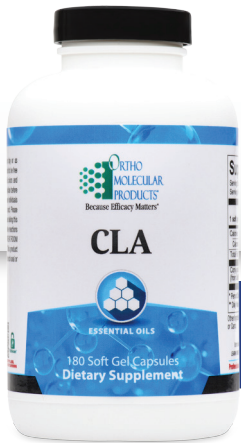


# CLA



## CLINICAL APPLICATIONS

- Promotes Healthy Body Composition
- Supports Healthy Glucose Metabolism
- Enhances Insulin Signaling
- Helps Preserve Muscle Tissue After Training
- Promotes Balanced Levels of Inflammation

## ESSENTIAL OILS

CLA, or conjugated linoleic acid, is an omega-6 fatty acid found naturally in dairy products and meat. Many studies have highlighted the ability of CLA to support a healthy body composition and ratio of body fat to muscle, as well as building lean body mass. CLA has also been found to support healthy blood sugar and insulin signaling, as well as to support balanced levels of inflammation. Each capsule of this CLA formula includes 780 mg of CLA providing effective dosing for metabolic support.

### Overview

CLA consists of several chemically similar compounds, or isomers, derived from the natural omega-6 polyunsaturated fatty acid, linoleic acid. The conjugated portion of CLA refers to the biochemical bonds within its structure. CLA has also been shown in a number of studies to have a variety of benefits, which include supporting the immune and cardiovascular systems, maintaining healthy blood sugar and lipid profiles, and supporting healthy body composition.

CLA is produced when bacteria in the gut of ruminant animals metabolize linoleic acid. Despite the high intake of foods, like beef, butter and cheese, in the U.S. that were once high in CLA Americans are much more deficient in CLA than previous generations. This is primarily due to current cattle feeding practices. Optimal CLA production requires that cattle are naturally grass-fed rather than being raised on feed lots and fed grain-based diets. Subsequently, today's meat and dairy products provide a much lower content of CLA compared to the times when the majority of cattle were grass fed (around the 1960s). Due to this deficiency, supplementing the diet

with CLA is ideal for those looking to naturally boost their metabolism.

### Body Composition<sup>†</sup>

While related to linoleic acid, conjugated linoleic acid has the opposite effects in key areas, including fat formation. Linoleic acid increases fat formation in adipose tissue; however, CLA has inhibiting effects on lipogenesis. A meta-analysis of 18 studies found that at a mean dose of 3.2 g/d, CLA supports healthy body fat levels in humans, when compared to placebo.<sup>[1]</sup> A randomized, double-blind, placebo-controlled study (20 healthy adults, with a body mass index (BMI) less than 25.0 kg/m<sup>2</sup>) also examined the effects of CLA. The participants of this study did standardized physical exercise in a gym for 90 minutes, 3 times weekly, while consuming CLA at a dose of 0.6 g, 3 times daily, or placebo for a 12-week period. This study found that CLA was effective in reducing the composition of body fat.<sup>[2]</sup> A second randomized, double-blind, placebo-controlled trial (subjects with a BMI of 24 to 35 kg/m<sup>2</sup>, gave 1.7 g of cis-9, trans-11 and trans-10, cis-12 CLA or placebo twice daily for 12 weeks). They found that compared to baseline, body weight, BMI, total fat mass, fat percentage, subcutaneous fat mass and waist-to-hip ratio decreased in the CLA group after 3 months of use.<sup>[3]</sup>

### Glucose Metabolism and Insulin Signaling<sup>†</sup>

A 10-week study in mice found CLA to have beneficial effects on glucose metabolism and insulin signaling and to markedly reduce adiponectin, a fat cell protein shown to play a key role in insulin signaling as well as fat deposition.<sup>[4]</sup> In a human study

<sup>†</sup> 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.

including 44 healthy young female subjects, the group that supplemented with 3.6 g/d of CLA for 6 weeks experienced significant reduction in body weight compared to baseline levels, in addition to promoting healthy blood sugar, compared to controls.<sup>[5]</sup> A 2007 study, which looked at the influence of 3 forms of CLA on insulin signaling, found the cis-9, trans-11 blend to be the most effective for supporting mitochondrial function and protecting against oxidative stress. This included an increase in the activities of manganese-superoxide dismutase, glutathione peroxidase and glutathione reductase and the level of glutathione, all of which play a significant role in enhancing insulin signaling.<sup>[6]</sup>

### Inflammatory Balance<sup>†</sup>

Research has demonstrated that CLA plays a crucial role in promoting healthy inflammatory balance by inducing beneficial changes in immune modulators.<sup>[7]</sup> In a 2-month randomized trial, 90 volunteers were given either 3 g/d CLA, 1,920 mg/d omega-3 fatty acids, or placebo for 2 months. The levels of C-reactive protein (CRP), interleukin-6 (IL-6), malondialdehyde (MDA), and glutathione peroxidase (GPx) were measured before and after supplementation, as markers of oxidative stress. The level of CRP decreased significantly in both the omega-3 and CLA group, while GPx increased in the CLA and omega-3 groups, and MDA levels decreased significantly in both groups. This indicates that dietary supplementation with omega-3 fatty acids and CLA can have a beneficial effect on oxidative stress and promote balanced inflammation.<sup>[8]</sup> CLA was also found to help ease joint discomfort in a randomized, double-blind placebo-controlled trial, among 87 patients at a dose of 2.5 g/d for 3 months.<sup>[9]</sup> Finally, a 2009 animal study found CLA to support greater muscle mass, enhanced mitochondrial ATP production with higher membrane potential, elevated muscle catalase and glutathione peroxidase production, as well as promote reduced markers of oxidative stress and normal levels of inflammation.<sup>[10]</sup>

### Directions

1 soft gel capsule three times per day or as recommended by your health care professional.

### Does Not Contain

Gluten, corn, yeast, artificial colors and flavors.

### Cautions

If you are pregnant or nursing, consult your physician before taking this product.

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| v3   |                    |               |
|--|--------------------|---------------|
| <b>Supplement Facts</b>                                  |                    |               |
| Serving Size 1 Soft Gel Capsule                          |                    |               |
| Servings Per Container 90 & 180                          |                    |               |
| 1 soft gel capsule contains                              | Amount Per Serving | % Daily Value |
| Calories   | 10                 |               |
| Calories from Fat  | 9                  |               |
| Total Fat  | 1 g                | 2%*           |
| Conjugated Linoleic Acid<br>(from Safflower Oil)         | 780 mg             | **            |
| * Percent Daily Values are based on a 2,000 calorie diet |                    |               |
| ** Daily Value not established                           |                    |               |

**ID# 436090 90 Soft Gel Capsules**

**ID# 436180 180 Soft Gel Capsules**

## References

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