Poster-discussion: Welding and metals

P91 THE EFFECTS OF SMOKING AND DRINKING ON BLOOD LEAD AND CADMIUM LEVELS: DATA FROM THE FOURTH KOREA NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY

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Objectives The purpose of this study is to assess the effects of smoking and drinking on blood lead and cadmium levels based on a dose-response relationship in the general Korean adult population.

Methods The study population consisted of 1901 Koreans, who took part in the 2008 Korean National Health and Nutrition Examination Survey, in which blood lead and cadmium levels were measured. Geometric mean concentrations and their 95% CIs of metals in blood were estimated by analysis of covariance (ANCOVA) adjusting for demographic and lifestyle factors.

Results We observed a statistically significant dose-response relationship with daily smoking amount/alcohol intake and blood lead/cadmium levels. While daily smoking amount was more consistent with blood cadmium level (0.1–0.2 µg/l per 5 cigarettes), blood lead concentrations were higher as daily alcohol intake increased (0.1–0.2 µg/dl per 10 gram of alcohol).

Conclusions Our findings clearly support a relationship between daily smoking amount/alcohol intake and blood lead/cadmium levels, suggesting an additional reason towards efforts to reduce smoking and drinking habits.