

LE Magazine April 2000

PRODUCTS

The Life Extension Foundation regularly profiles and evaluates important new products on the market, often making them available directly to you, as well as to Foundation members at a discount via the Life Extension Buyers Club.

CLA and Cancer

Conjugated Linoleic Acid's (CLA) powerful anti-cancer effects are in the news again! In the *Journal of Nutrition* (1999 December), a paper was published showing significant cancer preventing properties when CLA was added to the diet. This study revealed CLA to be a "potent cancer preventative agent in animal models." Specifically, it was determined that feeding CLA to female rats while they were young and still developing conferred life-long protection against breast cancer. This astounding preventative action was achieved by adding only enough CLA to equal 0.8% of the animal's total diet. This compares favorably with the Life Extension Foundation's (LEF) recommendation of three 1000 mg capsules daily, which is approximately 1% of the average human diet.

In an earlier study published in *Experimental Cell Research* (July 1999), CLA was also shown to prevent mammary cancer if given before the onset of puberty. And even more important, if CLA was ingested during the time of the "promotion" phase of cancer development, the rats were conferred substantial protection from further developing breast cancer. Another significant finding was that CLA appeared to actually inhibit the growth of normal mammary epithelial cell organoids (structures that resemble organs) and induced apoptosis or cell death of those same cells. The researchers concluded that this led to a reduction in the density of the developing mammary glands in rats and therefore, the incidence of breast cancer was reduced.

Prior to the July 1999 study, researchers reported in the journal *Carcinogenesis* (June 1999) on CLA's ability to reduce the size of breast tissue in the rat, thereby reducing the incidence of carcinogenesis. As in previous studies, the terminal end buds (TEB) were examined. TEB are basically the end points or buds located on the outside (epithelial) tissue of the mammary gland, and are the primary sites for breast cancer development in the rodent. Specifically, the researchers wanted to know what effect TEB density reduction had on the incidence of cancer due to CLA, and how much CLA was needed to produce the TEB reduction. What they found was that there was a ". . . graded and parallel reduction in TEB density and mammary tumor yield produced by 0.5% and 1% dietary CLA." Furthermore, these effects were not increased even when CLA content was raised to 1.5% or 2% of the total diet. They also determined that it is possible CLA intake may actually interfere with the metabolism of linoleic acid, which is the main unsaturated fatty acid found in vegetable oils. CLA's action may be explained because CLA and linoleic acid share the same enzyme system for chain de-saturation and elongation. This means that CLA, with its anti-cancer properties, is preferentially being used for cell functions over the cancer-promoting common linoleic acid. Another finding, and one that provides new insight into the biochemical action of CLA, is its dose-related ability to suppress arachidonic acid in proportion with its dose-related ability to produce anti-breast cancer effects. Since arachidonic acid can produce inflammatory compounds that can aid cancer proliferation, this may be yet another explanation for how CLA's anti-cancer effect works. Excess amounts of arachidonic acid are also related to the progression of prostate cancer.

Clearly, we can expect more research and more interest in this fascinating supplement that has already proven itself to be a formidable foe to cancer, as well as a weight loss promoter along with lean tissue development.

[Back to the Magazine Forum](#)



your physician or other health care professional or any information contained on or in any product label or packaging. You should not use the information on this site for diagnosis or treatment of any health problem or for prescription of any medication or other treatment. You should consult with a healthcare professional before starting any diet, exercise or supplementation program, before taking any medication, or if you have or suspect you might have a health problem. You should not stop taking any medication without first consulting your physician.