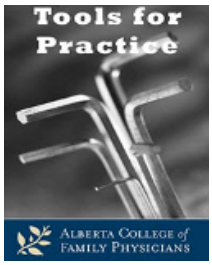
November 16, 2020



Somethin' Fishy: Prescription variants of Omega-3 to prevent cardiovascular disease

Clinical Question: Do prescription variants of omega-3's, like icosapent, reduce the risk of cardiovascular events when added to statins?

Bottom Line: In high risk patients, icosapent reduced cardiovascular events to 17% from 22% on placebo after 5 years. In lower risk patients, Eicosapentaenoic Acid (EPA) ethyl ester reduced major cardiovascular events to 2.8% from 3.5% with control after 5 years. Whether these products differ from each other or traditional omega-3 fatty acids (that don't show cardiovascular benefit) is unknown. Cost will likely limit use.

Evidence:

- Focusing on patient-oriented outcomes from large randomized controlled trials (RCTs) where prescription EPA products were added to statins.
    - Icosapent:
        - REDUCE-IT:[1] 8179 patients (70% secondary prevention), randomized to icosapent 2g twice daily or placebo. Mean age 64 years, 72% male. After ~5 years:
            - Composite of cardiovascular events: 17.2% versus 22.0% placebo. Number needed to treat (NNT)=21.
            - All-cause mortality: 6.7%, versus 7.6% placebo; no difference.
            - Atrial fibrillation: 5.3% versus 3.9% placebo; number needed to harm (NNH)=71.
    - EPA ethyl ester:
        - JELIS:[2] 18,645 Japanese (~80% primary prevention) patients with total cholesterol >6.5mmmol/L, randomized (open label) to EPA ethyl ester 1.8 g/day plus statin or statin alone. Mean age 61, 69% female. After ~5 years:
            - Major coronary events: 2.8% EPA versus 3.5% (NNT=143).
            - All-cause mortality: no difference.
            - Adverse events leading to discontinuation: 11.7% EPA ethyl ester plus statin versus 7.2% statin (NNH=23).

Context:

- Traditional Omega-3's are made up of EPA and decosahexaenoic acid (DHA).
    - Icosapent is an ethyl form of EPA,[1] a type of long chain omega-3 fatty acid.[3]

    - Systematic reviews of omega-3's do not generally find benefit in the prevention of cardiovascular disease[4,5] particularly when examining high quality studies.[5]
- Evidence gaps include:
    - A small secondary prevention trial has not been published.[6]
    - Additional trials evaluating EPA on cardiovascular outcomes are not being conducted.[7]
    - No studies compare EPA products.
    - Concerns exist with approving medications on single trial results.[8]
- Only icosapent is approved in Canada.[9]
    - Cost (~$3600/year) requires >40% reduction to approach cost effectiveness.[10]

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Disclosures:

Authors do not have any conflicts of interest to declare.

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