## Fish oils

Fish oils are finally beginning to get their long-overdue, well-deserved recognition as healthy fat burners.

Fats are separated into two categories: saturated and unsaturated. These classifications are based on the chemical structure of the fat.

Naturally occurring unsaturated fats contain at least one double bond between carbon atoms in its chain. In a saturated fat, extra hydrogen atoms have replaced all of the naturally occurring double bonds.

Unsaturated fats can be further classified into monounsaturated (containing one double bond) and polyunsaturated (containing two or more double bonds).

The polyunsaturated fats are termed 'essential fatty acids' because they cannot be created by the body and must be consumed through the diet. Polyunsaturated fats can be divided into two primary subtypes: omega-3 alpha-linoleic (containing their first double bond at the third carbon in the chain) and omega-6 linoleic (first double bond at the sixth carbon).

The average diet generally contains enough omega-6 fatty acids, but is strikingly deficient in omega-3's, which are found in freshwater fish, nuts, and seeds.

In spite of a desirable 1:1 ratio of omega-6 to omega-3 fatty acids, the average diet is slanted an amazing 25:1 or much more. This is a sad fact, considering the role of omega-3's in the body's metabolism.

Omega-3 fatty acids increase the fluidity of cell membranes, allowing for faster transport of fuel and chemical signals, as well as faster protein synthesis. They also suppress the body's production of fat-storing enzymes, while increasing fat transportation to the cells for oxidation.

Sources of omega-3 fatty acids include fish and flax seed oil. The flax seed oil actually contains a higher concentration of omega-3 fatty acids, which are broken down by the body to EPA and DHA.

However, fish oil contains amounts of EPA and DHA already, which can be quickly and efficiently used by the body. Because of these varying utilization rates, combining the two supplements can yield a sort of omega-3 'timed released' effect, significantly increasing fat oxidation.