

the RED CUP Q&A



separating alcohol fact from fiction
EVERY TUESDAY IN THE DAILY WILDCAT

Q Why do Asian people get so red when they drink?

A. Blame it on acetaldehyde. The “Asian flush” or “Asian glow,” that you are referring to is the result of the absence of an enzyme, in some individuals, that breaks down alcohol’s chemical byproducts. The body eliminates alcohol (ethanol) in a series of steps. First, ethanol gets broken down by the enzyme alcohol dehydrogenase (ADH). Next, another enzyme called aldehyde dehydrogenase (ALDH2) metabolizes the organic chemical compound acetaldehyde. However, among individuals who are deficient in ALDH2, acetaldehyde doesn’t get broken down and instead accumulates in the body. The result is the characteristic red, flushed appearance on the face, as well as increased heart rate, nausea, and sometimes dizziness associated with the “Asian flush.”

Studies have shown that around 36% of East Asians, including individuals from Japan, China and Korea, exhibit these symptoms after alcohol use due to their genetic makeup. For individuals with the genes that render ALDH2 ineffective, drinking can make for an unpleasant experience – something that researchers have correlated with a reduced risk of alcohol dependence, since the reaction effectively discourages drinking. Another more troubling finding is the fact that individuals who exhibit flushing may be at higher risk for esophageal cancer, a rare but deadly form of the disease. A known carcinogen, acetaldehyde normally doesn’t pose a problem because it is converted to acetate, but for those who lack ALDH2, the rise in acetaldehyde is a concern since it leads to increased exposure over time.

The take home message for those who exhibit the “Asian flush” is that limiting alcohol use is probably a good idea given the risks that have been documented so far. If you choose to drink, the less alcohol you consume, the less acetaldehyde will accumulate. Setting a limit on the number of drinks you will have up front may also mitigate the unpleasantness of facial flushing. For more info on alcohol, check out www.health.arizona.edu or signup to receive our Red Cup Q&A each week by emailing us at redcup@email.arizona.edu.



wildfact

Over half of UA students set a limit on the number drinks they will have before they go out. (Health & Wellness Survey, N=2,479)



Got a question about alcohol?

Email it to redcup@email.arizona.edu



www.health.arizona.edu

The Red Cup Q&A is written by Lynn Reyes, LCSW, LSAC, David Salafsky, MPH, Lee Ann Hamilton, MA, CHES, and Spencer Gorin, RN, in the Health Promotion and Preventive Services (HPPS) department of the UA Campus Health Service.