



# BodyBio Balance Oil

## Pure Omega-6 and Omega-3 in the Optimal Ratio

BodyBio Balance Oil is a healthy fat supplement made from non-GMO safflower seeds and flaxseeds, delivering essential fatty acids, omega-6 linoleic acid (LA) and omega-3 alpha-linolenic acid (ALA), in an ideal 4:1 ratio to support cellular health. Using low-temperature, expeller-pressed technology, these essential fatty acids are preserved in their purest form, supporting cell membrane structure, intracellular signaling, and gene expression.\*

### AVAILABLE FORMATS:

**Softgel** — 60, 180

**Liquid** — 16oz



## BENEFITS

### Supports Brain and Cognitive Health

Enhances memory, learning, mood, and neuronal communication by enhancing the fluidity and functionality of brain cell membranes.\*

### Promotes Cardiometabolic Wellness

Regulates lipid metabolism by lowering LDL-C and triglycerides, increasing HDL-C, enhancing insulin sensitivity, and supporting endothelial function and vascular tone.\*

### Strengthens Skin Barrier and Hydration

Maintains epidermal lipid structure, reduces transepidermal water loss, and enhances skin resilience against irritation and dryness.\*

### Enhances Hormonal and Reproductive Function

Supports menstrual regularity, ovulation, sperm quality, and stress hormone regulation through bioactive lipid precursors.\*

### Boosts Mitochondrial Energy Production

Optimizes mitochondrial membrane composition, promotes ATP synthesis, and supports cellular resilience under metabolic stress.\*

### Modulates Inflammatory Pathways

Balances pro- and anti-inflammatory mediators to modulate immune regulation without impairing the body's defense systems.\*

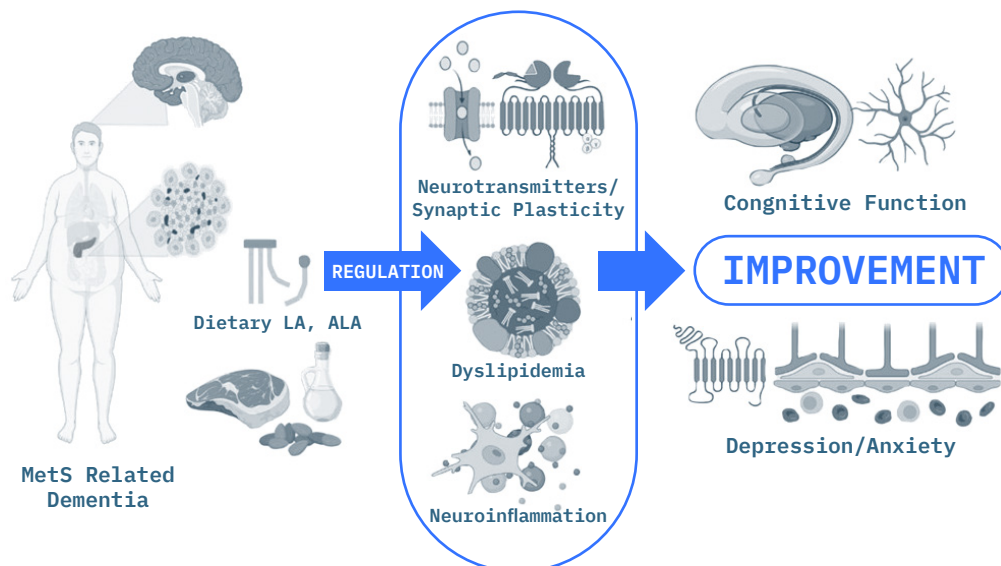
## TRUST POINTS

Omega-6 found in oxidized, industrial seed oils reacts drastically different than the omega-6 found in Balance Oil, which uses low-temperature, expeller-pressed technology to preserve the oils in their pure state.

Research shows a 4:1 ratio is ideal for learning, thermoregulation, and seizure protection.

## EVIDENCE

Metabolic syndrome (MetS), marked by insulin resistance, obesity, and dyslipidemia, increases the risk of dementia, which is often accompanied by memory loss and depression. While CNS mechanisms linking fatty acid imbalance and MetS are still being explored, the essential polyunsaturated fatty acids linoleic acid (LA) and alpha-linolenic acid (ALA) have been shown to influence key cellular processes, including inflammation, mitochondrial function, apoptosis, and insulin signaling. Insufficient intake of LA and ALA is associated with both metabolic dysfunction and neuropsychiatric disorders. Their roles in modulating synaptic plasticity, cognitive performance, and neuroinflammation suggest they may serve as therapeutic targets for addressing both metabolic and neurological aspects of MetS.



Kim, O. Y., & Song, J. (2024). Important roles of linoleic acid and α-linolenic acid in regulating cognitive impairment and neuropsychiatric issues in metabolic-related dementia. *Life Sciences*, 337, 122356. <https://doi.org/10.1016/j.lfs.2023.122356>

## APPLICATIONS

### Cognitive and Mood Support

Enhances focus, memory, and emotional regulation in settings of aging, cognitive stress, or neuroinflammation.\*

### Cardiovascular and Metabolic Health

Beneficial for individuals managing dyslipidemia by supporting healthy LDL clearance, reducing inflammation, and modulating endothelial function. These lipids also support those with or at risk for metabolic syndrome by improving insulin sensitivity and glucose tolerance.\*

### Dermatological Health

Beneficial for dry skin, eczema, and compromised skin barrier function, especially when topical strategies are insufficient.\*

### Reproductive and Hormonal Balance

LA supports ovulation, oocyte quality, and cervical mucus production in women, while ALA has been shown to improve egg quality and decrease sperm DNA damage.\*

### Mitochondrial and Energy Support

As LA is a critical component of mitochondrial membranes, particularly in the formation of cardiolipin, this essential fatty acid is well-suited for individuals experiencing fatigue, chronic illness, or metabolic inflexibility that demand improved cellular energy production.\*

### Chronic Inflammation and Immune Resilience

In contrast to industrial seed oils, which often contain oxidized lipids that generate reactive aldehydes capable of damaging cellular membranes, Balance Oil supports the resolution of low-grade inflammation, promotes immune homeostasis, and provides targeted support for individuals with autoimmune or chronic inflammatory conditions.

## SCIENTIFIC RATIONALE

### Lipid and Membrane Physiology

LA is an essential omega-6 fatty acid that integrates into phospholipid bilayers across cell membranes, where it contributes to structural integrity, optimal membrane fluidity, and receptor function, particularly in neurons, epidermal cells, and immune tissues. ALA, an essential omega-3 fatty acid, complements these effects through its potent anti-inflammatory properties, modulating key signaling pathways involved in immune balance, cellular stress response, and metabolic regulation.\*

### Mitochondrial Function

LA is the predominant fatty acid in cardiolipin, a mitochondrial-specific phospholipid critical for electron transport chain stability, ATP production, and mitochondrial dynamics. ALA enhances mitochondrial biogenesis and reduces ROS production.\*

### Neuroinflammation and Cognition

ALA activates GPR40 and GPR120 receptors in the brain, promoting insulin sensitivity, neuroprotection, and anti-inflammatory signaling. LA helps stabilize synaptic transmission through its role in membrane lipids.\*

### Lipid Metabolism and Cardiovascular Health

Linoleic acid increases LDL receptor activity to promote LDL clearance while also facilitating HDL synthesis through upregulation of ApoA1. ALA improves endothelial function and mitigates inflammatory drivers of atherosclerosis.\*

### Skin Integrity and Barrier Function

LA is vital for the synthesis of ceramides and lamellar lipids in the stratum corneum, preserving the skin's water barrier and reducing dermal reactivity. Its deficiency is linked to impaired barrier repair and increased irritation.\*

### Hormone Synthesis and Reproductive Health

Both LA and ALA are precursors to prostaglandins, leukotrienes, and thromboxanes involved in ovulation, implantation, sperm quality, and immune-endocrine regulation. ALA also improves oocyte mitochondrial function and reduces oxidative DNA damage.\*

### Inflammation Resolution

Balanced intake of omega-6 and omega-3 fatty acids regulates inflammatory nuclear transcription factors like NF- $\kappa$ B, promotes the synthesis of downstream anti-inflammatory mediators, and reduces chronic, low-grade inflammation without immunosuppression.\*

## SUGGESTED USE

Take 2 softgels (or 1/2 tsp) daily with food or as directed by your healthcare practitioner. Use as a finishing oil on cooked and cooled foods. Refrigerate after opening.

### Therapeutic Dose

For more intensive support, increase the dose up to 2-3 tablespoons (24-36 capsules) per day. This is especially helpful for addressing specific health concerns that require higher levels of EFAs. The duration of the therapeutic dose depends on your healthcare provider's recommendation. We typically suggest using it for up to 6 months, after which a gradual reduction to a maintenance dose may be considered.

### Alternative Dosing Methods

**Single Dose:** Take the total daily dose at once (1-3 tablespoons) for convenience.

**Split Dose:** For those taking a higher therapeutic dose, consider dividing it between meals to enhance absorption and reduce potential gastrointestinal discomfort.

If patient has difficulty digesting fat, consider pairing Balance Oil with TUDCA for improved bioavailability.

## SUPPLEMENT FACTS

### Softgel Variant

| Serving Size: 2 softgels<br>Servings: 30 (60 ct.), 90 (180 ct.) |                    |    |      |
|-----------------------------------------------------------------|--------------------|----|------|
|                                                                 | Amount Per Serving | %  | DV** |
| Calories                                                        |                    | 25 |      |
| Total Fat                                                       | 3 g                | 4% |      |
| Linoleic acid<br>(from safflower and flaxseed)                  | 1400 mg            |    | †    |
| Linolenic acid<br>(from flaxseed and safflower)                 | 350 mg             |    | †    |
| **The % Daily Values (DV) are based on a 2000 calorie diet.     |                    |    |      |
| † Daily Value not established.                                  |                    |    |      |

**Other ingredients:** Gelatin, glycerin, and purified water.

### Liquid Variant

| Serving Size: 1/2 tsp (2.5 mL)<br>Servings: 182             |                    |    |      |
|-------------------------------------------------------------|--------------------|----|------|
|                                                             | Amount Per Serving | %  | DV** |
| Calories                                                    |                    | 25 |      |
| Total Fat                                                   | 2.5 g              | 3% |      |
| Linoleic acid<br>(from safflower and flaxseed)              | 1400 mg            |    | †    |
| Linolenic acid<br>(from flaxseed and safflower)             | 350 mg             |    | †    |
| **The % Daily Values (DV) are based on a 2000 calorie diet. |                    |    |      |
| † Daily Value not established.                              |                    |    |      |

SCAN QR CODE  
FOR REFERENCES

