Anatomy of a Fat:

A fat has a long chain of carbons with a carboxyl group at the end and a methyl group at the beginning. When you hear about "Omega 6" or "Omega 3" fats, the "omega" names how many carbons away is the first "double bond," starting at the methyl group.

LEVEL OF FAT SATURATION

Saturated Fats (stearic acid): Butter, lard, animal by-products; no double bonds—it's "saturated" with hydrogen molecules around all of its carbons

Mono-Unsaturated Fats (oleic acid): olive oil; has one double bond, which means it has one less hydrogen than stearic acid.

Di-Unsaturated Fats (Linoleic Acid): Corn, cotton, canola, soy, safflower, peanut oils: *Omega 6*--the first double bond is at the 6th carbon from the methyl group. They have **2** double bonds. You NEVER need to supplement these fats—they are VERY pervasive in our diets.

Gamma Linoleic Acid: Evening Primrose Oil, Black Currant Seed Oil, Borage Oil: Also an omega 6; essential as a carrier molecule for Omega 3's because the skin cannot convert Linoleic Acid into gamma linoleic acid (Healthy Fats for Life by Vanderhaeghe)

Tri-Unsaturated Fat (Alpha Linolenic Acid): Flax, Hemp, Walnut Oils: *Omega 3*—the first double bond is at the 3rd carbon from the methyl group. Has **3** double bonds. The body can convert about 2-10% of this oil into the essential fats found in fish oil; this is not enough for the body's needs.

Long-Chain Poly Unsaturated Fatty Acid (Eicosapentaenoic Acid-EPA): Cold Water Fatty Fish *Omega 3*—the first double bond is also at the 3rd carbon from the methyl group. Has **5** double bonds.

Long-Chain Poly Unsaturated Fatty Acid (Docosahexaenoic Acid-DHA): Cold Water Fatty Fish, Algae Oil Source *Omega 3*; Has **6** double bonds; (algae oil is 5x more expensive than fish oil!!)