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제 목	대기오염 중의 PAH 노출에 의한 DNA 산화손상에 식이 비타민의 섭취가 미치는 보호작용 Protective effects of dietary vitamin intake against oxidative DNA damage by ambient PAH exposure
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To investigate the effect of vitamin intake level on the oxidative damage caused by PAH exposure, we measured urinary 1-hydroxypyrene (1-OHP) and 8-hydroxydeoxyguanosine (8-OHdG) levels to determine exposure and oxidative injury in total 780 adults.

Significant relation was observed between log 1-OHP and 8-OHdG concentrations in the whole study group with regression coefficient 1.84 ($p<.0001$). The vitamin intake level was calculated from food frequency questionnaire for vitamin A, C, E, retinol, and folic acid that usually have been regarded as a candidate of antioxidant. When vitamin level was grouped by mean value, low intake group of vitamin A, retinol, folic acid were shown to have higher regression coefficient. When analyzed with stratification by sex, the increase of coefficient was observed more distinctly in male group and all of them reached to statistical significance. To consider the effect of smoking on the change of regression coefficient, we performed the analysis in the group with low intake of vitamin according to smoking. Interestingly, the increases of regression coefficient were shown relative to increase of cotinine level all significantly.

In conclusion, vitamin intake may be preventive against the oxidative injury by PAH exposure and the effect of prevention might be different according to smoking habit.