The European Pollutant Release and Transfer Register (PRTR) constitutes a valuable resource for monitoring health effects of industrial pollution. Our objective is to ascertain whether there might be excess colorectal cancer (CRC) mortality among populations residing in the vicinity of Spanish industrial installations governed by the PRTR.

Methods An ecologic study of CRC mortality at a municipal level (8098 towns), over the period 1997–2006. We conducted an exploratory “near vs far” analysis to estimate the RR of towns at a distance of <2 km from installations. The analysis include 24 industrial groups. RR and their 95% credible/CI were estimated using Poisson regression models, using two approaches: (A) a conditional autoregressive Bayesian model, with explanatory variables; and (B) a mixed regression model. Integrated nested Laplace approximations were used as a Bayesian inference tool.

Results Statistically significant RR were detected in the vicinity of metal production and processing (RR 1.07, 95% CI 1.01 to 1.12), mining (RR 1.26, 95% CI 1.08 to 1.46), paper, pulp and board manufacture (RR 1.07, 95% CI 1.01 to 1.14), ceramic factories (RR 1.05, 95% CI 1.00 to 1.10) and food and beverage production (RR 1.07, 95% CI 1.01 to 1.14).

Conclusions Residing in the vicinity of PRTR-registered industries may constitute a risk factor for CRC, since a higher mortality was detected in both men and women residing in towns with such industries nearby. Some of the differences between men and women suggest that there may be a strong, little-studied component of occupational exposure.
factors, were 18.4%, 11.2% and 4.4%, 6.9% for men and women respectively.

**Conclusion** If individual data (eg, cohort and case-control studies) are accessible then the direct estimation of average PAF provides more realistic results. Besides, it seems that the order of important risk factors is the same in men and women except smoking.

**SP1-85** TROUBLED SLEEP: A CROSS-NATIONAL STUDY OF THE INFLUENCE OF AGE, HEALTH, SOCIAL AND PSYCHOSOCIAL FACTORS ON SLEEP

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**Introduction** Trouble with sleep is often accepted as a part of ageing with its prevalence reported up to half of the population surveyed. However it has been persuasively argued that in healthy ageing individuals, sleep need not diminish significantly or be of poor quality and that it is the chronic diseases and functional limitations that produce sleeping problems in the elderly. The objective of this study is to compare the prevalence of sleep problems and assess the influence of age, health and psycho-social factors in a sample of European countries.

**Method** Data of non-institutionalised Europeans above 50 years from the Study of Health, Ageing and Retirement in Europe were used. The outcome was a binary variable based on self reported sleep problems. Explanatory variables included age, gender, and various health, social and psycho-social factors. Statistical analysis was done using multiple logistic regression and multi-level models.

**Result** The prevalence of sleep problems ranged from 18% in Greece to 48% in Poland; Greece was an exception with other Southern European countries reporting more sleep problems. Age was significant factor only for women who had greater probability of sleep problems than men. Health was the major influence on sleep problems but psychosocial factors like trust in others and social factors like receiving help were also significantly associated.

**Conclusions** Health is the major influence on sleep with age significant only for women. However there are significant differences among European countries in the prevalence of sleep problems.

**SP1-86** FOLLOW-UP AND INCIDENT OUTCOMES IN A LONGITUDINAL STUDY IN BRAZIL (ELSA-BRASIL)

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S Barreto, R Ladeira,* V Passos, F Diniz, S Kelles. UFMG, Belo Horizonte/Minas Gerais, Brazil

**Introduction** Baseline data from Longitudinal Study of Adults Health (ELSA-Brasil), a cohort that investigates incidence and predictors of chronic diseases among 15000 civil servants aged 35–74 years from six universities in Brazil, was fully accomplished in December 2010. From now on, main challenges are: avoid loss to follow-up over time, correct identification, and classification of incident outcomes.

**Methods** Follow-up data collection relies on annual phone interview to identify hospitalisations and emergency department visits, 3-year examination in research centres, spontaneous participant report and linkage with available databases from human resources department of universities and death certificates. Events of interest include: acute myocardial infarction, unstable angina, heart failure, peripheral artery disease, myocardial revascularisation, resuscitated sudden death, stroke, transient ischaemic attack, incident diabetes, diabetes related complications, chronic kidney disease, cancer and all-causes mortality. Besides, intermediate outcomes such as hypertension, obesity, cognitive decline, kidney and endothelial dysfunction will be ascertained. To guarantee the uniformity of the assessment, an ELSA Outcome Committee performs a reiterated verification of the protocols, scripts and certifies periodically researchers which are in direct contact with the population under study. The Morbidity and Mortality Committee aggregates specialists from the six research centres, in order to perform events classification according to standardised protocols.

**Conclusions** The great number of exposures studied will allow investigate many associations with outcomes of interest. Besides that, a promising issue of this study is the biological samples and DNA bank of all participants which will also allow nested case-control analysis.

**SP1-87** PREVALENCE AND CHARACTERISTICS OF EARLY CHILDHOOD OBESITY IN TURKEY

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S Tezcan,* T Adali, E K Yigit. Hacettepe University, Ankara, Turkey

**Introduction** Developing societies experience a nutritional transition in line with their epidemiological transition. As a diet rich in carbohydrates and fats and poor in fibre spreads, one of the major consequences of the nutritional transition emerges: Obesity. Among all age groups, childhood obesity is especially important, since it is known that it is likely to lead to adulthood obesity; an important risk factor for cardiovascular disease and diabetes. This study focuses on early childhood (under age 5) obesity in Turkey. This emerging issue is gaining importance Turkey’s public health agenda, and there are already local studies to estimate the prevalence of childhood obesity. However, no national estimates have been obtained until recently, and this study presents the findings obtained for the further analysis study of the Turkey Demographic and Health Survey, 2008.

**Methods** Data were obtained from the anthropometric measurements in this survey.

**Results** The national prevalence of childhood obesity was calculated as 5.8%. It was higher in urban areas (6.7%) than rural areas (3.5%). It was also higher in the western region (7.8%), wealthiest households (11.5%); for children with at least high school graduation mothers (9.8%), no siblings (8.4%) and higher birth weights (7.1%). Multiple logistic regression analysis, where being obese was the dependent variable, showed that the birth order and birth weight of the child and duration of breastfeeding were significant determinants of childhood obesity.

**Conclusion** The results of the study will be benefited by the health planners and administrators to combat this problem as early as possible.

**SP1-88** MORTALITY IN AN URBAN COHORT IN RAGAMA, SRI LANKA

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P V T S Wihanage, P A S Panapitiya, N Padmakumara, S Hemantha, K T A A Kasturiratne, A R Wickremasinghe,* A Pathmeswaran, M J P Attygalle. Faculty of Medicine, University of Kelaniya, Ragama, Sri Lanka

**Introduction** The leading causes of mortality in Sri Lanka are due to chronic diseases. We describe the mortality patterns in a 35–64-year-old urban cohort resident in Ragama, Sri Lanka and followed over 3 years.

**Methods** A follow-up study was conducted among 2986 35–64 year olds randomly selected from the Ragama Medical Office of Health