Omega-3s and Heart Health
Dietetic Webinar
About GOED and the Omega-3 Coalition
THE GOED MISSION

To be a proactive and accountable association of the finest processors, refiners, manufacturers, distributors, marketers, retailers and supporters of products containing EPA and DHA, that works with governmental groups, the healthcare community, and the industry to:

1. educate consumers about the benefits of EPA and DHA;
2. support and develop public education and safety initiatives;
3. establish ethical business and product quality standards; and
4. advance government, healthcare and industry relations.
Mutually Dependent Success Factors

- Scientific Publishing
- Public Relations
- Practitioner Outreach
- Lobbying for RDIs
Bill Harris, PhD, FAHA

Marie Spano, MS, RD, CSCS, CSSD
DISCLOSURES

• Bill Harris, PhD, FAHA
  ▪ Science Advisory Council member, GOED/Omega-3 Coalition
  ▪ President and CEO, OmegaQuant Analytics, LLC

• Marie Spano, MS, RD, CSCS, CSSD
  ▪ Science Advisory Council member, GOED/Omega-3 Coalition
LEARNING OBJECTIVES

• After this presentation, you will be able to:
  ▪ Identify differences between ALA, EPA and DHA omega-3 fatty acids
  ▪ Access the latest science behind marine-based omega-3s and heart health
  ▪ Recommend best sources of omega-3s to clients to support heart health and reduce cardiovascular disease risk
Omega 3s: The Basics
THREE PRIMARY OMEGA-3S

• **Alpha (α)-linolenic acid (ALA)**
  - 18 carbon atoms, 3 double bonds
  - Plant sources: flaxseed, walnuts, soybeans, chia

• **Eicosapentaenoic acid (EPA)**
  - 20 carbon atoms, 5 double bonds
  - Marine sources: fish, algae, krill
  - Eicosanoids associated with:
    - Reducing inflammatory response
    - Reducing risk for blood clotting

• **Docosahexaenoic Acid (DHA)**
  - 22 carbon atoms, 6 double bonds
  - Marine sources: fish, algae, krill
  - Resolvins and protectins associated with:
    - Flexibility of cell walls
    - Resolving inflammatory response
OMEGA-3 SYNTHESIS

- Linoleic acid (omega-6) and α-linolenic acid (omega-3) both compete for desaturase enzymes
- Conversion, while biologically possible, occurs at a low rate
  - Less than 5%

Best to consume EPA+DHA directly
• Reduced risk of mortality from coronary heart disease or sudden cardiac death\(^1\)
• Lowers triglycerides\(^2\)
• Raises HDL-cholesterol\(^2\)
• Improves blood vessel function\(^3\)
• Reduces inflammation\(^4\)
• Lowers blood pressure\(^5\)

Diet and Reinfarction Trial (DART), 1989

- Randomized controlled trial
- 2033 men with previous history of MI
- Results found that consumption of two weekly servings of fatty fish:
  - Reduced risk of death by ischemic heart disease
  - Reduced all-cause mortality by 29%

GISSI-Prevenzione, 1999

- Randomized controlled trial
- 11,324 adults with history of recent MI
- Randomized to receive 1 capsule Lovaza per day providing 850 mg of EPA/DHA vs. no intervention
- Fish oil consumption reduced the risk of all-cause mortality, sudden death, and coronary death.

Fish Oil and Post-MI Prognosis
Early benefit of omega-3 polyunsaturated fatty acid (ω-3 PUFA) therapy on total mortality, sudden death, coronary heart disease (CHD) mortality, and cardiovascular mortality. Probability measurements represent relative risk (95% confidence interval). Reprinted, with permission, from Marchioli et al. MI = myocardial infarction.

Japan EPA Lipid Intervention Study (JELIS), 2007\(^8\)

- 18,645 patients with hypercholesterolemia (70% female)
- Randomized to receive statin alone or statin + 1,800 mg EPA (highly purified)
- 5-year duration
- EPA group had 19% reduced risk for major adverse coronary events

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EPA in Primary Prevention

Eicosapentaenoic acid (EPA) (1.8 g/day) reduced the incidence of major adverse coronary events in the JELIS (Japan EPA Lipid Intervention Study) trial by 19%. Reprinted, with permission, from Yokoyama et al. CI = confidence interval.
GISSI-HF, 2008⁹

- Placebo-controlled trial
- 7,000 patients with class II-IV heart failure
- Randomized to receive either
  - 1 g Lovaza (850-882 mg EPA+DHA),
  - Rosuvastatin (10 mg),
  - Both, or
  - Dual placebo
- Omega-3 supplement groups had
  - Reduction in total mortality
  - Reduction in mortality or hospitalizations associated with CVD

Fish Oil and Heart Failure Survival
Kaplan-Meier curves for time to all-cause death (A) and for time to all-cause death or admission to hospital for cardiovascular reasons (B). Reprinted, with permission, from the GISSI-HF Investigators (8). *Estimates were calculated with a Cox proportional hazards model, with adjustment for admission to the hospital for heart failure in the previous year, previous pacemaker, and aortic stenosis.
CI = confidence interval; HR = hazard ratio; ω-3 PUFA = omega-3 polyunsaturated fatty acids.

Newer studies have found no significant effects of EPA+DHA on cardiovascular disease risk or events

Context is key:

- Population now has higher baseline omega-3 intake
- Standard for medical care for CV health has evolved and improved significantly
- Statins, other therapies may mask effects of omega-3s
- Most studies have given too little too late for too short a duration

...there is likely to have been large changes in the general public’s consumption of either fish or supplemental fish oil use over the last 10 years or so, but more particularly in cardiac patients. Ironically, therefore, more recent fish oil supplement trials may have fallen victim to earlier successes, another reason why taking baseline measurements in clinical trials would be so important.

Chris Oliver
Research Director
Blackmores Institute (Australia)

13. [http://www.blackmoresinstitute.org/opinion/blog/Fish-oil-Does-it-work](http://www.blackmoresinstitute.org/opinion/blog/Fish-oil-Does-it-work), April 14, 2015.
**Association Between Omega-3 Fatty Acid Supplementation and Risk of Major Cardiovascular Disease Events**

A Systematic Review and Meta-analysis

Evangelos C. Rizos, MD, PhD
Evangelia E. Tzani, MD, PhD
Efthymia Bika, MD
Michael S. Kostapanos, MD
Moez S. Elseaf, MD, PhD, FASA, FRSH

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**Context** Considerable controversy exists regarding the association of omega-3 polyunsaturated fatty acids (PUFAs) and major cardiovascular endpoints.

**Objective** To assess the role of omega-3 supplementation on major cardiovascular outcomes.

**Data Sources** MEDLINE, EMBASE, and the Cochrane Central Register of Controlled Trials through August 2012.

**Study Selection** Randomized controlled trials evaluating the effect of omega-3 on all-cause mortality, cardiac death, sudden death, myocardial infarction, and stroke.

**Data Extraction** Descriptive and quantitative information was extracted; absolute and relative risk (RR) estimates were synthesized under a random-effects model. Heterogeneity was assessed using the Q statistic and I². Subgroup analyses were performed for the presence of blinding, the prevention settings, and patients with implantable cardioverter-defibrillators, and meta-regression analyses were performed for the omega-3 dose. A statistical significance threshold of 0.05 was adopted after adjustment for multiple comparisons.

**Data Synthesis** Of the 3636 citations retrieved, 20 studies of 6960 patients were included, reporting 7044 deaths, 3993 cardiac deaths, 1150 sudden deaths, 1837 myocardial infarctions, and 1490 strokes. No statistically significant association was observed with all-cause mortality (RR, 0.96; 95% CI, 0.91 to 1.02; risk reduction (RRD), −0.004; 95% CI, −0.01 to 0.002), cardiac death (RR, 0.91; 95% CI, 0.86 to 0.96; RRD, −0.01; 95% CI, −0.02 to 0.00), sudden death (RR, 0.87; 95% CI, 0.75 to 1.01; RRD, −0.003; 95% CI, −0.012 to 0.006), myocardial infarction (RR, 0.89; 95% CI, 0.76 to 1.04; RRD, −0.002; 95% CI, −0.007 to 0.002), and stroke (RR, 1.05; 95% CI, 0.93 to 1.18; RRD, 0.001; 95% CI, −0.002 to 0.004) when all supplement studies were considered.

**Conclusion** Overall, omega-3 PUFA supplementation was not associated with a lower risk of all-cause mortality, cardiac death, sudden death, myocardial infarction, or stroke based on relative and absolute measures of association.

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"Overall, omega-3 PUFA supplementation was not associated with a lower risk of all cause mortality, cardiac death, sudden death, MI or stroke..."
• Rizos et al. Meta-Analysis of Omega-3 Supplementation Studies

**Conclusion: Omega-3 Supplements reduce risk for cardiac death**

Rizos et al. Meta-Analysis of Omega-3 Supplementation Studies

**Efficacy of Omega-3 Polyunsaturated Fatty Acid Supplements Across Different Outcomes**

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Studies</th>
<th>Events</th>
<th>Participants</th>
<th>RR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All-cause mortality</td>
<td>17</td>
<td>6295</td>
<td>63279</td>
<td>0.96 (0.91-1.02)</td>
</tr>
<tr>
<td>Cardiac death</td>
<td>13</td>
<td>3480</td>
<td>56407</td>
<td>0.91 (0.85-0.98)</td>
</tr>
<tr>
<td>Sudden death</td>
<td>7</td>
<td>1030</td>
<td>41751</td>
<td>0.87 (0.75-1.01)</td>
</tr>
<tr>
<td>Myocardial infarction</td>
<td>13</td>
<td>1755</td>
<td>53875</td>
<td>0.89 (0.76-1.04)</td>
</tr>
<tr>
<td>Stroke</td>
<td>9</td>
<td>1490</td>
<td>52589</td>
<td>1.05 (0.93-1.18)</td>
</tr>
</tbody>
</table>

**Conclusion:** Omega-3 Supplements reduce risk for cardiac death

**New Conclusion:** Omega-3 supplements have no effect on any CVD endpoint

Unprecedented and too conservative for a safe agent?

• JAMA Meta-Analyses 2012

All 15 used 95% CI and none adjusted for multiple comparisons

• Omega-3 and CHD Meta-Analyses

All 14 used 95% CI and none adjusted for multiple comparisons

It’s OK to raise the “statistical bar” when you “go fishing” for new findings in a dataset, but should NEVER be done in a meta-analysis
More Evidence That Omega-3 Supplements Don't Work

Once again researchers have failed to find any clinical benefit for omega-3 supplements. In a new meta-analysis and systematic review published in *JAMA*, Evangelos Rizos and colleagues analyzed 20 randomized controlled trials including 68,680 patients and found no significant effect on any of the endpoints:

- all-cause mortality: relative risk (RR) 0.96, CI 0.91 – 1.02
- cardiac death: RR 0.91, CI 0.85 – 0.98 (not significant after correction for multiple comparisons)
- sudden death: RR 0.87, CI 0.75 – 1.01
- MI: RR 0.89, CI 0.76 – 1.04
- stroke: RR 1.05, CI 0.93 – 1.18

The authors reported that they found no evidence supporting a beneficial effect related to either lowering triglycerides or reducing sudden death. Regarding triglycerides, they wrote, “the proposed protective role of omega-3 PUFAs by lowering triglyceride levels is not
POTENTIAL DESIGN ISSUES

- Too Few Subjects
- Insufficient LC Omega-3 Dosage
- Treatment Duration too Short
- Maintenance on Aggressive Cardiovascular Drug Treatment
- Expanded Endpoints
- Improvements in Acute Care Post MI Reduce Heart Damage
- Higher Background LC Omega-3 Intake
FUTURE RESEARCH

• Properly powered
• Properly dosed
• Populations with low EPA+DHA levels
• Long duration
• Study individual effects of EPA, DHA
• Study EPA and DHA as a lifestyle intervention (vs a drug)
Omega-3 and Diet
GLOBAL RECOMMENDATIONS FOR OMEGA-3S

World Health Organization

Food and Agriculture Organization of the United Nations

European Food Safety Authority

Australian Government Department of Health

INSTITUTE OF MEDICINE OF THE NATIONAL ACADEMIES

Nordic Council of Ministers

MINISTRY OF HEALTH MALAYSIA
Seafood
Mean intake of seafood in the United States is approximately 3 1/2 ounces per week, and increased intake is recommended. Seafood contributes a range of nutrients, notably the omega-3 fatty acids, eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). Moderate evidence shows that consumption of about 8 ounces per week of a variety of seafood, which provide an average consumption of 250 mg per day of EPA and DHA, is associated with reduced cardiac deaths among individuals with and without pre-existing cardiovascular disease. Thus, this recommendation contributes to the prevention of heart disease. The recommendation is to consume seafood for the total package of benefits that seafood provides, including its EPA and DHA content.
Seafood Sustainability

Background

Seafood is recognized as an important source of key macro- and micronutrients. The health benefits of seafood, including support of optimal neurodevelopment and prevention of cardiovascular disease, are likely due in large part to long-chain n-3 polyunsaturated fatty acids (PUFA), docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA), although seafood also are good sources of other nutrients including protein, selenium, iodine, vitamin D, and choline. 

A moderate amount of seafood is an important component of two of three of these dietary patterns, and has demonstrated health benefits. The seafood industry is in the midst of rapid expansion to meet worldwide demand, although capture fishery production has leveled off while aquaculture is expanding. The collapse of some fisheries due to overfishing in the past decades has raised concern about the ability to produce a safe and affordable supply. In addition, concern has been raised about the safety and nutrient content of farm-raised versus wild-caught seafood. To supply enough seafood to support meeting dietary recommendations, both farm-raised and wild caught seafood will be needed. The review of the evidence demonstrated, in the species evaluated, that farm-raised seafood has as much or more EPA and DHA per serving than wild caught. Low-trophic seafood, such as catfish and crawfish, regardless of whether wild caught or farm-raised seafood, have less than half the EPA and DHA per serving than high-trophic seafood, such as salmon and trout.
AHA Scientific Statement

Diet and Lifestyle Recommendations Revision 2006
A Scientific Statement From the American Heart Association Nutrition Committee

Alice H. Lichtstein, DSc, FAHA; Chair; Lawrence J. Appel, MD, FAHA, Vice-Chair; Michael Brands, PhD, FAHA; Mercedes Carnethon, PhD; Stephen Daniels, MD, PhD, FAHA; Harold A. Franch, MD, FAHA; Barry Franklin, PhD, FAHA; Penny Kris-Etherton, RD, PhD, FAHA; David A. S. Harris, PhD, FAHA; Barbara Howard, PhD, FAHA; Njeri Karanja, PhD; Michael Lefevre, PhD, FAHA; Lawrence Rudel, MD, PhD, FAHA; Frank Sacks, MD, FAHA; Linda Van Horn, PhD, RD, FAHA; Mary Winston, EdD; Judith Wyko-Rosset, EdD, RD

Abstract—Improving diet and lifestyle is a critical component of the American Heart Association's strategy to prevent cardiovascular disease risk reduction in the general population. This document presents recommendations designed to meet this objective. Specific goals are to consume an overall healthy diet; aim for a healthy body weight; aim for recommended levels of low-density lipoprotein cholesterol, high-density lipoprotein cholesterol, and triglycerides; aim for normal blood pressure; aim for a normal blood glucose level; be physically active; and avoid use of and exposure to tobacco products. The recommendations are to balance calorie intake and physical activity to achieve and maintain a healthy body weight; consume a diet rich in vegetables and fruits; choose whole-grain, high-fiber foods; consume fish, especially oily fish, at least twice a week; limit intake of saturated fat to <7% of energy, trans fat to <1% of energy, and cholesterol to <200 mg/day by choosing lean meats and vegetable alternatives, fat-free (skim) or low-fat (1% fat) dairy products and minimize intake of partially hydrogenated fats; minimize intake of beverages and foods with added sugars; choose and prepare foods with little or no salt; if you consume alcohol, do so in moderation; and when you eat food prepared outside of the home, follow these Diet and Lifestyle Recommendations. By adhering to these diet and lifestyle recommendations, Americans can substantially reduce their risk of developing cardiovascular disease, which remains the leading cause of morbidity and mortality in the United States. (Circulation. 2006;114:82-96.)

Key Words: AHA Scientific Statements ■ nutrition ■ cardiovascular diseases

Improving diet and lifestyle is a critical component of the American Heart Association’s (AHA’s) strategy to prevent cardiovascular disease (CVD), the leading cause of morbidity and mortality in Americans. This document presents diet and lifestyle recommendations designed to meet this objective. Several features distinguish this set of recommendations from previous AHA Dietary Guidelines versions: (1) Recognizing that diet is part of an overall healthy lifestyle, lifestyle has been added to the title. (2) The 2006 recommendations incorporate new scientific evidence that has emerged after publication of the last set of guidelines in 2000. (3) The 2006 recommendations have been rephrased so that they are more easily understood. (4) A section raising awareness about environmental influences on CVD health behaviors has been included. (5) Practical guidance on how to achieve diet and lifestyle changes is provided. (6) The importance of following the recommendations when eating at home and away from home is emphasized. (7) The societal roles of healthcare professionals, restaurants, the food industry, schools, and local policies are highlighted, along with specific recommendations to those groups. This last feature and the focus on CVD prevention are the principal differences between these recommendations and those from the US Department of Agriculture and the US Department of Health and Human Services.

Consistent with the strategy plan of the AHA, the 2006 AHA Diet and Lifestyle Recommendations are one component of a comprehensive plan to achieve specific goals for CVD prevention in the United States. The goals are to reduce the number of deaths from CVD by one third and the rate of hospitalizations, surgeries, and emergency room visits by one fifth by the year 2010. To achieve these goals, the AHA has adopted lifestyle recommendations that emphasize physical activity, diet, and other strategies such as tobacco abstinence and stress management to achieve a healthier lifestyle. These recommendations are intended to complement, not replace, existing guidelines from other organizations. The AHA’s dietary and lifestyle recommendations are consistent with guidelines from the American Diabetes Association, the National Cholesterol Education Program’s Adult Treatment Panel, and the American College of Sports Medicine. These guidelines, and this document, are intended to be used by individuals, physicians, and other health professionals in assessing and modifying risk factors for CVD and are consistent with the AHA’s mission to reduce the burden of cardiovascular disease.

Other Dietary Factors That Affect CVD Risk

Fish Oil Supplements

Fish intake has been associated with decreased risk of CVD. On the basis of the available data, the AHA recommends that patients without documented CHD eat a variety of fish, preferably oily fish, at least twice a week. Patients with documented CHD are advised to consume ≥1 g of EPA+DHA per day, preferably from oily fish, although EPA+DHA supplements could be considered in consultation with their physician. For individuals with hypertriglyceridemia, 2 to 4 g of EPA+DHA per day, provided as capsules under a physician’s care, are recommended.
Triglycerides and Cardiovascular Disease

A Scientific Statement From the American Heart Association

Michael Miller, MD, FAHA, Chair; Neil J. Stone, MD, FAHA, Vice Chair;
Christie Ballantyne, MD, FAHA; Vera Bittner, MD, FAHA; Michael H. Criqui, MD, MPH, FAHA;
Henry N. Ginsberg, MD, FAHA; Anne Carol Goldberg, MD, FAHA; William James Howard, MD;
Marc S. Jacobson, MD, FAHA; Penny M. Kris-Etherton, PhD, RD, FAHA;
Terry A. Lennie, PhD, RN, FAHA; Moshe Levi, MD, FAHA; Theodore Mazerone, MD, FAHA;
Subramanian Punnathur, MD, FAHA; on behalf of the American Heart Association Clinical Lipidology,
Thrombosis, and Prevention Committee of the Council on Nutrition, Physical Activity, and Metabolism,
Council on Arteriosclerosis, Thrombosis and Vascular Biology, Council on Cardiovascular Nursing,
and Council on the Kidney in Cardiovascular Disease

Introduction

Triglyceride levels can be high for a variety of reasons, including obesity, sedentary lifestyle, and genetic factors. High triglycerides can contribute to the development of cardiovascular disease by increasing the risk of arterial plaque formation. The American Heart Association recommends targeting triglyceride levels to less than 150 mg/dL for patients with no other risk factors for cardiovascular disease. For patients with existing cardiovascular disease, triglyceride levels should be less than 135 mg/dL. This statement provides evidence-based guidance on the diagnosis, management, and treatment of high triglyceride levels.
• Fatty Acids position paper, 2014
• Acknowledges role of omega-3 fatty acids in the diet
• Recommends food-first, supplements-second approach
# RECOMMENDED AMOUNTS

<table>
<thead>
<tr>
<th>If you:</th>
<th>Aim for:</th>
<th>This can be achieved by:</th>
</tr>
</thead>
</table>
| Are generally healthy                 | 500 mg EPA+DHA/day\(^{15}\)                  | • Two 4-oz servings of fatty fish per week and/or  
• EPA/DHA fortified foods and/or  
• EPA+DHA supplements |
| Have a history of coronary heart disease | 1,000 mg or more EPA+DHA/day\(^{16}\)         | • Working out a plan with your doctor                                                      |
| Have severely elevated triglycerides  | 2,000 – 4,000 mg EPA+DHA/day\(^{16}\)         | • EPA+DHA supplements or pharmaceuticals under the supervision of a healthcare provider    |

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SOURCES OF OMEGA-3S

- Fatty fish
  - Salmon
  - Mackerel
  - Trout
  - Herring
  - www.seafoodhealthfacts.org

- DHA-fortified foods
  - Milk
  - Eggs
  - Buttery spreads

- Supplements
  - Fish oil
  - Krill oil
  - Vegetarian/Vegan

Nutrition Facts

<table>
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<tr>
<th>Amount Per Serving</th>
<th>% Daily Value</th>
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<td>110</td>
</tr>
<tr>
<td>Calories from fat</td>
<td>10</td>
</tr>
<tr>
<td>Total Fat</td>
<td>1g</td>
</tr>
<tr>
<td>Saturated Fat</td>
<td>0g</td>
</tr>
<tr>
<td>Trans Fat</td>
<td>0g</td>
</tr>
<tr>
<td>Cholesterol</td>
<td>5mg</td>
</tr>
<tr>
<td>Sodium</td>
<td>100mg</td>
</tr>
<tr>
<td>Total Carbohydrate</td>
<td>14g</td>
</tr>
<tr>
<td>Protein</td>
<td>12g</td>
</tr>
</tbody>
</table>

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.

Ingredients: Grade A pasteurized milk, nonfat milk, DHA Omega-3 Oil Blend, Purified Fish Oil, and Sunflower Oil. (To help maintain clean freshness), Natural Plant Sterols, DL-Alpha-Tocopherol Acetate, Vitamin E, Vitamin A Palmitate, Vitamin D3.

Supplement Facts

<table>
<thead>
<tr>
<th>Amount Per Serving</th>
<th>% Daily Value*</th>
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</thead>
<tbody>
<tr>
<td>Calories</td>
<td>19</td>
</tr>
<tr>
<td>Calories from fat</td>
<td>1g</td>
</tr>
<tr>
<td>Total Fat</td>
<td>2g</td>
</tr>
<tr>
<td>Saturated Fat</td>
<td>0g</td>
</tr>
<tr>
<td>Trans Fat</td>
<td>0g</td>
</tr>
<tr>
<td>Vitamin E (d-alpha tocopherol)</td>
<td>80IU</td>
</tr>
</tbody>
</table>

*Percent Daily Values are based on a 2,000 calorie diet. ** Daily Value not established. *** Natural Triglycerides. Less than 5mg of Cholesterol per serving.

Ingredients: pured deep sea fish oil from anchovies and sardines, softgel capsule (gelatin, water, glycerin, natural lemon oil), natural lemon oil, natural tocopherol, rosemary extract.
WHY FATTY FISH?

Largest fatty fish (e.g. shark, swordfish)

Larger fatty fish (e.g. salmon, trout)

Smaller fatty fish (e.g. sardines, mackerel)

Shrimp-like creatures (e.g. krill)

Algae/Phytoplankton (vegetarian)
FISH OIL VS. KRILL OIL

Fish Oil
• Comes from a variety of fatty fish sources
• Studied extensively for heart health benefits as well as benefits to neural development, brain health and eye health.

Krill Oil
• Comes from krill, a small, reddish-colored crustacean
• Not as well-studied as fish oil
IN CONCLUSION

• There are three main types of omega-3s: ALA, EPA and DHA.
• There is ample scientific evidence supporting the heart-health benefits of EPA+DHA.
• For optimal EPA+DHA intake, consume fatty fish at least twice a week.
• Taking a high-quality omega-3 supplement to support a healthy lifestyle, including a healthy heart, is reasonable.
• Omega-3s, like most supplements, are not drugs. They are not meant to treat disease.
  ▪ Omega-3s supplement nutrient gaps in the diet and contribute towards maintaining health and wellbeing.
CONTACT US

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Email ellen@GOEDomega3.com if you have questions after today’s webinar
Thank you