LOVAZA (omega-3-acid ethyl esters) Capsules

Initial U.S. Approval: 2004

**INDICATIONS AND USAGE**

LOVAZA is a combination of ethyl esters of omega 3 fatty acids, principally EPA and DHA, indicated as an adjunct to diet to reduce triglyceride (TG) levels in adult patients with severe (≥500 mg/dL) hypertriglyceridemia. (1)

Limitations of Use: The effect of LOVAZA on cardiovascular mortality and morbidity in patients with elevated triglycerides has not been determined. (1)

**DOSAGE AND ADMINISTRATION**

- The daily dose of LOVAZA is 4 grams per day taken as a single 4-gram dose (4 capsules) or as two 2-gram doses (2 capsules given twice daily). (2)
- Patients should be advised to swallow LOVAZA capsules whole. Do not break open, crush, dissolve or chew LOVAZA. (2)

**DOSAGE FORMS AND STRENGTHS**

1-gram transparent soft-gelatin capsules. (3)

**CONTRAINDICATIONS**

LOVAZA is contraindicated in patients with known hypersensitivity (e.g., anaphylactic reaction) to LOVAZA or any of its components. (4)

**WARNINGS AND PRECAUTIONS**

- In patients with hepatic impairment, monitor ALT and AST levels periodically during therapy. (5.1)
- LOVAZA may increase levels of LDL. Monitor LDL levels periodically during therapy. (5.1)
- Use with caution in patients with known hypersensitivity to fish and/or shellfish. (5.2)

**ADVERSE REACTIONS**

The most common adverse events (incidence >3% and greater than placebo) were eructation, infection, flu syndrome, and dyspepsia. (6)

To report SUSPECTED ADVERSE REACTIONS, contact GlaxoSmithKline at 1-888-825-5249 or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.

**DRUG INTERACTIONS**

Omega-3-acids may prolong bleeding time. Patients taking LOVAZA and an anticoagulant or other drug affecting coagulation should be monitored periodically. (7.1)

**USE IN SPECIFIC POPULATIONS**

- Pregnancy: Use during pregnancy only if the potential benefit justifies the potential risk to the fetus. (8.1)
- Pediatric Use: The safety and effectiveness in pediatric patients have not been established. (8.4)

See 17 for PATIENT COUNSELING INFORMATION and FDA-approved patient labeling.

Revised: Month Year
LVZ:XPI

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*Sections or subsections omitted from the full prescribing information are not listed.
FULL PRESCRIBING INFORMATION

1 INDICATIONS AND USAGE

LOVAZA® (omega-3-acid ethyl esters) is indicated as an adjunct to diet to reduce triglyceride (TG) levels in adult patients with severe (≥500 mg/dL) hypertriglyceridemia.

Usage Considerations: Patients should be placed on an appropriate lipid-lowering diet before receiving LOVAZA and should continue this diet during treatment with LOVAZA. Laboratory studies should be done to ascertain that the lipid levels are consistently abnormal before instituting LOVAZA therapy. Every attempt should be made to control serum lipids with appropriate diet, exercise, weight loss in obese patients, and control of any medical problems such as diabetes mellitus and hypothyroidism that are contributing to the lipid abnormalities. Medications known to exacerbate hypertriglyceridemia (such as beta blockers, thiazides, estrogens) should be discontinued or changed if possible prior to consideration of triglyceride-lowering drug therapy.

Limitations of Use: The effect of LOVAZA on cardiovascular mortality and morbidity in patients with elevated triglycerides has not been determined.

2 DOSAGE AND ADMINISTRATION

• Assess triglyceride levels carefully before initiating therapy. Identify other causes (e.g., diabetes mellitus, hypothyroidism, or medications) of high triglyceride levels and manage as appropriate. [see Indications and Usage (1)].

• Patients should be placed on an appropriate lipid-lowering diet before receiving LOVAZA, and should continue this diet during treatment with LOVAZA. In clinical studies, LOVAZA was administered with meals.

The daily dose of LOVAZA is 4 grams per day. The daily dose may be taken as a single 4-gram dose (4 capsules) or as two 2-gram doses (2 capsules given twice daily).

Patients should be advised to swallow LOVAZA capsules whole. Do not break open, crush, dissolve or chew LOVAZA.

3 DOSAGE FORMS AND STRENGTHS

LOVAZA (omega-3-acid ethyl esters) capsules are supplied as 1-gram transparent soft-gelatin capsules filled with light-yellow oil and bearing the designation REL900.

4 CONTRAINDICATIONS

LOVAZA is contraindicated in patients with known hypersensitivity (e.g., anaphylactic reaction) to LOVAZA or any of its components.
5 WARNINGS AND PRECAUTIONS

5.1 Monitoring: Laboratory Tests
In patients with hepatic impairment, alanine aminotransferase (ALT) and aspartate aminotransferase (AST) levels should be monitored periodically during therapy with LOVAZA. In some patients, increases in ALT levels without a concurrent increase in AST levels were observed.
In some patients, LOVAZA increases LDL-C levels. LDL-C levels should be monitored periodically during therapy with LOVAZA.
Laboratory studies should be performed periodically to measure the patient’s TG levels during therapy with LOVAZA.

5.2 Fish Allergy
LOVAZA contains ethyl esters of omega-3 fatty acids (EPA and DHA) obtained from the oil of several fish sources. It is not known whether patients with allergies to fish and/or shellfish, are at increased risk of an allergic reaction to LOVAZA. LOVAZA should be used with caution in patients with known hypersensitivity to fish and/or shellfish.

6 ADVERSE REACTIONS
6.1 Clinical Trials Experience
Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in the clinical trials of a drug cannot be directly compared to rates in the clinical trials of another drug and may not reflect the rates observed in practice.
Adverse events reported in at least 1% of patients treated with LOVAZA 4 grams per day or placebo during 8 randomized, placebo-controlled, double-blind, parallel-group studies for HTG are listed in Table 1. Adverse events led to discontinuation of treatment in 3.5% of patients treated with LOVAZA and 2.6% of patients treated with placebo.
Table 1. Adverse Events in Randomized, Placebo-Controlled, Double-Blind, Parallel-Group Studies for Very High TG Levels (≥500 mg/dL) that used LOVAZA

<table>
<thead>
<tr>
<th>BODY SYSTEM</th>
<th>Adverse Event*</th>
<th>LOVAZA 4 grams/day (N = 226)</th>
<th>Placebo (N = 228)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Subjects with at least 1 adverse event</td>
<td>80</td>
<td>35.4</td>
<td>63</td>
</tr>
<tr>
<td>Body as a whole</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infection</td>
<td>10</td>
<td>4.4</td>
<td>5</td>
</tr>
<tr>
<td>Flu syndrome</td>
<td>8</td>
<td>3.5</td>
<td>3</td>
</tr>
<tr>
<td>Back pain</td>
<td>5</td>
<td>2.2</td>
<td>3</td>
</tr>
<tr>
<td>Pain</td>
<td>4</td>
<td>1.8</td>
<td>3</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Angina pectoris</td>
<td>3</td>
<td>1.3</td>
<td>2</td>
</tr>
<tr>
<td>Digestive</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eructation</td>
<td>11</td>
<td>4.9</td>
<td>5</td>
</tr>
<tr>
<td>Dyspepsia</td>
<td>7</td>
<td>3.1</td>
<td>6</td>
</tr>
<tr>
<td>Skin</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rash</td>
<td>4</td>
<td>1.8</td>
<td>1</td>
</tr>
<tr>
<td>Special senses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taste perversion</td>
<td>6</td>
<td>2.7</td>
<td>0</td>
</tr>
</tbody>
</table>

* Adverse events were coded using COSTART, version 5.0. Subjects were counted only once for each body system and for each preferred term.

Additional adverse events reported by 1 or more patients from clinical studies for HTG are listed below:

- **Body as a Whole:** Enlarged abdomen, asthenia, body odor, chest pain, chills, suicide, fever, generalized edema, fungal infection, malaise, neck pain, neoplasm, rheumatoid arthritis, and sudden death.

- **Cardiovascular System:** Arrhythmia, bypass surgery, cardiac arrest, hyperlipemia, hypertension, migraine, myocardial infarct, myocardial ischemia, occlusion, peripheral vascular disorder, syncope, and tachycardia.

- **Digestive System:** Anorexia, constipation, dry mouth, dysphagia, colitis, fecal incontinence, gastritis, gastroenteritis, gastrointestinal disorder, increased appetite, intestinal obstruction, melena, pancreatitis, tenesmus, and vomiting.

- **Hematologic-Lymphatic System:** Lymphadenopathy.

- **Infections and Infestations:** Viral infection.

- **Metabolic and Nutritional Disorders:** Edema, hyperglycemia, increased ALT, and increased AST.
**Musculoskeletal System:** Arthralgia, arthritis, myalgia, pathological fracture, and tendon disorder.

**Nervous System:** Central nervous system neoplasia, depression, dizziness, emotional lability, facial paralysis, insomnia, vasodilatation, and vertigo.

**Respiratory System:** Asthma, bronchitis, increased cough, dyspnea, epistaxis, laryngitis, pharyngitis, pneumonia, rhinitis, and sinusitis.

**Skin:** Alopecia, eczema, pruritus, and sweating.

**Special Senses:** Cataract.

**Urogenital System:** Cervix disorder, endometrial carcinoma, epididymitis, and impotence.

### 6.2 Postmarketing Experience

In addition to adverse reactions reported from clinical trials, the events described below have been identified during post-approval use of LOVAZA. Because these events are reported voluntarily from a population of unknown size, it is not possible to reliably estimate their frequency or to always establish a causal relationship to drug exposure.

The following events have been reported: anaphylactic reaction, hemorrhagic diathesis.

### 7 DRUG INTERACTIONS

#### 7.1 Anticoagulants or Other Drugs Affecting Coagulation

Some studies with omega-3-acids demonstrated prolongation of bleeding time. The prolongation of bleeding time reported in these studies has not exceeded normal limits and did not produce clinically significant bleeding episodes. Clinical studies have not been done to thoroughly examine the effect of LOVAZA and concomitant anticoagulants. Patients receiving treatment with LOVAZA and an anticoagulant or other drug affecting coagulation should be monitored periodically (e.g., aspirin, NSAIDS, warfarin, coumarin).

### 8 USE IN SPECIFIC POPULATIONS

#### 8.1 Pregnancy

Pregnancy Category C: There are no adequate and well-controlled studies in pregnant women. It is unknown whether LOVAZA can cause fetal harm when administered to a pregnant woman or can affect reproductive capacity. LOVAZA should be used during pregnancy only if the potential benefit to the patient justifies the potential risk to the fetus.

**Animal Data:** Omega-3-acid ethyl esters have been shown to have an embryocidal effect in pregnant rats when given in doses resulting in exposures 7 times the recommended human dose of 4 grams/day based on a body surface area comparison.

In female rats given oral gavage doses of 100, 600, and 2,000 mg/kg/day beginning 2 weeks prior to mating and continuing through gestation and lactation, no adverse effects were observed in the high dose group (5 times human systemic exposure following an oral dose of 4 grams/day based on body surface area comparison).
In pregnant rats given oral gavage doses of 1,000, 3,000, and 6,000 mg/kg/day from gestation day 6 through 15, no adverse effects were observed (14 times human systemic exposure following an oral dose of 4 grams/day based on a body surface area comparison).

In pregnant rats given oral gavage doses of 100, 600, and 2,000 mg/kg/day from gestation day 14 through lactation day 21, no adverse effects were seen at 2,000 mg/kg/day (5 times the human systemic exposure following an oral dose of 4 grams/day based on a body surface area comparison). However, decreased live births (20% reduction) and decreased survival to postnatal day 4 (40% reduction) were observed in a dose-ranging study using higher doses of 3,000 mg/kg/day (7 times the human systemic exposure following an oral dose of 4 grams/day based on a body surface area comparison).

In pregnant rabbits given oral gavage doses of 375, 750, and 1,500 mg/kg/day from gestation day 7 through 19, no findings were observed in the fetuses in groups given 375 mg/kg/day (2 times human systemic exposure following an oral dose of 4 grams/day based on a body surface area comparison). However, at higher doses, evidence of maternal toxicity was observed (4 times human systemic exposure following an oral dose of 4 grams/day based on a body surface area comparison).

### 8.3 Nursing Mothers

It is not known whether omega-3-acid ethyl esters are excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when LOVAZA is administered to a nursing woman.

### 8.4 Pediatric Use

Safety and effectiveness in pediatric patients have not been established.

### 8.5 Geriatric Use

A limited number of patients older than 65 years were enrolled in the clinical studies of LOVAZA. Safety and efficacy findings in subjects older than 60 years did not appear to differ from those of subjects younger than 60 years.

### 9 Drug Abuse and Dependence

LOVAZA does not have any known drug abuse or withdrawal effects.

### 10 Overdosage

In the event of an overdose, the patient should be treated symptomatically, and general supportive care measures instituted, as required.

### 11 Description

LOVAZA, a lipid-regulating agent, is supplied as a liquid-filled gel capsule for oral administration. Each 1-gram capsule of LOVAZA contains at least 900 mg of the ethyl esters of omega-3 fatty acids sourced from fish oils. These are predominantly a combination of ethyl esters of eicosapentaenoic acid (EPA - approximately 465 mg) and docosahexaenoic acid (DHA - approximately 375 mg).
The empirical formula of EPA ethyl ester is C$_{22}$H$_{34}$O$_2$, and the molecular weight of EPA ethyl ester is 330.51. The structural formula of EPA ethyl ester is:

\[
\text{\includegraphics[width=5cm]{EPA_structure.png}}
\]

The empirical formula of DHA ethyl ester is C$_{24}$H$_{36}$O$_2$, and the molecular weight of DHA ethyl ester is 356.55. The structural formula of DHA ethyl ester is:

\[
\text{\includegraphics[width=5cm]{DHA_structure.png}}
\]

LOVAZA capsules also contain the following inactive ingredients: 4 mg $\alpha$-tocopherol (in a carrier of soybean oil), and gelatin, glycerol, and purified water (components of the capsule shell).

12 CLINICAL PHARMACOLOGY

12.1 Mechanism of Action

The mechanism of action of LOVAZA is not completely understood. Potential mechanisms of action include inhibition of acyl-CoA:1,2-diacylglycerol acyltransferase, increased mitochondrial and peroxisomal $\beta$-oxidation in the liver, decreased lipogenesis in the liver, and increased plasma lipoprotein lipase activity. LOVAZA may reduce the synthesis of triglycerides in the liver because EPA and DHA are poor substrates for the enzymes responsible for TG synthesis, and EPA and DHA inhibit esterification of other fatty acids.

12.3 Pharmacokinetics

In healthy volunteers and in patients with hypertriglyceridemia, EPA and DHA were absorbed when administered as ethyl esters orally. Omega-3-acids administered as ethyl esters (LOVAZA) induced significant, dose-dependent increases in serum phospholipid EPA content, though increases in DHA content were less marked and not dose-dependent when administered as ethyl esters.

Specific Populations: Age: Uptake of EPA and DHA into serum phospholipids in subjects treated with LOVAZA was independent of age (≤49 years versus ≥49 years).

Gender: Females tended to have more uptake of EPA into serum phospholipids than males. The clinical significance of this is unknown.

Pediatric: Pharmacokinetics of LOVAZA in pediatric patients have not been established [see Use in Specific Populations (8.4)].

Renal or Hepatic Impairment: LOVAZA has not been studied in patients with renal or hepatic impairment.
Drug-Drug Interactions: Simvastatin: In a 14-day study of 24 healthy adult subjects, daily co-administration of simvastatin 80 mg with LOVAZA 4 grams did not affect the extent (AUC) or rate ($C_{\text{max}}$) of exposure to simvastatin or the major active metabolite, beta-hydroxy simvastatin at steady state.

Atorvastatin: In a 14-day study of 50 healthy adult subjects, daily co-administration of atorvastatin 80 mg with LOVAZA 4 grams did not affect AUC or $C_{\text{max}}$ of exposure to atorvastatin, 2-hydroxyatorvastatin, or 4-hydroxyatorvastatin at steady state.

Rosuvastatin: In a 14-day study of 48 healthy adult subjects, daily co-administration of rosuvastatin 40 mg with LOVAZA 4 grams did not affect AUC or $C_{\text{max}}$ of exposure to rosuvastatin at steady state.

In vitro studies using human liver microsomes indicated that clinically significant cytochrome P450 mediated inhibition by EPA/DHA combinations are not expected in humans.

13 NONCLINICAL TOXICOLOGY
13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility

In a rat carcinogenicity study with oral gavage doses of 100, 600, and 2,000 mg/kg/day, males were treated with omega-3-acid ethyl esters for 101 weeks and females for 89 weeks without an increased incidence of tumors (up to 5 times human systemic exposures following an oral dose of 4 grams/day based on a body surface area comparison). Standard lifetime carcinogenicity bioassays were not conducted in mice.

Omega-3-acid ethyl esters were not mutagenic or clastogenic with or without metabolic activation in the bacterial mutagenesis (Ames) test with *Salmonella typhimurium* and *Escherichia coli* or in the chromosomal aberration assay in Chinese hamster V79 lung cells or human lymphocytes. Omega-3-acid ethyl esters were negative in the in vivo mouse micronucleus assay.

In a rat fertility study with oral gavage doses of 100, 600, and 2,000 mg/kg/day, males were treated for 10 weeks prior to mating and females were treated for 2 weeks prior to and throughout mating, gestation, and lactation. No adverse effect on fertility was observed at 2,000 mg/kg/day (5 times human systemic exposure following an oral dose of 4 grams/day based on a body surface area comparison).

14 CLINICAL STUDIES
14.1 Severe Hypertriglyceridemia

The effects of LOVAZA 4 grams per day were assessed in 2 randomized, placebo-controlled, double-blind, parallel-group studies of 84 adult patients (42 on LOVAZA, 42 on placebo) with very high triglyceride levels. Patients whose baseline triglyceride levels were between 500 and 2,000 mg/dL were enrolled in these 2 studies of 6 and 16 weeks duration. The median triglyceride and LDL-C levels in these patients were 792 mg/dL and 100 mg/dL, respectively. Median HDL-C level was 23.0 mg/dL.

The changes in the major lipoprotein lipid parameters for the groups receiving LOVAZA or placebo are shown in Table 2.
Table 2. Median Baseline and Percent Change From Baseline in Lipid Parameters in Patients with Very High TG Levels (≥500 mg/dL)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>LOVAZA N = 42</th>
<th>Placebo N = 42</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BL % Change</td>
<td>BL % Change</td>
<td></td>
</tr>
<tr>
<td>TG</td>
<td>816 -44.9</td>
<td>788 +6.7</td>
<td>-51.6</td>
</tr>
<tr>
<td>Non-HDL-C</td>
<td>271 -13.8</td>
<td>292 -3.6</td>
<td>-10.2</td>
</tr>
<tr>
<td>TC</td>
<td>296 -9.7</td>
<td>314 -1.7</td>
<td>-8.0</td>
</tr>
<tr>
<td>VLDL-C</td>
<td>175 -41.7</td>
<td>175 -0.9</td>
<td>-40.8</td>
</tr>
<tr>
<td>HDL-C</td>
<td>22 +9.1</td>
<td>24 0.0</td>
<td>+9.1</td>
</tr>
<tr>
<td>LDL-C</td>
<td>89 +44.5</td>
<td>108 -4.8</td>
<td>+49.3</td>
</tr>
</tbody>
</table>

BL = Baseline (mg/dL); % Change = Median Percent Change from Baseline; Difference = LOVAZA Median % Change – Placebo Median % Change

LOVAZA 4 grams per day reduced median TG, VLDL-C, and non-HDL-C levels and increased median HDL-C from baseline relative to placebo. Treatment with LOVAZA to reduce very high TG levels may result in elevations in LDL-C and non-HDL-C in some individuals. Patients should be monitored to ensure that the LDL-C level does not increase excessively.

The effect of LOVAZA on the risk of pancreatitis in patients with very high TG levels has not been evaluated.

The effect of LOVAZA on cardiovascular mortality and morbidity in patients with elevated TG levels has not been determined.

14.2 Other Clinical Experience

The effects of LOVAZA 4 grams per day as add-on therapy to treatment with simvastatin were evaluated in a randomized, placebo-controlled, double-blind, parallel-group study of 254 adult patients (122 on LOVAZA and 132 on placebo) with persistent high triglycerides (200 to 499 mg/dL) despite simvastatin therapy. Patients were treated with open-label simvastatin 40 mg per day for 8 weeks prior to randomization to control their LDL-C to no greater than 10% above NCEP ATP III goal and remained on this dose throughout the study. Following 8 weeks of open-label treatment with simvastatin, patients were randomized to either LOVAZA 4 grams per day or placebo for an additional 8 weeks with simvastatin co-therapy. The median baseline triglyceride and LDL-C levels in these patients were 268 mg/dL and 89 mg/dL, respectively. Median baseline non-HDL-C and HDL-C levels were 138 mg/dL and 45 mg/dL, respectively.

The changes in the major lipoprotein lipid parameters for the groups receiving LOVAZA plus simvastatin or placebo plus simvastatin are shown in Table 3.
Table 3. Response to the Addition of LOVAZA 4 grams per day to Ongoing Simvastatin 40 mg per day Therapy in Patients with High Triglycerides (200 to 499 mg/dL)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>LOVAZA + Simvastatin</th>
<th>Placebo + Simvastatin</th>
<th>Difference</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BL</td>
<td>EOT</td>
<td>Median % Change</td>
<td>BL</td>
</tr>
<tr>
<td>Non-HDL-C</td>
<td>137</td>
<td>123</td>
<td>-9.0</td>
<td>141</td>
</tr>
<tr>
<td>TG</td>
<td>268</td>
<td>182</td>
<td>-29.5</td>
<td>271</td>
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<tr>
<td>TC</td>
<td>184</td>
<td>172</td>
<td>-4.8</td>
<td>184</td>
</tr>
<tr>
<td>VLDL-C</td>
<td>52</td>
<td>37</td>
<td>-27.5</td>
<td>52</td>
</tr>
<tr>
<td>Apo-B</td>
<td>86</td>
<td>80</td>
<td>-4.2</td>
<td>87</td>
</tr>
<tr>
<td>HDL-C</td>
<td>46</td>
<td>48</td>
<td>+3.4</td>
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<tr>
<td>LDL-C</td>
<td>91</td>
<td>88</td>
<td>+0.7</td>
<td>88</td>
</tr>
</tbody>
</table>

BL = Baseline (mg/dL); EOT = End of Treatment (mg/dL); Median % Change = Median Percent Change from Baseline; Difference = LOVAZA Median % Change – Placebo Median % Change

LOVAZA 4 grams per day significantly reduced non-HDL-C, TG, TC, VLDL-C, and Apo-B levels and increased HDL-C and LDL-C from baseline relative to placebo.

16 HOW SUPPLIED/STORAGE AND HANDLING

LOVAZA (omega-3-acid ethyl esters) capsules are supplied as 1-gram transparent soft-gelatin capsules filled with light-yellow oil and bearing the designation REL900.

Bottles of 60: NDC 0173-0783-01
Bottles of 120: NDC 0173-0783-02

Store at 25°C (77°F); excursions permitted to 15° to 30°C (59° to 86°F) [see USP Controlled Room Temperature]. Do not freeze. Keep out of reach of children.

17 PATIENT COUNSELING INFORMATION

See FDA-approved patient labeling

- LOVAZA should be used with caution in patients with known sensitivity or allergy to fish and/or shellfish [see Warnings and Precautions (5.3)].
- Patients should be advised that use of lipid-regulating agents does not reduce the importance of adhering to diet [see Dosage and Administration (2)].
- Patients should be advised not to alter LOVAZA capsules in any way and to ingest intact capsules only [see Dosage and Administration (2)].

Manufactured for GlaxoSmithKline by:
Catalent Pharma Solutions
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Accucaps Industries Limited
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Windsor, Ontario, Canada N9B 3R5

Banner Pharmaceuticals Inc.
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GlaxoSmithKline
Research Triangle Park, NC 27709

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PATIENT INFORMATION

LOVZA® (lö-vä-zä)
(omega-3-acid ethyl esters) Capsules

Read the Patient Information that comes with LOVZA before you start taking it, and each time you get a refill. There may be new information. This leaflet does not take the place of talking with your doctor about your condition or treatment.

What is LOVZA?
LOVZA is a prescription medicine, called a lipid-regulating medicine, for adults. LOVZA is made of omega-3 fatty acids from oils of fish, such as salmon and mackerel. Omega-3 fatty acids are substances that your body needs but cannot produce itself.

LOVZA is used along with a low-fat and low-cholesterol diet to lower very high triglycerides (fats) in your blood. Before taking LOVZA, talk to your healthcare provider about how you can lower high blood fats by:

• losing weight, if you are overweight
• increasing physical exercise
• lowering alcohol use
• treating diseases such as diabetes and low thyroid (hypothyroidism)
• adjusting the dose or changing other medicines that raise triglyceride levels such as certain blood pressure medicines and estrogens

Treatment with LOVZA has not been shown to prevent heart attacks or strokes.

LOVZA has not been studied in children under the age of 18 years.

Who should not take LOVZA?
Do not take LOVZA if you:
• are allergic to LOVZA or any of its ingredients. See the end of this leaflet for a complete list of ingredients in LOVZA.

What should I tell my doctor before taking LOVZA?
Tell your doctor about all of your medical conditions, including if you:
• drink more than 2 glasses of alcohol daily.
• have diabetes.
• have a thyroid problem called hypothyroidism.
• have a liver problem.
• have a pancreas problem.
• are allergic to fish and/or shellfish. LOVAZA may not be right for you.
• are pregnant, or planning to become pregnant. It is not known if LOVAZA can harm your unborn baby.
• are breastfeeding. It is not known if LOVAZA passes into your milk and if it can harm your baby.

Tell your doctor about all the medicines you take, including prescription and non-prescription medicine, vitamins, and herbal supplements. LOVAZA and certain other medicines can interact. Especially tell your doctor if you take medicines that affect clotting such as anticoagulants or blood thinners. Examples of these medicines include aspirin, nonsteroidal anti-inflammatory agents (NSAIDS), warfarin, coumarin, and clopidogrel (PLAVIX®).

Know all the medicines you take. Keep a list of them with you to show your doctor and pharmacist.

How should I take LOVAZA?
• Take LOVAZA exactly as prescribed. Do not change your dose or stop LOVAZA without talking to your doctor.
• The usual dose of LOVAZA is 4 capsules:
  • Take all 4 capsules at the same time, or
  • Take 2 capsules two times a day
• Take LOVAZA at the same time or times each day.
• Take LOVAZA with or without food. You may find it easier to take LOVAZA with food.
• Do not take more than 4 capsules a day. Taking more than 4 capsules per day may increase the chance of side effects.
• Take LOVAZA capsules whole. Do not break, crush, dissolve, or chew LOVAZA capsules before swallowing. If you cannot swallow LOVAZA capsules whole, tell your doctor. You may need a different medicine.
• Your doctor should start you on a low-fat and low-cholesterol diet before giving you LOVAZA. Stay on this low-fat and low-cholesterol diet while taking LOVAZA.
• Your doctor should do blood tests to check your triglyceride and cholesterol levels during treatment with LOVAZA.
• If you have liver disease, your doctor should do blood tests to check your liver function during treatment with LOVAZA.
• If you miss a dose of LOVAZA, take it as soon as you remember. However, if you miss one day of LOVAZA, do not double your dose when you next take it.
• If you take too much LOVAZA or overdose, call your doctor or Poison Control Center right away.
What are the possible side effects of LOVAZA?

The most common side effects with LOVAZA are burping, infection, flu symptoms, upset stomach, a change in your sense of taste, back pain, and skin rash.

LOVAZA may affect certain blood tests. It may change:

- one of the tests to check liver function (ALT)
- one of the tests to measure cholesterol levels (LDL-C)

Talk to your doctor if you have side effects that bother you or that will not go away. You may report side effects to FDA at 1-800-FDA-1088.

These are not all the side effects with LOVAZA. For more information, ask your doctor or pharmacist.

How should I store LOVAZA?

- Store LOVAZA at room temperature, 59° to 86° F (15° to 30° C). Do not freeze.
- Do not keep medicine that is out of date or that you no longer need.
- Keep LOVAZA out of the reach of children. Be sure that if you throw medicines away, it is out of the reach of children.

General information about LOVAZA

Medicines are sometimes prescribed for conditions that are not mentioned in patient information leaflets. Do not use LOVAZA for a condition for which it was not prescribed. Do not give LOVAZA to other people, even if they have the same problem you have. It may harm them.

This leaflet summarizes the most important information about LOVAZA. If you would like more information, talk with your doctor. You can ask your doctor or pharmacist for information about LOVAZA that is written for health professionals or go to www.LOVAZA.com.

What are the ingredients in LOVAZA?

Active Ingredient: Omega-3-acid ethyl esters

Inactive Ingredients: Gelatin, glycerol, purified water, alpha-tocopherol (in soybean oil)

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