

nervous trouble (OR 4.7 (4.1 to 5.4), OR 4.1 (3.4 to 4.8), respectively); odds of neglect were increased for those in institutional care (OR 3.8 (2.7 to 5.4)) or with a family member in prison (OR 3.8 (3.0 to 4.8)).

**Conclusion** Forms of maltreatment co-occurred in the cohort, such that cumulative exposure to neglect increased odds of abuse. Maltreated children had elevated exposure to household dysfunction.

### P19 SOCIOECONOMIC DISPARITIES IN TRAJECTORIES OF ADIPOSITY ACROSS CHILDHOOD

doi:10.1136/jech.2010.120477.19

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**Objective** Socioeconomic inequalities in obesity are consistently observed in high-income countries, with lower socioeconomic groups tending to be more adipose amongst both adults and children. The development of such inequalities across childhood, however, has not been studied using longitudinal data.

**Design** Using longitudinal data from a prospective birth cohort study, we modelled individual trajectories of adiposity from birth to 10 years using random effects linear spline models, and estimated differences in trajectories by socioeconomic position (measured by maternal education). Trajectories were modelled separately for boys and girls.

**Setting** Avon Longitudinal Study of Parents and Children, South West England.

**Participants** Participants were born in 1991/1992.

**Main Outcome Measure** Ponderal index (PI, kg/m<sup>3</sup>, N=12 246) from birth to 2 years and body mass index (BMI, kg/m<sup>2</sup>, N=11 380) from 2 to 10 years. Height and weight measures were from research clinics, health records, and parent-completed questionnaires; trajectory models included an indicator of measurement source to account for reduced accuracy of parent-reported measurements.

**Results** There was little socioeconomic patterning of PI from birth to 2 years. Socioeconomic differences in BMI began to emerge by 4 years old, and widened with increasing age. Amongst girls there was a clear gradient across all categories of maternal education by age 8, with daughters of more educated women being less adipose. Amongst boys, sons of degree educated women had lower BMI, but there was little difference between the three lower maternal education categories. By 10 years old the mean BMI difference between the highest and lowest education category was 0.38 kg/m<sup>2</sup> for boys and 0.89 kg/m<sup>2</sup> for girls. The results imply that interventions to prevent inequalities in childhood obesity should begin in pre-school years.

### P20 DESCRIPTION OF DIETARY INTAKES OF ACRYLAMIDE IN THE BORN IN BRADFORD BIRTH COHORT STUDY

doi:10.1136/jech.2010.120477.20

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**Background** Compounds created during the cooking and processing of food may be associated with to future child health if consumed

during pregnancy. One such compound is acrylamide, which has been suggested as a potential dietary carcinogen, and is formed during the cooking of starchy foods. Little information is available on intake during pregnancy.

**Objective** To estimate intakes of the dietary compound acrylamide during pregnancy and describe the association of intakes with maternal age in years (<20, 20–39, 40+), ethnicity and quintile of deprivation when classified using the index of multiple deprivation (IMD07).

**Design** Data were collected using a Food Frequency Questionnaire (FFQ) within the Born in Bradford multi-ethnic birth cohort study carried out in the city of Bradford, UK. The FFQ was given to all women recruited into Born in Bradford between September 2007 and July 2009 and completed at between 28–32 weeks of pregnancy. Participants were asked to self-complete information on the frequency of intakes for selected food items. Values for acrylamide intake were derived using estimated European exposure values taken from the literature within different food groupings. Values of acrylamide consumption were grouped into quintiles. Multivariate logistic regression was then used to investigate maternal characteristics associated with the highest quintile of acrylamide consumption.

**Results** 5294 women were recruited between September 2007 and July 2009 and 4212 (79.5%) completed the FFQ. Overall estimated mean intake of acrylamide was 35.5 µg/day (SD: 27.2). French fries (31.1%), toast (18.3%) and crisps (12.2%) made the largest contributions to overall intake levels. Maternal characteristics associated with the highest quintile of acrylamide intake (>52.4 µg/day) was an age less than 20 years old (OR: 2.0, 95% CI 1.6 to 2.5), those aged 40 and over were less likely to be in this quintile (OR: 0.3, 95% CI 0.1 to 0.7) when compared to pregnant women aged 20–39 years. There was a significant interaction between ethnicity and deprivation levels (p=0.01) with pregnant women of white ethnicity showing an increasing trend of being in the highest quintile of intake with increasing deprivation score whereas for women of south Asian ethnicity there was no significant relationship between deprivation and acrylamide intake.

**Conclusion** Intakes of the dietary contaminant acrylamide during pregnancy were found to vary according to maternal age, ethnicity and deprivation levels. This may have implications for the targeting of public health messages if there are future findings which lead to recommendations for reductions in intake.

### P21 INFLUENCE OF LIFE-COURSE SOCIO-ECONOMIC POSITION ON PAIN INTERFERENCE IN A PROSPECTIVE COHORT STUDY OF OLDER ADULTS

doi:10.1136/jech.2010.120477.21

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**Objective** Pain that interferes with daily activities is the dominant cause of locomotor disability in older people. The objective of this study was to determine the influence of different trajectories of life-course socio-economic position (SEP) on pain interference in a population of older adults.

**Design** Prospective cohort study.

**Setting** General population in North Staffordshire, UK.

**Participants** All patients aged 50+ registered with three different general practices were sent a baseline postal questionnaire. Responders consenting to further contact were followed up twice. Ethical approval was granted for all stages of the study.

**Main Outcome** Pain interference measured using an SF-36 item, asking how much pain interfered with normal work and housework during the last 4 weeks. Response categories dichotomised into

having pain interference (extremely, quite a bit, moderately) and having no pain interference (a little bit, not at all).

**Life-Course SEP Measures** (1) Age left school (young adulthood SEP): those who left school at  $\leq$  the minimum school leaving age assigned low SEP; those who left school at  $>$  the minimum school leaving age assigned high SEP, (2) Longest job (adult working life SEP) and (3) Current/recent job (most recent adult SEP): using the National Statistics Socio-economic Classification, Routine and manual occupations were assigned low SEP; Intermediate and Managerial and professional occupations were assigned high SEP. Life-course SEP trajectories were constructed for each respondent from the three measures.

**Other Measures** BMI, HADS, health locus of control, adequacy of income.

**Analysis** Confined to participants who provided data at three SEP time-points ( $n=2535$ ). Association of pain interference with each SEP trajectory (High, High, High (HHH) as reference trajectory) was calculated by logistic regression and adjusted for age, gender and BMI. Forward stepwise logistic regression was used to adjust for potential confounding psychosocial and social factors. Latent class analysis identified any clustering in SEP trajectories.

**Results** Adjusted response to the three stages of the survey was 71–85%. The LLL SEP trajectory was significantly associated with pain interference compared to HHH (OR 2.73; 95% CI 2.16 to 3.45); this association was not altered by age or gender. Adjustment for the remaining factors reduced the association but it remained significant (OR 2.05; 95% CI 1.56 to 2.70). Latent class analysis identified two clusters of SEP trajectories: those that started Low remained Low, those starting High remained High.

**Conclusion** In this study, adults with a consistently low SEP throughout their life-course were more likely to report pain interference in later life.

**P22 CHILDHOOD SOCIOECONOMIC POSITION AND ADULT SMOKING: ARE CHILDHOOD COGNITIVE ABILITY, PSYCHOSOCIAL ADJUSTMENT AND PARENTAL INVOLVEMENT IMPORTANT?**

doi:10.1136/jech.2010.120477.22

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**Background** Studies have shown that childhood socioeconomic position (SEP) is related to smoking in adulthood, independent of adult SEP. Educational attainment partially mediates this association; however, previous studies suggest three childhood factors which may also be important—childhood cognitive ability, psychosocial adjustment and parental involvement.

**Objective** To assess whether childhood psychosocial adjustment, cognitive ability and parental involvement are important in the association between childhood SEP and adult smoking status, over and above educational attainment.

**Data, Participants and Variables** Data on 7709 participants from four sweeps of the 1958 National Child Development Study were used for this study—birth (1958), age 7 (1965), age 16 (1974) and age 42 (2000). Childhood SEP was indicated using father's social class at birth and adult smoking status was taken at age 42 years (categorised as: 1 never/infrequent smokers, 2 ex-smokers, 3 current smokers). All childhood factors investigated were measured at age 7 years. Childhood cognitive ability was measured using score in the Copying Designs Test, psychosocial adjustment was measured using the teacher-assessed Bristol Social Adjustment Guide (BSAG) and parental involvement was based on questions asked of the mother and father regarding the frequency of occasions spent reading and on outings with the child. Confounding variables included were mother's smoking, age at birth of child and educational level,

number of siblings and participant's own educational attainment at age 16 years (indicated by exam scores). Those with complete data on all variables used were included in the analysis.

**Statistical Methods** Multinomial logistic regression was used to examine the associations of childhood SEP and childhood factors with adult smoking status, both independently and mutually adjusted, and then adjusted for confounders and participant's educational attainment. Analyses were conducted separately for men and women.

**Results** Childhood SEP was an important predictor of current adult smoking status, even after adjustment for childhood factors and educational attainment. Also, parental involvement for men (most vs least frequent parental reading OR 0.75, 95% CI 0.60 to 0.94; most vs least frequent parental outings OR 0.55, 95% CI 0.35 to 0.86), and both parental involvement (most vs least frequent parental reading OR 0.68, 95% CI 0.55 to 0.85) and psychosocial adjustment (most vs least maladjusted OR 1.28, 95% CI 1.01 to 1.64) for women, remained important determinants of current adult smoking over and above childhood SEP, other childhood factors and educational attainment.

**Conclusions** These findings suggest that childhood disadvantage is associated with adult smoking behaviours and the early childhood social environment is important in the development of these.

## Children/Adolescence

**P23 PATTERNS OF ANTIRETROVIRAL THERAPY IN A EUROPEAN STUDY OF HIV-INFECTED CHILDREN AND ADOLESCENTS**

doi:10.1136/jech.2010.120477.23

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**Background** Antiretroviral therapy (ART) has resulted in increasing median survival times in HIV-infected individuals by sustaining viral load suppression. Since children and adolescents are likely to have long-term exposure to ART, it is important to understand patterns of drug use to investigate the emergence of unintended sequelae.

**Aim** To investigate patterns of ART in children and adolescents.

**Study Design** Cross-sectional analysis of HIV-infected subjects aged 2–22 years across 15 clinical sites in Belgium, Italy and Poland.

**Method** Prevalence of both “ever-use” and “current-use” (at recruitment) of ART drug classes: nucleoside analogue reverse transcriptase inhibitors (NRTIs); non-nucleoside analogue reverse transcriptase inhibitors (NNRTIs); and protease inhibitors (PIs), and individual drugs were investigated.

**Results** Among 468 participants (51% female) the median age was 13.5 years (IQR 9.9–17.0) with 320(68%) of white ethnicity and 104 (22%) Black African. Overall, 291(62%) were virologically suppressed (HIV-RNA  $\leq 50$ copies/ml) at enrolment and 35(7%) had severe immuno-suppression (age-stratified CD4%). Only 23 (5%) subjects were ART-naive (median age=10.0 years, IQR; 6.1–14.3); 15 had experienced moderate or severe immuno-suppression/HIV-disease, with 15 having detectable viral load at recruitment. Of the ever-treated subjects, 98% ( $n=436$ ) had received zidovudine or lamivudine in the past and 72% ( $n=324$ ) currently; 82% ( $n=368$ ) and 72% ( $n=323$ ) had been ever-exposed to PIs and NNRTIs, respectively. Median and modal lifetime number of drugs was six. Over their lifetime, 119 (27%) subjects had been exposed to  $\geq 8$  drugs (median age=15.7 years, IQR; 12.3–18.0). Age was associated with duration of total drug use ( $p<0.001$ ), with median age of ART initiation of 3.6 years (IQR: 1.1–7.4) Median total duration of drug use was 8.7 years (IQR=5.7–11.2 years). Nine percent of currently treated subjects ( $n=38$ ) had suboptimal management, defined as NRTIs-only (24 showing evidence of incomplete viral suppression), and 91% ( $n=384$ ) had treatment with combination ART (cART). The most common PI in current-use was kaletra ( $n=170$ , 40%),