Conclusion: Differences in study design and classification criteria result in slightly different patient populations in each registry. The outcome of pregnancies was favourable. Preterm birth rates are within rates reported by the WHO for the EU general population. However, a selection bias of rather planned and well-controlled pregnancies cannot be ruled out. This is the first collaborative analysis of the EuNeP registries. Descriptive data were combined, and will be – as a next step – pooled together.

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References:

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FRI0559

ASSOCIATION BETWEEN DIET QUALITY IN CHILDHOOD AND ADULTHOOD AND KNEE SYMPTOMS IN YOUNG ADULTS

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Background: Knee osteoarthritis (OA) is the most prevalent joint disease worldwide, but no disease-modifying treatments are available. Existing treatments largely focus on relieving symptoms, but they may have substantial adverse effects. Identifying risk factors affecting knee symptoms is important for developing safer prevention strategies of knee OA symptoms.

Objectives: To describe the associations between diet quality in childhood and adulthood and knee symptoms in young adults.

Methods: Participants were from the Australian Schools Health and Fitness Survey (ASHFS) in 1985, which was conducted to provide benchmark data on the health and fitness of Australian schoolchildren. During 2004-2006, participants were followed up in the Childhood Determinants of Adult Health (CDAH) Study. Dietary measures were collected in ASHFS (aged 10-15 years) and CDAH Study (aged 26-36 years) using food questionnaires. Diet quality was assessed by Dietary Guidelines Index (DGI), reflecting the adherence to Australian Dietary Guidelines. The DGI comprises 9 components and its maximum possible score is 100. A higher score indicated higher diet quality. During 2008-2010, participants (aged 31-41 years) were followed up in the CDAH Knee Study. Knee symptoms were collected using Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC). Zero-inflated negative binomial regression analyses were used to assess the associations between diet quality and knee symptoms. Age, sex, body mass index, physical activity, total energy intake, and knee injury history were included as potential confounders based on biological plausibility.

Results: A total of 399 participants (48.4% were female) were included in analysis. The average childhood and adult DGI was 46.5 and 55.4, respectively. The prevalence of knee pain, stiffness and dysfunction was 35.1%, 31.6% and 39.9%, respectively. The overall childhood DGI was not associated with adult knee symptoms. However, the limited intake of discretionary foods in childhood was associated with lower pain (Mean ratio (MR): 0.96, 95% confidence interval (CI): 0.92-1.00) and dysfunction (MR: 0.94, 95% CI: 0.90-0.99). The overall adult DGI was not associated with knee symptoms. However, replacing saturated fats with unsaturated fats in adulthood was associated with lower WOMAC (Pain: MR 0.93, 95% CI 0.87-0.99; stiffness: MR 0.93, 95% CI 0.87-0.99; dysfunction: MR 0.91, 95% CI 0.83-0.99), drinking water in adulthood was associated with lower stiffness (MR: 0.90, 95% CI: 0.83-0.99), and fruit intake in adulthood was associated with lower dysfunction (MR: 0.90, 95% CI: 0.81-0.99). Moreover, higher DGI score for dairy in adulthood was associated with higher WOMAC (Pain: MR 1.07, 95%

CI 1.00-1.13; stiffness: MR 1.13, 95% CI 1.05-1.21; dysfunction: MR 1.11, 95% CI 1.02-1.21). The overall score change of DGI from childhood to adulthood was not associated with adult knee symptoms. However, the score change of replacing saturated fats with unsaturated fats from childhood to adulthood was associated with lower stiffness (MR 0.89, 95% CI 0.80-0.98), and the score change of fruit intake was associated with lower dysfunction (MR 0.92, 95% CI 0.86-0.99).

Conclusion: Several DGI component scores in childhood and adulthood and some changes of DGI component score from childhood to adulthood were associated with knee symptoms in young adults. The results suggested that early-life diet quality may affect knee symptoms in young adults.

Disclosure of Interests: None declared

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FRI0560

INCREASED RISK OF RHEUMATOID ARTHRITIS DIAGNOSIS IN STATIN USERS IN A LARGE NATIONWIDE US STUDY

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Background: Studies evaluating the effect of statin use on the risk of rheumatoid arthritis (RA) onset have shown conflicting results. Most of these studies evaluated European populations while data from the US are scarce.

Objectives: We aimed to assess the association between statin use (and intensity) and RA occurrence using claims data from the US population.

Methods: For this case-control study, we used the OptumLabs Data Warehouse, a large administrative database of commercially insured and Medicare Advantage beneficiaries, to identify cases of RA and matched controls. Cases were defined as patients with 2 or more diagnoses of RA in January 1, 2010 - June 30, 2019 who were ≥18 years old, filled ≥1 prescription for a conventional or biologic disease modifying anti-rheumatic drug, and had no diagnoses of RA during the prior year. Controls were persons without RA matched 1:1 to RA cases on age, sex, census region, calendar year of index date (corresponding to the date of second diagnosis code for RA), and length of prior medical/pharmacy coverage. Statin use was defined as any filled prescription for a statin medication during prior coverage (excluding any new statin prescriptions filled up to 90 days before first RA diagnosis or index date). Logistic regression models were used to estimate odds ratios (OR) with 95% confidence intervals (CI) adjusted for age, sex, race, census region, calendar year and Charlson comorbidity index (excluding RA component).

Results: The study included 32,465 cases with RA (mean age 57.0, 72.2% female) and 32,465 matched controls (mean age 57.0, 72.2% female). There were 10,759 (33.1%) statin users among RA patients and 4,016 (12.4%) statin users among the matched controls. Statin use was associated with increased risk of RA (adjusted OR 3.34, 95%CI 3.19-3.49). All levels of statin intensity were associated with increased risk of RA (high OR: 3.60, 95% CI 3.28-3.94; medium OR: 3.20, 95% CI 3.04-3.37; low OR: 3.72, 95% CI 3.34-4.15) compared to non-users. Both former and current statin users showed an increased risk of RA (current OR: 3.04, 95% CI 2.80-3.30 and former OR: 3.37, 95% CI 3.20-3.54) compared to non-users.

Conclusion: This large nationwide study showed increased risk of RA in statin-users vs non-users. The lack of dose dependence may suggest confounding by indication or a common genetic predisposition for cardiovascular disease and RA. The underlying mechanisms for these associations require further investigation.

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FRI0561

PRO-INFLAMMATORY DIETS ARE ASSOCIATED WITH INCREASED C-REACTIVE PROTEIN AND RHEUMATOID ARTHRITIS IN THE UK BIOBANK COHORT

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