

the lower the prevalence of malocclusions. The concomitant presence of PB for at least six months and the non-regular use of pacifier until two years of age show a protective effect for crossbite following adjustment for confounders. The longer the duration of EB the lower the prevalence of moderate or severe WHO malocclusion. A dose-response relationship between duration of EB or PB and the prevalence of malocclusion was observed. This was reduced or eliminated if pacifier use is introduced early in the child's life.

Conclusions Given that breastfeeding is a protective factor for several childhood diseases, our findings indicate that the common risks approach is the most appropriate way for the prevention of malocclusions.

P2-244 APOLIPOPROTEIN E GENOTYPE, LIPOPROTEINS AND ISCHAEMIC HEART DISEASE IN LITHUANIAN POPULATION

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Introduction The aim of the study was to assess the frequency of APOE genotypes and their relationship with serum lipoproteins and prevalence of ischaemic heart disease (IHD) in Lithuanian population.

Methods Cross-sectional health survey was carried out in representative random samples of Lithuanian urban and rural population (936 men and 1115 women) aged 25–70. Serum low-density lipoprotein cholesterol (LDL-C) was determined by enzymatic methods. Three APOE genotypes were identified by polymerase chain reaction: APOE2 for those subjects carrying $\epsilon 2/2$ or $\epsilon 2/3$ genotypes, APOE3 - for $\epsilon 3/3$ genotype, and APOE4 for $\epsilon 3/4$ or $\epsilon 4/4$ genotypes. IHD was diagnosed according to the data of medical history and medical records, Rose questionnaire and by the Minnesota codes of electrocardiogram. Multiple logistic regression analysis was used to explore the impact of APOE genotype on risk of IHD.

Results The frequencies of APOE genotypes did not differ between men and women. The observed frequency of APOE3 genotype was the highest (63%). APOE2 genotype and APOE4 genotype were found in 17% and 17.2% of population respectively. In both genders individuals with APOE2 genotype had the lowest level of LDL-C. After adjustment for age and other conventional IHD risk factors, the OR for myocardial infarction for APOE2 men vs APOE3 men was 0.12 (95% CI 0.02 to 0.84). No relationship was found between APOE genotypes and IHD in women.

Conclusion This study suggests that APOE genotype influences the level of plasma lipoproteins in both gender and risk of IHD in men.

P2-245 PREVALENCE OF HYPERTENSION IN BRAZIL OVER THE PAST 3 DECADES: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Introduction Hypertension has become a major public health concern in developing countries. We conducted a systematic review with meta-analysis of population-based studies in order to estimate the prevalence of hypertension among the Brazilian adult population.

Methods Published cross-sectional and cohort studies conducted from 1980 to 2010 were independently identified by two reviewers, without language restriction, in the PubMed, Embase, LILACS, and SciELO electronic databases. Unpublished studies were explored in

the CAPES electronic thesis database. Hypertension was defined by JNC criteria of 140/90 mm Hg blood pressure measurement or use of blood pressure lowering medication, and additionally self-reported hypertension.

Results The search retrieved 598 original studies, 23 thesis, and six references from manual search. Based in title and abstract, 450 articles were excluded and 60 in full-text screening, leaving 47 eligible studies. Further five results were excluded, based on sampling and biases, and 42 studies comprising 124 thousand individuals were included. In the 1980's (n=5), pooled JNC prevalence of hypertension was 35.9% (95% CI 28.4% to 44.2%), 45.1% (40.0% to 50.4%) among men, and 34.6% (23.7% to 47.5%) among women. In the 1990's (n=15), the prevalence rates were, respectively, 28.5% (21.4% to 36.9%), 24.6% (15.5% to 36.6%), and 23.0% (14.5% to 34.3%). In the 2000's (n=22), the prevalence rates were 29.6% (26.3% to 32.9%); 29.4% (24.1% to 35.3%), and 25.8% (20.5% to 31.9%). Pooled prevalence from self-reported hypertension on telephone enquires, the overall was 20.6% (19.0% to 22.4%), 18.6% (17.4% to 19.9%) in men and 23.2% (21.1% to 25.4%) in women.

Conclusions This meta-analysis was first to summarise prevalence rates for Brazil. Steady estimates were detected over 3 decades, although lower rates for self-reported hypertension.

P2-246 THE NIGHTINGALE STUDY: A PROSPECTIVE COHORT STUDY ON SHIFT WORK AND BREAST CANCER AMONG NURSES IN THE NETHERLANDS

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A new prospective cohort study (the Nightingale Study) among nurses in the Netherlands was initiated in collaboration with the Institute for Risk Assessment Sciences (IRAS, Utrecht University) and the nationwide register of healthcare professionals (BIG-register of the Ministry of Health, Welfare and Sport, The Hague). Exposure to light-at-night has been suggested as a contributing cause of breast cancer (IARC classification "probable human carcinogen, 2A"). Since shift- and night-time work is prevalent and increasing in modern societies, this exposure may contribute to the continuing elevation in breast cancer risk and may be of public health concern. This study will provide insight into, among others, the potential association between occupational exposures (eg, shift work, electromagnetic fields) and the risk of cancer and other diseases, and on potential biological mechanisms. The total projected study population is 50 000 women. Through the BIG-register, women with a nurse diploma and who are younger than 60 years, will be asked to complete a (web-based or paper) questionnaire, sign an informed consent, and donate toenails for DNA analyses (eg, clock genes). In the spring of 2011, a pilot study (N=800) will be conducted of which the results will be presented. Specific attention will be directed to potential shift-work related selection.

P2-247 IMPACT OF RISK FACTORS FOR NON-FATAL ACUTE MYOCARDIAL INFARCTIONS AMONG SRI LANKANS

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Introduction The impact of risk factors for acute myocardial infarctions (AMI) differs across populations. The aim of this study was to determine the impact of established risk factors for the occurrence of

non-fatal AMI within a population based case control study of urban Sri Lankans.

Methods Cases were patients consecutively admitted to the cardiology and general medical wards of the National Hospital of Sri Lanka with a confirmed diagnosis of AMI and discharged alive. Age and sex matched community controls were recruited within 20–30 km distance from National Hospital of Sri Lanka using the electoral lists. Basic demographic information, smoking habits, physical activity and dietary patterns, anthropometric indices, fasting glucose and serum lipid measurements were done on all participants.

Results During the study period, 262 cases and 246 controls were recruited. Of the non-fatal acute myocardial infarct patients, 18% were female. Compared to males, females with non-fatal events were significantly older (58 years, SD 6.6). Mean age among cases and controls were similar (~54 years). Cases were significantly more likely to have diabetes mellitus, a family history of AMI, abnormalities in lipid profile and report poor vegetable and fruit consumption (consumption was defined as “poor” if the individual did not usually consume some fruit/vegetable at least once on a given day). Physical activity patterns, education level and smoking habits were similar between cases and controls.

Conclusion Results indicate a high prevalence of modifiable risk factors among AMI patients. It is vital that the health system identify these patients early and provide them with optimal treatment.

P2-248 TRENDS IN PROSTATE CANCER MORTALITY RATES IN THAILAND, 1998–2006

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Introduction Prostate cancer is one of the leading cause of death among Thai males. In Thailand, whether mortality rates of prostate cancer have been increasing from 1998 to 2006. This study aimed to examine trends in age-specific and age-standardised mortality rates for prostate cancer among Thai population.

Methods Mortality data during 1998–2006 were analysed based on ICD-10 for prostate cancer from Bureau of Health Policy and Planning, Ministry of Public Health. Both 5-year age-specific and age-standardised mortality rates per 100 000 were calculated and descriptively analysed for trends.

Results The results have shown that during 1998–2006, age-standardised mortality rates for prostate cancer increased from 0.38 to 1.56 for males. For each year, prostate cancer mortality rates increased with age and peaked at age 70 and over. In 2006, the highest mortality rates were 45.76 for male.

Conclusion The prostate cancer mortality rates had increased at least fourfold in 8 years for both sexes. The increase in mortality might be explained by the increased in risk factors including increase in ageing of the population, eating habit characterised by high fat, obesity, and hormonal factors. Health policymakers should increase its effort in controlling and reducing the risk factors by promoting healthy behaviours such as healthy diet. It is also important to make an effort to inform the profile of prostate-specific antigen testing for screening prostate cancer.

P2-249 SMOKELESS TOBACCO AND CORONARY HEART DISEASE IN BANGLADESH: IS THERE ANY ASSOCIATION?

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Objective To determine the association between smokeless tobacco (SLT) use and coronary heart disease (CHD) among non-smoking adults in Bangladesh.

Methods A case-control study of non-smoking Bangladeshi adults aged 40–75 years, was conducted in 2010. Incident cases of CHD were selected from two cardiac hospitals. Hospital controls were selected from outpatient departments of the same hospitals. Community controls were selected from neighbourhoods matched to CHD cases. Four community controls and one hospital control were matched to each case on age and gender.

Results The study enrolled 302 cases, 1208 community controls and 302 hospital controls. Forty percent of the study subjects were current users of or had used SLT in the past. Current use of SLT was similar among cases (33%), community controls (33%) and hospital controls (32%). Current use of SLT was not associated with increased risk of CHD when community controls were used (adjusted OR 0.87, 95% CI 0.63 to 1.19, $p>0.05$), or hospital controls were used (adjusted OR 1.00, 95% CI 0.63 to 1.60, $p>0.05$), or when both controls were combined (adjusted OR 1.00, 95% CI 0.74 to 1.34, $p>0.05$). Risk of CHD did not increase with use of individual type, frequency, duration and past use of SLT products.

Conclusion In this study, there was no statistically significant association between SLT use and CHD among non-smoking adults in Bangladesh. If the findings can be replicated in prospective studies, it may well be that strategic focus for reducing CHD in Bangladesh should be upon smoking control rather than on SLT.

P2-250 OMEGA 3 POLYUNSATURATED FATTY ACIDS (PUFAS) AND RISK OF EARLY ONSET PROSTATE CANCER

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Introduction In the UK, approximately 11% of newly registered PrCa cases are under the age of 60 years. The unequal incidence across different countries suggests that modifiable factors, such as dietary intake of omega 3 polyunsaturated fatty acids (PUFAs) may be important.

Methods Data were analysed on 805 cases and 1283 controls of age <60 years. A food frequency questionnaire assessing typical diet 5 years previous to either diagnosis in the cases or returning questionnaire in controls was used to assess dietary PUFAs. Nutrient intake of specific PUFA derivatives was then calculated via a nutritional database. Unconditional logistic regression was used to calculate ORs and 95% CIs for the effect of omega 3 and its derivatives docosahexaenoic acid (DHA), eicosapentaenoic acid (EPA), α -linolenic acid (α LNA) and supplementation of total omega 3, DHA and EPA on PrCa risk after adjusting for confounders. Linear trend was also assessed.