

CLA

Conjugated Linoleic Acid

DESCRIPTION

CLA, offered by Douglas Laboratories®, provide a significant amount of conjugated linoleic acid, together with an extract of green tea for maximum stabilization. CLA is thought to be an effective modulator of metabolism, reducing body fat and increasing muscle mass.

FUNCTIONS

CLA is a mixture of conjugated dienoic derivatives of linoleic acid from safflower oil. Conjugated linoleic acid is found mainly in meat and dairy foods; however it can also be found in certain vegetable oils. Its presence in human tissue comes not only from dietary sources, but also from in vivo oxidation of linoleic acid. Although CLA's activity as a potent metabolic modulator was first recognized in studies of its anticarcinogenic properties in fried hamburger, research of its metabolic activity has now expanded to include its ability to modulate lipid and energy metabolism, particularly control of body fat and muscle, as well as atherosclerosis.

Research in several animal models has demonstrated that CLA reduces body fat accumulation. Some studies have shown that the reduction in body fat occurs regardless of whether the diet is high or low in fat. It appears that increased energy expenditure is responsible for the decreased fat accumulation. Researchers have observed an increase in fat oxidation, but not a decrease in fat biosynthesis. Mice fed a high fat diet with 1% CLA exhibited a 50% reduction in weights of adipose depots, but no significant effects on body weight or energy intake. Energy expenditure persistently increased almost 8% through the trial period. This chronic increase in metabolic rate is thought to be responsible for the reduction in body fat stores. Uncoupling protein gene expression in the mice's brown fat may be partially responsible for this increased metabolic rate. CLA's anti-obesity effects have also been suggested to involve an inhibition and/or apoptosis of (pre)adipocytes.

INDICATIONS

CLA may be a useful dietary supplement for those who wish to support their weight control efforts.

FORMULA (#98336)

Two small oval softgels contain:

Calories.....	9
Total Fat	1g
Safflower Oil Complex	1,000 mg
Providing:	
Conjugated linoleic Acid.....	770 mg
Green Tea extract (leaf).....	0.5 mg

SUGGESTED USE

Adults take 2 softgels, 2-3 times daily with a meal or as directed by a healthcare professional.

SIDE EFFECTS

If pregnant or lactating, consult your physician before taking this product. CLA may cause gastrointestinal upset in sensitive individuals.

STORAGE

Store in a cool, dry place, away from direct light. Keep out of reach of children.

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REFERENCES

- Azain, MJ, Hausman, DB, Sisk, MB, Flatt, WP, Jewell, DE. Dietary conjugated linoleic acid reduces rat adipose tissue cell size rather than cell number. *J Nutr* 2000;130:1548-54.
- Basu, S, Smedman, A, Vessby, B. Conjugated linoleic acid induces lipid peroxidation in humans. *FEBS Lett* 2000;468:33-6.
- DeLany, JP, West, DB. Changes in body composition with conjugated linoleic acid. *J Am Coll Nutr* 2000;19:487S-493S.
- Evans, M, Geigerman, C, Cook, J, Curtis, L, Kuebler, B, McIntosh, M. Conjugated linoleic acid suppresses triglyceride accumulation and induces apoptosis in 3T3-L1 preadipocytes. *Lipids* 2000;35:899-910.
- Gavino, VC, Gavino, G, Leblanc, MJ, Tuchweber, B. An isomeric mixture of conjugated linoleic acids but not pure cis-9, trans-11-octadecadienoic acid affects body weight gain and plasma lipids in hamsters. *J Nutr* 2000;130:27-9.
- Hubbard, NE, Lim, D, Summers, L, Erickson, KL. Reduction of murine mammary tumor metastasis by conjugated linoleic acid. *Cancer Lett* 2000;150:93-100.
- Kritchevsky, D, Tepper, SA, Wright, S, Tso, P, Czarnecki, SK. Influence of conjugated linoleic acid (CLA) on establishment and progression of atherosclerosis in rabbits. *J Am Coll Nutr* 2000;19:472S-477S.
- MacDonald, HB. Conjugated linoleic acid and disease prevention: a review of current knowledge. *J Am Coll Nutr* 2000;19:111S-118S.
- Pariza, MW, Park, Y, Cook, ME. Mechanisms of action of conjugated linoleic acid: evidence and speculation. *Proc Soc Exp Biol Med* 2000;223:8-13.
- West, DB, Blohm, FY, Truett, AA, DeLany, JP. Conjugated Linoleic Acid Persistently Increases Total Energy Expenditure in AKR/J Mice without Increasing Uncoupling Protein Gene Expression. *J Nutr* 2000;130:2471-2477.
- Zambell, KL, Keim, NL, Van Loan, MD, Gale, B, Benito, P, Kelley, DS, Nelson, GJ. Conjugated linoleic acid supplementation in humans: effects on body composition and energy expenditure. *Lipids* 2000;35:777-82.

For more information on CLA visit douglaslabs.com

† These statements have not been evaluated by the Food and Drug Administration.
This product is not intended to diagnose, treat, cure, or prevent any disease.

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**You trust Douglas Laboratories.
Your patients trust you.**