

Genes relate to level of alcohol consumption among Asians

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In a study of 1,721 Korean male drinkers aged 40-70 y in an urban population-based cohort, and another sample of 1,113 male drinkers from an independent rural cohort, information on average daily alcohol consumption was collected and DNA samples were collected for genotyping.

In a genome-wide association (GWA) study, 12 single-nucleotide polymorphisms (SNPs) on chromosome 12q24 had genome-wide significant associations with alcohol consumption. These polymorphisms were closely related to [genes](#) that determine levels of ALDH, low levels of which relate to flushing after even small amounts of alcohol. Such enzymes are much more common among Asians than among westerners. Associations were tested only with the weekly amount of alcohol consumed, not the pattern of drinking; hence, these findings are not direct measures of alcoholism.

The editorial by Freedman et al states "epidemiologic literature suggests that those who begin drinking at an early age may be at greater risk for a maladaptive and more genetically pronounced form of [alcohol consumption](#), and other environmental milieus affect the risk of alcoholism." It will be important to investigate the interplay of genes and environmental factors when seeking the determinants of alcohol abuse. Despite the findings of this study, our understanding of factors associated with alcoholism remains very limited.

More information: Baik I, Cho NH, Kim SH, Han B-G, Shin C.

Genome-wide association studies identify genetic loci related to alcohol consumption in Korean men. *Am J Clin Nutr* 2011;93:809

Accompanying Editorial: Agrawal A, Freedman ND, Bierut LJ. Genome-wide association studies of alcohol intake—a promising cocktail? *Am J Clin Nutr* 2011;93:681

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