Role of Fish Lipids in Human Nutrition

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To achieve a balanced diet there is a need to reduce total fat intake and it is also important to make sure that the type of fat we eat is right.

The fat that is not beneficial to human is the hard "saturated" fat which comes mainly from the fat of land animals such as cows and sheep.

Fish fat has several beneficial effects.

1. Provide food with low fat

- Fish is a good food for a low fat diet. It is low in <u>calories</u> and many types of fish do not contain any unsaturated fat.
- The nutritional value of fish will vary slightly according to the location it is harvested, the cut of fish, and the age of the fish.
- The method used for cooking will have an affect on it also.

2. Reduce the cholesterol level in the blood

Cholesterol is the type of fat which is naturally produced by our bodies and is also found in the diet.

It is usually deposited in the lining of the blood stream vessels, causing them to narrow.

The heart then has to work harder to pump blood around the body.

Blood clotting can result and the cholesterol deposits can be very hard.

Tissues can become deprived of oxygen when the blood vessels become blocked.

Unsaturated fats can help to reduce the cholesterol level in the blood, thus lowering the risk of heart disease.

Oil-rich fish such as mackerel, sardines, herring and sprats are rich in unsaturated fats containing Omega-3 so valuable for health.

3. Source Omega-3 fatty acids

- Two fatty acids, eicosapentaenoic acid (EPA) and docosahexaenoic (DHA), collectively known as Omega-3, are essential fatty acids.
- Schizophrenia symptoms can be eliminated or at least vastly diminished by oral supplementation with EPA.
- DHA is the building block of human brain tissue and is particularly abundant in the grey matter of the brain and the retina.
- Low levels of DHA have been associated with depression, memory loss, dementia and visual problems.
- DHA is particularly important for fetuses and infants; the DHA contents of the infant's brain triples during the first three months of life.
- Optimal levels of DHA are therefore crucial for pregnant and lactating mothers.

- Oil-rich fish, such as salmon, trout, mackerel, herring and sardines, are an excellent source of Omega-3 fatty acids, which are essential to our diet.
- Eating oil-rich fish provides the Omega-3 fatty acids needed for the body.
- Omega-3 oils from fish have a lowering effect on blood fats.
- This decreases the chance of the blood vessels clogging with cholesterol.
- Omega-3 can also make blood less "sticky", and it therefore flows more easily around the body. This can reduce the risk of a heart attack.
- They also help to reduce blood pressure a little and keep the heart beat steady. Omega-3 oil in fish can reduce the risk of dying from heart attacks.

4. Fish oils prevent cancer

Fish oils can help to prevent cancer cells progressing to the tumor stage.

They may also reduce inflammation and provide relief for people suffering from rheumatoid arthritis and even some skin disorders such as psoriasis.

5. Needed for the development of brain

- Omega-3 oils can play an important part in aiding the development of brain.
- Expectant mothers are advised to eat a lot of oil-rich fish in the last three months of pregnancy to assist the baby's brain growth.
- A good supply of Omega-3 oils assists the development of nerves and eyesight.