

Can the Fatty Acid CLA Help me Loss Weight?

CLA is conjugated linoleic acid, a compound known as a trans fatty acid due to its stereochemistry, and while trans fatty acids are generally regarded as harmful, CLA is not because it is conjugated. This means that it has alternate single and double bonds in the backbone carbon chain, and the overall energy of the molecule is therefore reduced. Linoleic acid itself is one of the omega-6 fatty acids, the 6 referring to the double bond at the sixth carbon from the omega end of the carbon backbone chain. It is believed to be the cause of heart disease and obesity due to its increasing use in the diet at the expense of omega-3 fatty acids. When the molecule is conjugated, however, the fatty acid has different chemical properties to the standard isomer, and natural CLA is mainly found in cattle products, such as beef and dairy products. Conjugated linoleic acid is present in cattle because it is formed when linoleic acid is converted to oleic acid by rumen bacteria, that are responsible for the microbial fermentation of the feed of ruminant animals such as sheep and cattle. When oleic acid is formed, so too is CLA. However, the form used in supplements is manufactured from vegetable oils, and therefore suitable for use by vegetarians. The usual vegetable oils used are safflower oil and sunflower oil. It is believed to possess several beneficial properties, including antioxidant and anti-cancer properties, but it is for its ability to reduce body fat that it is best known to most people. A growing amount of information is being collected on the use of CLA as a supplement in the weight loss industry, although there are as yet no definitive mechanisms that explain its action. However, recent studies have indicated it possess properties that can help to reduce the levels of low density lipoproteins in the blood, and reduce the possibility of atherosclerosis due to LDL oxidation by free radicals. It is also theorized that CLA in some way regulates the prostaglandin biosynthesis that controls the level of hormones in the body that can regulate growth. An increase in growth hormones is one way in which athletes promote an increase in muscle bulk, while reducing their fatty tissue mass. CLA is also purported to increase thermogenesis, and so promote the loss of body fat and overall weight. Although most studies on the effect of conjugated linoleic acid in reducing body weight have been carried out on animals, recent animal studies have indicated that might not so much reduce weight, as to increase muscle bulk while reducing that of body fat. The end result, therefore, is not a loss of weight, but a leaner body that has more muscle and less fat. All it needs is the results on animals to be transferred to humans, and this, of course, is frequently the case. However, initial studies on the use of CLA in the human diet have been very positive, so the signs are good. Most scientific progress in human biochemistry has been obtained by virtue of prior studies on animals. These studies, of course, have been beneficial to the animals, making them leaner and much fitter than they otherwise would have been. It is believed that the same will be true of humans taking CLA as a supplement. In fact, recent studies are split about 50/50 with regard to the effects on humans. While some studies have shown no benefit, about an equal number have shown a positive benefit in the reduction in the mass of fat in the body. Some of the negative studies may have been flawed in measuring total body weight, and not the relative amounts of muscle and fat, and also basing their results on people already with a low level of fat in their body. In that respect, then, the results look very favorable, and taking CLA as a supplement is likely to help you to reduce fat and increase muscle, if not altogether lose total body weight. However, is that not the end result that most people want? They might not want to be lighter in weight, just to have more muscle mass and less fat tissue. In a study shown at a 2002 Experimental Biology meeting, it was shown that it was possible to substantially reduce body fat mass by taking CLA alone, and when it was taken in association with guarana, both the size and the number of fat cells in the body were reduced by 50%. However it has also been shown that CLA can be oxidized by free radicals shortly after ingestion, and that sesame lignans help to prevent this. Since sesame lignans can also be used in conjunction with CLA to reduce fat by increasing the level of fatty acid oxidation in the liver, then the benefit of CLA seems obvious. The antioxidant effect of CLA is one possible explanation for its anti-cancer properties, though there are others. Its antioxidant properties also have an anti-catabolic effect, in that it can help to prevent the wastage of muscle tissue. The FDA has published studies that attest to these anti-cancer properties. Diabetics, however, should consult with their physician before taking CLA as a supplement, since there is a body of thought that it reduces sensitivity to insulin. Others believe the opposite, so more studies might be needed in this aspect of the substance before it can be said to be safe for use by diabetics. Over recent years, the American diet has increased significantly in its content of the undesirable linoleic acid, due to its ubiquitous presence in margarines, and has reduced in CLA due to modern farming methods. Cattle feeding techniques have resulted in a reduction of CLA in meat products and milk, although eggs are still a rich source, and the CLA in eggs can resist temperatures used in normal cooking methods such as frying, boiling, etc. It is this CLA deficiency in the diet that has been proposed as one of the reasons for the current obesity problem in the USA. The European diet contains more beneficial fatty acids in general than the American diet. However, there is an increasing body of evidence being accumulated that collectively suggests almost unequivocally that CLA can help you lose body fat. Unless you are diabetic, there are few if any contra-indications and an increasing number of people are finding it effective not only to lose body fat, but to replace it with hard lean muscle.

About the Author

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