

Omega-3 fatty acid compounds and other fish oils

In England, Scotland, Wales and the Isle of Man, £2.8million is spent on omega-3 fatty acid compounds and other fish oils annually (NHSBSA England, Wales, Isle of Man Aug-Oct 23) and Public Health Scotland (Jun-Aug 23).

This bulletin provides further information on these products, which are considered to be a low priority for prescribing as there is insufficient evidence to support their use and they are not considered to be cost-effective (with the exception of icosapent ethyl prescribed in line with [NICE TA805](#)).

Recommendations

- Do not initiate omega-3 fatty acid compounds and other fish oils for any new patient in primary care (with the exception of icosapent ethyl prescribed in line with [NICE TA805](#)).
- For existing patients, deprescribe omega-3 fatty acid compounds and other fish oils (with the exception of icosapent ethyl prescribed in line with [NICE TA805](#)). Refer to the relevant specialist for patients prescribed omega-3 fatty acid compounds and other fish oils for any specialist indication.
- Patients for whom omega-3 fatty acid compounds are prescribed for specialist indications, e.g. schizophrenia (unlicensed), or where they have been recommended by a specialist lipid clinic should be referred back to the specialist for review. If there is any ongoing prescribing for specialist indications, this should take place in secondary care.
- Patients prescribed omega-3 fatty acid compounds or other fish oils with statin therapy for reducing the risk of cardiovascular events with raised triglycerides should be switched to icosapent ethyl, if appropriate and in line with [NICE TA805](#).
- Patients prescribed warfarin who stop taking omega-3 fatty acids compounds should be advised to inform their anticoagulant clinic of the change. In addition, the anticoagulant clinic should be informed of the change in prescribing practice so that they can check whether patients have stopped taking omega-3 medicines/supplements at their next blood test. This is to enable an accurate interpretation of their INR (in the unlikely event that there is any change) and any necessary dosage adjustments to be made accordingly.
- Inform patients of the risk of atrial fibrillation with omega-3 fatty acid compounds, especially at high doses, if they still wish to purchase them over-the-counter, and advise them to discontinue treatment if any symptoms of atrial fibrillation occur and present for further investigation.

Background

The omega-3 fatty acids, eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), are essential fatty acids. There are numerous products on the UK market that contain omega-3 fatty acids. Among them, some are licensed as medicinal products.¹

The majority of the oral formulations are indicated for use as adjuvant treatment in the secondary prevention of myocardial infarction and for treatment of hypertriglyceridaemia when dietary measures are not sufficient.¹

The National Institute of Health and Care Excellence (NICE) has also highlighted that the use of fish oils as a homogeneous therapeutic concept is problematic as there is variation in the fish oil dosage used in studies, and there are financial consequences to prescribing omega-3 supplements when the evidence shows no clear benefit.¹

National guidance

Prevention of cardiovascular disease (CVD)

[NICE NG238](#), entitled 'Cardiovascular disease: risk assessment and reduction, including lipid modification', published on 14 December 2023 includes the following recommendations:

- Do not offer omega 3 fatty acid compounds to prevent CVD.²

Icosapent ethyl is an exception to this if used as described in NICE's technology appraisal guidance on icosapent ethyl with statin therapy for reducing the risk of cardiovascular events in people with raised triglycerides.²

- Tell people that there is no evidence that omega 3 fatty acid compounds help to prevent CVD (except use of icosapent ethyl as described in [NICE TA805](#) on icosapent ethyl with statin therapy).²

Icosapent ethyl is recommended as an option for reducing the risk of cardiovascular events in adults fulfilling specific criteria.³ It is recommended if the person has a high risk of cardiovascular events and raised fasting triglycerides (1.7mmol/litre or above) and are taking statins, but only if they additionally fulfil both of the following criteria:³

- Established cardiovascular disease (secondary prevention), defined as a history of any of the following: acute coronary syndrome (such as myocardial infarction or unstable angina needing hospitalisation), coronary or other arterial revascularisation procedures, coronary heart disease, ischaemic stroke, peripheral arterial disease.

AND

- Low-density lipoprotein cholesterol (LDL-C) levels above 1.04 mmol/litre and below or equal to 2.60 mmol/litre.

In addition to the above, [NICE NG185](#) which covers management of 'Acute Coronary Syndromes' states:

- Do not offer or advise people to use the following to prevent another MI:⁴
 - » omega-3 fatty acid capsules.
 - » omega-3 fatty acid supplemented foods.

This guidance also highlighted that if people choose to take omega-3 fatty acid capsules or eat omega-3 fatty acid supplemented foods, there is no evidence of harm.⁴ However, new safety information has highlighted a dose-dependent increased risk of atrial fibrillation in patients with established cardiovascular diseases or cardiovascular risk factors treated with omega-3-acid ethyl esters compared to placebo. The observed risk is highest with a dose of 4g/day.⁵ Consequently, patients should be advised of this risk and if atrial fibrillation develops, treatment should be permanently discontinued.⁵

Furthermore, [NICE CG71](#) states that people with familial hypercholesterolaemia should not routinely be recommended to take omega-3 fatty acid supplements.⁶

Schizophrenia and children at high risk of psychosis

NICE published an evidence summary ([ESUOM19](#)) in 2013 entitled 'Schizophrenia: omega-3 fatty acid medicines'. It highlighted that there are no licensed omega-3 preparations for schizophrenia,¹ and a Cochrane Systematic Review concluded the evidence was inconclusive and the use of omega-3 fatty acids for people with schizophrenia remains experimental.⁷

Furthermore, NICE initially included a research recommendation for research on the clinical and cost effectiveness of omega-3 fatty acids in the treatment of children and young people considered to be at high risk of developing psychosis.⁸ However, this recommendation was withdrawn from [CG155](#) in 2022 as additional studies were identified that supported the decision to not make any recommendations about the use of omega-3 polyunsaturated fatty acids (PUFAs) to treat possible psychosis.⁹

Non-alcoholic fatty liver disease (NAFLD)

[NICE NG49](#) states: Do not offer omega-3 fatty acids to adults with NAFLD because there is not enough evidence to recommend their use.¹⁰

Multiple sclerosis (MS) in adults

[NICE NG220](#) states: Do not offer omega-3 or omega-6 fatty acid compounds to treat MS.¹¹ Explain that there is no evidence that they affect relapse frequency or progression of MS.¹¹

Autism spectrum disorder in under 19s

[NICE CG170](#) states: Do not use omega-3 fatty acids to manage sleep problems in autistic children and young people.¹²

NHS England

As a result of NICE recommending only one omega-3 fatty acid compound in specific clinical circumstances, and that all other omega-3 fatty acid compounds are not suitable for prescribing, NHS England included omega-3 fatty acid compounds (excluding icosapent ethyl) in their 2023 guidance entitled 'Items which should not routinely be prescribed in primary care: policy guidance'.¹³

Omega-3 fatty acid compounds are essential fatty acids that can be obtained from the diet. They (excluding icosapent ethyl) have a lack of robust evidence of clinical effectiveness. Consequently, they should not be initiated in primary care in England and should be deprescribed for existing patients.¹³

NHS Wales

This recommendation is also echoed by the All Wales Medicines Strategy Group (AWMSG) in their guidance entitled 'Medicines Identified as Low Priority for Funding in NHS Wales – Paper 2'.¹⁴

NHS Scotland

In Scotland, omega-3-acid ethyl esters (Omacor®) is not recommended for use within the NHS for hypertriglyceridaemia.¹⁵ However, it is deemed acceptable for general use within NHS Scotland as an additional treatment for the secondary prevention of myocardial infarction, but the priority given to this agent needs to be considered alongside the implementation of other effective approaches to the secondary prevention of cardiovascular disease, always keeping in mind alternative dietary methods of obtaining fish oil supplementation.¹⁶

Health and Social Care Northern Ireland

The Northern Ireland Formulary states: Do not offer omega-3 fatty acid compounds*, nicotinic acid or bile acid sequestrants (anion exchange resins) for the prevention of CVD (*icosapent ethyl is an exception to this if used as described in [NICE TA805](#) guidance on icosapent ethyl with statin therapy for reducing the risk of cardiovascular events in people with raised triglycerides). Inform patients there is no evidence that omega-3 fatty acids help to prevent CVD.¹⁷

It also states that: some studies suggest that increasing omega-3 (found in fish oils) and reducing omega-6 (mostly in fast foods), may improve symptoms for people with dry eye syndrome and blepharitis. Omega-3 can be obtained from dietary sources. Alternatively, omega-3 supplements are

available to buy from pharmacies and health food shops. Omega-3 supplements are not recommended on a health service prescription.¹⁷

In addition, the 'Stop and Limited Evidence List' highlights that the Northern Ireland Health and Social Care Board (HSCB) does not support the prescribing of green-lipped mussel (GLM, a source of omega fatty acids, e.g. Pernaton Gel®) or omega-3 fish oils (e.g. EyeQ® and Efalex®). Patients should be counselled and advised to purchase these over-the-counter if they wish to continue taking them.¹⁸

However, for Omacor® and Maxepa® (two brands of omega-3 fatty acids), the 'Stop and Limited Evidence List' states that although NICE advises that there is no evidence that omega-3 fatty acid compounds help to prevent cardiovascular disease, including following a myocardial infarction, treatment may be initiated under the direction of a specialist (cardiology or non-cardiology use), but should not be initiated in primary care.¹⁸

Costs and savings

Table 1: Cost of omega-3 fatty acid compounds and other fish oils^{19–22}

Product	Cost per 28 capsules
Eicosapentaenoic acid 460mg / Docosahexaenoic acid 380mg capsules	£14.24
A1 Omega 1000mg capsules (TriOn Pharma Ltd)	£4.41
AceOmeg 1000mg capsules (Essential-Healthcare Ltd)	£6.97
G & G Omega 3 1000mg softgels capsules (G & G Food Supplies Ltd)	£2.33
Teromeg 1000mg capsules (Advanz Pharma)	£11.39
All other omega-3 fatty acid compounds and other fish oils preparations (including unlicensed 'specials' or supplements)	Variable, fluctuating and unregulated

343. Omega-3 fatty acid compounds and other fish oils 2.0

Chart 1 and chart 2 show spend and items for omega-3 fatty acid compounds and other fish oils prescribed on an FP10/WP10 in England, Wales and the Isle of Man.

Chart 1. Total cost for omega-3 fatty acid compounds and other fish oils prescribed on the NHS²³

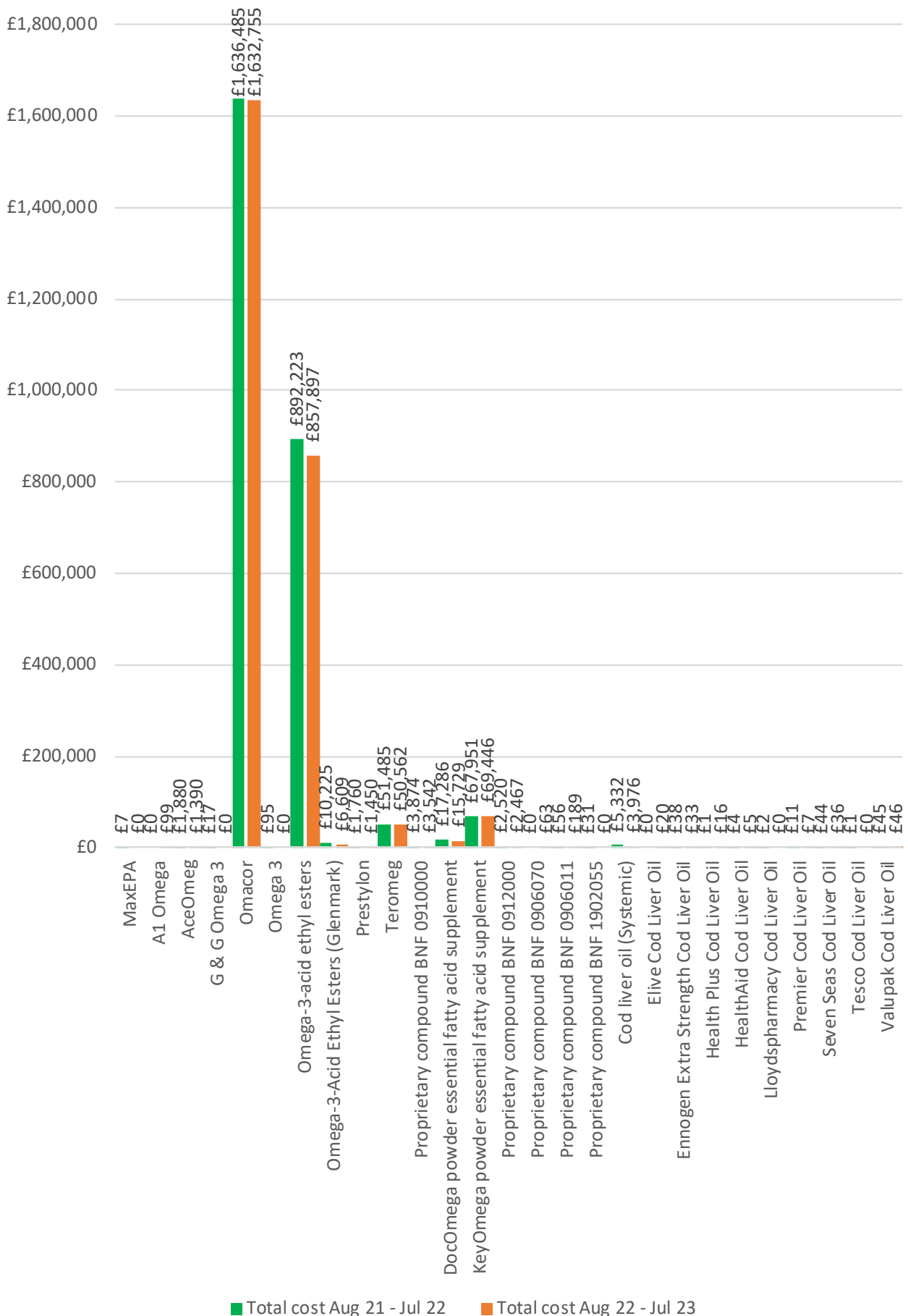
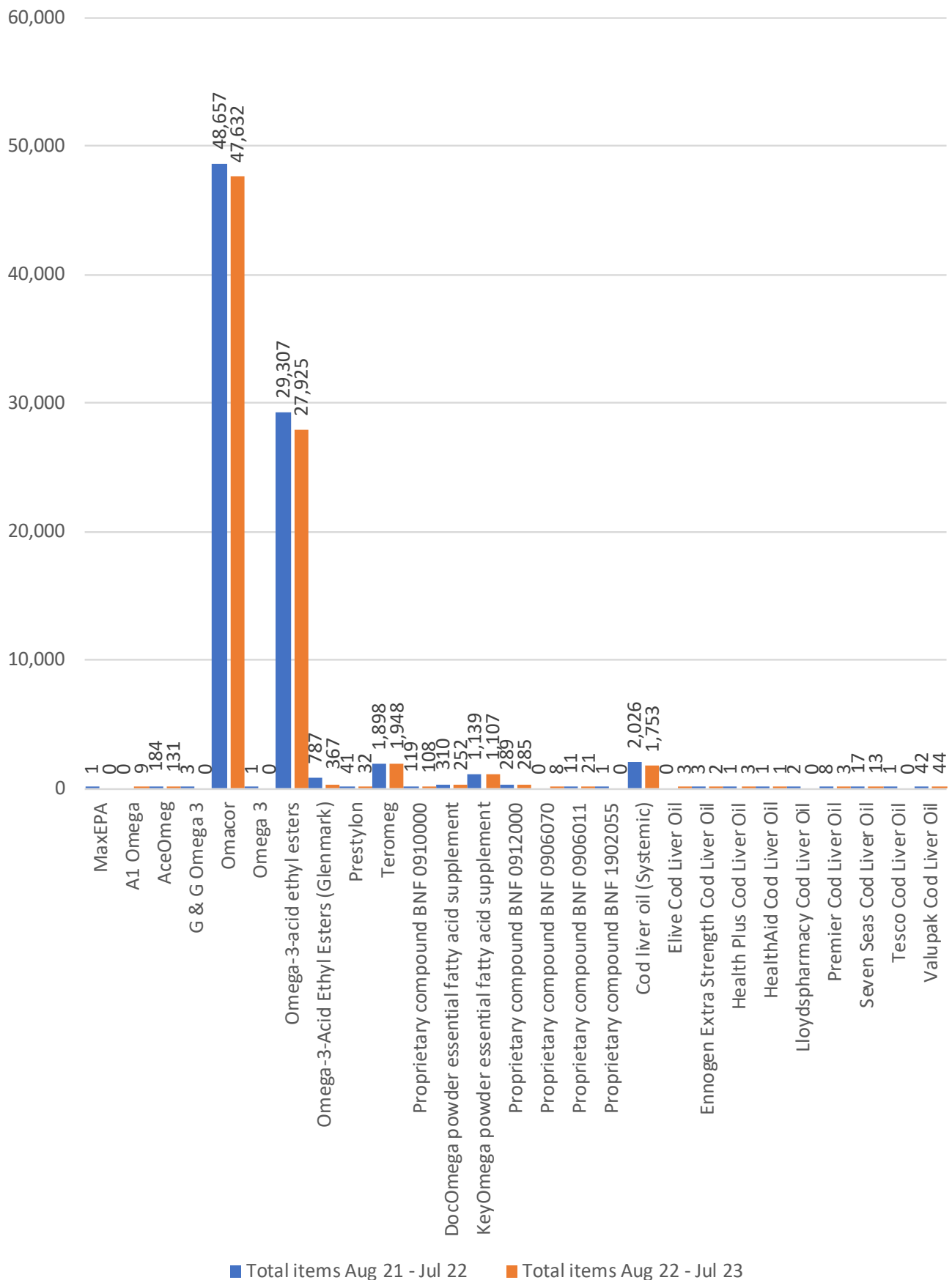


Chart 2. Total items for omega-3 fatty acid compounds and other fish oils prescribed on the NHS.



In terms of the trend illustrated by these graphs, it can be seen that there has been a slight decreasing trend in the prescribing of some omega-3 fatty acid compounds. However, the prescribing of a number of preparations listed actually increased, and the overall spend was similar in both years (£2.69 million vs. £2.65 million).

Savings

In terms of potential savings, deprescribing all omega-3 fatty acid compounds would result in annual savings of £2.8million in England, Wales, the Isle of Man and Scotland, or £3,887 per 100,000 population.

Deprescribing

Patients for whom omega-3 fatty acid compounds are prescribed for specialist indications, e.g. schizophrenia (unlicensed), or where they have been recommended by a specialist lipid clinic should be referred back to the specialist for review. If there is any ongoing prescribing for specialist indications, this should take place in secondary care.

Patients prescribed omega-3 fatty acid compounds or other fish oils with statin therapy for reducing the risk of cardiovascular events with raised triglycerides should be considered for switching to icosapent ethyl, if appropriate and in line with [NICE TA805](#).

Fish oil can have an anti-platelet effect at high doses, although most research indicates that doses of 3–6g/day of fish oil do not significantly affect the anticoagulant status of patients taking warfarin.²⁴ However, when deprescribing omega-3 fatty acid compounds for patients taking warfarin, this potential interaction²⁴ should be considered. In patients prescribed warfarin, the anticoagulant clinic should be informed when omega-3 fatty acid compounds have been deprescribed, if the patient is not purchasing them over-the-counter. This is to enable an accurate interpretation of their INR (in the unlikely event that there is any change) and any necessary dosage adjustments to be made accordingly.

Additional resources

The Association of UK Dietitians (BDA). Omega-3: Food Fact Sheet. <https://www.bda.uk.com/resource/omega-3.html> provides information for patients, including dietary guidelines for omega-3-rich foods (such as a portion size guide for fish and alternative dietary sources of omega-3), alongside tips for purchasing omega-3 supplements over-the-counter, for people who wish to do so.

Summary

Omega-3 fatty acid compounds and other fish oils are considered to be a low priority for prescribing as there is insufficient evidence to support their use and they are not considered to be cost-effective (with the exception of icosapent ethyl prescribed in line with [NICE TA805](#)).

They should not be initiated in any new patients in primary care. Existing patients should have these products deprescribed, with advice to purchase them over-the-counter if patients still wish to take them after understanding that there is a lack of consistent evidence to support their use and a risk of atrial fibrillation.

Patients for whom omega-3 fatty acid compounds are prescribed for specialist indications, e.g. schizophrenia (unlicensed), or where they have been recommended by a specialist lipid clinic should be referred back to the specialist for review. If there is any ongoing prescribing for specialist indications, this should take place in secondary care.

References:

1. NICE. Schizophrenia: omega-3 fatty acid medicines. Evidence summary [ESUOM19]. September 2013. www.nice.org.uk/guidance/esuom19
2. NICE. Cardiovascular disease: risk assessment and reduction, including lipid modification. NICE guideline [NG238]. Published 14 December 2023 <https://www.nice.org.uk/guidance/ng238>
3. NICE. Icosapent ethyl with statin therapy for reducing the risk of cardiovascular events in people with raised triglycerides. Technology appraisal guidance [TA805]. Published July 2022. <https://www.nice.org.uk/guidance/ta805>

4. NICE. Acute coronary syndromes. NICE guideline [NG185]. Published November 2020. <https://www.nice.org.uk/guidance/ng185>
5. European Medicines Agency. Meeting highlights from the Pharmacovigilance Risk Assessment Committee (PRAC) 25-28 September 2023. New safety information for Omega-3-acid ethyl esters. September 2023. <https://www.ema.europa.eu/en/news/meeting-highlights-pharmacovigilance-risk-assessment-committee-prac-25-28-september-2023>
6. NICE. Familial hypercholesterolaemia: identification and management. Clinical guideline [CG71]. Published August 2008, last updated October 2019. <https://www.nice.org.uk/guidance/cg71>
7. Irving C.B., Mumby-Croft R, Joy LA. Polyunsaturated fatty acid supplementation for schizophrenia. Cochrane Library. 19 July 2006. <https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD001257.pub2/full>
8. NICE. Psychosis and schizophrenia in children and young people. The NICE guideline on recognition and management. Full guideline. Last updated December 2021. <https://www.nice.org.uk/guidance/cg155/evidence/full-guideline-pdf-6785647416>
9. NICE. Appendix A: Summary of evidence from surveillance. 2022 surveillance of psychosis and schizophrenia in children and young people: recognition and management. (2013 NICE guideline CG155) <https://www.nice.org.uk/guidance/cg155/evidence/appendix-a-summary-of-evidence-from-surveillance-pdf-10956470798> accessed 21/12/23.
10. NICE. Non-alcoholic fatty liver disease (NAFLD): assessment and management. NICE guideline [NG49]. Published July 2016. <https://www.nice.org.uk/guidance/ng49>
11. NICE. Multiple sclerosis in adults: management. NICE guideline [NG220]. Published June 2022. <https://www.nice.org.uk/guidance/ng220>
12. NICE. Autism spectrum disorder in under 19s: support and management. Clinical guideline [CG170]. Published August 2013, last updated June 2021. <https://www.nice.org.uk/guidance/cg170>
13. NHS England. Items which should not routinely be prescribed in primary care: policy guidance. August 2023. <https://www.england.nhs.uk/long-read/items-which-should-not-routinely-be-prescribed-in-primary-care-policy-guidance/>
14. All Wales Medicines Strategy Group (AWMSG). Medicines Identified as Low Priority for Funding in NHS Wales – Paper 2. Published December 2018, last updated September 2022. <https://awttc.nhs.wales/files/guidelines-and-pils/medicines-identified-as-low-priority-for-funding-in-nhs-wales-paper-2/>
15. Scottish Medicines Consortium (SMC). Omega-3-acid ethyl esters (Omacor®). 16/02. November 2002. <https://www.scottishmedicines.org.uk/medicines-advice/omega-3-acid-ethyl-esters-omacor-fullsubmission-1602/>
16. Scottish Medicines Consortium (SMC). Omega-3-acid ethyl esters for (Omacor®). 15/02. November 2002. <https://www.scottishmedicines.org.uk/medicines-advice/omega-3-acid-ethyl-esters-for-omacor-fullsubmission-1502/>
17. Northern Ireland Formulary. <https://niformulary.hscni.net/> Last accessed 15/11/23.
18. Northern Ireland Department of Health Strategic Planning and Performance Group. Stop and Limited Evidence List. April 2023. https://niformulary.hscni.net/wpfd_file/stop-and-limited-evidence-list-april-2023/
19. NHS Business Services Authority (NHSBSA). Drug Tariff. January 2024. <https://www.nhsbsa.nhs.uk/pharmacies-gp-practices-and-appliance-contractors/drug-tariff>
20. Business Services Organisation. Northern Ireland Drug Tariff. November 2023. <https://bsc.hscni.net/directorates/operations/family-practitioner-services/pharmacy/contractor-information/drug-tariff-and-related-materials/drug-tariff-2/>
21. Joint Formulary Committee. British National Formulary (online) London: BMJ Group and Pharmaceutical Press. <https://www.medicinescomplete.com/> Accessed on 18/12/23.
22. NHSBSA. DM+D browser. <https://dmd-browser.nhsbsa.nhs.uk/> Accessed 09/01/24.

23. PrescQIPP. Visual growth deep dive. BNF growth drill dwn latest 12 months; Aug21-Jul21 v Aug22-Jul23. <https://www.prescqipp.info/our-resources/data-and-analysis/financial-reports/financial-summary-and-deep-dive-growth-reports/commissioner-visual-growth-deep-dive-reporting/>

24. National Institutes of Health (NIH). Office of dietary supplements. Omega-3 Fatty Acids: Fact Sheet for Health Professionals. Last updated February 2023. <https://ods.od.nih.gov/factsheets/Omega3FattyAcids-HealthProfessional/>

Additional PrescQIPP resources

Briefing	https://www.prescqipp.info/our-resources/bulletins/bulletin-343-omega-3-fatty-acid-compounds-and-other-fish-oils
Implementation tools	
Data pack	https://data.prescqipp.info/views/B343_Omega-3fattyacidcompoundsandotherfishoils/FrontPage?%3Aembed=y&%3Aiid=1&%3AisGuestRedirectFrom-Vizportal=y

Information compiled by Gemma Dowell, PrescQIPP CIC, December 2023 and reviewed by Katie Smith, PrescQIPP CIC, January 2024. Non-subscriber publication January 2025.

Support with any queries or comments related to the content of this document is available through the PrescQIPP help centre <https://help.prescqipp.info>

This document represents the view of PrescQIPP CIC at the time of publication, which was arrived at after careful consideration of the referenced evidence, and in accordance with PrescQIPP’s quality assurance framework.

The use and application of this guidance does not override the individual responsibility of health and social care professionals to make decisions appropriate to local need and the circumstances of individual patients (in consultation with the patient and/or guardian or carer). [Terms and conditions](#)