

**Conclusions** The Akha healthcare system is closely related to their religions practice and local wisdom. Any model of health promotion development needs to take into account such issue.

# SP1-5 ENDOCRINE, NUTRITIONAL AND METABOLIC DISEASES AS ASSOCIATED CAUSES OF DEATH IN OLDER WOMEN IN RIO DE JANEIRO, BRAZIL

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**Introduction** Changes in lifestyle contributed to an increased incidence and mortality from endocrine, nutritional and metabolic diseases in developing countries. The aim of this study was to evaluate the burden of these diseases as a cause of death in older women in a Brazilian city.

**Methods** All deaths of women aged 70 years or older, occurring in Rio de Janeiro, between 2003 and 2006, were identified in the Mortality Information System, a population-based nationwide registry. Death certificates with an ICD 10 Chapter IV code (E00-E90) were selected. When the code corresponded to the underlying cause, its subgroup was determined (endocrine, nutritional or metabolic diseases) and the associated causes were ascertained. When these codes corresponded to associated causes, the ICD chapter of the underlying cause was identified.

**Results** There were 55331 deaths, of which 7686 (13.9%) had E00-E90 codes as underlying (50.4%) cause. Endocrine diseases predominated among underlying causes. Diabetes was the leading cause of death (76.4%) and circulatory and respiratory diseases the main associated causes. As for deaths for other underlying causes, 20.7% of the circulatory system, 9.5% of the respiratory system, 6.0% of the neoplasms and 3.3% of the infectious diseases had Diabetes as an associated cause.

**Conclusion** Endocrine diseases, particularly Diabetes, are major causes of mortality in older women in Rio de Janeiro, representing an important public health problem. Urbanisation and socio-cultural influences of the occidental way of life led to changes in dietary patterns and an increased sedentary lifestyle. In order to modify the present patterns, health promotion strategies must be emphasised.

# SP1-6 NO EFFECT OF HORMONAL EXPOSURES ON UVEAL MELANOMA

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**Introduction** Several studies suggest that hormonal mechanisms may be associated with the development of uveal melanoma.

**Objectives** To study the association between the risk of uveal melanoma and exposure to hormonal exposures in a case-control study from nine European countries.

**Methods** Incident cases of uveal melanoma were frequency-matched to population and hospital controls by country, age and sex. Female subjects were asked about their reproductive history, use of menopausal hormone replacement therapy and oral contraceptives. Among males, occupational handling of oils while working with transformers or capacitors which contain polychlorinated biphenyls (PCB) was solicited. Unconditional logistic regression analyses were calculated, adjusting for several potential confounders. Analyses were stratified by sex.

**Results** 293 cases (165 men, 128 women) and 3198 control subjects (2121 men, 1077 women) were interviewed. Among women, no associations were observed with hormonal status variables, intake of hormonal therapy or intake of oral contraceptives. Males showed an increased risk with occupational exposure to transformer/capacitor oils (OR 2.74; Bonferroni-corrected 99.3% CI 1.07 to 7.02). However, these results were based on few exposed subjects only.

**Conclusions** The results of this study do not support the hypothesis of a hormonal influence in the carcinogenesis of uveal melanoma. Our finding of a potentially increased risk with PCB-containing oils requires further research.

# SP1-7 PESTICIDE EXPOSURE IN FARMING AND FORESTRY AND THE RISK OF UVEAL MELANOMA

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**Introduction** Since pesticides are disputed risk factors for uveal melanoma, we studied the association between occupational pesticide exposure and uveal melanoma risk in a case-control study from nine European countries.

**Methods** Incident cases of uveal melanoma and population as well as hospital controls were included and frequency-matched by country, 5-year age groups and sex. Self-reported exposure was quantified with respect to duration of exposure and pesticide

application method. We calculated the exposure intensity level based on application method and use of personal protective equipment. ORs and 95% CIs were estimated by unconditional logistic regression analyses and adjusted for several potential confounders.

**Results** 293 case and 3198 control subjects were interviewed. We did not identify positive associations with activities in farming or forestry, pesticide application or pesticide mixing. No consistent positive associations were seen with exposure intensity level scores either. The only statistically significantly raised association in this study was for exposure to chemical fertilisers in forestry (OR 8.93; 95% CI 1.73 to 42.13), but this observation was based on only six exposed subjects. Results did not change when we restricted analyses to morphologically verified cases and excluded proxy interviews as well as cancer controls. We did not observe effect modification by sex or eye colour.

**Conclusion** Risk estimates for pesticide exposures and occupational activities in agriculture and forestry were not increased and did not indicate a hormonal mechanism due to these exposures. The possible risk increase associated with exposure to chemical fertilisers should be reinvestigated in future studies.

#### SP1-8 ANAEMIA IN PREGNANT WOMEN ASSISTED BY PUBLIC HEALTHCARE SERVICES OF THE FIVE BRAZILIAN REGIONS BEFORE AND AFTER THE POLICY OF FORTIFICATION OF FLOURS WITH IRON

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**Objective** To compare prevalence of anaemia and haemoglobin (Hb) levels in pregnant women in the five Brazilian regions, before and after the fortification of flours with iron.

**Methods** A repeated cross-sectional panel study was carried out by public healthcare services located in the five Brazilian regions. Retrospective data were collected from medical records. Pregnant women were divided into two groups: before-fortification (delivery before June 2004) and after-fortification (last menstrual period after June 2005). The sample included 12 119 records. Anaemia was defined as Hb<11 g/dl. We used  $\chi^2$ , Student t test and logistic regression, with significance level of 5%.

**Results** Anaemia was lower after-fortification of flour ( $p<0.05$ ). The prevalence dropped from 25% to 20% after-fortification ( $p<0.001$ ). Hb level also was significantly higher after-fortification ( $p<0.001$ ). The findings showed different sized reductions between regions. In the Northeast and North, where the prevalence of anaemia were high, a significant drop after-fortification was found: from 37% to 29%, and 32% to 25%, respectively. In the Southeast and South, whose prevalence was low before-fortification, there were smaller decreases: from 18% to 15%, and 7% to 6%, respectively. Logistic regression showed that group, geographic region, marital status, gestational trimester, initial nutritional status and previous pregnancy were associated with anaemia ( $p<0.05$ ).

**Conclusions** The prevalence of anaemia in pregnant women is still high in the Northeast, North and Midwest of Brazil. However, the decrease in anaemia prevalence and increase in Hb levels suggest a positive effect of fortification of flour to control of iron deficiency. It should be noted that a number of other variables not studied may have contributed to this result.

#### SP1-9 PREDICTORS OF UNINTENTIONAL POISONING AMONG CHILDREN UNDER-5 YEARS OF AGE IN KARACHI: A MATCHED CASE-CONTROL STUDY

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**Introduction** Poisoning is the 4th leading cause of unintentional injury in children aged under-5 years. The study objective was to determine the factors associated with unintentional poisoning among children under-5 years of age, reporting to emergency rooms (ERs) of tertiary care hospitals in Karachi, Pakistan.

**Methods** A matched case-control study was conducted on 120 cases and 360 controls. Children with unintentional poisoning were included in the study as cases. For each case three control children matched for age and gender with complaints and diagnosis other than poisoning were selected from the same hospitals ER within 48 h of case identification. Parents were interviewed using structured questionnaires containing information on socio-demographic factors, child's behaviour, and storage practices. Conditional logistic regression was performed to analyse the data.

**Results** Accessibility to hazardous chemicals and medicines due to unsafe storage (OR 5.6, 95% CI 1.9 to 16.7), child's behaviour reported as hyperactive (OR 8.2, 95% CI 4.6 to 16.1), storage of kerosene oil and petrol in soft drink bottles (OR 3.8, 95% CI 2.0 to 7.3), low socio-economic status (OR 9.2, 95% CI 2.8 to 30.1), low mothers educational status (OR 4.2, 95% CI 1.8 to 9.6) and history of previous poisoning (OR 8.6, 95% CI 1.7 to 43.5) were all independently related to unintentional poisoning.

**Conclusion** The factors associated with unintentional poisoning in young children are modifiable. Key health messages on the safe storage of chemicals and medicines and the use of child resistant containers may help in decreasing the burden of childhood poisoning.

#### SP1-10 ALCOHOL CONSUMPTION AND SMOKING OF MONGOLIAN ADULTS

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**Introduction** Alcohol consumption and smoking have been common health problems globally including Mongolia. The objective of this survey was to examine the epidemiology of alcohol consumption and cigarette smoking in the elder population of Mongolia.

**Methods** A cross-sectional study was carried covering urban and rural areas in Mongolia and used a standardised questionnaire according to WHO STEPwise approach to surveillance manual.

**Results** A total of 2280 people completed the study. The prevalence of smoking was 24.0% with significantly more in males (50.5%) as compared to in females (8.3%) ( $p=0.0001$ ). Among smokers, mean age of initiation to smoking was 23.5 ( $\pm 9.7$ ) years and this was differed by sex whereas males started smoking at the age of 21.1 ( $\pm 7.8$ ) years and females started smoking at the age of 30.2 ( $\pm 11.0$ ) years. Mean number of cigarettes smoked per day was 11.1 ( $\pm 7.8$ ) among current daily smokers. Men smoked 12.3 ( $\pm 8.1$ ) cigarettes daily and women smoked 8.1 ( $\pm 6.3$ ) cigarettes daily. About six out of ten people using alcohol in last 12 months (60.3%). Alcohol consumption was different in gender (in men 75.6%, women 51.2%), in age group (in age 40–44 was 67.0%, in age above 60 was 45.1%) and in education level (in primary education 27.7%, in master degree 74.5%). Binge drinking was 19.6% in participants and different by sex (in men 34.2%, in women 10.8%,  $p=0.0001$ ) and location (in rural 24.1%, urban 16.2%).