the geometry and complexity of the adult brain. Cannabinoids seem to have profound and permanent effects on brain organization, connectivity, and geography when exposure occurs during critical periods in utero, early childhood, or adolescence (Science 2007;316:1212-6).

Pharmacologic interference with endocannabinoid signals during fetal development leads to long-lasting modifications of synaptic structure and function. In fact, endocannabinoids are critical in shaping the development of the central nervous system. Marijuana abuse during pregnancy can impair social behaviors, cognition, and motor functions in the offspring, with the impact lasting into adulthood. Similar effects can occur when cannabinoid use occurs during puberty and peak periods of brain growth and development.

Nonmedical drug use, including smoking marijuana, can cause long-term, if not permanent, changes in the brain. Marijuana smoking may make mental illness and drug dependence itself more likely.

The take-home message is that marijuana is a potent drug that can cause serious depression and elevated mental health risk profiles. In other words, drug abuse prevention also is mental illness prevention. As such, reducing adolescent use of marijuana and other drugs must be a priority for mental health treatment.

The common comorbidity of mental illness and substance abuse underscores the importance of universal screening of patients with serious mental disorders for substance use. When drug use is detected in this high-risk population, substance abuse treatment and ongoing monitoring for drug use should be a routine part of mental health care. ■

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Varenicline May Help Curb Heavy Drinking

BY KERRI WACHTER
Senior Writer

WASHINGTON — The antismoking drug varenicline also appears to curb alcohol cravings in smokers who are heavy drinkers, results of a small study show.

Nondependent heavy drinkers taking varenicline (Chantix) were nine times more likely to be abstinent during the 2-hour period of free access to alcoholic drinks than were those in the placebo group, based on logistic regression analysis, Sherry A. McKee, Ph.D., reported at a joint meeting sponsored by the Research Society on Alcoholism and the International Society for Biomedical Research on Alcoholism.

Participants were male and female non–treatment seeking, nondependent heavy drinkers who also were daily smokers, said Dr. McKee of Yale University, New Haven, Conn.

Subjects were titrated to steady-state levels of varenicline (2 mg/day) or placebo over the course of a week. On day 8, all participants were given free access to cigarettes and were administered a priming drink, which was designed to raise blood alcohol levels to 0.03 g/dL.

Subjective and psychological responses to alcohol were then assessed. A 2-hour period of self-administration followed, during which time participants could choose to consume up to eight additional drinks (designed to raise blood alcohol levels by 0.015 g/dL) or to receive monetary reinforcement for drinks not consumed.

Participants had to have smoked at least 10 cigarettes/day for the last year. Men had to consume more than 14 drinks/week or 5 or more drinks on one occasion; women had to consume more than 7 drinks/week or 4 or more drinks on one occasion. Urine testing was used to assess varenicline compliance on days 4-8.

A total of 20 participants were enrolled—10 in each arm. The groups were matched in terms of age, gender, number of cigarettes per day, weekly frequency of drinking, and number of drinks per episode.

During the period of unrestricted access to alcohol, varenicline "significantly reduced drinking by about two drinks," Dr. McKee said. Two subjects in the varenicline group consumed drinks, compared with seven in the placebo group. After the priming drink, no difference was found in blood alcohol levels between the two groups. However, a significant difference was found in alcohol craving. Those on varenicline reported a sharp decrease in alcohol craving; those on placebo reported an increase.

The subjective effects of alcohol remained steady for those in the varenicline group but increased in the placebo group. The difference was statistically significant. There was no effect of varenicline on tobacco craving in this period.

Adverse events were few and included nausea, sleep disturbance, abnormal dreams, constipation, flatulence, and vomiting. Dr. McKee said that she had no conflicts of interest. ■