

RGH Pharmacy E-Bulletin

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A joint initiative of the Patient Services Section and the Drug and Therapeutics Information Service of the Pharmacy Department, Repatriation General Hospital, Daw Park, South Australia. The RGH Pharmacy E-Bulletin is distributed in electronic format on a weekly basis, and aims to present concise, factual information on issues of current interest in therapeutics, drug safety and cost-effective use of medications.

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Benefits of fish oil

The health benefits of fish oil have been extensively studied since it was first hypothesised that the lower rates of heart disease found in Greenland Eskimos was associated with their consumption of omega-3 (n-3) polyunsaturated fatty acids from fish. The n-3 fats found in fish include eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). The claimed health benefits of fish oil are too numerous to fully cover here, and many are yet to be supported by clear evidence at this stage. However there are some benefits of fish oil that have strong evidence and are now well recognised:

Hypertriglyceridaemia

Fish oil is an established treatment for hypertriglyceridaemia, reducing triglycerides in a dose dependant manner. The current approach recommended in Australia involves the use of 1.2 - 3.6 g (4 – 12 capsules) of combined EPA and DHA per day for first-line treatment.

Rheumatoid Arthritis

In rheumatoid arthritis, consumption of fish oil has been shown to reduce symptoms and the usage of non-steroidal anti-inflammatory drugs. For these benefits high doses of fish oil are required, with current recommendations involving a daily dose of 3 – 4 g (10 – 14 capsules) or 0.2 g/kg of combined EPA and DHA.

Coronary Heart Disease

The National Heart Foundation of Australia also recommends the consumption of fish oil for primary and secondary prevention of coronary heart disease. The Heart Foundation 2008 position statement recommends consumption of total EPA and DHA of 1 g per day (3 - 4 capsules) for secondary prevention, and consumption of 500 mg per day (1 - 2 capsules) for primary prevention. The consumption of fish oil via two or three oily fish meals per week is also advocated. Fish with the highest levels of n-3 fats in Australia include tinned salmon and sardines, some varieties of canned tuna, Atlantic and Australian salmon, and oysters.

A recently published Cochrane review sought to address concerns regarding exposure to mercury and dioxins from consumption of oily fish, finding no significant effects on mortality, cardiovascular events or risk of cancer following consumption of fish oil from either dietary or supplementary sources. The surprising lack of benefit on mortality and cardiovascular events in this study is contrary to previous findings, the overall recommendation was for evidence to be regularly reviewed as new trials are published.

Side effects associated with the therapeutic use of fish oil include reflux (which can be avoided by taking immediately before a meal, and dividing the daily dose into 2 - 3 doses). There is also some concern regarding the potential anticoagulant effect of fish oil and bleeding risk, although there have been relatively few reported bleeding-related adverse events. Patients treated with anticoagulants or taking high doses of fish oil should probably be made aware of this theoretical risk.

A one gram fish oil capsule on average contains 180 mg EPA and 120 mg DHA although this can vary. A concentrated liquid product is also available in Australia, and appropriate doses should therefore be confirmed when recommending the use of this style of product.

This E-Bulletin is based on work by Claire Jones, Pharmacy Intern, RGH

FOR FURTHER INFORMATION CONTACT THE PHARMACY DEPARTMENT ON 82751763 or email: chris.alderman@health.sa.gov.au
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