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## OCEAN NUTRITION CANADA



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OMEGA 3 FATTY ACIDS  
Presentation to FDA

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## OCEAN NUTRITION CANADA (ONC)

- World leader in marine-based natural health and nutritional products
- "Harvesting natural resources from the sea to discover and develop new ingredients"
- Subsidiary of Clearwater Fine Foods, a premiere seafood company

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## OCEAN NUTRITION CANADA (cont'd)

- Has North America's largest privately owned research lab dedicated exclusively to the discovery and development of new marine natural products
- Uses the most sophisticated analytical equipment, which guarantees the quality, potency, and consistency of its products every time
- Has the only manufacturing plant in North America that can concentrate omega-3 fatty acids (EPA and DHA) from fish oil


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## ONC'S OMEGA-3 PRODUCTS


- ONC is the largest North American manufacturer of refined fish oil
- The EPA and DHA are extracted from multiple edible marine fish; 95-99% anchovy
  - Oil form for use in dietary supplements
  - Microencapsulated, no-taste, no-smell powder form ("microcaps") for use in food



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EPA, Eicosapentaenoic Acid, 20:5n3  
(contains 20 carbon atoms and 5 double bonds)



DHA, Docosahexaenoic Acid, 22:6n3  
(contains 22 carbon atoms and 6 double bonds)

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## ONC POSITION

- ONC believes that conventional foods containing its Omega-3 microcaps can make the qualified claim about Omega-3 fatty acids and CHD under:
  - Existing FDA policy
  - And the Agency's enforcement discretion

### EXISTING FDA POLICY

- Dietary supplements containing EPA and DHA from fish oil can make the qualified health claim that their consumption "may reduce the risk of coronary heart disease" FDA evaluated the data and determined that, although there is scientific evidence supporting the claim, the evidence is not conclusive" (Letter to Emord, February 8, 2002)

### EPA/DHA in Microcaps = EPA/DHA in Supplements

- The EPA and DHA in ONC's microcaps are scientifically indistinguishable from the EPA and DHA oils in dietary supplements
  - Therefore, conventional foods fortified with microcaps should be able to make the same qualified health claim
- Absorbed and incorporated in the same manner
- Toxicologically and biologically indistinguishable

### EPA/DHA in Microcaps = EPA/DHA in Supplements (cont'd)

- Omega-3s are GRAS
  - ONC has self-affirmed the GRAS status of its EPA/DHA products using expert panels
- Because the ONC products are toxicologically indistinguishable from other fish oil omega-3s, ONC product safety is also supported by FDA GRAS affirmations and no-objection letters
  - Unilever GRN 000105
  - Jedwards GRN 000102
  - Menhaden Oil 21 C.F.R. § 184.1472

### EPA/DHA in Microcaps = EPA/DHA in Supplements (cont'd)

- Same oil used in supplements and microcaps
- The EPA/DHA in both kinds of ONC products is extremely pure
  - ONC manufactures in accordance with Canadian drug GMPs
  - ONC is registered with the Canadian Food Inspection Agency
  - ONC adheres to Council for Responsible Nutrition (CRN) Voluntary Monograph on Long Chain Omega-3 EPA and DHA

### EPA/DHA in Microcaps = EPA/DHA in Supplements (cont'd)

- FDA has said the safety concerns for omega-3s in conventional food and dietary supplements are the same (October 31, 2000 letter to Emord, p 16)
- Microcaps will be used in the same categories of food specified for menhaden oil in the February 26, 2002 Proposed Rule (67 FR 8744)
- Microcaps are an alternative to menhaden oil and therefore, use will be consistent with the current upper limit of 3g/day for omega-3 fatty acids

### EPA/DHA in Microcaps = EPA/DHA in Supplements (cont'd)

- As in dietary supplements, the amount of omega-3s in microcaps (and resulting amount in a serving of food) can be precisely controlled
- ONC is the major oil supplier to supplement market. Same highly purified oil will be used in microcaps
  - ONC's purification process virtually eliminates contaminants, including mercury
    - Test results are below the detection level, which is <.01 ppm

### EPA/DHA in Microcaps = EPA/DHA in Supplements (cont'd)

- Microcaps are bioequivalent to the EPA/DHA used in dietary supplements
  - ONC's bioequivalence study shows equivalent incorporation into phospholipids and TG lowering
- In sum: Microcaps are safe and just as effective in reducing the risk of CHD as the EPA/DHA in supplements

### EXISTING FDA POLICY

- FDA has announced that conventional foods can make qualified health claims when appropriate
  - "FDA...intends to expand the exercise of [its] enforcement discretion to conventional food claims under [appropriate] circumstances." Dec 2002 Guidance, p.3.

### EXISTING FDA POLICY (cont'd)

- Policy represents real progress and leveling of the playing field
  - Improves public health - enables consumers to make more informed dietary choices
  - Ensures fairness – ends disparate treatment of claims for omega-3 fatty acids in dietary supplements and in foods fortified with same

### ENFORCEMENT DISCRETION

- Use of the qualified claim re. omega-3s and CHD is consistent with the overarching criterion for the exercise of FDA's enforcement discretion.
  - "Extent to which totality of the publicly available evidence supports the claim" (July 2003 Guidance, p.2)
- The strength and amount of evidence here are identical to data for DS
- It is important that FDA apply its enforcement discretion evenhandedly to dietary supplements and food

### QUALIFIED CLAIM IS SUPPORTED BY CLINICAL EVIDENCE

- FDA has acknowledged that the Omega-3 link to decreased risk for CHD is "somewhat settled science" (Task Force Report, p.7)
  - Since 1970, more than 8,000 peer-reviewed scientific publications on fish oil
  - Approximately 1,800 of those studies were published in or after 2000
  - Most of these publications deal with the health benefits of omega-3s
- FDA has already recognized the strength of the evidence
  - it allows the qualified claim for dietary supplements

### WHY NO FURTHER REVIEW IS NEEDED: Process (Cont'd)

- FDA has **already reviewed** the data that would be submitted with a petition for the omega-3/CHD claim in conventional food
  - Another review would be duplicative and delay the public health benefit from omega-3s

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### WHY NO FURTHER REVIEW IS NEEDED: Process

- FDA's new qualified claims petition review process should be used for foods *naturally* high in omega-3s, not foods fortified with omega-3s
  - E.g., Agency indicates that one of the claims to be evaluated first is "the benefits of eating at least several servings a week of foods high in omega-3 fatty acids, including certain oily fish like ocean salmon, tuna and mackerel, for reducing the risk of heart disease" (FDA Press Release, July 10, 2003, p.2.)

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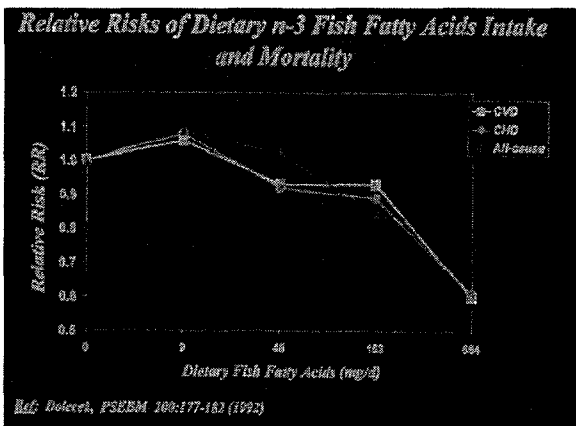
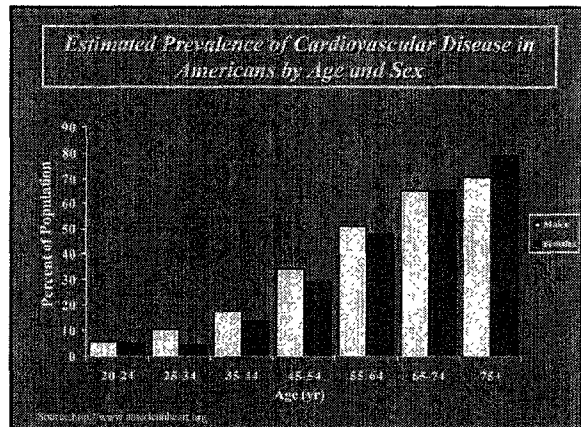
### WHY NO FURTHER REVIEW IS NEEDED: Process (Cont'd)

- Review of a health claim for conventional food requires FDA to evaluate which foods provide the benefit, the amount needed to obtain a benefit, and the frequency of consumption needed to obtain a benefit
  - None of those questions is implicated here
  - ONC will abide by the existing upper limit for omega-3s in fish oil (3g/day)

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### WHY THE QUALIFIED CLAIM SHOULD BE PERMITTED

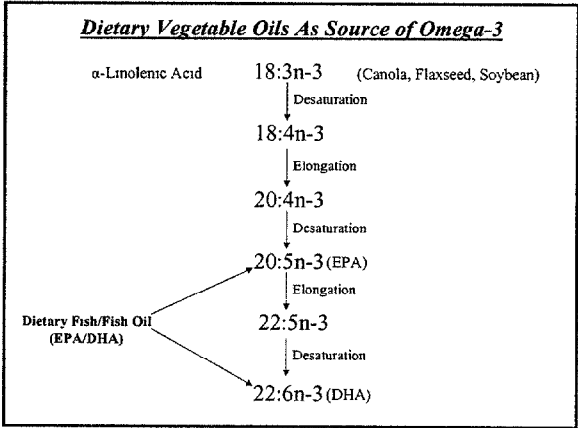
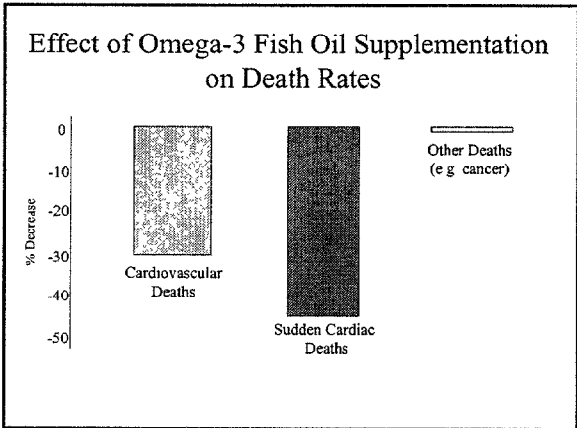
- Allowing the qualified claim is likely to have a significant positive impact on CHD -- the biggest killer in North America



### Dietary supplementation with n-3 polyunsaturated fatty acids and vitamin E after myocardial infarction: results of the GISSI-Prevenzione trial

Dr. Roberto Marchioli and Colleagues,  
Mario Negri Institute, S. Maria Imbaro, Italy

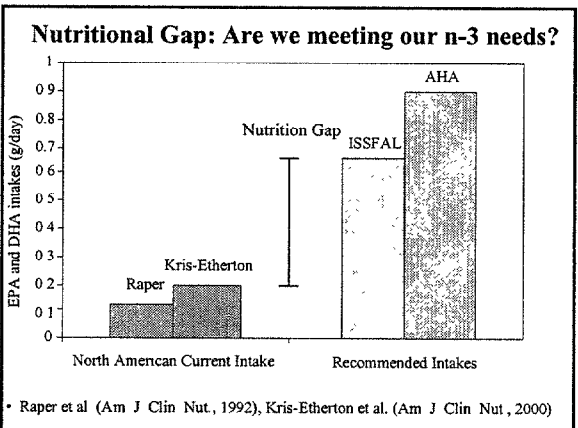
Reference: *Lancet* 354:447-455 (1999)



### AHA Dietary Guidelines

*Revision 2000: A Statement for Healthcare Professionals From the Nutrition Committee of the American Heart Association*

'Consumption of 1 fatty fish meal per day (or alternatively, a fish oil supplement) could result in an omega-3 fatty acid intake (i.e.. EPA and DHA) of ~900mg/day, an amount shown to beneficially affect coronary heart disease mortality rates in patients with coronary disease.'



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### Cost Savings in North America by Reducing Blood Triglyceride Levels Using Omega-3s Rather Than Drugs

Elevated triglyceride (>150 mg%)	Cost/day	Cost/year	Target Population/year	Net Savings/year
Pharmaceutical (e.g. gemfibrozil)	\$1.18	\$435	\$33.8 billion	-
Omega-3 fatty acids (EPA/DHA from fish oils)	\$0.21	\$77	\$6.6 billion	\$27.2 billion

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### OMEGA-3s ARE NEEDED (cont'd)

- "Attaining the proposed recommended intake...will require an approximate 4-fold increase in fish consumption in the United States."
  - Unlikely to happen, therefore...
- "Alternative strategies, such as food enrichment ... will become increasingly important in increasing n-3 fatty acid intake in the U.S. population." (Kris-Etherton et al. 2000)

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**OMEGA-3s ARE NEEDED: Public Health Benefits**

- Fortification of conventional foods with microcaps will help increase consumption of omega-3s
  - Providing EPA/DHA sources complementary to fish intake, should significantly enhance CHD prevention in North America

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**WHY NO FURTHER REVIEW IS NEEDED: Summary**

- In this case, the weight of the evidence demonstrates that no further review is needed
- Safety review of substance has already been conducted
- The qualified claim is not misleading
  - FDA already has experience with the use of the claim in dietary supplements

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**WHY NO FURTHER REVIEW IS NEEDED: Summary (cont'd)**

- EPA and DHA are well-characterized and the relevance of the studies of them is therefore well-understood
- CHD is defined and evaluated in accordance with generally accepted criteria established by a recognized body of qualified experts
- Most important, this claim and its supporting evidence have already been reviewed by qualified experts at FDA

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**ALLOWING THE QUALIFIED CLAIM WITHOUT FURTHER REVIEW**

- Will help increase consumption of omega-3s
  - “Consumers are more likely to respond to health messages in food labeling if the messages are specific with respect to the health benefits associated with particular substances in food.” (December 2002 Guidance, p.3)

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**ALLOWING THE QUALIFIED HEALTH CLAIM WITHOUT FURTHER REVIEW**

- Will enable us to reap important public health benefits safely and quickly
  - based on scientific evidence already reviewed by FDA
  - without a large expenditure of Agency resources

