



Early Nicotine Initiation Increases Severity of Addiction

Most tobacco use begins during adolescence. People who start using nicotine in their early teens are more likely to become lifelong smokers than are those who first light up as adults.

New research has shown adolescent smokers are more likely than adult smokers to become dependent on nicotine. **When compared with non-smoking peers, young smokers are more likely to be abusers of other drugs as well.**

A recent National Survey on Drug Use and Health reported that roughly half, 48.1%, of youths aged 12 to 17 who smoked cigarettes in the past month also used an illicit drug. **This survey also found that only 6.2% of nonsmoking youths reported using an illicit drug in the same time period.**

Research Outline

Laboratory researchers have recently looked at whether the developmental period during which animals are first ex-

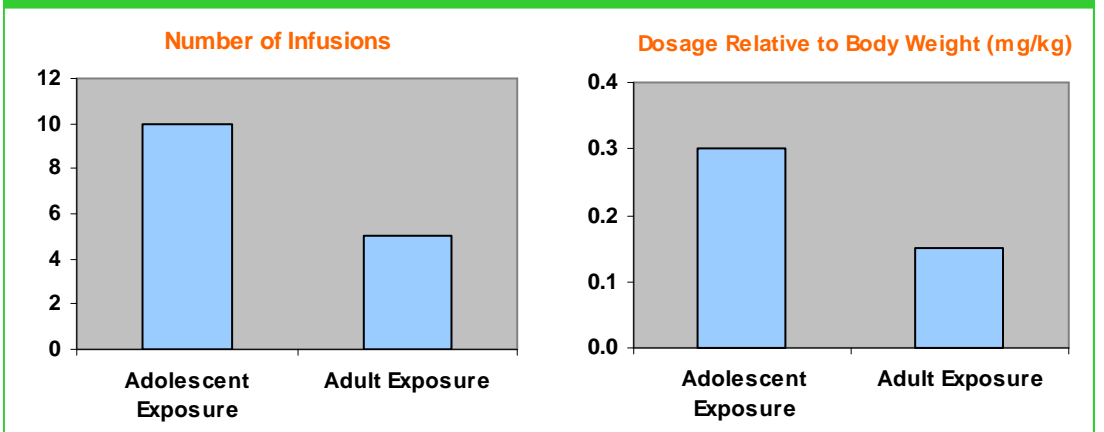
posed to nicotine makes a difference in their need to obtain the drug. One important experiment looked at the short-term effects of this drug, the other at its longer term effects.

In the study, the researchers trained a group of adolescent rats and a group of adult rats to press a lever to obtain an intravenous injection of nicotine.

The nicotine dosage delivered with each lever push changed each day, in different order for each animal over 8 days of the study. Regardless of dose, the adolescent animals self-administered more injections each day than the adults. The researchers found that an adolescent animal's initiation to nicotine produced a greater nicotine use in the days immediately following exposure to the drug.

Throughout the study period, the rats exposed as adolescents continued using nicotine much more often than the rats initially exposed as adults.

Adolescence Animals Self-Administer More Nicotine Than Animals First Exposed as Adults



Animals first exposed to nicotine as adolescents self-administered nicotine more often and in higher total doses per session than animals first exposed as adults.

Summary

Use of nicotine during the teenage years, when the brain is still developing, may well cause the developmental processes in the brain to proceed inappropriately.

Young people who begin smoking during adolescence are at a much greater risk for increased smoking when they become

adults, according to Mona Sumner, Chief Operations Officer, Rimrock Foundation.

The results indicate that smoking is much more addictive if it is initiated during adolescence. **Further evidence suggests that early exposure to nicotine may heighten response to other addictive drugs.**

Editorial Staff

Editor in Chief:
David W. Cunningham

Assistant Editors:
Hugh Kilbourne
Kay Seder

Art/Graphics Designer:
Lenny Joyce

Web Developer:
Christine Kringle



Center for Behavioral
Health Studies

Rimrock Foundation
P.O. Box 30374
Billings, MT 59107

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