

# Research Highlights

## Helping Adolescents Resist Drugs

Over the past two decades, the tragic consequences of adolescent drug use have spurred development of drug-prevention strategies. More than 2,000 school-based prevention programs are currently in use in the nation's classrooms. However, only a handful have been scientifically tested. Among the most successful of these is Project ALERT, an intervention designed in the 1980s by a RAND Health team led by Phyllis L. Ellickson, with funding from the Conrad N. Hilton Foundation.

Project ALERT works. In multi-year, multi-site tests, it has been found to curb or forestall cigarette and marijuana use among seventh- and eighth-grade students. It is equally effective in schools with low or high proportions of minority students and in a variety of socioeconomic settings. It reduces drug use by both low- and high-risk students. The Project ALERT curriculum has been implemented in most of the 50 states. A companion program, ALERT Plus, is being created to help teens resist the increasing social pressures of high school.

### About Project ALERT

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Project ALERT departs boldly from prevention models of the 1960s and 1970s, which emphasized informing adolescents about the long-term consequences of drug use or building their decisionmaking skills. Instead, Project ALERT is based on the theory that adolescents turn to drugs because of perceived social norms, because media images and the influence of peers make drug use appear attractive, and because, being kids, they want to appear mature and independent.

To combat these powerful forces, the Project ALERT curriculum seeks to modify norms about drug use, give students

reasons not to use, and help them identify and resist pro-drug pressures—both internal and external. To build resistance skills, it equips them with a repertoire of strategies and builds their confidence in using them. To build motivation not to use drugs, the curriculum helps students to understand that most teenagers do not use drugs and to recognize the multiple ways in which drugs affect students now—socially, emotionally, and physically.

The original ALERT curriculum consists of eight lessons in seventh grade and three booster lessons in eighth grade. The lessons are designed to help students connect what they learn to their daily lives: They involve students actively, demonstrate how to use new skills, and provide plenty of practice.

### Evaluating Project ALERT's Effectiveness

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For purposes of evaluation, the program was implemented in 30 highly diverse middle schools in California and Oregon between 1984 and 1986. The schools encompassed urban, suburban, and rural communities. Nine schools had a minority population of 50 percent or more; 18 drew from neighborhoods with household incomes below the state median.

Ellickson and her colleagues surveyed some 6,500 seventh-graders about substance use and attitudes toward drugs before the program began. Over the next five years, the team conducted six follow-up surveys with nearly 4,000 of those teens as they moved through grade 12. The surveys compared students' drug use and related attitudes before, during, and after being exposed to Project ALERT's curriculum with similar data from students who had no contact with the program.

Seventh- and eighth-graders in 20 of the schools went through Project ALERT's 11-lesson curriculum. Adults taught

the classes in 10 of the schools; in another 10, older teens drawn from nearby high school assisted the adults. In the remaining 10 schools, students didn't go through Project ALERT but continued to receive whatever drug-information programs their schools offered.

Ellickson and her colleagues focused on marijuana, cigarette, and alcohol—the drugs of choice among adolescents and gateways to use of other drugs. The researchers suspected that use of drugs prior to participation in Project ALERT could influence how students responded to the program. Thus, for the analysis, adolescents were assigned to three risk groups according to their exposure to a given substance: students who had never tried it (“nonusers”), those who had tried it once or twice at some point in the past (“experimenters”), and those using it more often or recently (“users”). For marijuana, the low-risk category consisted of those who had never tried marijuana or cigarettes.

## How Successful Was Project ALERT?

Project ALERT specifically aims to keep nonusers from starting or moving to frequent use and to reduce the rate at which experimenters become frequent or regular users. The evaluation demonstrated that Project ALERT meets these goals (see the figure):

- Marijuana initiation rates among baseline nonusers were 30 percent lower for students who had gone through Project ALERT than for those who hadn't.
- Project ALERT reduced frequent marijuana use among pre-program experimenters with marijuana and cigarettes.
- Project ALERT curbed occasional, weekly, and daily smoking among pre-program cigarettes experimenters.
- Project ALERT helped experimenters quit smoking.
- Overall, teen- and adult-led classes were equally effective.

Shortly after delivery of the seventh-grade curriculum, Project ALERT produced modest reductions in drinking for all three risk levels. However, by the time the students entered the eighth grade, most of these early gains had disappeared. The program also did not help the more confirmed cigarette smokers, whose profiles revealed that they needed a more intensive program aimed at multiple family, school, and behavior problems.

## Help for High-School Students: ALERT Plus

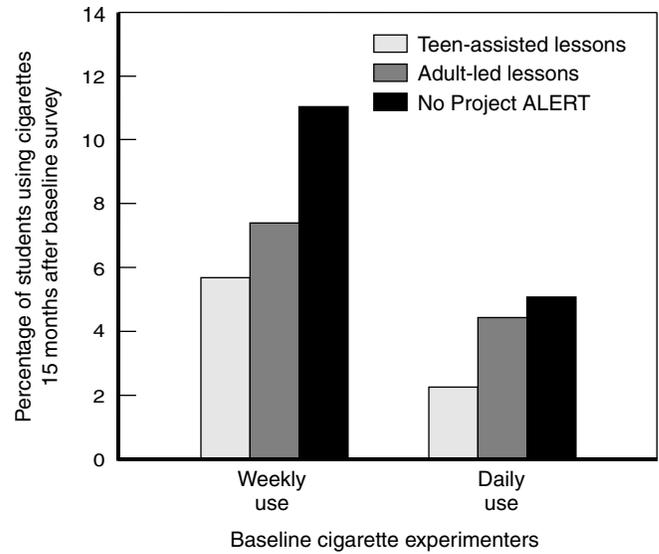
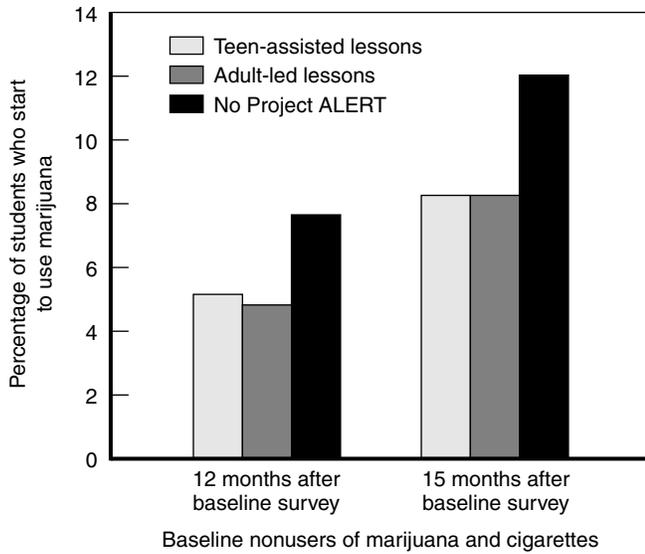
Project ALERT is effective in the seventh and eighth grades, but its early gains erode after the lessons stop. As other studies have shown, maintaining the effects of prevention lessons requires booster programs after adolescents make the transition into high school. What form that reinforcement should take is still uncertain. To help resolve that uncertainty, RAND has undertaken ALERT Plus, with funding from the National Institute on Drug Abuse.

ALERT Plus is a curriculum designed to prevent use of alcohol, tobacco, and other drugs in high school; it has five lessons for ninth-graders and five for tenth-graders. The ALERT Plus curriculum targets the same three drugs as

### Debunking the Myths

Myth About Prevention Programs	Reality Documented in Project ALERT Evaluation
Only work in middle-class suburban communities.	Worked in rural and suburban communities, in schools with high and low proportions of minority students, and in a variety of socioeconomic settings.
Curtail only trivial levels of drug use.	Reduced daily and weekly smoking; helped students quit.
Help only kids who need help least.	Effective with high-risk tobacco experimenters, who are four times as likely as nonusers to become regular smokers.
<p align="center"><b>The success of Project ALERT exploded three myths about prevention programs.</b></p>	

**Project ALERT Reduced Initiation of Marijuana Use and Heavy Smoking**



Project ALERT does, plus less-prevalent substances such as cocaine and other stimulants, depressants, and hallucinogens. It continues to focus on developing and reinforcing motivations not to use drugs.

In addition to helping students develop effective resistance skills, the program also includes techniques for quitting, for dealing with particular high-risk situations (such as pressure to drink and drive), for identifying and countering different marketing techniques, for coping with stress and anxiety, and for practicing teen advocacy against drugs. Parents participate in the program through home-learning activities.

The ALERT Plus evaluation is now under way in 48 South Dakota school districts involving 7,000 students. ALERT Plus programs will be started in other states after the high-school program has been evaluated.

**Success = Buying Time**

To be successful, drug use prevention programs like Project ALERT and ALERT Plus need not turn every drug-using youth into a lifetime abstainer. It may be sufficient that they delay experimentation by nonusers, delay regular use by experimenters, and get users to cut back. Such delays and reduction lessen the likelihood of tragic consequences during the years when people are least able to judge and cope with the implications of substance use. They also translate into lower numbers of users and experimenters over the long term.

## Key Publications on Project ALERT

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Bell, R. M., P. L. Ellickson, and E. R. Harrison. Do Drug Prevention Effects Persist into High School? How Project ALERT Did with Ninth Graders. *Preventive Medicine*, Vol. 22, 1993, pp. 463–483. (Also available as RAND Reprint RP-237.)

Ellickson, P. L. Getting and Keeping Schools and Kids for Evaluation Studies. *Journal of Community Psychology*, CSAP Special Issue, 1994, pp. 102–116. (Also available as RAND Reprint RP-371.)

Ellickson, P. L. Helping Urban Teenagers Avoid High Risk Behavior: What We've Learned from Prevention Research. In J. B. Steinberg, D. W. Lyon, and M. E. Vaiana, eds., *Urban America: Policy Choices for Los Angeles and the Nation*, Santa Monica, CA, RAND, MR-100-RC, 1992.

Ellickson, P. L. Preventing Adolescent Substance Use: Lessons from the Project ALERT Program. In Jonathan Crane, ed., *Social Programs That Work*, New York, Russell Sage, 1998, pp. 201–224.

Ellickson, P. L., and R. M. Bell. Challenges to Social Experiments: A Drug Prevention Example. *Journal of Research in Crime and Delinquency*, Vol. 29, No. 1, February 1992, pp. 79–101. (Also available as RAND R-4173-CHF, 1992.)

Ellickson, P. L., and R. M. Bell. Drug Prevention in Junior High: A Multi-Site Longitudinal Test. *Science*, Vol. 247, 1990, pp. 1299–1305. (Also available as RAND R-3919-CHF, March 1990.)

Ellickson, P. L., and R. M. Bell. Prospects for Preventing Drug Use Among Young Adolescents, Santa Monica, CA, RAND, R-3896-CHF, April 1990.

Ellickson, P. L., R. M. Bell, and E. R. Harrison. Changing Adolescent Propensities to Use Drugs: Results from Project ALERT. *Health Education Quarterly*, Vol. 20, No. 2, 1993, pp. 227–242.

Ellickson, P. L., R. M. Bell, and K. McGuigan. Preventing Adolescent Drug Use: Long Term Results of a Junior High Program. *American Journal of Public Health*, Vol. 83, No. 6, 1993, pp. 856–861. (Also available as RAND Reprint RP-208.)

Ellickson, P. L., and J. A. Hawes. An Assessment of Active vs. Passive Methods for Obtaining Parental Consent. *Evaluation Review*, Vol. 13, No. 1, 1989, pp. 45–55. (Also available as RAND N-2935-CHF, 1989.)

Reinisch, E. J., R. M. Bell, and P. L. Ellickson. How Accurate Are Adolescent Reports of Drug Use? Santa Monica, CA, RAND, N-3189-CHF, 1991.

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