

'Sweet tooth,' craving for alcohol linked

As a doctor in Russia in the 1980s, Alexey Boris Kampov-Polevoy noticed a common trait among the alcoholics he treated: many of them craved sweets, spooning large dollops of sugar into their coffee and eating the candies on his desk so quickly that he stopped filling the candy dish. Kampov-Polevoy, now a U.S. resident, followed up that observation with research indicating that a craving for alcohol and a craving for sweets may stem from a common neurochemical mechanism.

In one study, Kampov-Polevoy and colleagues gave sweetened beverages to 20 detoxified alcoholic men, and 37 non-alcoholic controls, and asked the participants to rate how much they liked each solution, on a scale ranging from "disliked very much" to "liked very much." The alcoholics reacted very differently from the controls, with 65 percent of alcoholic subjects preferring the most concentrated sugar solution (which was more than twice as sweet as a cola). Controls, by comparison, generally preferred a solution only half as sweet as the one selected by the alcoholics, with only 16 percent of the controls picking the strongest solution.

Kampov-Polevoy et al. note that a craving for sweets, by itself, is not evidence of a potential for alcoholism. Rather, they say, an excessive craving for sweets, when associated with certain personality traits, may be associated with alcohol problems. In one study, the researchers found that sweet-craving alcoholics tend to exhibit the personality traits of harm avoidance and novelty seeking, while non-alcoholics who like sweets score low on these traits. They note that high levels of harm avoidance and novelty seeking have also been associated with bipolar disorder and opiate addiction.

Animal studies strongly support a link between a craving for alcohol and a craving for sweets. Kampov-Polevoy et al. have found that rats bred to prefer alcohol drink double or even triple the amount of a sweet solution as rats bred to avoid alcohol, and other researchers report similar findings. Research also shows that the correlation between consumption of sweets and alcohol in mice is influenced more by genetic than environmental factors.

Kampov-Polevoy et al. suggest that the sweets/alcoholism connection may involve opioids, natural opium-like chemicals produced by the body. "The literature suggests that sweets stimulate the endogenous opioid system in animals and humans by inducing a release of Beta endorphin, and by increasing the binding affinity for opioids," the researchers say. "Similarly, activation of the opioid system is known to be involved in the regulation of alcohol intake."

The researchers cite anecdotal evidence that many alcoholics use sweets to alleviate their cravings for alcohol. It may be, they say, that abstaining alcoholics eat large quantities of sweets as a form of self-medication.

"Association between preference for sweets and excessive alcohol intake: a review of animal and human studies," Alexey B. Kampov-Polevoy, James C. Garbutt, and David S. Janowsky, *Alcohol & Alcoholism*, Vol. 34, No. 3, 1999, pp. 386-395.

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"Evidence of preference for a high-concentration sucrose solution in alcoholic men," Alexey B. Kampov-Polevoy, James C. Garbutt, and David S. Janowsky, *American Journal of Psychiatry*, Vol. 154, No. 2, February 1997, pp. 269-270.

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"Preference for higher sugar concentrations and tridimensional personality questionnaire scores in alcoholic and nonalcoholic men," Alexey B. Kampov-Polevoy, James C. Garbutt, C. E. Davis, and David S. Janowsky, *Alcoholism: Clinical and Experimental Research*, Vol. 22, No. 3, May 1998, pp. 610-614.

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"Carolina's sweet test," *Center Line*, School of Medicine, University of North Carolina at Chapel Hill, Vol. 8, No. 4, 1997.