

# Lipid Management

By Jeff Kildahl

**“The part can never be well unless the whole is well.”**

*--Plato*

All excess calories – no matter the source – become body fat. You know where you stand regarding this issue. Fat is comprised of carbon, hydrogen, and oxygen – just like carbohydrate – but the quantity of carbon and hydrogen atoms far exceeds its oxygen counterpart. A gram of fat yields more than twice as many calories as a gram of either carbohydrate or protein.

Like protein, fat is integrated into the membrane of every cell, and fulfills many vital physiological and structural purposes in your body. Dietary fat insulates the body from exposure to low temperatures, lubricates your joints, mitigates organ trauma during concussive force, ensures the seamless function of endocrine glands and hormone production, and protects nerve tissue.

Dietary fat regulates blood pressure, heart rate, blood vessel constriction, blood clotting, and the nervous system. Dietary fat plays a role in the manner carbohydrate is utilized and serves as a source of energy when your carbohydrate supply is low. The delivery and absorption of fat-soluble vitamins A, D, E, and K to ensure overall health and vitality is yet another role of dietary fat.

Fat is a macro-nutrient. It has the capacity as a dietary component to provide energy like carbohydrate and protein. Not all fats are created equal. Cholesterol is another concern. Cholesterol is an alcohol lipid (sterol) found in animal fats. Plant foods are cholesterol-free. Your body produces the cholesterol it needs with precision. Excess cholesterol through your dietary choices will simply be harmful to your body. Eating harmful fats is hazardous to both your snowshoeing and your health.

Research repeatedly validates that dietary fat derived from plant sources (polyunsaturated and monounsaturated) best serve humans. The saturated fat found in animal foods has been linked to the chronic and degenerative diseases afflicting our society. These 'Diseases of Affluence' include but are not limited to cancer, diabetes, heart disease, and obesity.

Excess fat in the bloodstream – thanks to an elevated dietary intake – lines blood cells and vessels with plaque and limits oxygen transfer to your brain and muscles. Plaque inhibits insulin from transporting glucose to fuel the cells. This sustained inhibition creates high levels of blood sugar which fosters





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diabetes, candida, and the like. Your body does not have a daily recommended requirement for saturated fat; yet, these fatty acids are often the first types ingested – and it shows.

Poor dietary choices and a lack of physical activity have played significant roles in the overweight and obesity epidemic. The most recent data indicate that 72 percent of men and 64 percent of women are



overweight or obese. The data also indicate that persons not overweight or obese contribute to the burgeoning number of chronic and degenerative diseases simply by adhering to the Standard American Diet (SAD).

Milk is a perfect example. This substance is highly-touted for its ability to provide your body with nourishment through vitamins and minerals for growth and vitality among other claims. Keeping your body in an alkaline state has more to do with bone health than a lack of dietary calcium.

Stress and consumption of acid-forming foods contribute to osteoporosis versus a lack of milk. North America consumes milk like there is no tomorrow – and our rate of osteoporosis is among the highest in the world. There are natural and plant-based sources for calcium, vitamin D, and the rest of what your body needs to thrive.

The next time you consume a glass of acidic cow's milk think about its health attributes. It likely contains calcium, protein, vitamin D, saturated fat, cholesterol, sugar, antibiotics, pesticides, genetically-engineered growth hormones, and so forth. Remember that pasteurization destroys enzymes. Maybe it is time to consider purchasing or making your own almond, rice, soy, or similar milk?

Our penchant for high fat foods like meat and dairy products, processed and refined foods, and sweets laced with sugar and sugar alcohols, combined with a sedentary lifestyle have pushed obesity levels to an all-time high. More money is now spent on fast-food than college, automobiles, or computers.

The SAD offers an abundance of foods containing too much sodium, saturated and trans-fats, refined sugars and grains, and the convenience to exercise at home by flipping channels on a remote in between trips to the refrigerator or cupboard. What you eat is your choice despite the fact that our governments subsidize the production of foods known to accelerate disease and hasten ecological damage. Your due diligence will spell the difference between effort and struggle in your snowshoeing pursuits and your wellness.

**“Every man's disease is his personal property.”**

*--Alonzo Clark*

The ability to discern healthy fats from unhealthy versions will impact your snowshoeing and your life.

Determining the former from the latter is a simple process. Dr. Douglas N. Graham, DC, author, raw vegan, endurance sports coach, consultant, and ultra-endurance athlete, offers the following steps:

- 1) Determine whether the fat has been heated. Heated fats have lost their antioxidant qualities – whether hydrogenated or not. Heated fats are carcinogenic and contribute to the development of cancer in humans. These fats are typically rancid;
- 2) Determine whether the fat is animal or plant-based. Plant-based fats are healthier;
- 3) Determine whether the fat is solid or liquid at room temperature. Liquid fats are healthier;
- 4) Determine whether the fat is in its whole form or has been refined. Whole fats are the best option.



Harmful fats contain cholesterol – a major factor in the development of heart disease – and are usually found in animal foods and products that have been partially or completely hydrogenated. Food manufacturers justify hydrogenation - the addition of hydrogen atoms to mono-and-polyunsaturated fats – because it will thwart rancidity.

The process of hydrogenation actually renders a once usable (unsaturated) fat useless (saturated). Our digestive tracts do not possess the power to break the chemical bonds of saturated fats. The globules from these consumed fats incessantly work to clog your arteries, hamper oxygenation, and increase your risk for heart disease – at least the food was not rancid!



Fatty acids are categorized as saturated, monounsaturated, or polyunsaturated. Fats contain a mixture of these fatty acids. The types of fatty acids consumed are at least as important in influencing the risk of cardiovascular disease as the cumulative fat in the diet. Animal foods tend to have a higher proportion of saturated fats versus the monounsaturated and polyunsaturated fatty acids akin to plant foods.

Most fats with a high percentage of saturated or trans-fatty acids are solid at room temperature (solid fats) while those with more unsaturated fatty acids remain liquid at room temperature (oils). Solid fats are found in animal foods but can be made from vegetable oils via the process of hydrogenation.

## Saturated Fats

This fat type is solid or semi-solid at room temperature. It has been conclusively shown to be one of the most significant contributors to high blood cholesterol levels, cardiovascular disease, and the like. The main sources include animal foods and dairy products. Cocoa butter, coconut oil, palm or palm kernel oil are the three vegetable culprits high in saturated fat.

Saturated fat contributes an average of 11 percent of calories to the diet – which is much too high. Adding more monounsaturated and polyunsaturated sources will dramatically reduce the aforementioned risks.

## Monounsaturated Fats (MUFAs)

These healthy fats lower LDL (bad) cholesterol levels and reduce the risk of certain types of cancers. These fats remain liquid at room temperature but may begin to solidify in the refrigerator. MUFAs ward off type-2 diabetes, protect your heart, slash Metabolic Syndrome Risk, reduce inflammation, lower breast cancer risk, revitalize your brain, target belly fat, and extend your life.

Endeavor to eat a MUFA every meal. Some sources include edamame, walnuts, almonds, cashews, pecans, Brazil nuts, pistachios, pumpkin seeds, sunflower seeds, olives (green or black), avocado, and dark chocolate.

## Polyunsaturated Fats (PUFAs)

See omega-3 and omega-6 description below (EFAs). Salmon is just one example of fish that have been touted as terrific sources of omega-3 fatty acids. Leafy greens and flaxseeds offer more bang for your omega-3 and fiber dollars absent the mercury and other toxins. One can easily meet the two to four grams per day recommended omega-3 intake with plant-based alternatives.

## Trans-Fats

Trans-fats are killers. Trans-fats increase bad cholesterol (LDL) and lower good cholesterol (HDL) levels and proliferate triglycerides. Carefully read labels as these fats are prevalent in peanut butter, margarine, chips, cookies, processed and a plethora of foods. Avoid them at all costs.

Saturated and heated (trans-fats) should be treated like poisons.

Only two types of fat are essential to your diet: alpha-linoleic (omega-6) and alpha-linolenic (omega-3).

These are termed essential fatty-acids (EFAs) because they must be ingested by eating foods rich in



EFA's. All other “non-essential” fat can be manufactured by your body.

EFA's are important to overall health. They have major roles in cardiovascular, immune, and nervous system functions. EFA's rejuvenate cellular health which is requisite to biological youth, mobility, and vitality.



EFA's reduce inflammation and shield us from infections, stimulate brain function and development. A balance of omega-3 and omega-6 fatty acids is integral to skin health in terms of suppleness and elasticity.

A ratio of 4:1 (or less) omega-6 to omega-3 fatty acids is optimal. Integration of more omega-3 fatty acids Omega-6 fatty acids are easily obtained thanks to an abundance of refined oils while omega-3 fatty acids are more elusive but worth the effort.

Omega-3 fatty acids are important to the snowshoer. These fatty acids reduce inflammation and metabolize fat. A diet with a daily dose of ground flaxseeds (1 tablespoon / 10 grams) will propel your body to burn fat as fuel - sparing depletion of your muscle glycogen supply. Flaxseeds are high in potassium which regulates blood pressure, hydration, and efficient muscle contractions.

Its role as a soluble and insoluble fiber slows the release of carbohydrate into the bloodstream, controls insulin levels, and prolongs energy (soluble). Its function as an insoluble fiber is to flush toxins from the digestive tract and discard any litter in the bloodstream.

An effective blend of omega-3 and omega-6 fatty acids with proper training will provide another fuel source, preserve your carbohydrate supply, and cleanse your system while you snowshoe.

Omega-3 sources include flaxseed, flaxseed oil, all hemp products (protein, seed, flour, oil), and walnuts. Some omega-6 sources include hemp products, seeds, most nuts, vegetable oils, extra-virgin olive oil, and avocados.

Try to consume as often as possible all fats only in their unheated states – avocado, raw nuts, seeds....

**'Fresh air impoverishes the doctor.'**

*--Danish proverb*



The root causes of chronic and degenerative diseases are poor dietary practices and lack of physical activity. It is clear that most people do not understand this concept. Wellness is often taken for granted until it is too late. The toll of diet-related chronic diseases is staggering. Health care reform remains a disastrous failure. Your dietary choices impact much more than your snowshoeing. The food you ingest today will impact your life later.

The power of an optimal diet to mitigate and reverse disease is a misunderstood phenomenon that deserves attention. No other method offered by modern medicine has the broad and profound effect of plant-based nutrition. Food is sacred. Mindful dietary choices will delineate invigorating snowshoeing experiences from lackluster ones; accelerate cellular regeneration versus the prospect of becoming another needless casualty of chronic and degenerative diseases.

The science is clear. Combine your passion for snowshoeing with a few gradual changes to your diet and you have a recipe to take both your snowshoeing and your wellness to new levels.





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