replacement 2 yrs before and some protheses had to be explanted in the past because of infection. We did not observe an infection of the remaining devices during RTX + ETN therapy.

Depletion of B cells and anti-TNF-α therapy target different pathways of inflammation and therefore probably act synergistically. TNF-α is one of the most powerful pro-inflammatory cytokines and is produced by monocytes. RTX treatment virtually depletes B cells in the circulation, but synovial B cells are only depleted in patients with RA who show a good response to RTX therapy [10]. An inflammatory network with multiple cell types, cytokines and chemokines contributes to synovitis. Elimination of one specific mediator might be bypassed by other mechanisms.

This is the first report which shows that the combination of RTX + ETN and DMARDs might be safe and effective in patients with RA.

Rheumatology key message

- Combination of RTX and ETN is safe and effective in patients with RA.

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The use of fish oil in the community: results of a population-based study

Sir, Fish oil has been demonstrated to have symptomatic benefits [1] and improve disease activity in RA [2]. In addition, fish oil has been shown to have NSAID-sparing effect in patients with RA [3–6]. Recently, the use of fish oil in patients with early RA has been shown to reduce cardiovascular risk factors in these patients already at increased risk of cardiovascular disease [6]. In addition, reduction in NSAID use is likely to reduce cardiovascular and gastrointestinal harm in these patients. A previous study of complementary medicine use in outpatients with OA showed 5% were taking fish oil supplements [7]. Fish oil is widely marketed to the general public for joint and general health benefits. We undertook this population-based study to determine the use of fish oil and its effects in the community.

Participants of the North West Adelaide Health Study (NWAHS) were recruited from households randomly selected from the electronic telephone directory in 2000–02. At follow-up of the NWAHS cohort in 2004–05 (response rate: 81.0%), clinic assessment and medication data were available on 3161 individuals. Respondents completed surveys and clinic assessment included measurement of blood pressure, medication use (including fish oil and NSAIDs), information-assessing doctor-diagnosed conditions [including arthritis (OA, RA, other), osteoporosis, diabetes, asthma and cardiovascular disease (myocardial infarct, angina, stroke, transient ischaemic attack)], joint pain (in at least one of the following sites—foot, knee, hip, hand, shoulder) and behavioural risk factors, health service utilization and demographics. These methods have been previously described [8].

Data were weighted to Census data by region, age group, gender and probability of selection in the household, to provide population-representative estimates. Data were analysed using SPSS (Version 15.0, SPSS, Chicago, IL, USA). Multivariable logistic regression analysis determined the likelihood of fish oil use associated with arthritis adjusted for covariates including age, smoking status, education level and income. The study was approved by the institutional ethics committees of the North West Adelaide Health Service, and all subjects gave written informed consent.

Overall, among participants who were able to provide information related to their medication use, 6.0% reported that they took fish oil. The overall prevalence of self-reported arthritis was 21.4%, including self-reported prevalence of OA (7.5%), RA (2.9%) and other (11%). Those reporting that they had RA reported the highest level of taking fish oil (18.8%), followed by those with OA (13.7%). Overall, 42.4% of those taking fish oil were using it for 'General health and wellbeing' and 32.6% for 'Joint pain or joint health'. Of the 274 participants in whom doses of fish oil were available, the median daily dose was 1 g (range 0.2–20 g). Only two participants were taking liquid fish oil, the remainder were taking fish oil in capsule form.

Fish oil use was independently associated with female gender, increasing age and increasing household income, but not with higher educational attainment (Table 1). Participants with doctor-diagnosed arthritis were more likely to use fish oil, compared with those without joint pain and those with joint pain without arthritis diagnosed by a doctor. Those with history of cardiovascular disease, uncontrolled hypertension and those using NSAIDs were less likely to use fish oil, although these associations were non-significant. Former and non-smokers were more likely to use fish oil than smokers. Participants using fish oil were significantly more likely to have had frequent visits to their general practitioner and alternative therapists than those not taking fish oil.

TABLE 1. Prevalence of fish oil use and multivariable logistic regression analysis of factors associated with fish oil use

	Fish oil use, % (*n*)	Odds ratio (95% CI)
Demographic factors		
Sex		
Male	4.6 (71)	1.0 (referent)
Female	8.5 (137)	1.6 (1.2, 2.3)
Age, years		
20–34	1.6 (14)	1.0 (referent)
35–54	5.5 (66)	3.3 (1.2, 6.0)
55–74	13.1 (99)	6.7 (3.5, 12.7)
75+	9.3 (29)	4.2 (2.0, 9.0)
Education		
Secondary or less	8.1 (118)	1.0 (referent)
Diploma, trade qualification	5.7 (66)	0.9 (0.7, 1.3)
University degree	4.4 (24)	0.9 (0.5, 1.5)
Annual household income		
<$400 000	8.3 (109)	1.0 (referent)
$400 000–80 000	4.8 (55)	1.0 (0.7, 1.5)
⩾$80 001	5.8 (32)	1.4 (0.8, 2.3)
Not stated	8.4 (12)	1.0 (0.5, 1.9)
Chronic disease		
Joint pain[a]		
No	4.4 (68)	1.0 (referent)
Diagnosed arthritis	13.3 (86)	1.6 (1.1, 2.4)
Undiagnosed joint pain	5.4 (51)	1.0 (0.7, 1.5)
Osteoporosis[b]		
No	6.3 (188)	1.0 (referent)
Yes	15.2 (17)	1.1 (0.6, 2.0)
Cardiovascular disease[b]		
No	6.4 (186)	1.0 (referent)
Yes	8.8 (18)	0.7 (0.4, 1.3)
NSAID use		
No	6.5 (197)	1.0 (referent)
Yes	8.2 (12)	0.9 (0.6, 2.3)
Risk factors		
Smoking status		
Current	1.9 (12)	1.0 (referent)
Former	8.9 (96)	3.5 (1.9, 6.4)
Never	6.9 (100)	2.7 (1.4, 5.1)
Uncontrolled hypertension[c]		
No	5.6 (129)	1.0 (referent)
Yes	9.6 (78)	1.1 (0.8, 1.6)
Health service use in previous 12 months		
GP visits		
None	1.5 (4)	1.0 (referent)
1–4	5.5 (91)	2.6 (1.0, 7.1)
5+	9.0 (110)	3.5 (1.3, 9.3)
Alternative therapist[d]		
No	6.2 (180)	1.0 (referent)
Yes	11.0 (25)	2.1 (1.3, 3.3)

[a]Doctor diagnosed OA/RA/other type of arthritis, or undiagnosed arthritis/joint pain in at least one site including hand, foot, shoulder, hip and knee.
[b]Self-reported doctor diagnosed: myocardial infarct, angina, stroke, transient ischaemic attack.
[c]Clinic determined.
[d]Includes visits to naturopath, osteopath.

Fish oil use is widespread in the community with higher levels amongst those with doctor-diagnosed arthritis. However, in the majority of people with arthritis, fish oil was not taken at analgesic/anti-inflammatory doses. This is especially important in patients with RA as symptomatic benefits are seen with doses between 2.6 g and 7.1 g per day, with no effect seen at 1 g per day [9], the most common dose seen in this study. However, the effectiveness of fish oil in OA has not yet been the subject of a randomized controlled trial. The pattern of usage we observed suggested that GPs or other therapists were recommending usage of fish oil in participants with doctor-diagnosed arthritis. Fish oil has been demonstrated to reduce coronary artery disease events and reduce triglyceride levels [10]. However, in this population-based study, those at highest risk of CVD events (those with existing CVD, uncontrolled hypertension, current smokers and NSAID users) were less likely to be using fish oil. The symptomatic benefits of fish oil in arthritis have been well known for some time; however, most users are using suboptimal doses. In addition, less than one in five participants with RA were using fish oil, a proven intervention that is safe and inexpensive with favourable collateral benefits on cardiovascular risk and can reduce reliance on NSAIDs.

Rheumatology key message

- Few RA patients use fish oil, a proven intervention with collateral benefits on cardiovascular risk.

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Detection of anti-PTX3 autoantibodies in systemic lupus erythematosus

SIR, Systemic lupus erythematosus is a multiorgan autoimmune disease characterized by the presence of autoantibodies mainly directed against components of the nucleus. The main