Blacks May Be at Greater Risk for Alcoholism

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WASHINGTON — Differences in response to alcohol suggest that African Americans may be at greater risk for alcoholism than whites, based on the preliminary results of an alcohol challenge study involving 160 participants.

"The surprising thing is that the response pattern for our sample is indicative of increased risk for African Americans," Denis M. McCarthy, Ph.D., said in an interview.

Dr. McCarthy of the department of psychological sciences at the University of Missouri–Columbia and Sarah L. Pedersen, a graduate student, presented the study as a poster at a joint meeting sponsored by the Research Society on Alcoholism and the International Society for Biomedical Research on Alcoholism.

African American subjects had increased stimulation and African American male subjects reported decreased sedation in response to an alcohol challenge, compared with the response seen in whites. The risk of developing alcohol problems is influenced in part by one's subjective response to alcohol. Studies have shown that individuals at risk for alcoholism report greater stimulation, less sedation, and/or a low response to alcohol, they said.

The findings are somewhat unexpected, given that previous research has clearly indicated a lower risk of alcoholism for African Americans, particularly in adolescence and young adulthood. African American youths tend to start drinking later and increase use slower than do white youths. African American youths also have higher rates of alcohol abstinence and engage in less heavy drinking in college.

The study involved 160 participants—48% of whom were male, with an average age of 22 years—who completed an alcohol challenge. Of these, 64% were African American. Participants were recruited through posted advertisements. At the first visit, participants completed clinical interviews and questionnaires. The alcohol challenge was conducted at the second visit.

For the alcohol challenge, baseline measurements were performed using the Biphasic Alcohol Effects Scale (BAES) and breath alcohol concentration (BrAC). The BAES is a self-reported rating scale designed to measure both stimulant and sedative effects of alcohol when blood alcohol content is increasing (ascending limb of the blood alcohol curve) and decreasing (descending limb). The BrAC allows the estimation of blood alcohol content.

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Alcohol (vodka and tonic) was dosed by weight and gender—0.72 g/kg alcohol for men and 0.65 g/kg alcohol for women. This dosing was used to achieve an estimated peak blood alcohol concentration of 80 mg/dL (0.08%). Alcohol was consumed in 15 minutes and measurements were repeated at 15, 30, 45, 60, 90, 120, and 150 minutes after alcohol administration.

African Americans had sharper increases in stimulation from alcohol on the ascending limb of the blood alcohol curve, and white males had increased sedation. No differences were found between the races for stimulation or sedation on the descending limb, Dr. McCarthy and Ms. Pedersen wrote.

Stimulation on the ascending limb was related to drinking in the past month for African Americans but not for whites. Sedation on the ascending limb was related to drinking in the past month for both racial groups. Sedation on the descending limb was related to past-month drinking only for whites. African Americans reported lower levels of alcohol use during the past month, in terms of both frequency and quantity. African Americans also reported lower levels of alcohol risk factors: positive alcohol expectancies, disinhibited personality traits, and peer drinking.

"My initial thought is that the other protective factors found in African American college students are 'holding down' their drinking," Dr. McCarthy said. "It will be important to see how these findings on response to alcohol fit in with other risk and protective factors."

The researchers hope to look at differences in drinking culture between college-age African Americans and whites. ■