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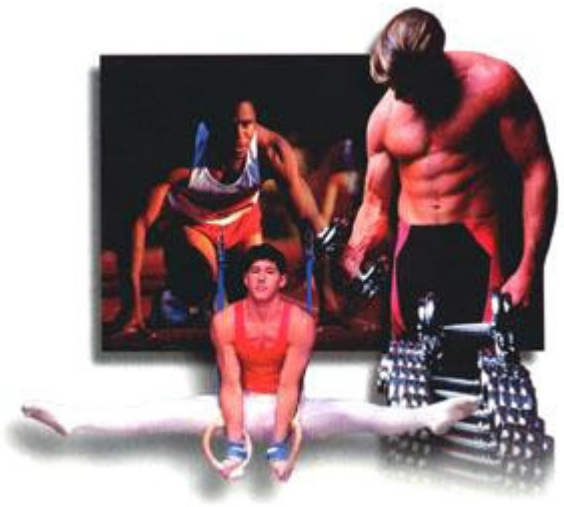
UPDATE

CONJUGATED LINOLEIC ACID (CLA): NEW STUDIES

Conjugated linoleic acid (CLA) has become one of the most popular supplements used by body builders. Athletes are taking CLA to push glucose into their muscle cells and connective tissues instead of letting it turn into fat. CLA has been shown to reduce protein degradation in both humans and animals, and to protect against degenerative diseases.



CLA is one of the substances the FDA is investigating for disease prevention. Here is a quote from an FDA paper published in the journal Lipids (vol. 30, no. 7, 1995):

"The objective of this study was to investigate oxidative products of conjugated linoleic acid (CLA)...which have been reported to have antioxidant and anticarcinogenic properties."

> *"Interest in CLA has been growing as a result of the reported antioxidant and anticarcinogenic properties of these compounds."*

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WHAT IS CLA?

CLA is a natural, polyunsaturated fatty acid found in small quantities in many foods. The human body cannot produce CLA. It is efficiently absorbed in supplement form and only low levels of CLA are needed to produce therapeutic benefits.

CLA received widespread media attention five years ago when it was identified as a component of red meat that actually prevented cancer. Further research showed that CLA is a potent anticancer agent, an anticatabolic agent, an immune stimulating agent and, through a unique mechanism, a fat-burning agent.

The FDA has researched the metabolic effects of CLA. In a personal communication with The Life Extension Foundation, an FDA oil chemist said he would be worried about the amount of fat loss noted with CLA use, because it could be interpreted as a toxic effect, except that the other effects such as its antioxidant, anticarcinogen, and anticatabolic effects far outweigh his concerns (Editor's note: The FDA has not endorsed CLA for any purpose).

CLA is required to maintain optimal function of the phospholipid membranes of cells. Healthy cell membranes will allow fat, protein and carbohydrate to flow into active cells such as muscle, connective tissue and organ cells, instead of being stored as passive fat cells.

CLA inhibits fat storage by enhancing the ability of cell membranes (other than fat cells) to open up and allow the absorption of fats and other nutrients. CLA specifically promotes the growth of muscles by letting nutrients into active muscle cells. This is why CLA has become such a popular supplement among body builders.

The fat reducing mechanism of CLA involves rejuvenating cell membranes in the muscles and connective tissues to allow fats to freely enter to produce energy and growth. This anabolic effect may provide antiaging benefits in the elderly, but there have been no studies to date to investigate this.

A recent study in the Journal of Nutritional Biochemistry (Jan. 1997) provides further evidence that CLA may play a role in cancer prevention and treatment. Dr. M. Sugano, an authority on fatty acids, hypothesizes how CLA can be effective in stopping different types of cancers. Previous studies have suggested that CLA may suppress cancer initiation, promotion and/or progression. CLA may be effective both in preventing and treating certain forms of cancer.

According to Dr. Sugano, CLA has been shown to be highly effective in lowering cholesterol and preventing atherosclerosis in rabbits. Dr. Sugano states that CLA has a tendency to reduce PGE2 levels. PGE2 is the inflammatory prostaglandin that is involved in a wide range of autoimmune diseases, such as rheumatoid arthritis and possibly atherosclerosis.

The Foundation recently added CLA to the Breast Cancer Treatment Protocol. Cancer patients are advised to be taking soy in conjunction with CLA because CLA can enhance tyrosine kinase activity in cancer cells. The genistein fraction of soy specifically inhibits tyrosine kinase activity.

CLA has anti-oxidant effects. CLA fed rats, exhibit far less lipoperoxidation after CLA feeding. Although it is not known how CLA exerts its antioxidant effect, it is known that it works differently than vitamins E and C.

WHO SHOULD BE TAKING CLA?

Those over the age of 40 who take CLA may reduce their risk of heart disease, cancer, muscle atrophy, free radical activity and obesity. Healthy people normally take four to six 750mg capsules a day. Cancer patients and those seeking body fat reduction often take six to 12 capsules a day. Cancer patients are advised to take high doses of a soy genistein extract when using CLA because CLA could enhance tyrosine kinase C activity. Cancer cells use tyrosine kinase C for energy metabolism, and genistein (which is found in soy foods and supplements) inhibits tyrosine kinase C.

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