

A variable-number-of-tandem-repeats polymorphism in the dopamine D4 receptor gene affects social adaptation of alcohol use: Investigation of a gene-environment interaction

Author(s)

Larsen H, van der Zwaluw CS, Overbeek G et al.

Published

Friday, January 1, 2010 - 12:00

Publisher

Psychological Science

Volume

21

Issue

8

Page(s)

1064-8

Abstract

Research suggests that people adapt their own drinking behavior to that of other people. According to a genetic-differences approach, some individuals may be more inclined than others to adapt their alcohol consumption level to that of other people. Using a 3 (drinking condition) x 2 (genotype) experimental design (N = 113), we tested whether susceptibility to alcohol-related cues (i.e., seeing someone drink) was related to the variable number of tandem repeats in exon 3 of the D4 dopamine receptor gene. A strong gene-environment interaction showed that participants carrying at least one copy of the 7-repeat allele consumed substantially more alcohol in the presence of a heavy-drinking individual than did participants without this allele. This study highlights that individual variability in sensitivity to other people's drinking behavior may be attributable to genetic differences. Carrying the 7-repeat allele may increase the risk for heavy alcohol use or abuse in the company of heavydrinking peers.

Web link

<http://www.ncbi.nlm.nih.gov/pubmed/20610847>

[View PDF](#)