

Results Girls, but not boys, hospitalised for infections at least twice in the first 6 months of life had pubertal onset at about 8 months older (mean 10.3 years), time ratio 1.08 (95% CI: 1.04 to 1.12), than those without such hospitalisations (9.6 years) adjusted for infant characteristics and socio-economic position (sex interaction p value 0.02). There were no such associations for infections at 6 months to <8 years. Growth did not mediate the association.

Conclusion Early infectious morbidity in girls may be associated with later puberty, perhaps via suppression of the gonadotropic axis. Fewer infections in early life with economic development may be an additional factor contributing to earlier puberty.

P2-149 BEHAVIOURAL RISK FACTORS FOR CVD AMONG ADULT SLUM DWELLERS IN NAIROBI

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C Kyobutungi,* S Oti. *African Population and Health Research Center, Nairobi, Kenya*

Introduction About 80% of deaths from non-communicable diseases (NCD) occur in developing countries and behavioural risk factors that underlie the burden of major NCD are on the rise in SSA. However, most research and development work has focused on communicable diseases such as malaria and HIV/AIDS while neglecting NCD. This study aims to contribute to the state of knowledge on the prevalence of modifiable risk factors for NCD specifically cardiovascular diseases in the adult population of two slums in Nairobi, Kenya.

Methods A cross-sectional survey among 5190 adults selected by stratified random sampling in two Nairobi slums covered. Data were collected on behavioural risk factors for cardiovascular diseases including self-reported tobacco and alcohol use, dietary habits and physical activity.

Results About 19% of respondents had ever used tobacco, and 12% were current users. Males were 20 times more likely to be current tobacco users than females. Majority of respondents (85%) reported sufficient physical activity though large sex differences were observed. Females were three times more likely to be inactive than males. Less than half of respondents consumed sufficient fruits and vegetables while a little over a third had high salt consumption. Ten percent of respondents were current alcohol users of which, more than a third were frequent heavy drinkers.

Conclusion We found high levels of behavioural risk factors for NCD, specifically high alcohol and tobacco use and poor dietary habits albeit with marked gender differentials. Targeted intervention programmes that promote healthy lifestyles among the urban poor are recommended.

P2-150 RESULTS OF THE 22-YEARS STUDY OF LEUKAEMIA IN CHERNOBYL ACCIDENT CLEAN-UP WORKERS IN UKRAINE

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A Romanenko, B Ledoshchuk.* *Research Center for Radiation Medicine, Kyiv, Ukraine*

Introduction The study was conducted to determine whether the leukaemia incidence rate in Chernobyl Nuclear Power Plant catastrophe clean-up workers depended on the year of the emergency work and the period after irradiation.

Methods All cases collected were verified. The analysis was performed for workers in 1986 and 1987 by periods of observation of 1987–1991 and 1992–1996.

Results Leukaemia RR in workers of 1986 vs workers of 1987 in 1987–1991 was 2.32 (95% CI 1.19 to 4.70). No significant differences were identified in 1992–1996. The results of these studies

were the beginning of the project “Leukaemia” in collaboration with the Cancer Institute of the U.S. The project used modern methods for epidemiological studies and created a database of case and controls. Further analysis is based on 71 cases of histologically confirmed leukaemia diagnosed in 1986–2000 and 501 residence-matched controls selected from the same cohort. Study subjects or their proxies were interviewed about their clean-up activities and other relevant factors. The excess RR (ERR) of total leukaemia was 3.44 per Gy (95% CI 0.47 to 9.78, $p < 0.01$). We found a similar dose-response relationship for chronic and non-chronic lymphocytic leukaemia [ERR=4.09 per Gy (95% CI <0 to 14.41) and 2.73 per Gy (95% CI <0 to 13.50), respectively]. We found a linear dose-response relationship between Chernobyl-related radiation exposure among cleanup workers and their risk of leukaemia.

Conclusion The project plans to extend the case-control study to ascertain cases for another 6 years (2001–2006).

P2-151 DETERMINANTS OF INCIDENT AND PERSISTENT FINGER JOINT PAIN DURING A 5-YEAR FOLLOW-UP AMONG FEMALE DENTISTS AND TEACHERS

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H Ding, S Solovieva, P Leino-Arjas.* *Finnish Institute of Occupational Health, Helsinki, Finland*

Introduction To investigate the association of radiographic finger osteoarthritis (OA), hand use, and lifestyle factors with incident and persistent finger joint pain among female dentists and teachers.

Methods Random samples of female dentists ($n=295$) and teachers ($n=248$) aged 45–63 years were examined for the presence of finger joint OA by radiography. Body weight was measured. Information on finger joint pain during the past 30 days, height, smoking, and leisure-time hand activity was collected by questionnaire. Five years later, 482 women (ie, 89%; 65% still occupationally active) responded to a survey on finger joint pain.

Results The incidence and persistence of finger joint pain were higher among the subjects with OA compared to those without. The RR of incident pain in the 1–3rd fingers was 1.8 (95% CI 1.2 to 2.7) in the right hand and 3.0 (2.0 to 4.6) in the left, allowing for age, occupation, and lifestyle factors. The corresponding figures for the 4–5th fingers were 2.3 (1.4 to 3.8) in the right and 1.9 (1.1 to 3.5) in the left hand. Regarding persistent pain, the RRs varied between 2.4 and 5.4. Body mass index, smoking, or leisure-time hand activity were not associated with pain. The dentists tended to have a higher incidence of pain in the 1–3rd fingers of the right hand than the teachers.

Conclusion Radiographic finger joint OA was a significant determinant of both persistent and incident finger joint pain in a 5-year follow-up among middle-aged women. Hand use may modify the association between radiographic OA and finger joint pain.

P2-152 ASSESSING MENTAL HEALTH AMONG WOMEN: THE HEALTHY COMMUNITY COUNCIL 2011 ASSESSMENT

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¹K Lewis,* ¹C Reeves. ¹James Madison University, Harrisonburg, Virginia, USA; ²Rockingham Memorial Hospital, Harrisonburg, Virginia, USA

Introduction The Healthy Community Council (HCC) is a nonprofit community-based network composed of over 100 local stakeholders representing both public and private organisations within the community. The HCC has been working to improve the health of the community by conducting needs assessments, identifying priorities and assisting in the implementation of programs and

initiatives. Methodology: A grant was obtained from the Coalition for a Healthier Community based on a 2006 HCC assessment data. A recent community needs assessment was conducted in 2010 using cross-sectional techniques. Data were collected and analysed from a random sample of community members. The HCC assessment data were analysed to evaluate mental health among women 18 years of age and older.

Results Eleven per cent of women stated that they had experienced intense stress, depression, and/or difficulty managing your emotions for at least 2 weeks or more. Approximately, 10% of women stated that they sought assistance from a counsellor for mental health purposes. Another 6% stated that they had difficulty obtained needed mental healthcare within the community. Women (10%) in the community identified family counselling as their main need among a list of services. Social support networks were also assessed. Women stated that they turned to family (73%), friends (59%) and a spouse or partner (48%) in times of need.

Conclusions Data from the HCC assessment on mental health of women in the community can be utilised to identify needs and establish priorities. The data are beneficial in planning for mental health services within the community.

P2-153 **PRENATAL STRESS FOLLOWING MATERNAL BEREAVEMENT DURING PREGNANCY AND OVERWEIGHT IN THE OFFSPRING: A COHORT STUDY IN 109 919 DANISH CONSCRIPTS**

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J Li,* C Obel, M Vestergaard, J Olsen. Aarhus University, Aarhus, Denmark

Introduction It has been suggested that prenatal stress contributes to the risk of obesity later in life. In a population-based cohort study, we examined whether prenatal stress related to maternal bereavement during pregnancy was associated with the risk of overweight in the offspring in young adulthood.

Methods We conduct a cohort study of 109919 Danish men who were born in 1986-1990 and presented for conscription in 2006–2009. By linkage of the conscription file (“session”) and national registers, we identified 4549 conscripts who were exposed to prenatal stress, defined by being born to mothers who were bereaved by death of a close family member from 1 year before pregnancy until birth of the child. Differences in the means in Body mass index and RR of overweight between the exposed and the unexposed were analysed by GLM regression or Logistic regression in SAS.

Results Body mass index values and prevalence of overweight were higher in the exposed group. The overall adjusted OR for overweight was 1.13 (95% CI 1.04 to 1.23). The highest OR was observed in the subjects whose mothers lost a child or husband during pregnancy (OR 1.35, 95% CI 1.07 to 1.71).

Conclusions Our results suggest that severe pre-pregnancy stress is associated with an increased risk of overweight in the offspring in young adulthood.

P2-154 **“TRIGLYCERIDEMIC-WAIST” PHENOTYPE PREDICTS CORONARY HEART DISEASE IN ABORIGINAL AUSTRALIANS**

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¹M Li,* ²B McCulloch, ¹R McDermott. ¹Division of Health Sciences, University of South Australia, Adelaide, South Australia, Australia; ²Tropical Public Health Unit, Queensland Health Cairns, Cairns, Queensland, Australia

Introduction Australian Aboriginal and Torres Strait Islands (TSI) people experience socioeconomic disadvantage and have higher

prevalence of risk factors for cardiovascular diseases including overweight and obesity, smoking and alcohol drinking, higher blood triglycerides. In this population, diabetes and albuminuria have been reported to better predict some of the excess incident CHD than the “traditional” Framingham risk factors. This study aims to compare the relative performance of components of the metabolic syndrome (MetS) in predicting coronary heart disease morbidity and mortality in a cohort of Australian Aboriginal and Torres Strait Islander adults.

Methods Cohort study of 2100 adults (1283 Aborigines and 817 TSI) with 7-year follow-up from 2000. Outcome measures were all CHD events (deaths and hospitalisations). Baseline anthropometric measurements, blood pressure, fasting blood lipids and glucose were collected. Alcohol and tobacco intake was by self report.

Results MetS (both ATP-III and IDF criteria) was more prevalent in TSI males (50.5%) compared to Aborigines (37.7%). MetS at baseline doubled the risk of a CHD event in Aborigines. Increased fasting triglycerides was stronger in predicting CHD compared with MetS (HR: 2.8) after adjusted for age, sex, tobacco and alcohol consumption, and baseline diabetes and albuminuria for Aborigines but not among TSIs.

Conclusion Indigenous Australians have a high prevalence of CHD risk factors. MetS was not more powerful than its components in predicting CHD events. In Australian Aborigines, the “triglyceridemic waist” phenotype best predicts CHD events, while among TSIs, increased fasting glucose was a stronger predictor of CHD.

P2-155 **CONSUMPTION OF ULTRA-PROCESSED FOOD IS ASSOCIATED WITH BLOOD PRESSURE IN HYPERTENSIVE INDIVIDUALS**

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¹R Lima, ^{1,2}L Moreira, ^{1,3}S Rossato,* ²R Silva, ^{1,2}S Fuchs. ¹Postgraduate Studies Program in Health Science: Cardiology and Cardiovascular Diseases; UFRGS, Porto Alegre, Rio Grande do Sul, Brazil; ²Division of Cardiology; Hospital de Clínicas de Porto Alegre, Porto Alegre, Rio Grande do Sul, Brazil; ³Postgraduate Studies Program in Epidemiology; UFRGS, Porto Alegre, Rio Grande do Sul, Brazil

Introduction The consumption of the ultra-processed food has been associated with a growing prevalence of chronic diseases.

Objective To assess the effect of processed food consumption on systolic (SBP) and diastolic (DBP) blood pressure among hypertensive patients.

Methods This cross-sectional study enrolled 125 patients, aged 30–80 years, followed-up on the outpatient Hypertension Clinic from a reference Center (Hospital de Clínicas de Porto Alegre), in southern Brazil. Food intake was assessed by 24-h dietary recall administered four times one week apart. Food items were aggregated by the types of processing into unprocessed (group 1), culinary foods (group 2), and ultra-processed foods (group 3). The intake was calculated by the number of items per group consumed daily and categorised in quartiles. Generalised Estimated Equation (GEE) was adopted in the analysis.

Results The consumption amount of unprocessed and culinary food was not associated with blood pressure. Among ultra-processed foods, the comparison between patients in the first and the fourth quartile showed a difference of 15.8 ± 4.0 mm Hg in SBP ($p < 0.01$) and 6.3 ± 2.3 in DBP ($p = 0.02$), controlled for age, gender and the consumption of both unprocessed and culinary food. No difference was observed for the 2nd and 3rd quartiles vs the 1st one.

Conclusion The ultra-processed foods consumption can affect SBP and DBP of hypertensive individuals.