

RGH Pharmacy E-Bulletin

Volume 41 (8): March 21, 2011

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.

Editor: Assoc. Prof. Chris Alderman, University of South Australia – Director of Pharmacy, RGH

© Pharmacy Department, Repatriation General Hospital, Daw Park, South Australia 5041

Antiplatelet effects of Fish Oil supplements

Fish oil supplements are widely available and the use of these products is considered to be associated with a range of health benefits (refer E bulletin Vol 38(1)). Two of the most important omega-3 fatty acids in fish oil are eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). A 1g capsule of fish oil *does not* supply a 1g dose of omega-3 fatty acids. For example a 1g capsule of Blackmores Fish Oil[®] contains only 300 mg of omega-3 fatty acids (180 mg EPA and 120 mg DHA). Omacor[®] contains 840 mg of omega-3 fatty acids per capsule. For lowering triglyceride, 2-5g of the omega-3 fatty acids are needed. To achieve this would require the daily intake of four capsules of Omacor[®] daily or seven capsules of Blackmores Fish Oil[®].

Omega-3 fatty acids have antithrombotic effects and may increase the risk of bleeding. Particular caution is therefore needed for patients with cardiovascular disease, as they tend to be prescribed antiplatelet drugs and/or anticoagulants. There is a propensity for patients with cardiovascular disease to take fish oil supplements. Additionally, many patients with joint disease take the supplements. This may be important when joint surgery is planned and risk of intra-operative and post-operative bleeding must be minimised. Fish oil increases eicosapentaenoic content of phospholipids from red blood cells and platelets and alters their pattern of thromboxane and prostacyclin synthesis.

The data on antiplatelet effects of fish oil is limited. A mean dose of 3 g omega-3 fatty acids per day added to aspirin and clopidogrel did *not* increase bleeding risk in one study of 182 patients. Another study however, has reported epistaxis in 8 of 11 adolescents with familial hypercholesterolaemia treated who were treated with a fish oil supplement, and prolonged bleeding in a further three patients. The US National Institute of Health states intakes of 3 g or more Omega-3 fatty acids may increase bleeding risk.

Clinically significant bleeding associated with fish oil supplements may be more likely in those patients with other risk factors for bleeding (e.g. the elderly, those treated with concomitant antiplatelet drugs or anticoagulant drugs). One case report describes such a patient who suffered a subdural haematoma post fall while being treated with a combination of warfarin, aspirin and fish oil.

When taking a medication history from a patient it is helpful to know about use of fish oil supplements. In scenarios where bleeding is predictable (such as some elective surgical procedures) it would be wise to withhold the supplement for a period pre- procedure to allow for normalisation of platelet activity.

Acknowledgment – This E-Bulletin is based on work by Nicky Gordon, Senior Pharmacist, RGH

FOR FURTHER INFORMATION – CONTACT THE PHARMACY DEPARTMENT ON 82751763 or email: chris.alderman@rgh.sa.gov.au
Information in this E-Bulletin is derived from critical analysis of available evidence – individual clinical circumstances should be considered when making treatment decisions. You are welcome to forward this E-bulletin by email to others you might feel would be interested, or to print the E-Bulletin for wider distribution. Reproduction of this material is permissible for purposes of individual study or research.

View RGH E-Bulletins at www.auspharmlist.net.au/ebulletin.php