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## Risk Assessment of Niacin by Ingestion of Food and Multivitamin in Population Having a Typical Lifestyle

Hyomin Lee, Eunkyung Yoon, Shinhee Park, Yunhee Kim, Jungwon Park, Sujin Lee,  
Chungsik Min, Hyunjoung Kim, Keumryun Je and Kwangsik Choi  
*Division of Risk Assessment, National Institute of Toxicological Research, Seoul, Korea*

Ingestion of large dose of niacin brings adverse effects including flushing, skin, itching, nausea, vomiting and gastrointestinal disturbance to human. This study was conducted to estimate daily intake of niacin by ingestion of food and multivitamin and to identify risk value related with side effects, which can be caused by large dose in population having a typical lifestyle. For estimating daily intake of niacin, exposure scenario reflecting a plausible situation in common life style was considered. And also, exposure of niacin by only food ingestion and exposure by intake of both food and multivitamin were considered to subject as a adult with 60kg. Dietary intake dose of niacin as 18.37 mg/day from report on 2002 National Health & Nutrition Survey and daily intake level of nutritive medicine permitted from the Korea Food and Drug Administration as 10~500mg/day were used. Upper tolerable nutrient intake levels(ULs) which mean the maximum intake that is unlikely to pose risk of adverse health effects to decide whether side effects occur or not, was compared with daily intake level. Induced risk values by comparing only dietary intake level and intake level by both food and multivitamin with upper with upper level as 35mg/day (US.FNB) were 0.52 and 0.81~14.81 respectively. Risk value over 1 means that occurrence of side effects would be expected in some population who daily nutritive medicine. If some people intake multivitamin and functional food including niacin, risk value will increase more than risk value identified in this study

**Keyword** : risk assessment, niacin, upper level, multivitamin