Early Intervention Needed To Deter Marijuana Use

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MIAMI — Intervene to prevent marijuana use in children as young as 8 years, a National Institute on Drug Abuse researcher suggested at the annual conference of the American Society for Addiction Medicine.

"Addiction is a developmental disease—it starts in adolescence and childhood with tobacco, THC [tetrahydrocannabinol], and alcohol," Jag H. Khalsa, Ph.D., said.

Physicians first can help children and their parents overcome the common misperception that marijuana carries much lower health risks, compared with other substances, Dr. Khalsa said. "Young people think this drug is innocuous and does not do much harm. Drug use goes up with this perception and down with the perception that it is dangerous."

Almost 20% of high school seniors smoke marijuana. Overall, 15 million Americans 12 years and older have used marijuana at least once in their lifetime, and there are 2-3 million new users each year, said Dr. Khalsa. He is chief of the medical consequences branch, division of pharmacotherapies and medical consequences of drug abuse, National Institute on Drug Abuse, Bethesda, Md."Marijuana continues to remain the third most commonly used drug mentioned in the ER—so the consequences are significant," Dr. Khalsa said.

Among the most important adverse effects of marijuana use are the cognitive effects: impairment in cognition, short-term memory loss, and executive dysfunction. These deficits can be dose related and can persist up to 15 days, according to a NIDA-funded study (Neurology 2002;59:1337-43). College students who abused marijuana showed impairment in cognitive function and ability to remember simple tasks at baseline. Effects were still observed after 7 days and 15 days of abstinence, but deficits were no longer seen at day 28. "This suggests people recovered from the chronic effects of marijuana."

Chronic marijuana use also may be associated with major depression, attention-deficit/hyperactivity disorder, and aggressive behaviors in drug-dependent adolescents. Acute increases in heart rate, increased blood pressure, and cardiac output alterations are among the cardiovascular effects. Endocrine effects in humans include lower testosterone levels, decreased luteinizing hormone levels, infertility, and gynecomastia. "There are inconsistent reports, however, in the literature" regarding endocrine alterations, Dr. Khalsa said.

In addition, the immune effects are significant, he said. THC suppresses macrophages, natural killer cells, and T lymphocytes, mediated through CB2 receptors on leukocytes. "Suppression of antitumor activity makes a person more susceptible to cancer. Squamous cell carcinomas have been reported in the mouths of marijuana users," he noted.

Marijuana smoke contains approximately 50% more carcinogenic compounds than tobacco smoke. However, "sometimes it is difficult to tease out effects between the people who smoke both tobacco and marijuana over the long term," Dr. Khalsa said.

THC also can cause modest short-term bronchodilation. In addition, regular marijuana smoking leads to chronic cough and increased sputum production, he said. ■

For more information on the clinical effects of marijuana and research developments, visit www.nida.nih.gov.

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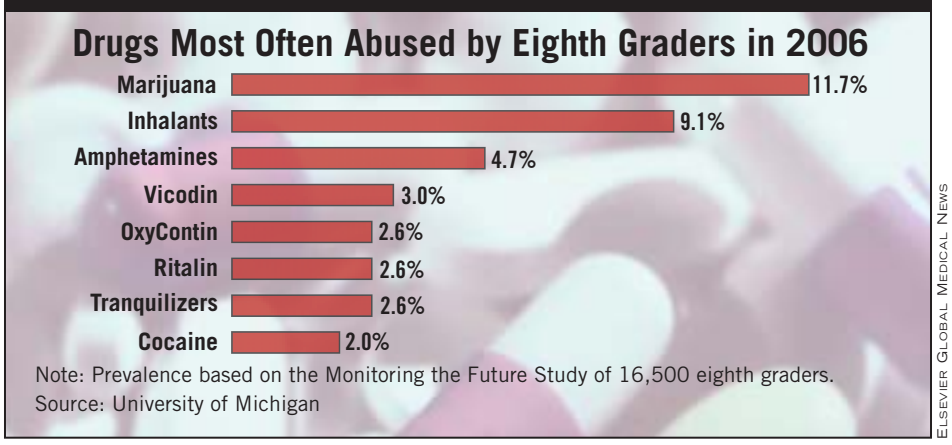

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