

## **BPA IS RELATED TO ABNORMAL LIVER FUNCTION : THE KOREAN ELDERLY ENVIRONMENTAL PANEL STUDY (KEEPS)**

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**Background and Aims** : Bisphenol A(4,4-isopropylidenediphenol, BPA) is known to have adverse effect on various organs. Liver has been reported to be affected in previous animal studies, however there were few human studies and the mechanism is not clear. Our study tried to evaluate the relationship between BPA level and liver function in human using repeated measurement data.

**Methods** : From 2008 to 2009, a total of 556 elderly participants dwelling in Seoul were evaluated repetitively. At the first visit, demographic data, environmental exposure and habitual histories were gathered through a systemized questionnaire. Blood and urine samples were gathered at the same time and stored for analysis. Generalized linear mixed models were performed adjusting for age, sex, body mass index, drinking, smoking, exercise frequency and cholesterol level.

**Results** : Mean urinary BPA level were 1.03 µg/g creatinine. Higher urinary BPA levels were associated with elevated liver enzyme levels in a fully adjusted model (ALT, gamma-GTP were significant at  $P < 0.01$ , AST showed marginal significance). Because BPA levels were significantly associated with BMI, we evaluated the BPA-liver relationship with or without controlling for BMI. The association of BPA with abnormal liver function remained significant regardless of controlling for BMI.

**Conclusions** : Our results suggest that BPA has adverse effect on liver in human. BPA may affect liver function independently from the pathway of obesity.