold and flu
- Common headache
- Neurological problems



The protective properties of OPF

Internal cleansing

Another way in, which OPF maintain a healthy digestive system is its ability to cleanse the digestive system. OPF do not only reduce toxins production by relieving constipation and normalizing bowel transit time, but it can also retain toxins produced by bacteria especially in the colon.

The digestive system has a very thin inner wall, but it has one of the highest cell turnover times. Every 4 – 5 days, the intestine will completely shed its inner wall cells. OPF aids the shedding of these cells, which are damaged, dead, beyond their functioning life, and are removed quickly along with toxins, bacteria and chemical wastes from our body system.

Cholesterol levels

Studies have shown that fibre has a cholesterol-lowering effect on the blood. They lower the level of harmful LDL cholesterol in the body, while raising the valuable and protective HDL cholesterol level.

OPF plays the function of sweeps out toxic materials as it moves down the intestine tract. The body uses this fibre sweep as a key way of ridding itself of cholesterol. The liver converts the cholesterol to bile salts and these are excreted into the intestinal tract. The fibre then helps sweep the bile salts out of the body. In short, OPF is an important tool in eliminating excess cholesterol.

Blood sugar levels

OPF slows the release of sugar into your bloodstream, which prevents an exhausting demand for the release of insulin. If you have normal pancreatic function, your body produces insulin in response to the sugar load in your bloodstream from food that you have eaten. Insulin brings your blood back into a normal range.

Diabetic patients, who cannot produce insulin from their pancreas, must use medication in tablet form or by injection to normalize their blood sugar. As a benefit of adequate fibre intake, insulin-dependent diabetics may be able to reduce their required dose of insulin.

OPF AND BALANCED DIET

What you eat will be absorbed into your body through the digestive system. In order words, what is in the digestive system has the potential to be absorbed. Similarly, faecal matter and toxins that stayed in the body for too long can be absorbed into the body as well. We must therefore be careful of what we eat, but also what we don't pass out!

Anyhow, healthy meals go a long way in ensuring a healthy body. A balanced and healthy diet is a diet that contains all the major food groups – carbohydrates, protein, fat, mineral salts and vitamins. It is recommended that we obtain energy from the right proportion of this major food group: 50 – 65% from carbohydrate, 10 – 15% from protein and 20 – 30% from fat. However, medical evidence and scientific experiments have shown that dietary fibre is also a very important in maintaining the health of the digestive system and thus the general health.

Dietary fibre actually interacts with dietary nutrients; these interactions are beneficial in our modern diet to maintain health. The different food groups and their interaction with dietary fibre are discussed below.

Protein and toxins

Proteins are the essential building blocks of the cell. The are also used by cells to manufacture enzymes, hormones, antibodies and all other important elements in the functioning of a cell.

Proteins are made up so smaller basic molecules known as amino acids. After digestion, proteins are always reduced to amino acid and these are absorbed into the body. There are 23 known amino acids and are divided into essential and non-essential amino acids. Non-essential amino acid can be manufactured by the body and has to supplies by diet, which contains them. A diet, which contains grains, wheat, nuts, vegetables, fish, red and white meat will be more than sufficient to meet our daily requirement of protein.

Although dietary fibre does not have defect interaction with protein, food that contains dietary fibre, such as vegetables and fruits contain essential amino acid as well. Furthermore, digestion of protein by intestinal bacteria produces toxins, and dietary fibre is able to reduce the number of such bacteria and thus their toxins.

Fats and weight control

Fats are soluble organic matter rich in energy. They are made up of basic units called fatty acids. Both facts and fatty acids can be classified according to their molecular structures, into the following:

- Saturated fat
- Mono-unsaturated fact
- Poly-unsaturated fats or fatty acids

Saturated fats are found in both animal and vegetable food, and are deemed undesirable as it increases LDL cholesterol in the blood. LDL cholesterol is responsible for high blood pressure, coronary heart disease and other modern age illness.

Unsaturated fats are less harmful to the body and are able to decrease the LDL cholesterol level and increase the protective HDL cholesterol in the body. Unsaturated fats are mainly found in vegetables, grains, cereals and fish.

Cholesterols are closely linked to fats, as fatty food also contains high cholesterol level. However, eating too much fat can also increase cholesterol level in the blood. Cholesterol is one of the major contributing factors of coronary heart disease in the world.

OPF has the ability to bind fats and lipids and cholesterols. This will reduce the absorption of these compounds thus reducing the body's fats and cholesterols content. Besides that, dietary fibre is also able to bind bile salts. As bile salts are made from cholesterols, increase removal of bile salts from the body means that more cholesterol will be used to manufacture it. This will further reduce the cholesterol level in the body.

The fat and cholesterol binding ability of dietary fibre also mean that the total energy absorption will be reduced. Modern diet contains too much energy, dietary fibre therefore is a good supplement in order to reduce overall energy intake. This is particularly useful to combat unwanted weight gain and is helpful in intentional weight loss.

Potassium and sodium

Minerals are required in a very small amount in the body. However, a continuous supply is required to maintain the optimum level of minerals in the body. Minerals are very important in maintaining life and proper function of the cells. However, the intake of two particular minerals, potassium and sodium, requires extra attention.

The imbalance in the consumption of sodium and potassium can greatly affect a cell's water balance and function. Sodium is the major electrolyte outside the cell, although small quantity is also needed inside the cell. Potassium in the other hand is the major electrolyte inside the cell. Together, these two electrolytes balance the amount of fluid inside the cell and outside the cell, including the blood volume, which affect blood pressure.

We have no problem getting sodium in our diet; in fact, we consume too much sodium than we actually need, as there is plenty of sodium in our diet. The real issue is the consumption of potassium in our diet. Besides regulating the balance of water in the cell, potassium is needed in the proper function of nerve cells, and functioning of both skeletal muscles and heart muscles. We should therefore reduce the intake of sodium and increase the intake of potassium. Fresh fruits and vegetables are the best source of potassium.

OPF has been found to be very high in potassium content while not contributing too much sodium. Another two minerals are found in high levels in OPF, namely calcium and magnesium. These two minerals are important in maintaining

healthy bones and teeth, preventing premature bone thinning (osteoporosis) and fragile teeth. We lose more calcium every day, as we grow older, therefore sufficient calcium intake is important to maintain healthy bones. Furthermore, magnesium is believed to be essential for the production of energy at a cellular level, a lack of magnesium will lead to muscle weakness, apathy and even convulsion.

BENEFITS OF OIL PALM FIBRE (OPF)	
Improves bowel function	Relieves constipation
Maintain beneficial microenvironment	Encourages the growth of beneficial bacteria and suppress the growth of pathological bacteria
Detoxify the colon	Dietary fibre prevents bacterial overgrowth, reduces bacterial toxins production and binds to these toxins, removing it from the body. Intestinal toxaemia is responsible for many diseases.
Improves diabetes	Slows the absorption of sugar into the blood stream, prevents and reduces the severity of diabetes.
Effective weight control	Binds fats and cholesterols, reducing total energy intake, prevents unwanted weight gain and effective weight loss.
Stabilize blood pressure	By reducing blood cholesterol level, prevent atherosclerotic plaques.
Prevent coronary heart disease and stroke	Reduce blood cholesterol level and progression of atherosclerotic plaques, preventing coronary heart disease and stroke.
Prevents and improve colon and breast cancer	Dietary fibre reduces bacterial toxins, removes bile salts and lignin prevents colon cancer. Effectively reduces oestrogen, which prevents breast cancer.