

The Vitamin & Fat Story: What Is the Healthy Intake?

FTI FOOD TECH PVT. LTD.

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Vitamin K– The Unsung Hero

A fat-soluble substance present in green leafy vegetables was found in 1929 to be needed for coagulation of the blood to take place. The substance came to be named Vitamin K. The K was for Koagulation (Danish for coagulation). This powerful nutrient plays an essential role in many aspects of health.



Vitamin K is actually a group of compounds. It refers to a group of fat-soluble vitamins that play a role in blood clotting, bone metabolism, and regulating blood calcium levels. The most important of these compounds appears to be vitamin K1 and vitamin K2. Vitamin K1 is obtained from leafy greens and some other vegetables. Vitamin K2 is a group of compounds largely obtained from meats, cheeses, and eggs, and synthesized by bacteria.

Why do people take vitamin K?

Low levels of vitamin K can raise the risk of uncontrolled bleeding. While vitamin K deficiencies are rare in adults, they are very common in new born infants. A single injection of vitamin K for new born is standard. Vitamin K is also used to counteract an overdose of the blood thinner Coumadin.

How Do Vitamins K1 and K2 Work?

Calcium is an incredibly important mineral. It is more than just building material for bones and teeth, it plays a crucial role in all kinds of biological processes .

The main function of Vitamin K is modifying proteins to give them the ability to bind calcium. In this way, it "activates" the calcium-binding properties of proteins.

Vitamin K1 is mostly used by the liver to activate calcium-binding proteins involved in blood clotting, while K2 is used to activate proteins that regulate where calcium ends up in the body.

In the body, vitamin K plays a major role in blood clotting. So it is used to reverse the effects of “blood thinning” medications when too much is given; to prevent clotting problems in new born who don’t have enough vitamin K; and to treat bleeding caused by medications including salicylates, sulphonamides , quinine, quinidine, or antibiotics. It is also used to :

- ♣ Prevent and treat weak bones (osteoporosis), Vitamin K2 (menaquinone) is taken by mouth to treat osteoporosis and bone loss caused by steroids.
- ♣ Relieve itching that often accompanies a liver disease called biliary cirrhosis and
- ♣ To lower total cholesterol in people on dialysis.

Can you get vitamin K naturally from foods?



Good natural food sources of vitamin K include:

- ♣ Vegetables like spinach, asparagus, and broccoli
- ♣ Legumes like green beans

You can also meet your daily requirement with foods that have lesser amounts of vitamin K:

- ♣ Eggs
- ♣ Strawberries
- ♣ Meat like liver



Omega-3

Incredibly essential Fatty Acids



Omega 3 is on everybody's lips...or at least should be!

It is one of the most important "essential fats" that our body cannot make on its own and must be supplied in the diet.

Omega 3 is an anti-inflammatory food which can repair damaged cells and restore a healthy balance that can prevent diseases like Alzheimer's, cancers, heart disease and arthritis. Omega 3 also lowers triglycerides, a type of circulating fats that can clog arteries, and improves overall blood circulation.



Two important omega-3s, DHA and EPA, are found mainly in oily fish including salmon, mackerel and sardines, but you don't have to miss out if you don't eat fish – linseeds, pecans, hazelnuts and walnuts are rich in another form of omega-3 called ALA, which gets turned into DHA and EPA in your body.

But the conversion rate of ALA (the omega-3 in plant foods) to EPA and DHA is very low; only a small amount is converted to EPA and DHA in most of us.

Omega-3 vs omega-6

Omega-6 is still an essential fat but when we eat more omega-6 than omega-3, it can cause inflammation, which may be linked to conditions from arthritis to heart disease. In general, omega-3s have an anti-inflammatory effect on the body while omega-6s have a pro-inflammatory effect. Both omega-3s and omega-6s are needed for optimal health but they need to be in balance. Too much omega-6 in relation to omega-3 has a negative effect on health; we can help restore the balance by consuming EPA and DHA omega-3s.

Omega -3 for Vegetarians

Fish eaters can get their omega 3 from fatty fish, especially, tuna, salmon, mackerel, vegetarians need not despair. Here's a list of some good sources of omega 3 for vegans.



Flaxseeds: One of the good vegetarian sources of Omega 3 would be flaxseeds. Flaxseed oil is also another option, but this would need to be used raw rather than for cooking.

Walnuts: These tasty brain shaped nuts are packed with a good dose of omega 3 fats. To get the required amount of omega 3, you would need at least 30 grams of walnuts per day or two tablespoons of walnut halves.

Chia seeds: Chia seeds are rich in Omega 3, Calcium, Iron, Zinc and Manganese. They can be easily added or sprinkled on top of sharbats, lassi, milkshakes, curd or yoghurt.

Canola oil: Made from rapeseeds, canola oil contains an ideal balance of omega 3 and omega 6 fats, besides also being a good source of monounsaturated fats. Canola can be easily used in cooking or poured over cold salads for better results.

Seaweed: It is widely believed that sea fish are the best and only sources of good omega 3 fats. But the not so well-known secret is that these fish get all their omega 3 from...Seaweeds! Yes, the origin of omega 3 and the greatest source would still be seaweed. These are the only complete omega 3 fats with both its components of EPA (eicosapentaenoic acid) and DHA (docosahexaenoic acid). All the above mentioned vegan foods only contain ALA or alpha linoleic acid which is converted into EPA and DHA in the body, but not as efficiently.

Well-being benefits of this essential fat :

- ♣ Good for joints, brain and heart
- ♣ It can help you sleep better
- ♣ It can soothe your skin
- ♣ It can lower your blood pressure
- ♣ It can boost your memory
- ♣ It can ease PMS



Quick Facts About Omega-3s

- ♣ Research has identified that EPA (eicosapentaenoic) and DHA (docosahexaenoic), the omega-3s found in marine oils, are the two most important fatty acids in human health.
- ♣ Consuming enough EPA and DHA omega-3s is important for general health across the lifespan.
- ♣ Many countries and health organizations around the world recommend consumption of at least 500mg EPA and DHA per day.
- ♣ Depending on one's diet and family history, doctors and dietitians often recommend consuming more omega-3s.
- ♣ Marine-sourced omega-3s are one of the most studied nutrients in the world.

It is a well-known fact that vegetarian sources of nutrients are not as “bioavailable” as their animal counterparts. This means, the body does not absorb all of the omega 3 the vegetarian foods contain. Eating more than recommended amounts of omega 3 foods will ensure more of this nutrient becomes available.

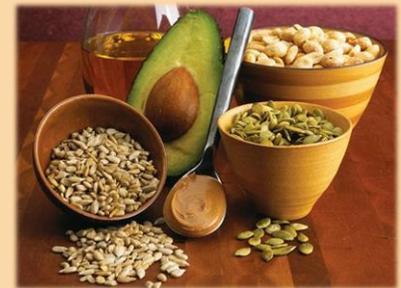
MUFA

MONOUNSATURATED FATTY ACIDS FROM PLANTS



You'll likely live longer and healthier if you eat a diet rich in monounsaturated fats that come from plant sources, according to research presented at a scientific session of the American Heart Association.

Monounsaturated fat called "MUFAs" are often referred to as "good fats." These healthy dietary fats come from plant sources and are usually liquid at room temperature. Examples of monounsaturated fat include olive oil, canola oil, and avocado.



How Monounsaturated Fats Affect Your Health

Monounsaturated fats are good for your health in several ways:

- ♣ They can help lower your LDL (bad) cholesterol level. Cholesterol is a soft, waxy substance that can cause clogged, or blocked, arteries (blood vessels). Keeping your LDL level low reduces your risk of heart disease and stroke.
- ♣ Eaten in place of unhealthy fats, these fats may help people with type 2 diabetes manage their blood sugar.
- ♣ Monounsaturated fats help develop and maintain your cells. The fat is also high in vitamin E, necessary for healthy vision, a healthy immune system.

WHERE TO FIND MUFA FROM PLANTS :



Olive Oil - A prime source of monounsaturated fat is olive oil, consistently hailed by nutrition experts and a key factor of the Mediterranean diet, a way of eating linked to longer life and lower risk of disease.

Avocado - Another monounsaturated fat source is avocado, which also carries a bunch of other helpful nutrients that make them a worthy addition to diet.

Nuts and seeds – These are also high in monounsaturated fat.

Dark Chocolate – Those with a sweet tooth will be happy to hear that dark chocolate is another source of MUFAs. An occasional square of dark chocolate or a quarter – cup of semi – sweet chocolate chips can provide a tasty treat as well as a healthy helping of beneficial fatty acids.

Safflower oil (high oleic) - The health benefits of safflower oil include its ability to lower cholesterol levels, manage blood sugar, aid in weight loss and hair care, boost skin quality, reduce the symptoms of PMS, control muscle contractions, and boost the immune system.

Sunflower oil - Substitution of foods rich in saturated fat with foods rich in high-oleic-acid sunflower oil and margarine has favourable outcomes on blood lipids . This oil presents another useful source of MUFA for diets aimed at prevention of heart disease.

Macadamia oil – This oil contains up to 75 percent MUFA, has a favourable omega-6:omega-3 ratio, and a moderately high smoke point (about 400°).



COMPILED BY:

Sakshi Maheshwari, Sandeep Kaur & Shikha Dhakre

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