Fats – Good Fat, Bad Fat, and Killer Fat

By Simon Yu, MD

America lives in constant fear of fat as if fats are villains. We are afraid of eating fat and we end up becoming fatter than ever. Most Americans are grossly misinformed about nutrition in general and the importance of fat and essential fatty acid intake in our diet. We end up eating more of the wrong fats. It is important for us to distinguish good, bad and killer fats and to recognize when the good fat becomes a bad fat and finally becomes a killer fat.

There are two essential fatty acids – Omega-3 and Omega-6 – that are vital to good health and must be acquired by food. What are the major symptoms of essential fatty acid deficiency? Omega-3 deficiency symptoms include: growth retardation, weakness, impaired vision, learning disability, tingling sensations in arms and legs, behavioral changes, hypertension, high triglycerides, inflammation, edema and dry skin, and impaired metabolic and immune function. Omega-6 deficiency symptoms include: eczema, loss of hair, liver and kidney degeneration, excessive thirst, failure of wound healing, sterility in males, miscarriage in females, arthritic pain, growth retardation and cardio-vascular problems.

Fat, protein and carbohydrates are the major building blocks of nutrients for our body (referred to as “macro-nutrients”). Omega-3 and 6 fats and eight amino acids from protein are considered “essential.” These are not manufactured by the body so they must be acquired from our food. Carbohydrates are needed for energy and acquired from starch and glucose but carbohydrates are not considered an essential nutrient. For example, Eskimos have survived with blubber (fat) and fish protein almost exclusively and without carbohydrates.

Fats can be divided into two major groups: saturated and unsaturated fat. Our body utilizes saturated fats from animals and cholesterol. Saturated fats are involved in all of our known metabolic, immunological and neurological systems. Saturated fats include butter, coconut, palm, cocoa butter, peanuts, and animal fat.

Unsaturated fats attract oxygen, help generate bio-electrical currents, and help transform bio-electrical energy into cell membranes, muscles, and nerve impulses. Unsaturated fats are metabolically unstable and rapidly oxidize. They need a whole group of antioxidants to regulate their oxidation rate. Unsaturated fats and Essential Fatty Acids in conjunction with saturate fats, proteins, and glucose build cell membranes, create electrical potentials, and hormones.

Two main Essential Fatty Acids (EFA) can be divided into Omega-3 and Omega-6 unsaturated fats. Major sources of Omega-3 EFA are: 1) Alpha-linolenic Acid found in flax seed, canola, soy, walnut and green vegetables and 2) Eicosapentaenoic Acid (EPA) and Docosahexanoic Acid (DHA) found in cold water fish like salmon and mackerel.

Major sources of Omega-6 EFA are: 1) Linoleic Acid found in safflower, sunflower, soy, walnut, sesame, pumpkin and flax seed, 2) Gamma-linolenic Acid in Borage, evening primrose and black current oil, and 3) Arachidonic Acid found in meats and other animal products.

Monounsaturated Omega-9 fat, which is not considered an EFA but is helpful to the body, comes from olive, almond, avocado, peanuts, pecan, cashew and macadamia oils. There are many different kinds of fats available commercially but these will not be discussed due to space limitations.

If these Essential Fatty Acids are so essential for our survival and optimum wellness, what are optimal daily doses, how long does it take for these fats to go bad, and how do some turn into “killer fats”?
The daily requirement of EFAs varies by individual depending on body mass, physical activity, stress and one’s nutritional state. Most Americans consume adequate amounts of Omega-6 fats. If you are in good health, as a general rule I recommend one tablespoon daily of Omega-3 from fish oil and/or flax seed oil. If you are an athlete or are suffering from chronic medical conditions, you may have to double or triple this amount of fish oil and flax seed oil. I like to use fish oil, especially cod liver oil, and flax seed oils since they are widely available and easy to use but you may use other oils as mentioned above. Walnuts are an excellent choice for Omega-3 and Omega-6 fats.

Any oils and fats that have been processed or hydrogenated, or partially-hydrogenated, like soy oil, corn oil, shortening or margarine are high in “Trans-fatty Acids.” These are considered bad fats, very unhealthy, and should be avoided. There are many hidden hydrogenated or partially-hydrogenated oils in all processed foods such as cookies, donuts, salad dressing, chips, etc. Avoid fried or deep fried foods. In addition, high carbohydrate and sugar diets can raise triglycerides and saturated fats.

The worst combinations are consuming more carbohydrates and sugar than your body can assimilate while you are eating hydrogenated trans-fats. This bad combination of dietary habit will transform even good fats to bad fats and eventually, in the absence of proper vitamins, anti-oxidants, and minerals become deadly killer fats. You have a dietary choice daily to choose good fat over bad fat and not allowing bad fats to become a gang of killer fats.

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