The feel-good oil

A natural oil from a fruit with lots of health benefits, palm oil is one of the best gifts to us from Mother Nature, writes Tan Bee Hong

PALM oil, produced from the fruit of the oil palm (Elaeis guineensis), contains a variety of fats, vitamins and nutrients, with no unhealthy trans-fatty acids that is mainly found in hydrogenated oils.

Palm oil is free of artery-clogging trans-fats as it is made up of a mixture of fatty acids and contains valuable vitamins and nutrition that our bodies need. It is rich in phytonutrients such as natural carotenoids, tocotrienols and tocopherols (Vitamin E) and co-enzyme Q10.

ANTI-CANCER EFFECTS

Studies on the health benefits of palm oil show it has anti-cancer properties and the fatty acids of palm oil can inhibit and/or delay experimental carcinogenesis.

In the United States, Dr Paul Sylvestor, Professor of Pharmacology and director of Graduate Studies and Research at the College of Pharmacy, University of Louisiana, has conducted studies that demonstrated the anti-cancer effects of dietary palm oil (Sylvestor et al., Cancer Research 46:757, 1986).

“In these studies, we investigated the effects of different types of high fat diets on mammary tumour development and discovered that nearly all of the different high fat diets were found to stimulate tumour development regardless of whether the diets were formulated with different animal versus vegetable fats or saturated versus unsaturated fats,” said Dr Sylvestor who has been researching on the health benefits of tocotrienols for nearly 25 years.

“The notable exception to this finding was the observation that high dietary intake of palm oil suppressed carcinogen-induced mammary tumourigenesis in experimental animals. Palm oil differs from other animal and vegetable fats in that it naturally contains high levels of tocotrienols.”

LOWER TUMOUR INCIDENCE

The findings were confirmed in subsequent studies that showed carcinogen-induced mammary tumour incidence was lower in rats fed high palm oil diets as compared to rats fed diets high in other dietary fats, he said, adding that palm oil diets stripped of tocotrienols were found to enhance mammary tumourigenesis in rats.

There has been a massive amount of evidence that further characterised the antitumor action of palm tocotrienols. It is now well-established that tocotrienols, in contrast to tocopherols (the more common form of vitamin E), display potent antiproliferative and cytotoxic activity against a wide range of cancers at treatment doses that have little or no effect on normal cell growth and function.

Dr Sylvestor said it has also been established that combined treatment of palm tocotrienol with other traditional chemotherapies very often results in a synergistic inhibition in cancer cell growth and viability. Since combination therapy of tocotrienol with other chemotherapeutic agents requires significantly lower treatment doses to suppress cancer cell growth and survival, an additional benefit can also be realised in a corresponding reduction in adverse side effects and toxicity characteristically associated with high dose chemotherapy.

Recent studies in the areas of tocotrienol kinetics have provided essential information required for understanding the therapeutic limitations of oral administration of tocotrienols.

OTHER BENEFITS

Intensive research into the health benefits of palm oil also show that it helps in the reduction in the risk of arterial thrombosis and atherosclerosis, inhibition of cholesterol biosynthesis and platelet aggregation, and reduction in blood pressure.

In a study comparing palm, soya bean, peanut oils and lard, researchers in China found that palm oil actually increased the levels of good cholesterol and reduced the levels of bad cholesterol in the blood (Zhang et al. 1997).

According to the book, The Palm Oil Miracle by Dr Bruce Fife, benefits of palm oil include, apart from those mentioned earlier, better eye health, immunity boost, better blood circulation, improved nutrient absorption, strengthens bones and teeth, and protects against mental deterioration.

LONG HISTORY

People have been using palm oil for cooking for thousands of years. Today it is used all over the world as cooking oil as well as in the production of a huge variety of food products.

Because palm oil is naturally semi-solid at room temperature, it does not require hydrogenation, making it a good replacement for partially hydrogenated oils.

It provides the same “hard or solid” fat needed to produce pastries, cookies and other food items that require long shelf stability and a particular texture.

NEURO-PROTECTIVE

Professor Yuen Kah Hay of Universiti Sains Malaysia is presently conducting a study to assess the neuro-protective, anti-atherogenic and hepatoprotective properties of...
tocotrienols (palm vitamin E) supplementation as determined by white matter lesion load on serial magnetic resonance imaging (MRI), carotid artery magnetic resonance angiography (MRA) and liver ultrasound (US) as well as lipid profile analysis.

He says: “The results are very encouraging. This is the first study to show that in humans. Tocotrienols is a supplement, not a drug, so it can be taken as a daily dietary supplement for neuroprotection.”

He and his team found that there was regression of white matter lesion load in terms of numbers and size in the brain (time frame: 1-2 years). Secondary results include regression of the carotid artery stenoses in terms of percentage and an improvement in liver echogenicity.

Palm oil tocotrienols has been shown to inhibit human breast cancer cells. Delta-tocotrienol was found to be the most effective tocotrienols in inducing apoptosis (cell death) in human breast cancer cells and Gamma-tocotrienol is three times more potent in inhibiting growth of human breast cancer cultured cells than Tamoxifen.

WHAT TOCOTRIENOLS DO

LOWERS CHOLESTEROL
Tocotrienols inhibit cholesterol production in the liver, thereby lowering total blood cholesterol. Alpha tocotrienol suppresses hepatic HMG-CoA reductase activity that results in the lowering of LDL cholesterol levels.

Tocotrienols which are naturally occurring in palm oil have been shown to suppress lower plasma cholesterol in humans.

REVERSES ARTERIOSCLEROSIS
A study showed that patients with confirmed carotid arteriosclerosis, who consumed 240mg of palm based tocotrienols per day for 18-36 months, had a decrease in the amount of cholesterol plaque in their carotid artery while those receiving placebo did not show such an effect.

ANTI-CANCER AND TUMOUR SUPPRESSIVE
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Prof Yuen does extensive research on palm oil

Studies show that fatty acids of palm oil can inhibit and/or delay experimental carcinogenesis