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There is evidence that individuals who start to smoke marijuana at an early age—while the brain is still developing—show deficits in cognition which are not seen in individuals who begin use of the drug when they are older. The reasons for this difference is unclear. Scientists from the Harvard Medical School and from the intramural research program of the National Institute of Drug Abuse (NIDA) found lasting cognitive deficits in those who started to smoke marijuana before age 17. The researchers analyzed neuropsychological test results from 122 long-term heavy users of marijuana and 87 subjects who had used marijuana only a few times (control subjects). Sixty-nine of the 122 users started using marijuana at age 17 or before. The subjects were between the ages of 30 and 55 at the time of the study, and all had refrained from any drug use 28 days prior to testing.

Individuals who started using marijuana at age 17 or younger performed significantly worse on the tests assessing verbal functions such as verbal IQ and memory of word lists than did those who started using marijuana later in life or who had used the drug sparingly. There were virtually no differences in test results among the individuals who started marijuana use after age 17 and the control subjects.

The investigators suggest three possible hypotheses that might explain these differences. One possibility is that early-onset smokers had lower innate cognitive skills before they ever started smoking marijuana. A second possibility is poor learning of certain cognitive skills by young users of marijuana who neglect school and academic pursuits. The third and most ominous possibility is that marijuana itself has a neurotoxic effect on the developing brain. According to the authors, further research will be required to determine the relative contributions of these three factors.

**SOURCE:** From a study in the March 2003 issue of *The Journal Drug and Alcohol Dependence* by John H. Halpern and Harrison G. Pope, Jr.

## Little Hoover Commission Takes a Stand for Addiction Treatment

One in nine Californians suffers from an addiction to alcohol

or other drugs. But few addicts suffer alone. Drug addiction underlies the abuse and neglect of more than 100,000 children in California and is a factor in a majority of domestic assaults.

Eight in ten felons who are sent to prison abuse drugs or alcohol. But the costs are not limited to the criminal justice system. Some \$11 billion is spent from the state General Fund responding to problems created by abuse or addiction.

The expenditures and economic losses to individuals, corporations, and public agencies that result from abuse and addiction in California are estimated to top \$32 billion.

*For the rest of the story, go to <http://www.assm.org>*

## WHAT CONSTITUTES EFFECTIVE TREATMENT OF PEOPLE WHO ABUSE INHALANTS?

People who abuse inhalants are thought to be an easily overlooked and undertreated population. In many ways, they are like other people who are chemically dependent, but they also have unique treatment needs. Currently, treatment protocols are based on limited experience and research, primarily with disadvantaged Native American and Hispanic populations in Southwestern and Midwestern United States.

The checklist below includes questions you should consider as you review treatment protocols or guide program development.

✓ Do you provide information about inhalant abuse to referral sources? Do referral sources understand the dangers of inhalant abuse and the need for intervention? People who abuse inhalants are a hidden population. They rarely seek treatment, and inhalant abuse is often undetected because it “is not on the radar screen.”

✓ Do you rigorously assess for inhalant abuse? Do you know what inhalants are abused and how they are abused? Do you know patterns of abuse so that you can converse with clients who may be reluctant and embarrassed to discuss their abuse? Do you ask clients why they are attracted to inhalants (very quick acting, short duration, free or low cost, easy availability,