**P2-276** INFLUENCE OF SMOKING AND SMOKING CESSATION ON PULMONARY FUNCTION IN JAPANESE HEALTHY PEOPLE

doi:10.1136/jech.2011.142976k.9

1M Shigeta, 1E Ozaki, 1N Kuriyama, 1D Matsui, 1Watanabe, 1K Inoue, 1A Nakazawa, 1K Osaka, 1Kyoto Prefectural University of Medicine, Kyoto, Japan; 2Radiation Effects Research Foundation, Hiroshima, Japan

**Background and Objective** Chronic obstructive pulmonary disease has been increasing throughout the world. Many studies show that smoking accelerate decline in pulmonary function and smoking cessation can improve it, but there are very few studies focusing effect of smoking cessation in Japanese people. Therefore we investigated influence of smoking/smoking cessation on pulmonary function.

**Subjects and Method** Subjects were 3915 (55.7±10.5 years old) male who underwent medical check-up in a hospital during 2004. We compared pulmonary functions with stratified analysis among 1096 current smokers (CS), 1706 ex-smokers (ES) and 1111 never smokers (NS) using ANOVA.

**Result** There were significant differences respectively among the three groups, in the following order of NS, ES, CS: FEV1.0 (Forced Expiratory Volume in 1 second) %: 82.3±5.9, 80.5±6.8, 79.3±7.2, % FEV1.0, Peak Flow, V55, V50 and V25. In their 40s, 50s and 60s, ES preserved better pulmonary function than CS consistently and the subjects who quit younger showed the more favourable function.

**Conclusion** Smoking impaired pulmonary function obviously and smoking cessation improved pulmonary function in Japanese people as Western. However earlier cessation was related to larger improvement, even 60-s-quitter had certain effect.

**P2-277** ALCOHOL DRINKING AND PRIMARY LIVER CANCER IN JAPANESE: A POOLED ANALYSIS OF FOUR COHORT STUDIES

doi:10.1136/jech.2011.142976k.10

1T Shimazu, 2S Sasaki, 3K Wakai, 3A Tamakoshi, 4Tsugane, 5Y Sugawara, 6K Matsuo, 4C Nagata, 1Miyazaki, 1Tanaka, 1Inoue, 1Tsugane, 1National Cancer Center, Tokyo, Japan; 2Nagoya University Graduate School of Medicine, Nagoya, Japan; 3Aichi Medical University School of Medicine, Aichi, Japan; 4Tokyo University Graduate School of Medicine, Sendai, Japan; 5Aichi Cancer Center Research Institute, Nagoya, Japan; 6Gifu University Graduate School of Medicine, Gifu, Japan; 7National Center for Global Health and Medicine, Tokyo, Japan; 8Saga University, Saga, Japan

**Introduction** Because studies of the association between alcohol intake and the risk of primary liver cancer use varying cut-off points to classify alcohol intake, it is difficult to precisely quantify this association by meta-analysis of published data. Furthermore, there are limited data for women in prospective studies of the dose-specific relation of alcohol intake and the risk of primary liver cancer.

**Methods** We analysed original data from four population-based prospective cohort studies encompassing 174 719 participants (89 86 men and 84 856 women). After adjustment for a common set of variables, we used Cox proportional hazards regression to estimate HRs and 95% CIs of primary liver cancer incidence according to alcohol intake. We conducted a meta-analysis of the HRs derived from each study.

**Results** During 1 964 136 person-years of follow-up, 804 primary liver cancer cases (605 men and 199 women) were identified. In male drinkers, the multivariate-adjusted HRs (95% CI) for alcohol intakes of 0.1–22.9, 23.0–45.9, 46.0–68.9, 69.0–91.9, and ≥92.0 g/day, as compared with occasional drinkers, were 0.88 (0.57 to 1.36), 1.06 (0.70 to 1.62), 1.07 (0.69 to 1.66), 1.76 (1.08 to 2.87), and 1.66 (0.98 to 2.82), respectively (p for trend=0.015). In women, we observed a significantly increased risk among those who drank ≥23.0 g/day, as compared with occasional drinkers (HR: 3.60; 95% CI 1.22 to 10.66).

**Conclusion** This pooled analysis of data from large prospective studies in Japan indicates that avoidance of (1) heavy alcohol drinking (≥69.0 g alcohol/day) in men and (2) moderate drinking (≥23.0 g alcohol/day) in women may reduce the risk of primary liver cancer.

**P2-278** ALTRUISTIC MOTIVATION FOR PRO-SOCIAL BEHAVIOUR PREDICT DECREASED RISK OF CARDIOVASCULAR MORTALITY AMONG COMMUNITY DWELLING POPULATION IN JAPAN: JACC STUDY

doi:10.1136/jech.2011.142976k.11

1K Shirai,* 1H Iso, 1H Noda, 2T Ohira, 1K Sakata, 1A Tamakoshi, 1Harvard School of Public Health, Boston, Massachusetts, USA; 2University of the Ryukyus, Nishihara, Okinawa, Japan; 3Osaka University, Suita, Osaka, Japan; 4Nagoya Medical University, Morioka, Iwate, Japan; 5Aichi Medical University, Nagoya, Aichi, Japan

**Objectives** This study examine the effects of sense of being relied by others reflecting altruistic motivation for pro-social behaviour on cardiovascular disease mortality among Japanese community residents.

**Method** Subjects were 99,969 Japanese men and women aged 40–79 years free from cardiovascular and cancer disease at baseline 1988–1990, included in the Japan Collaborative Cohort Study. Sex-specific age and multivariable adjusted HRs were calculated according to the perceived level of being relied by others from Cox proportional hazard models to estimate the risks of cardiovascular mortality. Additionally, one-to-one nearest neighbour propensity score matching analysis were carried using a probit model.

**Result** Among 41,906 men and 58,063 women followed up for 14.4 years in median, a total of 4,280 (2,520 men and 1,960 women) cardiovascular deaths were documented. The multivariable HRs of total cardiovascular disease deaths for men with the highest sense of being relied by others to compare with those in the lowest were 0.65 (95% CI 0.52 to 0.82), p for trend p=0.05 for stroke, and 0.75 (95% CI 0.64 to 0.88), p for trend=0.004, for total cardiovascular deaths with dose responses. For both men and women, they were not associated with coronary heart disease deaths. The HRs and the 95% CIs calculated in the matching technique were not grossly different.

**Conclusion** A lower level of sense of being relied by others was found to be associated with higher risk of cardiovascular disease mortality among middle-aged men, suggesting a protective role of altruistic psychological conditions on cardiovascular disease.

**P2-279** 10-YEAR MORTALITY FOLLOW-UP OF MATERNAL AND PATERNAL GRANDPARENTS SHOWS DIFFERENT PATTERNS OF ASSOCIATION WITH THEIR GRANDCHILDREN’S BIRTH WEIGTHS: THE LIFEWAYS CROSS GENERATION COHORT STUDY

doi:10.1136/jech.2011.142976k.12

A Shrivastava,* C Murrin, C Kelleher, for the Lifeways Cross Generation Cohort Study Steering Group.

**Introduction** Association between individual birth measures and chronic disease morbidity or mortality in their adult relatives contributes to evidence of developmental origins of disease.