Conclusion This study demonstrates that despite evidence of Vitamin D and its role in anti-inflammatory and immune-modulating effects (in addition to bone protection) we are not actively measuring and treating its deficiency. Perhaps guidance from ECCO may encourage our testing of vitamin D in IBD patients.

Competing interests None declared.

PWE-248 DOCOSAHEXANOEIC ACID IN THE AETIOLOGY OF CROHN'S DISEASE—DATA FROM A EUROPEAN PROSPECTIVE COHORT STUDY (EPIC)

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Introduction Docosahexaenoic acid (DHA) is an n-3 polyunsaturated fatty acid, present in fish oils, which possess anti-inflammatory properties, including biological effects on genetic expression, immune cell function and the production of inflammatory eicosonoids. The aim of this investigation was to conduct the first prospective cohort study to determine if low dietary intakes of this nutrient were associated with the development of incident Crohn's disease.

Methods A total of 229 702 healthy participants aged 30—74 years of age were recruited in a prospective cohort study (EPIC—European Prospective Investigation Into Cancer) who were resident in either: Sweden, Denmark, The Netherlands, Germany or The UK. At baseline, participants completed food frequency questionnaires from which their intakes of DHA and other dietary fatty acids were determined. The cohort was followed-up between 1992 and 2004 to identify those who developed incident Crohn's disease, with each diagnosis medically confirmed by a review of the medical notes. Each case was matched with four controls for gender, age at recruitment and centre, and the analysis performed using conditional logistic regression. Adjustments were made for: smoking, total energy, fat and fatty acids, which affect the inflammatory process.

Results In the cohort, 73 participants developed incident Crohn's disease (64% women) at a mean age of 56.3 years (SD=11.1 years). Of these, 51% had disease affecting the terminal ileum and 19% had a pancolitis. The four higher quintiles of DHA intake were all inversely associated with the development of Crohn's disease, with the highest (>310 mg/day) having the largest effect (OR 0.07, 95% CI 0.01 to 0.80, p=0.03), with a dose-response across categories (OR trend 0.54, 95% CI 0.30 to 0.98, p=0.04). The attributable fraction, namely the percentage of cases which may be due to the lowest dietary intake of DHA was 40%.

Conclusion The data suggest a potential dose-dependent protective effect for increasing dietary DHA in the aetiology of Crohn's disease. DHA should be measured in future aetiological studies of this disease and could be assessed as a dietary treatment in clinical trials of patients.

Competing interests None declared.

PWE-249 BODY MASS INDEX IN THE AETIOLOGY OF INFLAMMATORY BOWEL DISEASE—DATA FROM A EUROPEAN COHORT STUDY (EPIC)

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Introduction There are plausible biological mechanisms for how obesity may be involved in the development of inflammatory bowel disease (IBD) due to the pro-inflammatory cytokines synthesised by adipose tissue including TNF-α. The aim of this work was to conduct the first prospective cohort study of obesity in the aetiology of IBD.

Methods The cohort consisted of 366 351 healthy men and women aged 30—74 years from centres in Europe (EPIC—European Prospective Investigation into Cancer) recruited between the years 1991 and 1998. At recruitment participants' weight, height and energy intake were measured and physical activity from questionnaires and their body mass index (BMI) calculated. The cohort was monitored to 2004 to identify those who developed Crohn's disease (CD) or ulcerative colitis (UC). Each diagnosis was medically confirmed via review of the medical notes. Each case was matched with four controls, for gender, age at recruitment and centre. BMI was divided into five categories. Conditional logistic regression was used to calculate OR and 95% CI adjusted for smoking.

Results In the cohort, 102 participants developed incident CD (73% female, mean age of 55.9 years, SD=11.0 years) and 213 participants developed incident UC (61% female, mean age of 57.5 years, SD=10.8 years). There were no associations between the four higher categories of BMI and the development of CD (Trend=1.00, 95% CI 0.79 to 1.27, p=0.91) or UC (Trend=1.03, 95% CI 0.83 to 1.29, p 0.76). Dividing BMI in two categories.

Conclusion No associations were found between BMI and either CD or UC. Further studies are required to confirm these results. If confirmed then BMI does not need to be measured in future epidemiological studies of IBD.

Competing interests None declared.

PWE-250 AZATHIOPRINE AND ALLOPURINOL CO-THERAPY FOR IBD PATIENTS IS A SAFE AND EFFECTIVE TREATMENT OPTION IN THE DISTRICT GENERAL HOSPITAL SETTING

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Introduction Reports from specialist inflammatory bowel disease (IBD) units have demonstrated that allopurinol and low-dose thiopurine co-therapy is an effective treatment option in patients who have failed standard dose therapy. There is little experience however from the district general hospital (DGH) setting. Co-therapy was introduced in our unit in September 2010.

Aim To evaluate the safety and therapeutic outcome of IBD patients treated with azathioprine and allopurinol co-therapy at our institution.

Methods A prospective database of all patients treated with allopurinol co-therapy is maintained at our institution. We reviewed the database entries and case notes of all patients. Data from patients who had been on allopurinol for <3 months were disregarded.

Results 25 patients were identified, five were excluded because of insufficient follow-up (<3 months) and one patient was lost to follow-up. The median length of co-therapy was 9 (range 3—12) months. Diagnosis was ulcerative colitis (12), Crohn's disease (7), IBD-Unclassified (1). Indications for co-therapy were abnormal LFTs (3), drug side effects (8), high methylmercaptopurine (5), gout (2), therapeutic failure (2). 6-thioguanine nucleotide levels were measured where appropriate in patients before co-therapy, of these 50.0% were therapeutic. Following co-therapy 6-thioguanine nucleotide levels were therapeutic in 81.8% of patients. Co-therapy was effective and well tolerated in 13 (68.4%). Two (10%) patients developed side effects from allopurinol both had been treated with 200 mg od, in one patient (50%) symptoms resolved with dose reduction.

Conclusion We have previously published our long-term outcome data of IBD patients treated with thiopurines; 55% of these patients stopped thiopurine therapy due to therapeutic failure or side effects. The current data demonstrate that the majority of this refractory