

# *Helping* Young Smokers *Quit*

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## Identifying Best Practices for Tobacco Cessation

# Literature Resource

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This resource document highlights literature on smoking cessation among youth aged 14-18 years, published between 1995 and 2010; it contains over 300 article citations and abstracts, although it may not include all publications related to youth smoking cessation published within this timeframe.

Articles in this literature resource were collected through the Pubmed and OCLC FirstSearch databases. All were published in peer-reviewed journals and were reviewed by HYSQ staff for relevance to youth smoking cessation.

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## Index

|   | Page                      |
|---|---------------------------|
| I. <a href="#"><u>2010 Publications.....</u></a>    | <a href="#"><u>1</u></a>  |
| II. <a href="#"><u>2009 Publications.....</u></a>   | <a href="#"><u>2</u></a>  |
| III. <a href="#"><u>2008 Publications.....</u></a>  | <a href="#"><u>9</u></a>  |
| IV. <a href="#"><u>2007 Publications.....</u></a>   | <a href="#"><u>16</u></a> |
| V. <a href="#"><u>2006 Publications.....</u></a>    | <a href="#"><u>22</u></a> |
| VI. <a href="#"><u>2005 Publications.....</u></a>   | <a href="#"><u>26</u></a> |
| VII. <a href="#"><u>2004 Publications.....</u></a>  | <a href="#"><u>33</u></a> |
| VIII. <a href="#"><u>2003 Publications.....</u></a> | <a href="#"><u>39</u></a> |
| IX. <a href="#"><u>2002 Publications.....</u></a>   | <a href="#"><u>43</u></a> |
| X. <a href="#"><u>2001 Publications.....</u></a>    | <a href="#"><u>45</u></a> |
| XI. <a href="#"><u>2000 Publications.....</u></a>   | <a href="#"><u>49</u></a> |
| XII. <a href="#"><u>1999 Publications.....</u></a>  | <a href="#"><u>52</u></a> |
| XIII. <a href="#"><u>1998 Publications.....</u></a> | <a href="#"><u>53</u></a> |
| XIV. <a href="#"><u>1997 Publications.....</u></a>  | <a href="#"><u>56</u></a> |
| XV. <a href="#"><u>1996 Publications.....</u></a>   | <a href="#"><u>57</u></a> |
| XVI. <a href="#"><u>1995 Publications.....</u></a>  | <a href="#"><u>57</u></a> |

## 2010 Publications

**Title:** A national evaluation of community-based youth cessation programs: design and implementation

**First Author:** Curry SJ **Authors:** Curry SJ, Mermelstein RJ, Sporer AK, Emery SL, Berbaum ML, Campbell RT, Carusi C, Flay B, Taylor K, Warnecke RB

**Source:** Evaluation Review **Year:** 2010 **Volume:** 34 **Issue:** 6 **Page Range:** 142 - 149

**Abstract:** Although widely available, little is known about the effectiveness of youth cessation treatments delivered in real-world settings. The authors recruited a nonprobability sample of 41 community-based group-format programs that treated at least 15 youth per year and included evidence-based treatment components. Data collection included longitudinal surveys of youth participants (n = 878); posttreatment surveys of program leaders (n = 77); and one-time surveys of organizational leaders (n = 64) and community leaders in education, health, and juvenile justice (n = 94). Information about smoking-related ordinances was collected at the state and local levels. The framework, evaluation design, and implementation strategies described in this article provide a template for large-scale real-world program evaluations.

**Title:** Finding Needles in a Haystack: A Methodology for Identifying and Sampling Community-Based Youth Smoking Cessation Programs

**First Author:** Emery SL **Authors:** Lee J, Curry SJ, Johnson T, Sporer AK, Mermelstein R, Flay B, Warnecke R.

**Source:** Evaluation Review **Year:** 2010 **Volume:** 34 **Issue:** 1 **Page Range:** 35 - 51

**Abstract:** Background: Surveys of community-based programs are difficult to conduct when there is virtually no information about the number or locations of the programs of interest. This article describes the methodology used by the Helping Young Smokers Quit (HYSQ) initiative to identify and profile community-based youth smoking cessation programs in the absence of a defined sample frame. Methods: We developed a two-stage sampling design, with counties as the first-stage probability sampling units. The second stage used snowball sampling to saturation, to identify individuals who administered youth smoking cessation programs across three economic sectors in each county. Multivariate analyses modeled the relationship between program screening, eligibility, and response rates and economic sector and stratification criteria. Cumulative logit models analyzed the relationship between the number of contacts in a county and the number of programs screened, eligible, or profiled in a county. Results: The snowball process yielded 9,983 unique and traceable contacts. Urban and high-income counties yielded significantly more screened program administrators; urban counties produced significantly more eligible programs, but there was no significant association between the county characteristics and program response rate. There is a positive relationship between the number of informants initially located and the number of programs screened, eligible, and profiled in a county. Discussion: Our strategy to identify youth tobacco cessation programs could be used to create a sample frame for other nonprofit organizations that are difficult to identify due to a lack of existing directories, lists, or other traditional sample frames.

**Title:** Use of program evaluation in community youth tobacco cessation programs

**First Author:** Houser-Marko L. **Authors:** Sporer AK, Emery SL, Hund L, Lee J, Curry SJ.

**Source:** Evaluation Review **Year:** 2010 **Volume:** 34 **Issue:** 6 **Page Range:** 142 - 149

**Abstract:** **OBJECTIVE:** To examine the inclusion of program evaluation components in a national sample of youth tobacco cessation programs. **METHODS:** Program administrators were interviewed to ascertain program characteristics associated with the inclusion of program evaluation components. **RESULTS:** Two thirds of all surveyed programs (n=591) had an evaluation component; most included attendance, user satisfaction, and quitting measures. Programs with an evaluation component were significantly more likely to report annual funding greater than the median and to conduct a follow-up with participants. **CONCLUSION:** Program characteristics and associated evaluation components are summarized, and recommendations are given for a minimal level of program evaluation planning

## 2009 Publications

**Title:** Health risk behaviors in relation to making a smoking quit attempt among adolescents

**First Author:** Abrantes AM      **Authors:** Abrantes AM, Lee CS, MacPherson L, Strong DR, Borrelli B, Brown RA

**Source:** Journal of Behavioral Medicine    **Year:** 2009      **Volume:** 32      **Issue:** 2      **Page Range:** 142 - 149

**Abstract:** The primary aim of this study was to examine youth risk behaviors in relation to: (a) making a smoking quit attempt, and (b) successful cessation among adolescent smokers. Data were analyzed from the public use dataset of the 2003 national school-based Youth Risk Behavior Survey. The sample consisted of 2,033 students (weighted mean age of 16.3 years, 49.8% female, 73.6% White) who reported a history of daily smoking. While almost two-thirds (63.5%) of adolescent smokers reported making a quit attempt in the last year, only 10% of those were able to successfully quit. Factors associated with making a quit attempt included depression and participating in sports while high-risk sexual activity and engaging in substance use other than alcohol or marijuana were negatively related to making a quit attempt. Externalizing health behaviors (e.g., fighting, drug use, and high risk sexual activity) were associated with decreased likelihood of cessation. Findings from this study may inform efforts to develop more effective smoking prevention and treatment programs for youth.

**Title:** Helping teenagers stop smoking: comparative observations across youth settings in Cardiff

**First Author:** Bowles H      **Authors:** Bowles H, Maher A, Sage R

**Source:** Health Education Journal      **Year:** 2009      **Volume:** 68      **Issue:** 2      **Page Range:** 111 - 118

**Abstract:** Objective: This paper presents comparative observations between schools/colleges, youth centres, and specialist youth provision, in relation to delivery of the 2tuff2puff six-week smoking cessation and awareness programme to young people in Cardiff. Design A six-week smoking cessation programme was delivered to 12--23 year olds in various youth venues, using weekly records of attendance and compulsory questionnaires delivered by the group facilitator at week one and week six. Setting Twenty-two groups were delivered in 14 youth settings across Cardiff. These settings were categorized into three types: schools/ colleges; youth centres; and specialist youth provisions. Method: Data collected from 179 young people at week one and 84 young people at week six were used to measure changes in weekly smoking behaviour, weekly expenditure on cigarettes, knowledge about smoking and smoking cessation, attitudes toward smoking, motivation to quit/ cut down, and attrition. These were compared across the three different setting types. Youth Health Development Officers rated the three setting types on five factors (ease of access/communication with venue; suitability for sessions/acceptability to young people; supportiveness of environment for making a quit attempt; recruitment of young people; and data collection and evaluation) to reflect their practical experiences of delivering the six-week smoking cessation programme across the different youth settings. Results: Schools/colleges and specialist youth provision had the highest levels of attendance, and positive change in attitude toward quitting was greatest in specialist youth settings (79 per cent of attendees were more determined to quit). Conclusion: Overall, when both practical delivery issues and young peoples' outcome measures were considered, specialist youth provisions were the most effective settings for delivery of this programme. Delivery of smoking awareness as part of a wider health curriculum for groups of excluded young people is also recommended.

**Title:** Effects on substance use outcomes in adolescents receiving motivational interviewing for smoking cessation during psychiatric hospitalization

**First Author:** Brown RA      **Authors:** Brown RA, Strong DR, Abrantes AM, Myers MG, Ramsey SE, Kahler CW

**Source:** Addictive Behaviors    **Year:** 2009      **Volume:** 34      **Issue:** 10      **Page Range:** 887 - 891

**Abstract:** The purpose of this study was to compare substance involvement among psychiatrically hospitalized adolescent smokers who had received motivational interviewing (MI) versus brief advice (BA) for smoking cessation. One hundred and ninety-one (191) adolescent smokers (62.3% female; 15.4 years of age) were randomly assigned to MI (n=116) or BA (n=75). All patients were assessed at baseline, immediately after hospitalization, and at 1-, 3-, 6-, 9-, and 12-month follow-ups. Rates of substance use in the MI condition during follow-up increased from a low of 8.2% (SD=18.5) to a high of 15.4% (SD=30.0) substance use days, whereas in BA, substance use days increased from a low of 8.4% (SD=20.8) to a high of 21.4% (SD=35.2). The results of this study suggest that MI, relative to BA, for smoking cessation was associated with better substance use outcomes during the first 6 months following psychiatric hospitalization among adolescents. This finding is consistent with previous studies that have shown that smoking cessation does not have a detrimental effect on substance abuse treatment outcomes among youth.

**Title:** Self-initiated tobacco cessation and substance use outcomes among adolescents entering substance use treatment in a managed care organization

**First Author:** Campbell CI      **Authors:** Campbell CI, Chi F, Sterling S, Kohn C, Weisner C

**Source:** Addictive Behaviors      **Year:** 2009      **Volume:** 34      **Issue:** 2      **Page Range:** 171 - 179

**Abstract:** Purpose: Adolescents with substance use (SU) problems have high rates of tobacco use, yet SU treatment has historically ignored treatment for tobacco use. Barriers to such efforts include the belief that tobacco cessation could compromise other SU abstinence. This study examines self-initiated tobacco cessation and 12-month alcohol and drug abstinence in adolescents entering SU treatment in a private, managed care organization. Results: Self-initiated tobacco cessation at 6 months, and at both 6 and 12 months, were related to higher odds of drug abstinence but not alcohol abstinence. Conclusion: Self-initiated tobacco cessation was not related to poor SU outcomes, and may be important to maintaining drug abstinence. Implementing tobacco cessation efforts in SU treatment can be challenging, but comprised SU outcomes may not be a barrier. The positive associations for drug abstinence and lack of associations for alcohol abstinence could be due to differences in motivation, medical conditions, or to the illicit nature of drug use. Tobacco use has serious long-term health consequences, and tobacco cessation efforts in adolescent SU treatment programs need further research.

**Title:** Assessing the impact of the national 'truth' antismoking campaign on beliefs, attitudes, and intent to smoke by race/ethnicity

**First Author:** Cowell AJ      **Authors:** Cowell AJ, Farrelly MC, Chou R, Vallone DM

**Source:** Ethnicity & Health      **Year:** 2009      **Volume:** 14      **Issue:** 1      **Page Range:** 75 - 91

**Abstract:** OBJECTIVE: To examine racial/ethnic differences in the association between exposure to the 'truth' antismoking campaign and youth's beliefs and attitudes about cigarette companies and their intent to smoke. DESIGN: The data are for 31,758 youth aged 12-17 from seven waves of the Legacy Media Tracking Survey (LMTS), conducted in the USA between December 1999 and July 2003. LMTS was designed to include sufficient proportions of African Americans (n=4631), Hispanics (n=6311), and Asians (n=2469) to assess tobacco countermarketing campaign associations in individual racial/ethnic groups. Separate belief and attitude indices were created. An indicator for the respondent not intending to smoke during the next year was created for non-smokers only, and models were estimated separately by ever-/never-smoking status. RESULTS: Exposure to the truth campaign was positively associated with increased antitobacco beliefs and attitudes among youth overall. When analyzed by race/ethnicity, this association was statistically significant for white and African American youth. An examination of the individual belief and attitude items that composed the measurement indices suggests that different messages appealed to youth based on their race/ethnicity. Among never smokers, those exposed to the truth campaign had significantly higher odds of not intending to smoke. When analyzed separately by race/ethnicity, the estimates for African American youth were statistically significant and the estimates for white and Hispanic youth approached significance. Among ever smokers and across all racial/ethnic groups, those exposed to the truth campaign had significantly higher odds of not intending to smoke, and every racial/ethnic group had an odds ratio greater than one that was also statistically significant. CONCLUSIONS: The findings suggest that the individual items comprising the indices may be less meaningful for some non-white groups of youth. Analyses of intention to smoke indicated that, among those who had never smoked, there were greater odds of not intending to smoke when examining all youth together without stratifying by race/ethnicity; however, a statistically significant effect was found only for the African American group when examining the effect by race/ethnicity. Among those who had ever smoked, a statistically significant effect was found for most racial/ethnic groups. This is a rich area for further research and is potentially critical to the success of future efforts to reach youth through behavior change messages.

**Title:** Pharmacokinetics, safety, and tolerability of Varenicline in healthy adolescent smokers: a multicenter, randomized, double-blind, placebo-controlled, parallel-group study

**First Author:** Faessel H **Authors:** Faessel H, Ravva P, Williams K

**Source:** Clinical Therapeutics **Year:** 2009 **Volume:** 31 **Issue:** 1 **Page Range:** 177 - 189

**Abstract:** Background: Varenicline is approved as an aid to smoking cessation in adults aged  $\geq 18$  years. Objective: The goal of this study was to characterize the multiple-dose pharmacokinetics, safety, and tolerability of varenicline in adolescent smokers. METHODS: This multicenter, randomized, double-blind, placebo-controlled, parallel-group study enrolled healthy 12- to 16-year-old smokers ( $\geq 3$  cigarettes daily) into high-body-weight ( $>55$  kg) and low-body-weight ( $\leq 55$  kg) groups. Subjects were randomized to receive 14 days of treatment with a high dose of varenicline, a low dose of varenicline, or placebo. The varenicline doses in the high-body-weight group were 1 mg BID and 0.5 mg BID; the varenicline doses in the low-body-weight group were 0.5 mg BID and 0.5 mg once daily. The apparent renal clearance (CL/F) and volume of distribution (V/F) of varenicline and the effect of body weight on these parameters were estimated using nonlinear mixed-effects modeling. Results: The high-body-weight group consisted of 35 subjects (65.7% male; 77.1% white; mean age, 15.2 years). The low-body-weight group consisted of 37 subjects (37.8% male; 48.6% white; mean age, 14.3 years). The pharmacokinetic parameters of varenicline were dose proportional over the dose range from 0.5 to 2 mg/d. The CL/F for a 70-kg adolescent was 10.4 L/h, comparable to that in a 70-kg adult. The estimated varenicline V/F was decreased in individuals of small body size, thus predicting a varenicline C(max) approximately 30% greater in low-body-weight subjects than in high-body-weight subjects. In high-body-weight subjects, steady-state varenicline exposure, as represented by the AUC(0-24), was 197.0 ng · h/mL for varenicline 1 mg BID and 95.7 ng · h/mL for varenicline 0.5 mg BID, consistent with values reported previously in adult smokers at the equivalent doses. In low-body-weight subjects, varenicline exposure was 126.3 ng · h/mL for varenicline 0.5 mg BID and 60.1 ng · h/mL for varenicline 0.5 mg once daily, values at the lower end of the range observed previously in adults at doses of 1 mg BID and 0.5 mg BID, respectively. Among high-body-weight subjects, adverse events (AEs) were reported by 57.1% of subjects in both the high- and low-dose varenicline groups and by 14.3% of subjects in the placebo group; among low-body-weight subjects, AEs were reported by 64.3%, 73.3%, and 12.5% of subjects in the high-dose varenicline, low-dose varenicline, and placebo groups, respectively. The most common AEs were nausea, headache, vomiting, and dizziness. Psychiatric AEs that were considered treatment related included abnormal dreams in 2 subjects and mild, transient anger in 1 subject. Of the AEs reported by  $\geq 1$  subject in any treatment group,  $\geq 92\%$  were mild in intensity. No subject discontinued the study because of an AE. Conclusions: Varenicline steady-state exposure in study subjects weighing  $>55$  kg was similar to that observed previously in adults. The body-weight effect on varenicline pharmacokinetics, which resulted in higher exposure in individuals of smaller body size ( $\leq 55$  kg), was adequately offset by administration of half the varenicline dose recommended in adults. Varenicline was generally well tolerated during the 14-day treatment period.

**Title:** Self-efficacy with application to adolescent smoking cessation: a concept analysis

**First Author:** Heale R **Authors:** Heale R, Griffin MTQ

**Source:** Journal of Advanced Nursing **Year:** 2009 **Volume:** 65 **Issue:** 4 **Page Range:** 912 - 918

**Abstract:** Self-efficacy with application to adolescent smoking cessation: a concept analysis. This paper is a report of a concept analysis of adolescent smoking cessation self-efficacy. Smoking cessation is a key preventive care/health promotion strategy offered by nurses worldwide. Most programming is tailored to adults although the reasons for smoking, along with coping strategies, resources and developmental stage, differ in adolescence. Understanding of the concept of self-efficacy as it relates to the adolescent population will assist nurses in addressing smoking cessation behaviours with this population. The CINAHL and Proquest Nursing databases were searched for papers published between 1977 and 2007 using the keywords self-efficacy, adolescents and smoking cessation. The Walker and Avant method of concept analysis was applied. Adolescent smoking cessation self-efficacy is the confidence, perceived capacity and perceived ability that the teen possesses to quit smoking. Identified antecedents include developmental stage, past life support, emotional support, coping strategies, resources and emotional status. Consequences are smoking cessation: positive or negative. Empirical measures are identified. Levels of self-efficacy have been shown to be an important consideration in the approach of nurses to smoking cessation counselling with the adolescent client. The theoretical definition for this concept will provide the basis for nurses to design appropriate interventions for use in smoking cessation programmes targeted to adolescents. This definition identifies the key attributes of this concept that should be addressed when caring for this population.

**Title:** A comparative review of the effectiveness trial of N-O-T in Alabama: guideposts for future research

**First Author:** Horn K    **Authors:** Horn K, Dino G

**Source:** American Journal of Health Education    **Year:** 2009    **Volume:** 40    **Issue:** 1    **Page Range:** 47 - 55

**Abstract:** The American Lung Association's Not On Tobacco (N-O-T) program is federally recognized as an accessible and effective option for teen smoking cessation. The program is the most widely used teen smoking cessation program in schools and communities across the U.S. Over a decade of research demonstrates the program's solid evidence base, with overwhelmingly positive findings for both smoking cessation and reduction. A recent publication detailing a Not On Tobacco trial in Alabama reported low impact and negative findings. Given the program's widespread use across the country, it is important to understand differential outcomes between the Alabama study and past Not On Tobacco studies, and to explore what we can learn from these differences. The current manuscript: (1) details and compares the methodological differences between the Alabama study and previous Not On Tobacco efficacy and effectiveness studies in other states, (2) explores important issues surrounding the analysis of teen smoking cessation outcomes, and (3) provides guidance for future research for Not On Tobacco and other teen smoking cessation interventions.

**Title:** Potential effects of active parental consent: enrolling teen smokers into a school-based cessation program

**First Author:** Horn KA    **Authors:** Horn KA, Branstetter SA, Dino GA, Jarrett TD, Tworek C, Zhang J

**Source:** Nicotine & Tobacco Research    **Year:** 2009    **Volume:** 11    **Issue:** 11    **Page Range:** 1359 - 1367

**Abstract:** INTRODUCTION: Research on effective teen smoking cessation interventions is critical to reducing the tobacco-related disease burden and risk of lifetime negative health outcomes for youth. However, informed consent procedures requiring active parental consent may restrict or influence teen participation in critical teen cessation programs. METHODS: Not On Tobacco (N-O-T) is a teen smoking cessation intervention that has been implemented under both active parental consent and passive parental consent conditions. The present study determined if there are differences in characteristics of youth enrolled under each condition. Data were available for active consent (n = 968) and passive consent (n = 4,924) participants aged 14-18 who completed the N-O-T program between 1998 and 2006 across several states. RESULTS: Participants enrolled under active consent conditions were more likely to be older, White/non-Hispanic, live in father-only or grandparent-headed household, start smoking at an earlier age, smoke more on weekdays, have previous unsuccessful quit attempts, and have siblings and friends who smoke. Additional differences were found between active and passive consent conditions in motivation to quit smoking, confidence in quitting, and stage of change. DISCUSSION: Results highlight important differences between youth who enroll in a smoking cessation program under active and passive consent conditions, often a distinguishing feature of research and non-research implementation.

**Title:** Age at menarche and weight concerns in relation to smoking trajectory and dependence among adolescent girls enrolled in a smoking cessation trial

**First Author:** Jaszyna-Gasior M    **Authors:** Jaszyna-Gasior M, Schroeder JR, Thorner ED, Heishman SJ, Collins CC, Lo S, Moolchan ET

**Source:** Addictive Behaviors    **Year:** 2009    **Volume:** 34    **Issue:** 1    **Page Range:** 92 - 95

**Abstract:** Many girls adopt dieting and other practices (i.e. cigarette smoking) to control weight during puberty. This analysis explored the relationship between age at menarche and onset of daily smoking, and whether this relationship was influenced by weight concerns among treatment seeking female adolescents. The sample consisted of 71 participants enrolled in a smoking cessation trial (age 15.2(plus or minus)1.3 years; 74.7(percent) European American, baseline BMI 24.7(plus or minus)5.4, age at menarche 11.7(plus or minus)1.3 years, Fagerstrom Test for Nicotine Dependence score 7.0(plus or minus)1.2). Over 60(percent) of participants reported weight concerns at baseline, based on responses to the Eating Disorders module from the Diagnostic Interview for Children and Adolescents. Linear regression analyses revealed a significant association between age at menarche and age of onset of daily smoking (b=0.18(plus or minus)0.09, p=0.038). Having weight concerns did not modify the relationships between age at menarche and smoking trajectory/severity or abstinence. Findings support previous research showing that early maturation represents a risk factor for substance use. Further study in larger samples that include non-treatment-seeking adolescent female smokers is warranted.

**Title:** Design and implementation of an effective telephone counseling intervention for adolescent smoking cessation

**First Author:** Kealey KA **Authors:** Kealey KA, Ludman EJ, Marek PM, Mann SL, Bricker JB, Peterson AV

**Source:** Journal of the National Cancer Institute **Year:** 2009 **Volume:** 101 **Issue:** 20 **Page Range:** 1393 - 1405

**Abstract:** Effective smoking cessation for youth is urgently needed, but the literature guiding such efforts is nascent. We evaluated the implementation of a proactive intervention for adolescent smoking cessation that incorporated motivational interviewing (MI) and cognitive behavioral skills training (CBST). We proactively identified 1058 smokers via classroom survey of enrolled juniors in 25 experimental high schools. After parental consent was obtained, trained counselors telephoned participants to invite their participation and deliver personalized smoking cessation counseling that combined MI and CBST. Implementation quality was assessed via weekly supervision of counselors, monitoring of counselor adherence to protocol via review of 5% of each counselor calls, and formal evaluation of counselor fidelity to MI via review of a random sample of 19.8% of counseling calls using the Motivational Interviewing Treatment Integrity Code.

**Title:** Mechanisms of adolescent smoking cessation: Roles of readiness to quit, nicotine dependence, and smoking of parents and peers

**First Author:** Kleinjan M **Authors:** Kleinjan M, Engels RCME, van Leeuwe J, Brug J, van Zundert RMP, van den Eijnden RJJM

**Source:** Drug and Alcohol Dependence **Year:** 2009 **Volume:** 99 **Issue:** 1 **Page Range:** 204 - 214

**Abstract:** Multiple levels of influence should be considered in interventions aimed at the adolescent smoker, including psychological, addiction, peer and parental influences. However, the mechanism by which these variables influence the process of smoking cessation in adolescents is not well elucidated. Therefore, this prospective study tested two models among 850 adolescent smokers, specifying the direct and indirect relations between adolescents' readiness to quit smoking, levels of nicotine dependence, and smoking behavior of their parents and friends. One year later smoking cessation was assessed. Results showed that, among adolescent smokers, readiness to quit was positively associated with quit attempts, while nicotine dependence was inversely associated with successful cessation. Instead of a direct relation, parental and peers' smoking were inversely related to smoking cessation through nicotine dependence. The findings emphasize that interventions should be developed and tested within and outside the school setting, as well as within the family situation. In addition, the strong impact of nicotine dependence on successful cessation indicates that a more direct approach is needed to lower nicotine dependence among adolescents.

**Title:** How adolescents experience smoking cessation

**First Author:** McVea KLS **Authors:** McVea KL, Miller DL, Creswell JW, McEntarrfer R, Coleman MJ

**Source:** Qualitative Health Research **Year:** 2009 **Volume:** 19 **Issue:** 5 **Page Range:** 580 - 592

**Abstract:** In this study we develop a model of how youth experience smoking cessation attempts. We followed 15 adolescent smokers twice monthly over three months. Through six semistructured interviews, we explored participants' subjective experiences of making a 'quit' attempt. We analyzed transcript data using grounded theory procedures, beginning with open coding, axial coding, construction of matrices, and development of a preliminary theory or model of this phenomenon. We found that only emotionally compelling and inescapable quit reasons were truly motivating. Few parents actively supported their child during quit attempts; smoking friends and other peers undermined them. All successful quitters established new, nonsmoking friends and completely redefined themselves. The quit experience was physically uncomfortable, emotionally distressful, and socially isolating. Greater motivation, mature problem-solving skills, and a willingness to supplant their smoking friends characterized successful quitters. Further research is needed to test this model's efficacy in the adolescent population.



**Title:** Milestones in the process of cessation among novice adolescent smokers

**First Author:** O'Loughlin J      **Authors:** O'Loughlin J, Gervais A, Dugas E

**Source:** American Journal of Public Health      **Year:** 2009      **Volume:** 99      **Issue:** 3      **Page Range:** 499 - 504

**Abstract:** Objectives. We sought to document the sequence and timing of milestones in the process of smoking cessation by prospectively studied cessation milestones among novice adolescent smokers. Methods. Participants, aged 12 to 13 years in 1999 (n=1293), completed self-report questionnaires every 3 months during the school year over 5 years. We ascertained time after first puff to attain 5 cessation milestones among 319 participants who initiated cigarette smoking during follow-up. Results. The cumulative probability of first reports of a serious desire to quit and perceived permanent cessation was 25(percent) at 1.5 months (95(percent) confidence interval (CI) = 1.5, 2.5) after the first puff. The first serious quit attempt occurred at 2.5 months (95(percent) CI=2.5, 5.4), lack of confidence about quitting followed at 18.4 months (95(percent) CI = 18.4, 26.8), and awareness of the difficulty of quitting occurred at 32.2 months (95(percent) CI= 19.2, 38.4). Conclusions. Desire and attempts to quit began soon after smoking onset. Novice smokers progressed through several stages in their perception of the difficulty of quitting. Increased understanding of the cessation process may help in developing effective tobacco control interventions for novice smokers.

**Title:** Group-randomized trial of a proactive, personalized telephone counseling intervention for adolescent smoking cessation

**First Author:** Peterson AV      **Authors:** Peterson AV, Kealey KA, Mann SL, Marek PM, Ludman EJ, Liu J, Bricker JB

**Source:** Journal of the National Cancer Institute      **Year:** 2009      **Volume:** 101      **Issue:** 20      **Page Range:** 1378 - 1392

**Abstract:** BACKGROUND: The Hutchinson Study of High School Smoking randomized trial was designed to rigorously evaluate a proactive, personalized telephone counseling intervention for adolescent smoking cessation. METHODS: Fifty randomly selected Washington State high schools were randomized to the experimental or control condition. High school junior smokers were proactively identified (N = 2151). Trained counselors delivered the motivational interviewing plus cognitive behavioral skills training telephone intervention to smokers in experimental schools during their senior year of high school. Participants were followed up, with 88.8% participation, to outcome ascertainment more than 1 year after random assignment. The main outcome was 6-months prolonged abstinence from smoking. All statistical tests were two-sided. RESULTS: The intervention increased the percentage who achieved 6-month prolonged smoking abstinence among all smokers (21.8% in the experimental condition vs 17.7% in the control condition, difference = 4.0%, 95% confidence interval [CI] = -0.2 to 8.1, P = .06) and in particular among daily smokers (10.1% vs 5.9%, difference = 4.1%, 95% CI = 0.8 to 7.1, P = .02). There was also generally strong evidence of intervention impact for 3-month, 1-month, and 7-day abstinence and duration since last cigarette (P = .09, .015, .01, and .03, respectively). The intervention effect was strongest among male daily smokers and among female less-than-daily smokers. CONCLUSIONS: Proactive identification and recruitment of adolescents via public high schools can produce a high level of intervention reach; a personalized motivational interviewing plus cognitive behavioral skills training counseling intervention delivered by counselor-initiated telephone calls is effective in increasing teen smoking cessation; and both daily and less-than-daily teen smokers participate in and benefit from telephone-based smoking cessation intervention.

**Title:** Randomized controlled trial of the ACTION smoking cessation curriculum in tobacco-growing communities

**First Author:** Stein-Seroussi A      **Authors:** Stein-Seroussi A, Stockton L, Brodish P, Meyer M

**Source:** Addictive Behaviors      **Year:** 2009      **Volume:** 34      **Issue:** 9      **Page Range:** 737 - 743

**Abstract:** We conducted a group randomized trial of an interactive, games-based, tobacco cessation program (ACTION) designed to help adolescents who live in tobacco-growing communities to stop using tobacco. More than 260 high school students participated in this study, in 14 schools across three states. We collected self-reported measures of cigarette and smokeless tobacco use and conducted biochemical validation of self-reported use at three time points (pre-test, immediate post-test, and 90-day follow-up). We used multi-level modeling to account for intraclass clustering at the school and classroom levels, and we analyzed our results using an intent-to-treat approach and a per protocol approach. Using the per protocol analytic approach, ACTION participants were more likely than comparison participants to achieve abstinence at 90-day follow-up. We found no program effects on our secondary outcomes or mediating factors. This study suggests that ACTION has promise as a relatively effective adolescent cessation program, although the overall limited effectiveness of cessation programs for adolescents must be acknowledged.

**Title:** Providers' experiences caring for adolescents who smoke cigarettes

**First Author:** Stevens SL      **Authors:** Stevens SL, Pailer ME, Diamond GS, Levy SA, Latif S, Kinsman SB

**Source:** Health Psychology      **Year:** 2009      **Volume:** 28      **Issue:** 1      **Page Range:** 66 - 72

**Abstract:** OBJECTIVE: To describe providers' experiences screening for and counseling adolescent patients who smoke cigarettes. DESIGN: Eight qualitative focus groups were conducted with 51 health care providers in primary care settings. Focus groups were video- and audiotaped; tapes were transcribed for coding by an interdisciplinary team using the constant comparative method. MAIN OUTCOME MEASURES: Providers reported experiences screening for and managing adolescent patients who reported smoking cigarettes. RESULTS: Providers expressed confidence in their ability to screen adolescent patients for tobacco use, particularly as part of regularly scheduled preventive and medical visits. Providers reported difficulty balancing screening for smoking with their concern for maintaining rapport with their adolescent patients. In addition, providers reported that adolescent smoking patterns differed from those of adults, and consequently, providers were not certain at what level of smoking an adolescent required intervention. Furthermore, providers were unclear regarding what interventions were recommended for and effective with adolescents. CONCLUSION: Providers are interested in adolescent evidence-based screening methods and cessation interventions that are supportive of a nonjudgmental and empathic approach to caring for adolescent smokers, particularly those with irregular and situational smoking patterns.

**Title:** Weight gain, related concerns, and treatment outcomes among adolescent smokers enrolled in cessation treatment

**First Author:** Thorner-Bantug E      **Authors:** Thorner-Bantug E, Jaszyna-Gasior M, Schroeder JR, Collins CC, Moolchan ET

**Source:** Journal of the National Medical Association      **Year:** 2009      **Volume:** 101      **Issue:** 10      **Page Range:** 1009 - 1014

**Abstract:** We examined associations of weight concerns and weight gain with adolescent tobacco cessation treatment and whether these effects differed by gender or ethnorracial group. Participants were 115 urban adolescents recruited for a randomized clinical trial of nicotine replacement therapy. Baseline weight gain concerns were assessed using the Eating Disorders module from the Diagnostic Interview for the Child and Adolescent (DICA-IV). The average weight gain during the trial was 0.59 +/- 2.85 kg among the 43.5% of participants who completed the treatment study. As indicated by the DICA, baseline weight gain concerns were not associated with weight gain during treatment, study completion, or abstinence from smoking at 3-month posttreatment follow-up; these results did not vary by gender or ethnorracial group. Adolescents who quit smoking gained no more weight during the trial than those who smoked.

**Title:** Nicotine withdrawal symptoms following a quit attempt: an ecological momentary assessment study among adolescents

**First Author:** Van Zundert RM      **Authors:** van Zundert RM, Boogerd EA, Vermulst AA, Engels RC

**Source:** Nicotine & Tobacco Research      **Year:** 2009      **Volume:** 11      **Issue:** 6      **Page Range:** 722 - 729

**Abstract:** INTRODUCTION: The present study describes growth curves of withdrawal symptoms among 138 daily smoking adolescents before, during, and after a quit attempt. METHODS: Participants reported their levels of withdrawal symptoms (craving, negative affect, and hunger) three times a day over a period of 28 days: 1 week prior to and 3 weeks following a quit attempt. Results: All withdrawal symptoms were quite stable at a relatively low level during the 5 days prior to the quit day. At Day 8, withdrawal symptoms (especially craving) increased substantially. A significant decrease in symptoms was visible during the week following the quit day, and within 2 weeks postquit, both abstinent and relapsed adolescents had reverted to levels comparable to those during the prequit period. The course over time for craving and hunger were best described by a quadratic term, and a linear model best suited negative affect. Individual intercepts and slopes of the growth curves were used to predict abstinence during the last week of the study and at the 2-month follow-up. Analyses revealed that higher levels of craving at the beginning of the prequit week and on the target quit day (intercepts) decreased the odds of being abstinent during the last week of the study. In addition, the quadratic term for hunger predicted abstinence during the last week. Finally, among all three symptoms, none of the growth model characteristics predicted abstinence at follow-up. DISCUSSION: The findings generally suggest that smoking cessation among daily smoking adolescents does not largely depend on how their withdrawal symptoms evolve over time after achieving abstinence

## 2008 Publications

**Title:** Factors associated with recruitment and retention of youth into smoking cessation intervention studies-a review of the literature

**First Author:** Backinger CL      **Authors:** Backinger CL, Michaels CN, Jefferson AM, Fagan P, Hurd AL, Grana R

**Source:** Health Education Research      **Year:** 2008      **Volume:** 23      **Issue:** 5      **Page Range:** 359 - 368

**Abstract:** This paper examines factors associated with high levels of recruitment and retention of youth into smoking cessation interventions. Fifty-five articles published from 1976 to June 2004 reported cessation outcomes were analyzed to examine the associations between selected variables and recruitment and retention rates. Studies with participants who smoked  $\leq$  5 cigarettes per day (cpd) were more likely to have recruitment rates  $\geq$  85%. Yet, studies with participants who smoked  $\geq$  6 cpd were more likely to have high retention rates. Studies that did not use incentives were more likely to have retention rates at end of intervention  $\geq$  85%. Findings indicate a lack of information reported about recruitment and retention procedures in adolescent tobacco cessation studies. Additional analyses and research need to be conducted to identify successful methods.

**Title:** Trajectories of smoking from adolescence to early adulthood and their psychosocial risk factors.

**First Author:** Costello DM      **Authors:** Costello DM, Dierker LC, Jones BL, Rose JS

**Source:** Health Psychology      **Year:** 2008      **Volume:** 27      **Issue:** 6      **Page Range:** 811 - 818

**Abstract:** Objective: To explore patterns of persistence and change in smoking behavior as well as risk factors associated with the developmental course of smoking from age 13 to 25. Design: Data from the public use sample of the National Longitudinal Study of Adolescent Health (N = 5,789) were analyzed using semiparametric group-based modeling. Main Outcome Measures: Smoking quantity-frequency in the past 30 days. Results: Six distinct smoking trajectories were identified: nonsmokers, experimenters, stable light smokers, quitters, late escalators, and stable high smokers. Baseline risk factors that were associated with greater likelihood of membership in all of the smoking trajectory groups compared with nonsmokers included alcohol use, deviance, peer smoking, and (with the exception of the late escalators) drug use. Deviance, peer smoking, and alcohol and drug use also distinguished the likelihood of membership among several of the 5 smoking trajectory groups. Conclusion: The results add to basic etiologic research on developmental pathways of smoking in adolescence and young adulthood by providing evidence of heterogeneity in smoking behavior and prospectively linking different patterns of risk factors with the probability of trajectory group membership.

**Title:** Cost-effectiveness analysis of the Not On Tobacco program for adolescent smoking cessation

**First Author:** Dino GA      **Authors:** Dino G, Horn K, Abdulkadri A, Kalsekar I, Branstetter S

**Source:** Prevention Science      **Year:** 2008      **Volume:** 9      **Issue:** 1      **Page Range:** 38 - 46

**Abstract:** Public health researchers and practitioners emphasize the need for effective, adoptable, and available youth smoking cessation interventions. Scarce resources demand that such interventions also be cost effective. This study describes a cost-effectiveness analysis (CEA) of the American Lung Association's Not On Tobacco (N-O-T) national and international teen smoking cessation program. N-O-T has been rigorously evaluated as an effective and adoptable program, and was recently found to be the most frequently-used teen smoking cessation program in the nation. N-O-T studies show intent-to-treat quit rates between 15% and 19%, among the highest reported in the literature. The current CEA resulted from a 2-year state-wide demonstration study in Florida, comparing the effectiveness of N-O-T with a 20-min brief intervention (BI). The CEA utilized a Markov transition model of decision analysis to explain stage progression of smoking cessation among participants from the age of 17 to 25 years. The Markov simulation predicted that out of a cohort of 100 N-O-T students, 10 will quit smoking and remain smoke-free at the age of 25 years and 14 will reduce smoking, resulting in 102.22 life years saved and a total of 20.11 years discounted life years (DLY) saved. Among BI youth, six will quit smoking and nine will reduce, indicating 64.31 life years saved and a total 12.65 DLY saved. The incremental DLY saved is 7.46 years. Results indicate that N-O-T is a very cost-effective option school-based smoking cessation, as cost effective as school-based primary tobacco prevention, and potentially more cost effective than adult tobacco use cessation.

**Title:** A computerized smoking cessation intervention for high school smokers

**First Author:** Fritz DJ **Authors:** Fritz DJ, Hardin SB, Gore PA, Bram D

**Source:** Pediatric Nursing **Year:** 2008 **Volume:** 34 **Issue:** 1 **Page Range:** 13 - 17

**Abstract:** This study evaluated a computerized intervention designed to assist high school-aged smokers to consider not smoking and move forward in the 'Stages of Change.' A pretest-posttest pilot was conducted with 121 high school students who completed self-reported questionnaires that provided information about smoking history and exposure, smoking dependence, stage of change, and social support. Following baseline assessment, the experimental group (n = 61) completed four, 30-minute computerized sessions known as the Computerized Adolescent Smoking Cessation Program (CASCP). Immediately following completion of the program and 1 month later, the experimental subjects were reassessed. Control subjects completed baseline assessment and were reassessed 4 to 5 weeks later. CASCP increased the number of quit attempts. At 1 month after the intervention, 20% of the experimental group quit smoking. Of those subjects who did not quit smoking, nicotine dependence and the number of cigarettes smoked daily decreased, which decreased their nicotine dependence. Overall, there was a forward movement in the experimental group's stage of change. CASCP was found to be an effective and inexpensive intervention that motivates adolescent smokers to consider smoking cessation, move forward in the stage of change, and decrease nicotine dependence.

**Title:** Helping smokers quit: understanding the barriers to utilization of smoking cessation services

**First Author:** Gollust SE **Authors:** Gollust SE, Schroeder SA, Warner KE

**Source:** Milbank Quarterly **Year:** 2008 **Volume:** 86 **Issue:** 7 **Page Range:** 601 - 627

**Abstract:** Context: Counseling smokers to quit smoking and providing them with pharmaceutical cessation aides are among the most beneficial and cost-effective interventions that clinicians can offer patients. Yet assistance with quitting is not universally covered by health plans or offered by all clinicians. Analysis of stakeholders' perspectives and interests can identify the barriers to more widespread provision of cessation services and suggest strategies for the public policy agenda to advance smoking cessation. Methods: Review of literature and discussions with representatives of stakeholders. Findings: All stakeholders-health plans, employers, clinicians, smokers, and the government-face barriers to broader smoking cessation activities. These range from health plans' perceiving that covering counseling and pharmacotherapy will increase costs without producing commensurate health care savings, to clinicians' feeling unprepared and uncompensated for counseling. Like other preventive measures aimed at behavior, efforts directed at smoking cessation have marginal status among health care interventions. State governments can help correct this status by increasing Medicaid coverage of treatment and expanding coverage for state employees. The federal government can promote the adoption of six initiatives recommended by a government subcommittee on cessation: set up a national quit line, develop a media campaign to encourage cessation, include cessation benefits in all federally funded insurance plans, create a research infrastructure to improve cessation rates, develop a clinician training agenda, and create a fund to increase cessation activities through a new \$2 per pack cigarette excise tax. Both the federal and state governments can increase cessation by adopting policies such as the higher cigarette tax and laws prohibiting smoking in workplaces and public places. Conclusions: Public policy efforts should assume greater social responsibility for smoking cessation, including more aggressive leadership at the state and federal levels, as well as through advocacy, public health, and clinician organizations.

**Title:** Cigarette reduction: an intervention for adolescent smokers

**First Author:** Hanson K **Authors:** Hanson K, Zylla E, Allen S, Li Z, Hatsukami DK

**Source:** Drug and Alcohol Dependence **Year:** 2008 **Volume:** 95 **Issue:** 1 **Page Range:** 164 - 168

**Abstract:** This observational study examined whether adolescents who were not interested in quitting could reduce cigarette smoking and if cigarette reduction led to a corresponding and significant reduction in biomarkers of exposure. The study design was a randomized, open-label trial of nicotine patch and nicotine gum with an added placebo control. Participants (n=103) attended 4 treatment visits over 4 weeks and follow-up visits at 3- and 6-months. Participants were told to reduce their smoking by 25% of baseline smoking during the 1st week and by 50% of baseline smoking during the subsequent 3 weeks. Of consented participants, 91.3% (n=94/103) completed the study until the end-of-treatment, 85.1% (n=80/94) completed the 3-month follow-up visit and 71.3% (n=67/94) completed the 6-month follow-up visit. Participants had a very high prevalence of co-morbidity. With regard to the percentage of participants who achieved a 50% reduction of baseline smoking, there were no significant differences among treatment groups (p=.89). At the end-of-treatment, 49.4% of participants (n=41) had reduced smoking by at least 50%. Additionally, there was no significant group, visit or interaction effect of a biomarker measure for carcinogen exposure (p>.05). The results suggest that reduction may be a potential aid to engage adolescents who are unable or unwilling to quit, but should not be an end goal. The effect of treatment methods on outcome measures did not differ significantly.

**Title:** Feasibility of a smoking cessation intervention for teens in the emergency department: reach, implementation fidelity, and acceptability

**First Author:** Horn K **Authors:** Horn K, Dino G, Hamilton C, Noerachmanto N, Zhang J

**Source:** American Journal of Critical Care **Year:** 2008 **Volume:** 17 **Issue:** 3 **Page Range:** 205 - 216

**Abstract:** Background: Traditional efficacy research alone is insufficient to move interventions from research to practice. Motivational interviewing has been adapted for brief encounters in a variety of health care settings for numerous problem behaviors among adolescents and adults. Some experts suggest that motivational interviewing can support a population health approach to reach large numbers of teen smokers without the resource demands of multi-session interventions. Objectives: To determine the reach, implementation fidelity, and acceptability of a brief motivational tobacco intervention for teens who had treatment in a hospital emergency department. Methods: Among 74 teens 14 to 19 years old, 40 received a brief motivational tobacco intervention and 34 received brief advice/care as usual at baseline. Follow-up data were collected from the interventional group at 1, 3, and 6 months and from the control group at 6 months. For the interventional group, data also were collected from the teens' parents, the health care personnel who provided the intervention, and emergency department personnel. Results: Findings indicated low levels of reach, high levels of implementation fidelity, and high levels of acceptability for teen patients, their parents, and emergency department personnel. Data suggest that practitioners can operationalize motivational interventions as planned in a clinical setting and that patients and others with an interest in the outcomes may find the interventions acceptable. However, issues of reach may hinder use of the intervention among teens in clinical settings. Conclusions: Further investigation is needed on mechanisms to reduce barriers to participation, especially barriers related to patient acuity.

**Title:** A profile of teen smokers who volunteered to participate in school-based smoking intervention

**First Author:** Horn K     **Authors:** Horn K, Dino G, Branstetter SA, Zhang J, Kelley G, Noerachmanto N, Tworek C

**Source:** Tobacco Induced Disease     **Year:** 2008     **Volume:** 4     **Issue:** 3     **Page Range:** 6 - 7

**Abstract:** Objectives: Although a number of population-based studies have examined the characteristics of teens who attempt to quit smoking, few have identified the characteristics of youth who participate in structured cessation interventions, particularly those with demonstrated effectiveness. The purpose of the present study is to describe the sociodemographic and smoking-related characteristics of teen smokers who participated in the American Lung Association's Not On Tobacco (N-O-T) program, spanning eight years. N-O-T is the most widely used teen smoking cessation program in the nation. Methods: Drawn from multiple statewide N-O-T studies, this investigation examined data from 5,892 teen smokers ages 14-19 who enrolled in N-O-T between 1998-2006. We demonstrate similarities and differences between N-O-T findings and existing data from representative samples of US teen smokers where available and relevant. Results: N-O-T teens started smoking earlier, were more likely to be poly-tobacco users, were more dependent on nicotine, had made more previous attempts to quit, and were more deeply embedded in smoking contexts than comparative samples of teen smokers. Additionally, N-O-T teens were moderately ready to quit smoking, believed important people in their lives would support their quit efforts, yet had deficits in their confidence with quitting. Conclusion: This profile of N-O-T teens can guide efforts for targeted recruitment strategies to enhance intervention reach for teen smoking cessation. Findings provide guidance for marketing and recruitment efforts of intensive, school-based cessation interventions among established teen smokers, particularly those who want to quit. Study results may shed light upon who is and is not enrolling in N-O-T.

**Title:** Associations between the transtheoretical processes of change, nicotine dependence and adolescent smokers' transition through the stages of change

**First Author:** Kleinjan M     **Authors:** Kleinjan M, van den Eijnden RJM, Vermulst AA, Van Zundert RM, Engels RC

**Source:** Addiction     **Year:** 2008     **Volume:** 103     **Issue:** 2     **Page Range:** 331 - 338

**Abstract:** Aims: To examine the significance of the transtheoretical processes of change in predicting transition through the stages of change in adolescent smokers, as well as the relative role of nicotine dependence in predicting stage transitions. Design: In grades 9 and 10, adolescents' stage of change, the use of processes of change and nicotine dependence were assessed (T1). Stage transitions were assessed 1 year later (T2). Response rate was 73.2%. Setting: Twenty-five secondary schools throughout the Netherlands participated in the present study. Participants: Respondents were 721 adolescents who were classified as smokers at T1 and consequently completed the paper-and-pencil questionnaire at T2. Measurements: Stages of change and processes of change were assessed according to the original transtheoretical measures. Nicotine dependence was measured using a newly developed multi-dimensional scale consisting of 11 items. Findings: Few associations were found between the processes of change and stage transitions. Nicotine dependence contributed significantly to the explanation of adolescents' transition from preparation to action, after adjustment for processes of change. No evidence for a moderating effect of nicotine dependence in the relation between the processes of change and stage transitions was found. Conclusions: Processes of change do not seem significant in explaining adolescents' stage transitions. As an alternative for promoting the use of the processes of change for intervention purposes in adolescents, it might be more useful to focus on treating nicotine dependence.

**Title:** Correlates of transitions in stage of change for quitting among adolescent smokers

**First Author:** Kohler CL **Authors:** Kohler CL, Schoenberger YM, Tseng TS, Ross L

**Source:** Addictive Behaviors **Year:** 2008 **Volume:** 33 **Issue:** 4 **Page Range:** 1615 - 1618

**Abstract:** Longitudinal studies have been conducted to evaluate correlates of stage of change movement among adult smokers but no studies were found to be conducted among adolescent smokers. This study used longitudinal data to examine adolescents' abstinence self-efficacy over 10-week and six-month periods and determined whether stage transitions were associated with concomitant changes or baseline values in perceived abstinence self-efficacy, nicotine dependence and motivation to quit. From baseline to 10-weeks results showed a change in motivation to quit and baseline stage were significantly associated with stage progression and regression. Additionally, intervention school status was significantly associated with stage progression. On the other hand, baseline score for nicotine dependence predicted stage regression not progression. Adolescents' becoming more or less 'ready' to quit smoking are influenced by their nicotine dependence and motivation to quit.

**Title:** Adolescent smoking trajectories and nicotine dependence

**First Author:** Lessov-Schlaggar C **Authors:** Lessov-Schlaggar C, Hops H, Brigham J, Hudmon KS, Andrews J, Tildesley E, McBride D, Jack L, Javitz H, Swan G

**Source:** Nicotine & Tobacco Research **Year:** 2008 **Volume:** 10 **Issue:** 2 **Page Range:** 341 - 351

**Abstract:** The present study correlates empirically constructed prospective adolescent smoking trajectories with indicators of nicotine dependence assessed in adolescence and in adulthood. Excluding individuals who reported no smoking during repeat assessment (nonadopters), we identified five smoking trajectory groups: experimenters (n=116, 48.5%), late increasers (n=39, 16.3%), early increasers (n=37, 15.5%), quitters (n=22, 9.2%), and persistent smokers (n=25, 10.5%). Higher frequency of nicotine dependence symptoms in adolescence occurred in the quitters and persistent smokers groups, who smoked at higher levels relative to the experimenters, late increasers, and early increasers groups, who reported a similar frequency of nicotine dependence symptoms and smoked at low levels. Lifetime nicotine dependence was assessed in adulthood in lifetime daily smokers using the Fagerstrom Test for Nicotine Dependence (FTND) and the Nicotine Dependence Scale (NDS). Lifetime FTND levels were similar across trajectory groups. Relative to experimenters, all remaining smoking trajectory groups had higher NDS levels that were similar to one another. These results suggest that higher levels of adolescent nicotine dependence were associated with heavier smoking trajectory groups, and that regardless of trajectory group membership, smoking more than a few cigarettes per week throughout adolescence resulted in similar levels of lifetime nicotine dependence as measured by the FTND and NDS.

**Title:** Adolescent reasons for quitting smoking: initial psychometric evaluation

**First Author:** Myers MG **Authors:** Myers MG, MacPherson L

**Source:** Psychology of Addictive Behaviors **Year:** 2008 **Volume:** 22 **Issue:** 6 **Page Range:** 129 - 134

**Abstract:** Most adolescent smokers report intentions to quit, and the majority attempt cessation. However, little is known regarding the relationship between adolescent motives for cessation and smoking cessation efforts. To this end, the present study describes an initial evaluation of the psychometric characteristics of the Adolescent Reasons for Quitting scale (ARFQ), a measure of adolescent motives for smoking cessation. Participants were 109 current smoking high school students assessed at baseline and 6-month follow-up. The ARFQ item content and format was developed in a separate qualitative study with 36 high school students who had previously attempted to quit smoking. Exploratory factor analyses of ARFQ items yielded 3 subscales: Short-Term Consequences, Social Disapproval, and Long-Term Concerns. Validation analyses were conducted in relation to concurrent intentions to stop smoking and prospective smoking cessation attempts, providing evidence of concurrent, predictive, and discriminant validity. In particular, the Social Disapproval and Long-Term Concerns subscales significantly predicted subsequent cessation attempts. As such, the ARFQ may prove valuable for informing interventions to encourage adolescent smoking cessation.

**Title:** Changes in readiness to quit and self-efficacy among adolescents receiving a brief office intervention for smoking cessation

**First Author:** Patten CA **Authors:** Patten CA, Decker P, Dornelas E, Barbagallo J, Rock E, Offord K, Hurt R, Pingree S

**Source:** Psychology, Health & Medicine **Year:** 2008 **Volume:** 13 **Issue:** 4 **Page Range:** 326 - 336

**Abstract:** Purpose: To examine changes in readiness to quit and self-efficacy among adolescents who received a clinic-based, brief office intervention (BOI) for smoking cessation. Methods: This study utilized a prospective, pre-post-treatment design. Participants were adolescent smokers (34 females, 35 males) with a mean +/- SD age of 15.8 +/- 1.4 years; 86% were Caucasian, who were randomly assigned to receive the BOI as part of a larger clinical trial. They were recruited from three cities in the Midwest and Northeastern part of the United States. After the baseline assessment, the BOI was designed for adolescents to receive four weekly individual sessions with a research counselor lasting between 10 and 40 min each. The BOI includes motivational interviewing and cognitive-behavioral techniques. Readiness to quit was assessed at each treatment session using the stages of change algorithm. The validated Adolescent Smoking Self-Efficacy Scale (SES) was used to assess self-efficacy at baseline (week 0) prior to the intervention and at post-treatment (week 4). The SES items comprise three factors or subscales: opportunities to smoke, emotional stress, and friends' influence. Results: The percentage of adolescents who made improvement on readiness to quit from the baseline treatment session was statistically significant ( $p < .001$ ) for each of the three subsequent treatment sessions. Self-efficacy scores increased significantly ( $p < .004$ ) from baseline to post-treatment for all three subscales. Conclusions: Adolescents receiving a BOI progressed in their readiness and self-efficacy to quit. Understanding the change process among adolescent smokers during treatment could influence the design of future stop smoking interventions.

**Title:** Smoking cessation recruitment among african american youth: what youth think will help them attend

**First Author:** Peters RJ **Authors:** Peters RJ, Amos C, Meshack A, Yacoubian GS, Essien E

**Source:** Journal of Ethnicity in Substance Abuse **Year:** 2008 **Volume:** 7 **Issue:** 1271 **Page Range:** 451 - 464

**Abstract:** Data on the perceived sources of cessation information and the reasons why alternative school students would attend a smoking cessation program were collected from 302 students at an alternative high school who were surveyed through the Safer Decisions Program in Houston, Texas. Data collection took place between September 2006 and January 2007. Logistic regression identified that non-smokers were more likely to believe it was important to receive cessation information from doctors (4.93 adjusted odds ratio 95% confidence interval CI=1.96; 12.40), health educators (4.70 AOR; 95% CI=1.46; 15.10), people who have been affected by smoking (3.20 AOR; 95% CI=1.04; 9.80), teachers (2.73 AOR; 95% CI=1.3; 5.60), and celebrities (2.44 AOR; 95% CI=1.21; 4.92) compared to smokers. In addition, persons who had smoked in the past 30 days were twice as likely to report embarrassment (1.86 AOR; 95% CI=1.00; 3.44) and feel that it was not right to smoke (2.24 AOR; 95% CI=1.00; 5.00) compared to respondents who had not smoked during the past 30 days. While the relationships tested in this study are exploratory, they provide initial evidence for understanding the importance of smoking cessation recruitment strategies that may impact minority alternative school youth.

**Title:** Reducing tobacco use in adolescents

**First Author:** Rosen IM **Authors:** Rosen IM, Maurer DM

**Source:** American Family Physician **Year:** 2008 **Volume:** 77 **Issue:** 5 **Page Range:** 483 - 490

**Abstract:** After steadily decreasing since the late 1990s, adolescent smoking rates have stabilized at levels well above national goals. Experts recommend screening for tobacco use and exposure at every patient visit, although evidence of improved outcomes in adolescents is lacking. Counseling should be provided using the 5-A method (ask, advise, assess, assist, and arrange). All smokers should be offered smoking cessation assistance, including counseling, nicotine replacement therapy, bupropion therapy, or combination therapy. Pharmacotherapy of any kind doubles the likelihood of successful smoking cessation in adults; however, nicotine replacement therapy is the only pharmacologic intervention that has been extensively studied in children. Community interventions such as smoking bans and educational programs have been effective at reducing smoking rates in children and adolescents. Antismoking advertising and tobacco sales taxes also help deter new smokers and motivate current smokers to attempt to quit.



**Title:** Preliminary examination of tobacco withdrawal in adolescent smokers during smoking cessation treatment

**First Author:** Smith AE **Authors:** Smith AE, Cavallo D, McFetridge A, Liss T, Krishnan-Sarin S

**Source:** Nicotine & Tobacco Research **Year:** 2008 **Volume:** 10 **Issue:** 1 **Page Range:** 1253 - 1259

**Abstract:** Tobacco withdrawal symptoms have been shown to play a significant role in mediating relapse to smoking in adult smokers; however, few prospective studies have examined the course of tobacco withdrawal symptoms over time and their connection to lapse in adolescent smokers. Withdrawal symptoms were assessed weekly for 4 weeks in a sample of adolescent smokers participating in a pilot cessation intervention. Adolescent smokers experienced an exacerbation in overall withdrawal symptoms, particularly of cravings and restlessness, although symptoms were generally mild. The course of symptoms was different for boys and girls: Girls generally experienced a peak and subsequent decline in symptoms early in the establishment of abstinence, whereas boys experienced a constant level of symptoms that did not decline over the 4 weeks. Finally, withdrawal symptoms experienced on quit day were not related to lapse to smoking during the course of treatment for either boys or girls. These results suggest that although withdrawal symptoms may be uncomfortable, they may not be the most salient to a lapse to smoking for adolescent smokers attempting to quit. These findings have direct implications for the design and implementation of treatment of nicotine dependence in adolescent smokers.

**Title:** An integration of parents' and best friends' smoking, smoking-specific cognitions, and nicotine dependence in relation to readiness to quit smoking: a comparison between adolescents with and without asthma

**First Author:** Van Zundert RM **Authors:** van Zundert RM, Engels RC, Kleinjan M, van den Eijnden RJ

**Source:** Journal of Pediatric Psychology **Year:** 2008 **Volume:** 33 **Issue:** 5 **Page Range:** 821 - 832

**Abstract:** Objective: To study the impact of parents' and best friends' smoking, nicotine dependence, and craving on smoking-specific cognitions, and readiness to quit in adolescents with and without asthma. Methods: Structural equation analyses were applied to data from a sample of 1,120 daily smoking adolescents, 83 of whom had asthma. Results: Adolescents with asthma felt more ready to quit, and cognitions were more strongly related to readiness to quit among adolescents with asthma than among adolescents without asthma. Moreover, best friends' smoking seemed more relevant to the cognitions of adolescents with asthma. Nicotine dependence and craving were strongly related to cognitions, and to readiness to quit in both groups. The relation between craving and readiness to quit, however, was stronger among participants with asthma. Conclusions: Reduction of nicotine dependence and craving is essential for both groups. Youth with asthma may benefit even more from cognitive-based cessation services than healthy youth. The finding that adolescents with asthma are relatively more ready to quit, and that their cognitions are more easily affected can be turned into advantages in asthma-specific cessation services.

**Title:** Smoking cessation: why do smokers fail?

**First Author:** Wolburg JM **Authors:** Wolburg JM

**Source:** Journal of Consumer Marketing **Year:** 2008 **Volume:** 25 **Issue:** 2 **Page Range:** 72 - 73

**Abstract:** Purpose - The purpose of this article is to probe three explanations for the difficulty that cigarette smokers have in quitting: the addictive nature of the product; the failure to deliver messages with effective quit strategies; and the resistance to enacting smoking bans in bars and restaurants. It aims to argue that the latter two issues result in misplaced marketing. Design/methodology/approach - This article examines data from published research, interviews with smokers who have successfully quit, and government statistics to have a clearer picture of the issues. Findings - Smokers are exposed to anti-smoking messages created to discourage youth from starting to smoke, but smokers seldom encounter smoking cessation messages that offer realistic quit strategies. Instead, too many messages offer overly simplistic solutions. Furthermore, smokers in many states continue to find smoking permitted in bars - a place that typically triggers the desire to smoke due to associations between drinking and smoking. Arguments favoring smoking bans have concentrated on the health benefits to those who want to avoid second-hand smoke but have neglected to address the added benefits to smokers. Practical implications - Creators of messages can focus more specifically on successful quit strategies, and legislators can add a compelling argument for banning smoking in bars and restaurants. Originality/value - The article calls for an end to misplaced thinking that leads to ineffective campaign message strategy and resistance to smoking bans for bars and restaurants.

## 2007 Publications

**Title:** Tobacco use cessation for adolescents

**First Author:** Adelman WP      **Authors:** Adelman WP

**Source:** Adolescent Medicine Clinics      **Year:** 2007      **Volume:** 17      **Issue:** 3      **Page Range:** 697 - 717

**Abstract:** Features of tobacco dependence vary by ethnicity, which could be partially due to measurement bias inherent in instruments that assess nicotine dependence. This study compared responses on the Fagerstrom Test for Nicotine Dependence (FTND) by African American adolescents (n = 478) with those of White adolescents (n = 661) seeking smoking cessation treatment. We conducted item-by-item comparisons by ethnicity for the six questions composing the FTND and confirmatory factor analyses and multiple indicators-multiple causes (MIMIC) modeling to test the hypothesis of measurement invariance of the FTND by ethnicity. Study participants (N = 1,139) were daily smokers of average age 15.4 years (SD = 1.3); 42.0% were African American and 61.5% female. White adolescents' pattern of responses to the FTND indicated a greater degree of dependence; these differences were statistically significant for five of the six items. The FTND exhibited a unidimensional structure with similar factor loadings in both White and African American adolescents. However, MIMIC modeling indicated differential reporting for three out of six items, suggesting that the FTND may not measure nicotine dependence equivalently for White and African American youth.

**Title:** Adolescents with conduct disorder: early smoking and treatment requests

**First Author:** Bagot K      **Authors:** Bagot K, Berarducci J, Franken F, Frazier M, Ernst M, Moolchan ET

**Source:** American Journal on Addictions **Year:** 2007      **Volume:** 16      **Issue:** 1      **Page Range:** 62 - 66

**Abstract:** Internet-based cessation programs are promising. However, little information exists on how to recruit college smokers to participate in online interventions. Two studies assessed the feasibility of Internet health screening as a recruitment strategy for college smokers. The Internet Survey Study compared Internet (n = 735), mail (n = 1,490), and phone (n = 550) surveys as means to identify college smokers. The RealU Recruitment Study described the use of an Internet-based general health screening survey (N = 25,000) to recruit for an online cessation trial. The Internet Survey Study showed that, despite large differences in response rates (Internet = 38%, mail = 47%, phone = 90%; p<.001), the rates of past-month tobacco use were similar (Internet = 35%, mail = 38%, phone = 34%; p = .35). Among past-month users, a greater proportion reported daily use on the Internet (33%) and phone (37%) surveys versus the mail survey (23%, p = .007). In the RealU Recruitment Study, 517 college smokers were recruited in 1 week. The Internet survey response rate was 26%, the prevalence of current smoking was 29%, the eligibility rate was 87%, and the enrollment rate was 32% (517/1,618). Internet health screening can be used to quickly identify and enroll large numbers of college smokers in an online smoking cessation intervention.

**Title:** A national survey of tobacco cessation programs for youths

**First Author:** Curry SJ      **Authors:** Curry SJ, Emery S, Sporer AK, Mermelstein R, Flay BR, Berbaum M, Warnecke RB, Johnson T, Mowery P, Parsons J, Harmon L, Hund L, Wells H

**Source:** American Journal of Public Health      **Year:** 2007      **Volume:** 97      **Issue:** 1      **Page Range:** 171 - 177

**Abstract:** Objectives: We collected data on a national sample of existing community-based tobacco cessation programs for youths to understand their prevalence and overall characteristics. Methods: We employed a 2-stage sampling design with US counties as the first-stage probability sampling units. We then used snowball sampling in selected counties to identify administrators of tobacco cessation programs for youths. We collected data on cessation programs when programs were identified. Results: We profiled 591 programs in 408 counties. Programs were more numerous in urban counties; fewer programs were found in low-income counties. State-level measures of smoking prevalence and tobacco control expenditures were not associated with program availability. Most programs were multisession, school-based group programs serving 50 or fewer youths per year. Program content included cognitive-behavioral components found in adult programs along with content specific to adolescence. The median annual budget was \$2000. Few programs (9%) reported only mandatory enrollment, 35% reported mixed mandatory and voluntary enrollment, and 56% reported only voluntary enrollment. Conclusions: There is considerable homogeneity among community-based tobacco cessation programs for youths. Programs are least prevalent in the types of communities for which national data show increases in youths' smoking prevalence.

**Title:** Smoking cessation and stress among teenagers

**First Author:** Falkin G **Authors:** Falkin G, Fryer C, Mahadeo M

**Source:** Qualitative Health Research **Year:** 2007 **Volume:** 17 **Issue:** 6 **Page Range:** 812 - 823

**Abstract:** The authors describe the experience of quitting smoking, focusing on the obstacles youth struggle with, based on individual interviews and focus groups with 54 teenagers in New York City. A major obstacle was the belief that people should stop smoking forever. The youth had to cope with temptation, frequent and often intense urges or cravings for cigarettes, and lack of social support from their family and friends. The young participants not only had to cope with general life stresses without being able to use cigarettes to reduce tensions but also had to contend with new stressful situations, such as friends who put them down for not smoking. In addition, the teens had to give up things that were important to them, such as friendships, during their quit attempts. The study describes how quitting can be a much more stressful experience for youth than research typically acknowledges. The authors discuss public health implications.

**Title:** Tobacco cessation interventions for young people

**First Author:** Grimshaw GM     **Authors:** Grimshaw GM, Stanton A

**Source:** Cochrane Database of Systematic Reviews     **Year:** 2007     **Volume:** 18     **Issue:** 4     **Art. No.:** CD003289.

**Abstract:** Background: Teenage smoking prevalence is around 15% in developing countries (with wide variation from country to country), and around 26% in the UK and USA. Although most tobacco control programmes for adolescents are based around prevention of uptake, there are also a number of initiatives to help those who want to quit. Since those who do not smoke before the age of 20 are significantly less likely to start as adults, there is a strong case for programmes for young people that address both prevention and treatment. Objectives: To evaluate the effectiveness of strategies that help young people to stop smoking tobacco. Search Strategy: We searched the Cochrane Central Register of Controlled Trials (CENTRAL) and the Cochrane Tobacco Addiction Group's Specialized Register, MEDLINE, EMBASE, PsycINFO, ERIC, CINAHL, and the bibliographies of identified trials. We also searched the 'grey' literature (unpublished materials), and contacted authors and experts in the field where necessary. Selection Criteria: Types of studies: Randomized controlled trials, cluster-randomized controlled trials and controlled trials. Types of participants: Young people, aged less than 20, who are regular tobacco smokers. Types of interventions: The interventions ranged from simple ones such as pharmacotherapy, targeting individual young people, through complex programmes targeting people or organizations associated with young people (for example, their families or schools), or the community in which young people live. We included cessation programmes but excluded programmes primarily aimed at prevention of uptake. Types of outcome measures: The primary outcome was smoking status at six months follow up, among those who smoked at baseline. We report the definition of cessation used in each trial (e.g seven- or thirty-day point prevalence abstinence, or sustained or prolonged abstinence), and we preferred biochemically verified cessation when that measure was available. Data Collection and Analysis: Both authors independently assessed the eligibility of candidate trials identified by the searches, and extracted data from them. We categorized included trials as being at low, medium or high risk of bias, based on concealment of allocation, blinding (where applicable) and the handling of attrition and losses to follow up. We conducted limited meta-analyses of some of the trials, provided that it was appropriate to group them and provided that there was minimal heterogeneity between them. We estimated pooled odds ratios using the Mantel-Haenszel method, based on the quit rates at longest follow up for trials with at least six months follow up from the start of the intervention. Main Results: We found 15 trials, covering 3605 young people, which met our inclusion criteria (seven cluster-randomized controlled trials, six randomized controlled trials and two controlled trials). Three trials used or tested the transtheoretical model (stages of change) approach, two tested pharmacological aids to quitting (nicotine replacement and bupropion), and the remaining trials used various psycho-social interventions, such as motivational enhancement or behavioural management. The trials evaluating TTM interventions achieved moderate long-term success, with a pooled odds ratio (OR) at one year of 1.70 (95% confidence interval (CI) 1.25 to 2.33) persisting at two-year follow up with an OR of 1.38 (95% CI 0.99 to 1.92). Neither of the pharmacological intervention trials achieved statistically significant results (data not pooled), but both were small-scale, with low power to detect an effect. The three interventions (5 trials) which used cognitive behavioural therapy interventions did not individually achieve statistically significant results, although when the three Not on Tobacco trials were pooled the OR 1.87; (95% CI 1.00 to 3.50) suggested some measure of effectiveness. Although the three trials that incorporated motivational interviewing as a component of the intervention achieved a pooled OR of 2.05 (95% CI 1.10 to 3.80), the impossibility of isolating the effect of the motivational interviewing in these trials meant that we could not draw meaningful inferences from that analysis. Authors' Conclusions: Complex approaches show promise, with some persistence of abstinence (30 days point prevalence abstinence at six months), especially those incorporating elements sensitive to stage of change. There were few trials with evidence about pharmacological interventions (nicotine replacement and bupropion), and none demonstrated effectiveness for adolescent smokers. Psycho-social interventions have not so far demonstrated effectiveness, although pooled results for the Not on Tobacco trials suggest that that this approach may yet prove to be effective; however, their definition of cessation (one or more smoke-free days) may not adequately account for the episodic nature of much adolescent smoking. There is a need for well-designed adequately powered randomized controlled trials for this population of smokers, with a minimum of six months follow up and rigorous definitions of cessation (sustained and biochemically verified). Attrition and losses to follow up are particularly problematic in trials for young smokers, and need to be kept to a minimum, so that management and interpretation of missing data need not compromise the findings.

**Title:** Efficacy of an emergency department-based motivational teenage smoking intervention

**First Author:** Horn K    **Authors:** Horn K, Dino G, Hamilton C, Noerachmanto N

**Source:** Preventing Chronic Disease    **Year:** 2007    **Volume:** 4    **Issue:** 1    **Page Range:** A08

**Abstract:** Introduction: Motivational interviewing techniques have been minimally researched as a function of a teenage smoking intervention. The present study examined the efficacy of a theory-based motivational tobacco intervention (MTI). Methods: A randomized two-group design was used to compare 6-month post-baseline quit and reduction rates among teenagers who received the MTI with those who received brief advice or care as usual. Participants were smokers aged 14 to 19 years (N = 75) who presented for treatment in a university-affiliated hospital emergency department (ED). Motivational interviewing techniques were used by trained providers to facilitate individual change; stage-based take-home materials also were provided. Results: Similar to past clinic-based studies of motivational interviewing with teenage smokers, our study found negative results in terms of intervention efficacy for cessation. Six-month follow-up cessation rates were nonsignificant--two teenagers quit smoking. Among teenagers who were available at follow-up, a medium effect size (Cohen's  $h = .38$ ) was found for reduction and a large effect size (Cohen's  $h = .69$ ) was found for percentage reduction, although these results also were not statistically significant. Conclusion: Although the major findings of this study were not significant, the reductions in tobacco use suggest that motivational interviewing may be a clinically relevant counseling model for use in teenage smoking interventions. However, many questions remain, and the current literature lacks studies on trials with significant outcomes using motivational interviewing in smoking cessation. Additionally, more research is needed to examine the suitability of the ED for MTI-type interventions.

**Title:** Alcohol use and tobacco abstinence among adolescents in cessation treatment: preliminary findings

**First Author:** Jaszyna-Gasior M    **Authors:** Jaszyna-Gasior M, Schroeder JR, Moolchan ET

**Source:** Addictive Behaviors    **Year:** 2007    **Volume:** 32    **Issue:** 3    **Page Range:** 617 - 621

**Abstract:** Although adult alcohol use is negatively associated with tobacco cessation, this relationship has not been reported for adolescents. We assessed the relationship between alcohol use and point prevalence abstinence from smoking in a sample of tobacco-dependent adolescents undergoing cessation treatment. Alcohol use both at baseline and) during tobacco cessation treatment was examined as predicting smoking abstinence in 101 adolescents (age= 15.1years, S.D.= 1.31years; age at first cigarette= 11.3years, S.D.= 1.93years; age at first drink= 12.01years, S.D.= 2.87years) attending a total of 642 treatment visits. Mixed regression analysis showed that participants who reported alcohol use during tobacco cessation treatment were significantly less likely to abstain from tobacco smoking (OR= 0.42, 95% CI= 0.23-0.78,  $t = -2.78$ ,  $df = 540$ ,  $p = 0.0057$ ). However, pre-enrollment alcohol use was not significantly associated with either short- or long-term tobacco abstinence. If confirmed in a larger group of adolescents, our findings suggest that youths attempting to quit smoking should abstain from alcohol.

**Title:** Overcoming barriers to recruitment and retention in adolescent smoking cessation

**First Author:** Kealey K    **Authors:** Kealey K, Ludman E, Mann S, Marek P, Phares M, Riggs K, Peterson A

**Source:** Nicotine & Tobacco Research    **Year:** 2007    **Volume:** 9    **Issue:** 2    **Page Range:** 257 - 270

**Abstract:** Participant recruitment and retention have been identified as challenging aspects of adolescent smoking cessation interventions. Problems associated with low recruitment and retention include identifying smokers, obtaining active parental consent, protecting participants' privacy, respecting participants' autonomy, and making participation relevant and accessible to adolescents. This paper describes nine strategies for minimizing these recruitment and retention problems via a proactive telephone counseling intervention, and reports on their simultaneous implementation among 1,058 smokers from 25 high schools in Washington state. Results are as follows: (a) 85.9% of parents of minor-age seniors provided active consent for their teen's participation, (b) 89.8% of eligible smokers were successfully contacted by counselors, (c) 86.5% of contacted smokers consented to participate in the cessation counseling, (d) 93.8% of consented smokers participated in smoking cessation counseling calls, and (e) 72.2% of participating smokers completed their full intervention. These results demonstrate that older teens who smoke, and their parents, are receptive to confidential cessation counseling that is personally tailored, supportive of their autonomy, and proactively delivered via the telephone.

**Title:** Youth smokers' beliefs about different cessation approaches: are we providing cessation interventions they never intend to use?

**First Author:** Leatherdale S      **Authors:** Leatherdale S, McDonald P

**Source:** Cancer Causes and Control      **Year:** 2007      **Volume:** 18      **Issue:** 7      **Page Range:** 783 - 791

**Abstract:** Most youth smokers intend to quit, but the majority is neither aware nor interested in most conventional cessation approaches. As such, a critical first step in understanding youth cessation is to better understand the beliefs youth have about different cessation options. This cross-sectional study used self-reported data collected from 26,379 grade 9 to 12 students in Ontario, Canada. We examined both the attitudes of youth smokers toward common smoking cessation approaches and factors associated with intentions to join a school-based cessation program. The majority of youth smokers intend to quit smoking but tend to have negative attitudes toward most formal smoking cessation approaches; Nicotine Replacement Therapy (NRT) was an exception. Among occasional smokers, self-identification as a smoker and being physically active were positively associated with intending to join a school-based cessation program. Having tried to quit smoking at least once in the past year more than doubled the likelihood of being interested in a school-based program among both occasional and daily smokers. Findings have the potential for informing the development of more effective campaigns for engaging adolescent smokers into smoking cessation treatment. Results also reinforce the need for programmatic innovation within and beyond school settings.

**Title:** Getting it right: designing adolescent-centered smoking cessation services

**First Author:** MacDonald S      **Authors:** MacDonald S, Rothwell H, Moore L

**Source:** Addiction      **Year:** 2007      **Volume:** 102      **Issue:** 7      **Page Range:** 1147 - 1150

**Abstract:** To demonstrate the importance of identifying adolescent preferences for smoking cessation in order to inform the design of effective adolescent cessation services. Structured qualitative interviews drawing on means-end theory. Three youth-clubs and two secondary schools in south-east Wales. Twenty-five male and female 13-18-year-olds, mainly daily smokers. Interviewees did not assume immediately that a smoking cessation service is something that will be available to them, and therefore they initially encountered difficulties in identifying attributes of such support. With further prompting interviewees were able to express a preference for support attributes, but these were not attributes that traditionally form part of cessation provision. Their main preference was for support from friends and family, access to nicotine replacement therapy and non-school-based, flexible support and guidance. The results re-emphasize the inadequacies of existing cessation provision for meeting adolescent preferences and suggest that developing more adolescent-appropriate support requires a reconceptualization of existing interventions, with service users situated at the core of intervention design. The study highlights a number of service development points for intervention planners including: rethinking the timing and location of provision; placing more emphasis on the selection of facilitators; harnessing support from friends and family; and rooting these developments in broader tobacco control strategies.

**Title:** Randomized clinical trial of an internet-based versus brief office intervention for adolescent smoking cessation

**First Author:** Patten CA      **Authors:** Patten CA, Croghan IT, Meis TM, Decker PA, Pingree S, Colligan RC, Dornelas EA, Offord KP, Boberg EW, Baumberger RK, Hurt RD, Gustafson DH,

**Source:** Patient Education and Counseling      **Year:** 2007      **Volume:** 64      **Issue:** 1      **Page Range:** 249 - 258

**Abstract:** Objective: Evaluation of novel treatment delivery methods, such as the Internet are notably absent from the adolescent smoking treatment literature. Methods: Adolescent smokers ages 11-18 years were randomized to a clinic-based, brief office intervention (BOI; N=69) consisting of four individual counseling sessions; or to Stomp Out Smokes (SOS), an Internet, home-based intervention (N=70). Adolescents in SOS had access to the SOS site for 24 weeks. Results: The 30-day, point-prevalence smoking abstinence rates for BOI and SOS were 12% versus 6% at week 24 and 13% versus 6% at week 36, with no significant treatment differences. Among participants who continued to smoke, SOS was associated with a significantly greater reduction in average number of days smoked than BOI (P=0.006). The BOI was found to be feasible with high session attendance rates. SOS participants accessed the site a mean+/-S.D. of 6.8+/-7.1 days. SOS use dropped to less than one-third of participants by week 3. Conclusion: Additional research is needed to tap the potential capabilities of the Internet for adolescent smoking cessation using proactive, personalized, patient-education components. Practice Implications: Augmenting the SOS type of intervention with more structured, personal and proactive patient-education components delivered in-person or by telephone or electronic mail is recommended.

**Title:** Child and adolescent psychiatrists' practices in assisting their adolescent patients who smoke to quit smoking

**First Author:** Price J     **Authors:** Price J, Sidani J, Price J

**Source:** Journal of the American Academy of Child and Adolescent Psychiatry

**Year:** 2007     **Volume:** 46     **Issue:** 1     **Page Range:** 60 - 67

**Abstract:** Abstract: Objective: This national study examined the practices and perceptions of smoking cessation activities among child and adolescent psychiatrists. Method: A random sample of child and adolescent psychiatrists was identified from the membership list of the American Academy of Child and Adolescent Psychiatry and was mailed a valid and reliable 34-item questionnaire. Results: A total of 184 responses (47%) were received. A plurality (48%) of psychiatrists reported being self-taught in smoking cessation techniques. A majority (67%) of psychiatrists were in the maintenance stage for asking about smoking status. However, only 19% consistently made attempts to assess willingness to quit, and 30% consistently gave messages urging the smoker to quit. The perceived number of barriers for addressing smoking was negatively correlated with psychiatrists' levels of confidence ( $r = -0.35, p < .001$ ) and preparedness ( $r = -0.39, p < .001$ ) in addressing smoking cessation. Estimations by the psychiatrists of youths who smoked were 61% of those with conduct disorders, 46% of those with schizophrenia, and 40% of those with attention-deficit/hyperactivity disorder. Conclusion: Considering the perceived high rate of patient smoking and the lack of formal training in smoking cessation, more postgraduate education is needed to adequately prepare child and adolescent psychiatrists for addressing tobacco cessation.

**Title:** Relationship between self-reported task persistence and history of quitting smoking, plans for quitting smoking, and current smoking status in adolescents

**First Author:** Steinberg ML     **Authors:** Steinberg ML, Krejci JA, Collett K, Brandon TH, Ziedonis DM, Chen K

**Source:** Addictive Behaviors     **Year:** 2007     **Volume:** 32     **Issue:** 7     **Page Range:** 1451 - 1460

**Abstract:** The task persistence construct has previously been measured primarily behaviorally (e.g., with a mirror-tracing task, or breath holding), and only in adults. It has been shown to differentiate between adult smokers and non-smokers and to predict smoking cessation in adult smokers trying to quit. This theory-based analysis is the first to examine task persistence in adolescent smokers and to examine a two-item, internally consistent, self-report measure of task persistence. Results indicate that task persistence is greater among adolescent non-smokers as compared to adolescent current smokers, and those planning to quit smoking as compared to those with no plans to quit. Contrary to hypotheses, task persistence was not found to be related to prior successful attempts to quit smoking. Our results suggest that a brief, self-report measure of task persistence may be a methodologically sound, practical clinical tool for this population.

**Title:** Short-term effects of Project Ex-4: a classroom-based smoking prevention and cessation intervention program

**First Author:** Sun P     **Authors:** Sun P, Miyano J, Rohrbach LA, Dent CW, Sussman S

**Source:** Addictive Behaviors     **Year:** 2007     **Volume:** 32     **Issue:** 2     **Page Range:** 342 - 350

**Abstract:** Objective: Researchers continue to try to develop effective teen tobacco use prevention and cessation programs. Three previous school clinic-based studies established the efficacy of Project EX for teen smoking cessation. This fourth study adapts Project EX to the classroom context. This paper reports the findings based on pretest and posttest surveys conducted immediately prior and post-intervention. Methods: An eight-session classroom-based curriculum was developed and tested with a randomized controlled trial that involved a total of 1097 students in six program and six control continuation high schools. Program-specific knowledge and smoking measures were assessed at both the pretest and posttest surveys, and were used to evaluate the program's effect on the immediate outcomes. The immediate outcomes effects were analyzed with multi-level random coefficients models. Results: Program students provided favorable process ratings of the overall program and each session. Compared with the students in the control condition, students in the program condition showed a greater change in correct knowledge responses from pretest to posttest ( $\beta = +5.5\%, p = 0.0003$ ). Students in the program condition also experienced a greater reduction in weekly smoking ( $\beta = -6.9\%, p = 0.038$ ), and intention for smoking in the next 12 months ( $\beta = -0.21$  in 5-level scale,  $p = 0.023$ ). Conclusions: EX-4 immediate outcome results revealed favorable student responses to the program, increases in knowledge, and decreases in smoking relative to a standard care control condition.

**Title:** Progression to daily smoking: is there a gender difference among cessation treatment seekers?

**First Author:** Thorner ED      **Authors:** Thorner ED, Jaszyna-Gasior M, Epstein DH, Moolchan ET

**Source:** Substance Use & Misuse      **Year:** 2007      **Volume:** 42      **Issue:** 5      **Page Range:** 829 - 835

**Abstract:** The goal of this study was to develop an understanding the developmental trajectory of smoking behaviors in adolescents who seek smoking cessation treatment to inform tailored prevention and treatment efforts; this includes identifying gender differences in smoking behaviors. Smoking trajectory was examined retrospectively in 639 treatment-seeking adolescents (59% female; 44% African American, 50% European American, mean + or - SD daily cigarettes per day [CPD] 19.16 + or - 7.2 for both girls and boys). Smoking trajectory variables examined included age at first cigarette, age at daily smoking (a proxy measure for onset of dependence), and age at treatment request. The time interval from first cigarette to daily smoking was shorter for girls than for boys (mean + or - SD 0.9 + or - 1.1 years for girls, 1.3 + or - 1.5 years for boys,  $p < 0.01$ ). From this clinical sample of adolescent smokers, findings suggest only a brief window of opportunity for secondary preventive interventions before the development of tobacco dependence. Additional research is needed to explore the specific factors that differentially affect smoking trajectory in girls compared to boys.

**Title:** The role of smoking-cessation-specific parenting in adolescent smoking-specific cognitions and readiness to quit

**First Author:** van Zundert RMP      **Authors:** van Zundert RM, van de Ven MO, Engels RC, Otten R, van den Eijnden RJ.

**Source:** Journal of Child Psychology and Psychiatry, and Allied Disciplines

**Year:** 2007      **Volume:** 48      **Issue:** 2      **Page Range:** 202 - 209

**Abstract:** An instrument assessing smoking-cessation-specific parenting was developed and tested in relation to a) the pros of smoking and quitting and self-efficacy to resist smoking, and b) adolescent readiness to quit. Cross-sectional survey data from 998 Dutch adolescents who smoked regularly were used to perform structural equation analyses. Adolescents who perceived relatively few advantages of smoking and many benefits of quitting reported a high readiness to quit. Self-efficacy was not related to readiness to quit. Smoking-cessation-specific parenting was both directly related to a high readiness to quit, and indirectly through the perceived pros of quitting. Also, if one or both parents were smokers, adolescents reported experiencing less smoking-cessation-specific parenting and a lower readiness to quit. However, in general, differences in paths were not found between adolescents with two parents who did not smoke and adolescents with one or two parents who smoked. Given that anti-smoking socialisation has not yet been operationalised in terms of smoking-cessation-specific parenting, the present results will warrant further research into smoking-cessation-specific parenting in relation to adolescent smoking cessation. Further, parental smoking should not discourage parents from engaging in smoking-cessation-specific parenting as its relations with smoking cognitions and readiness to quit were highly similar in both the group with two parents who did not smoke and the group with one or two parents who smoked.

## 2006 Publications

**Title:** Tobacco use by adolescents: the role of the oral health professional in evidence-based cessation programs

**First Author:** Albert D      **Authors:** Albert D, Severson HH, Andrews JA

**Source:** Pediatric Dentistry      **Year:** 2006      **Volume:** 28      **Issue:** 2      **Page Range:** 177 - 187

**Abstract:** The use of tobacco products, especially cigarette smoking, represents the leading cause of preventable illness and death in the developed world. In the United States, major gains have been made to reduce smoking among adults. Similar gains, however, have not been realized with adolescents. In recent years, substantial interest has been directed to tobacco cessation studies with adolescents. The previously limited interest in adolescent cessation programs was attributable in large part to the mistaken assumptions that: (1) adolescent tobacco users were not dependent on nicotine and could stop at any time; (2) adolescents did not want to quit; and (3) adult tobacco cessation programs would be effective with adolescents. The need for programs to increase adolescent cessation attempts is underscored by the Healthy People 2010 goal that calls for an increase in tobacco use cessation attempts by adolescent smokers to 84%. Dental providers need to take steps to prevent tobacco use by adolescent patients. For those who are already addicted, they need to provide cessation counseling services or referral for appropriate treatment. The purpose of this paper was to provide dental clinicians with information on: (1) tobacco and health; (2) the epidemiology of adolescent tobacco use; and (3) tobacco cessation programs for parents and adolescents that can be implemented in the dental office setting.



**Title:** Increased reach and effectiveness of a statewide tobacco quitline after the addition of access to free nicotine replacement therapy

**First Author:** An LC **Authors:** An LC, Schillo B, Kavanaugh AM, Lachter RB, Luxenberg MG, Wendling AH, Joseph AM

**Source:** Tobacco Control **Year:** 2006 **Volume:** 15 **Issue:** 4 **Page Range:** 286 - 293

**Abstract:** This study sought to determine that Tobacco users receiving behavioral and pharmacological assistance are more likely to quit than smokers not receiving assistance. Although telephone quit lines provide population access to counseling, few offer pharmacotherapies. The objective of the study was to assess change in cessation rates and program impact after the addition of free nicotine replacement therapy (NRT) to statewide quit line services. This was an observational study in which the number of calls to the Minnesota QUITPLAN Helpline by participants were recorded both before (n = 380) and after (n = 373) the addition of access to free NRT. Intervention was defined as the mailing of NRT (patch or gum) to callers enrolling in multi-session counseling. The main outcome measure is a thirty-day abstinence six months after program registration. The number of callers increased from 155 (SD 75) to 679 (180) per month pre-NRT to post-NRT (difference 524, 95% confidence interval (CI) 323 to 725). Post-NRT, the proportion of callers enrolling in multi-session counseling (23.4% v 90.1%, difference 66.6%, 95% CI 60.8% to 71.6%) and using pharmacotherapy (46.8% v 86.8%, difference 40.0%, 95% CI 31.3% to 47.9%) increased. Thirty-day abstinence at six months increased from 10.0% pre-NRT to 18.2% post-NRT (difference 8.2%, 95% CI 3.1% to 13.4%). Post-NRT the average number of new ex-smokers per month among registrants increased from 15.5 to 123.6 (difference 108.1, 95% CI 61.1 to 155.0). The cost per quit pre-NRT was \$1362 (SD \$207). The cost per quit post-NRT was \$1934 (\$215) suggesting a possible increase in cost per quit (difference \$572, 95% CI -\$12 to \$1157). The addition of free NRT to a state quit line is followed by increases in participation and abstinence rates resulting in an eightfold increase in program impact. These findings support the addition of access to pharmacological therapy as part of state quit line services.

**Title:** Recruiting teen smokers in shopping malls to a smoking cessation program using the foot-in-the-door technique

**First Author:** Bloom PN **Authors:** Bloom PN, McBride CM, Pollak KI

**Source:** Journal of Applied Social Psychology **Year:** 2006 **Volume:** 36 **Issue:** 5 **Page Range:** 1129 - 1144

**Abstract:** Persuading teen smokers to volunteer for smoking-cessation programs is a challenging yet understudied problem. As a method of dealing with this problem, we used and tested a foot-in-the-door (FITD) approach. Teen smokers were intercepted at malls and were assigned randomly to request compliance with a small behavior request of either (a) answering a few questions (light FITD) or (b) answering the same questions and a few additional ones, plus watching a short video about the effects of nicotine (heavy FITD). Participants were then called back by telephone several weeks later and asked to comply with a large behavior request of joining a cessation program that involved the use of self-help materials and telephone counseling. Although no differences were found in responses from the light and heavy groups, consent to enter the program was obtained from 12% of the pooled qualified intercepts and their parents (for those under 18 years). This recruitment rate was considered good, given that this is one of the only reported studies that recruited teen smokers from the general population to cessation programs.

**Title:** Is there regulation between school smoking policies and youth cigarette smoking knowledge and behaviors?

**First Author:** Darling H **Authors:** Darling H, Reeder A, Williams S, McGee R

**Source:** Health Education Research **Year:** 2006 **Volume:** 21 **Issue:** 1 **Page Range:** 108 - 115

**Abstract:** To comply with workplace legislation, New Zealand schools are required to have policies regarding tobacco smoking. Many schools also have policies to prevent tobacco use by students, including education programs, cessation support and punishment for students found smoking. This paper investigated the associations between school policies and the prevalence of students' cigarette smoking. Furthermore, we investigated the association between school policy and students' tobacco purchasing behavior, knowledge of health effects from tobacco use and likelihood of influencing others not to smoke. Data were obtained from a self-report survey administered to 2658 New Zealand secondary school students and staff from 63 schools selected using a multi-stage sampling procedure. Components of school policy were not significantly associated with smoking outcomes, health knowledge or health behavior, and weakly related to a punishment emphasis and students advising others to not smoke. Similarly, weak associations were found between not advising others to not smoke and policies with a punishment emphasis as well as smoke-free environments. The results suggest that having a school tobacco policy was unrelated to the prevalence of tobacco use among students, tobacco purchasing behavior and knowledge of the negative health effects of tobacco.

**Title:** Initial evaluation of a real-world self-help smoking cessation programme for adolescents and young adults

**First Author:** Hanewinkel R     **Authors:** Hanewinkel R, Wiborg G

**Source:** Addictive Behaviors     **Year:** 2006     **Volume:** 31     **Issue:** 10     **Page Range:** 1939 - 1945

**Abstract:** There is a lack of effective smoking cessation programs for young people, despite the urgent need for them. The present study reports the initial results of a real-world self-help cessation program which also contained quit and win-contest component designed for adolescents and young adults. Consecutive registrants (N =1265) were surveyed 11 to 23 months after they registered to the program to assess continuous abstinence. Results must be interpreted cautiously because this is an uncontrolled study with a 20.7% response rate (N =262). The program was assessed positively by the participants. Results showed an 8.5% intention-to-treat quit rate with an average duration of 51.30 weeks continuous abstinence. Predictors for successful smoking were occasional smoking (not daily smoking) and older age.

**Title:** Monitoring and decreasing public smoking among youth: a preliminary study

**First Author:** Jason LA     **Authors:** Jason LA, Pokorny SBT

**Source:** Behavior Modification     **Year:** 2006     **Volume:** 30     **Issue:** 5     **Page Range:** 681 - 692

**Abstract:** This study examined the impact of tobacco possession laws on public smoking among youth. There were two intervention sites: a fast food restaurant and a shopping mall. Two control sites were also monitored for public smoking among youth. Preliminary findings suggest that when police issued tickets to minors for violating tobacco possession laws, the number of youth smoking in public declined in both towns, with a more dramatic decrease occurring at the fast food site. In contrast, public smoking among youth in the control sites was not affected. The significance of reducing number of youth smoking in public through tobacco possession laws is discussed.

**Title:** School-based smoking cessation programs: do youth smokers want to participate in these programs?

**First Author:** Leatherdale ST     **Authors:** Leatherdale ST

**Source:** Addictive Behaviors     **Year:** 2006     **Volume:** 31     **Issue:** 8     **Page Range:** 1449 - 1453

**Abstract:** The purpose of the present study was to examine characteristics that predict interest in school-based cessation programs among 3136 youth smokers with intentions to quit smoking. The majority of youth smokers report that they would not join a school-based smoking cessation program. However, improving awareness of these types of programs among students is important as sub-populations of youth smokers were more likely to be interested in school-based cessation initiatives when aware that such programs exist. Future school-based cessation intervention outcomes might be improved if programs are targeted to the youth that are most likely to use them, if more youth can be made aware of existing programs, and if the benefits of participating in such programs can be more adequately conveyed to youth smokers.

**Title:** Reasons for wanting to quit: ethnic differences among cessation seeking adolescent smokers

**First Author:** Luther EJ     **Authors:** Luther EJ, Bagot KS, Franken FH, Moolchan ET

**Source:** Ethnicity & Disease     **Year:** 2006     **Volume:** 16     **Issue:** 3     **Page Range:** 739 - 743

**Abstract:** Enhancing adolescent cessation requires an understanding of approaches that will motivate youths to quit smoking. We compared reasons for wanting to quit expressed by European Americans to those of African American youths. Adolescent cessation-seeking smokers completed telephone interviews regarding their smoking behavior and reasons for wanting to quit in an open-ended format. Responses were then classified into nine categories. Participants included 1,268 Baltimore-area adolescents (mean age 15.6 +/-1.7 years, 60% female, 58% European American, mean Fagerstrom Test for Nicotine Dependence 5.8 +/- 2.2). While both groups broadly cited health as the predominant reason for wanting to quit, chi-square analyses of further stratification of health into general, future, and current health concerns showed that European Americans were more likely to endorse current health reasons (P<.001), while African Americans were more likely to state general health reasons (P=.004). European Americans were more likely to state cost (P=.002) or to not give a reason for wanting to quit (P=.008), while African Americans more frequently reported a lack of positive (pharmacologic or social) reinforcement (P<.001). In conclusion the development of culturally tailored messages may help enhance smoking cessation efforts among adolescents.

**Title:** Motivation to quit as a mediator of tobacco cessation among at-risk youth

**First Author:** McCuller WJ      **Authors:** McCuller WJ, Sussman S, Wapner M, Dent C, Weiss DJ

**Source:** Addictive Behaviors      **Year:** 2006      **Volume:** 31      **Issue:** 5      **Page Range:** 880 - 888

**Abstract:** The purpose of this study is twofold: 1) to evaluate the effects of a smoking cessation clinic (Project EX) on changing motivation to quit smoking, and 2) to assess differences in quit rates based on these changes in motivation. Student smokers in 18 continuation high schools in the Los Angeles county area were invited to participate in a tobacco cessation clinic designed to enhance motivation to quit tobacco use. The 18 schools were randomly assigned to one of three conditions. Compared to students in the control group, students who participated in the program conditions were more likely to express higher motivation to quit tobacco use. Higher motivation was also significantly related to higher quit rates. Motivation to quit as defined by constituents of the energy/direction model of motivation appears to be a plausible mediator of cessation program effects.

**Title:** Adolescent smokers screened for a nicotine replacement treatment trial: correlates of eligibility and enrollment

**First Author:** Robinson M      **Authors:** Robinson M, Schroeder JR, Moolchan ET

**Source:** Nicotine & Tobacco Research      **Year:** 2006      **Volume:** 8      **Issue:** 3      **Page Range:** 447 - 454

**Abstract:** The enrollment process determines the study sample and external validity of clinical trial results; however, few reports describe the process and outcome of screening efforts for smoking cessation studies among adolescents. We describe and evaluate a screening protocol to enroll adolescent smokers for a randomized clinical trial of nicotine replacement therapy. Adolescent smokers obtained the recruitment call in number (1800NOSMOKE) via media and other advertisements. Trained recruitment staff collected information using an internally developed, targeted telephone screening interview, which was used to determine pre-eligibility for the clinical trial. Correlates of qualification and of study enrollment were determined. Among 1,347 adolescents screened, 329 (24.4%) were eligible to participate in the trial. Light smoking (39.1%) and lack of parental support (14.8%) were the biggest contributors to ineligibility. Eligible adolescents were more likely to be female (66.9% vs. 58.2%,  $p=.0052$ ) and more likely to be European American (63.5% vs. 52.2%,  $p<.0003$ ). The higher rates of ineligibility for African Americans and boys were partly explained by lower scores on the Fagerstrom Test for Nicotine Dependence. Of those eligible to participate in the trial, 159 (48.3%) enrolled. Results underscore the need for screening instruments that are measurement in variant across ethnicities and gender, and for enrollment strategies that maximize inclusion of eligible participants.

**Title:** Self-efficacy and outcome expectations for quitting among adolescent smokers

**First Author:** Solomon LJ      **Authors:** Solomon LJ, Bunn JY, Pirie PL

**Source:** Addictive Behaviors      **Year:** 2006      **Volume:** 31      **Issue:** 7      **Page Range:** 1122 - 1132

**Abstract:** Relatively little is known about smoking cessation self-efficacy and outcome expectations for quitting smoking in adolescent smokers. In this study, we created measures of these two constructs and conducted factor analyses with data from a diverse sample of 1126 adolescent smokers. Results yielded a two-factor solution for the self-efficacy measure, and a four-factor solution for the outcome expectations scale. In a subset of the original sample ( $n=515$ ), we re-administered the measures one year later and also examined the longitudinal associations between the baseline subscale scores and cigarettes smoked per week at follow-up. Results revealed significant relationships between the negative affect sub-scales of the self-efficacy and outcome expectations measures and weekly smoking level. These associations remained when adjusting for baseline smoking level and other sub-scales. The findings lend support for the possible role of affect regulation in smoking reduction in adolescents.

**Title:** A meta-analysis of teen cigarette smoking cessation

**First Author:** Sussman S **Authors:** Sussman S, Ping S, Dent C

**Source:** Health Psychology **Year:** 2006 **Volume:** 25 **Issue:** 5 **Page Range:** 549 - 557

**Abstract:** This paper presents a meta-analysis of 48 teen cigarette smoking cessation studies, the first meta-analysis of its kind conducted among teens (12-19 years old). The primary analyses involved controlled comparisons with a weighted least squares random effects method used to pool the results from individual study net effect estimates. Multi-level random coefficients modeling was applied to control for the intra-study variation. Findings indicate that across studies, program conditions compared to control conditions appears to give smokers a 2.90% (95% CI=1.47%-4.35%) absolute advantage in quitting, increasing the probability of quitting by approximately 46% (9.14% versus 6.24%). Relatively higher quit rates were found in programs that included a motivation enhancement component, cognitive-behavioral techniques, and social influence approaches. Also relatively higher quit rates were found in school-based clinic or classroom modalities. Furthermore, relatively higher quit rates were found for programs consisting of at least 5 quit sessions. Data also indicated that the effects were maintained at short term (one year or less) and longer-term (greater than 1 year) follow-ups.

## 2005 Publications

**Title:** Is inter-school variation in smoking uptake and cessation due to differences in pupil composition? A cohort study

**First Author:** Aveyard P **Authors:** Aveyard P, Markham WA, Lancshire E, Almond J, Griffiths R, Cheng KK

**Source:** Health & Place **Year:** 2005 **Volume:** 11 **Issue:** 1 **Page Range:** 55 - 65

**Abstract:** The aims of this study were to determine if inter-school variation in smoking prevalence was due to differences in pupil composition or other school-level factors. A cohort of 13-14-year-olds (n=7147) from 52 schools was followed up 1 year later. Random effects logistic regression was used to examine school variation in smoking uptake and cessation, with and without adjustment for pupil composition. Inter-school variation in smoking prevalence is not caused by differences in pupil composition but is due to differences in the onset of smoking arising because of unmeasured school contextual or collective factors operating on pupils decisions.

**Title:** The association between adolescent smokers' desire and intentions to quit smoking and their views of parents' attitudes and opinions about smoking

**First Author:** Castrucci B **Authors:** Castrucci B, Gerlach K

**Source:** Maternal and Child Health Journal **Year:** 2005 **Volume:** 9 **Issue:** 4 **Page Range:** 377 - 384

**Abstract:** This study intended to explore whether an association exists between adolescent smokers' attitudes toward quitting and their beliefs about whether their parents know they smoke, their perceptions of whether their parents disapprove of smoking, their recollection of their parents' expressed disapproval of smoking, and the importance they place on their parents' opinions. This cross sectional study of US high school students included 17,287 respondents. Only those who had smoked in the past 30 days (4593 [26.6%]) were included in the analysis. 'Have you ever seriously thought about quitting smoking?' was asked of all adolescent smokers. Those who had seriously thought about quitting were then asked about past attempts and how recent their last attempt was, while those who had not seriously thought about quitting were asked if they thought they would ever want to quit. Findings suggest that regardless of whether their parents smoked, adolescents who placed value on their parents' opinions were more likely to think seriously about quitting and to have tried to quit in the past 6 months. Recalling parents' expressed desire that their child not smoke was associated with significant increases in the likelihood of seriously thinking about quitting, even among those whose parents smoked. Agreeing with the statement, 'When I'm older, my parents won't mind that I smoke' was significantly associated with decreased odds of seriously thinking about quitting and recently attempting to quit. In conclusion, parents, both those who smoke and those who do not, may have a significant role in influencing young smokers' desire to quit smoking.

**Title:** Brief motivational intervention for adolescent smokers in medical settings

**First Author:** Colby SM **Authors:** Colby SM, Monti PM, O'Leary T

**Source:** Addictive Behaviors **Year:** 2005 **Volume:** 30 **Issue:** 5 **Page Range:** 865 - 875

**Abstract:** This study evaluated the efficacy of using a brief motivational intervention to reduce smoking among adolescent patients treated in a hospital outpatient clinic or Emergency Department. Patients aged 14-19 years (N=85) were randomly assigned to receive either one session of motivational interviewing (MI) or standardized brief advice (BA) to quit smoking. The assessment and intervention were conducted in the medical setting proximal to the patient's medical treatment. Patients were proactively screened and recruited, and were not seeking treatment for smoking. Follow-up assessments were conducted at 1, 3, and 6 months post-intervention. Self-report data indicated that 7-day abstinence rates at 6-month follow-up were significantly higher in the MI group than in the BA group, but this difference was not confirmed biochemically. Self-reported smoking rate (average cigarettes per day) was significantly lower at 1, 3, and 6 months follow-up than it was at baseline. Cotinine levels indicated reduced smoking for both groups at 6 months, but not at 1 month. At 3-month follow-up, only those in MI showed cotinine levels that were significantly reduced compared to baseline. Findings offer some support for MI for smoking reduction among non-treatment-seeking adolescents, but overall changes in smoking were small.

**Title:** A school-based harm minimization smoking intervention trial: outcome results

**First Author:** Hamilton G **Authors:** Hamilton G, Cross D, Resnicow K, Hall M

**Source:** Addiction **Year:** 2005 **Volume:** 100 **Issue:** 5 **Page Range:** 689 - 700

**Abstract:** To determine the impact of a school-based harm minimization smoking intervention compared to traditional abstinence-based approaches. A school-based cluster randomized trial was conducted in Perth, Western Australia in 30 government high schools from 1999 to 2000. Over 4000 students were recruited to participate and schools were assigned randomly to either the harm minimization intervention or a standard abstinence-based program. The harm minimization intervention comprised eight 1-hour lessons over 2 years, quitting support from school nurses and enactment of policies to support program components. Comparison schools implemented standard abstinence-based program and policies. Cigarette smoking was categorized at two levels: regular smoking, defined as smoking on 4 or more days in the previous week; and 30-day smoking as any smoking within the previous month. At immediate post-test (20 months post-baseline), after accounting for baseline differences, school-level clustering effects, socio-economic status, gender and family smoking, intervention students were less likely to smoke regularly [OR = 0.51, 95% confidence interval (CI) = 0.36, 0.71] or to have smoked within the previous 30 days (OR = 0.69, 95% CI = 0.53, 0.91). The school-based adolescent harm minimization intervention appears to have been more effective than the abstinence-based social influences program at reducing regular smoking.

**Title:** The impact of Not On Tobacco on teen smoking cessation: end-of-program evaluation results, 1998 to 2003

**First Author:** Horn K **Authors:** Horn K, Dino G, Kalsekar I, Mody R

**Source:** Journal of Adolescent Research **Year:** 2005 **Volume:** 20 **Issue:** 6 **Page Range:** 640 - 661

**Abstract:** This review summarizes end-of-program quit rates from 6 controlled and 10 field-based Not on Tobacco (NOT) evaluations. Approximately 6,130 youth from 5 states and 489 schools participated. Intent-to-treat and compliant quit rates were calculated at 3 months post-baseline (end-of-program). Results from controlled evaluations revealed an aggregate quit rate of 15% and 19%, respectively. The field-based evaluations revealed an aggregate quit rate of 27% and 31%, respectively. NOT youth were two times more likely to quit than comparison youth (OR = 1.94; p = .002; 95% CI 1.267-2.966). This is the first multiyear, multi site review of a teen smoking cessation program reported in the literature and the first longitudinal review of NOT. NOT participants showed consistent, significant positive smoking behavior change across evaluations.

**Title:** Effects of smoking and smoking abstinence on cognition in adolescent tobacco smokers

**First Author:** Jacobsen LK      **Authors:** Jacobsen LK, Krystal JH, Mencl WE, Westerveld M, Frost SJ, Pugh KR

**Source:** Biological Psychiatry    **Year:** 2005    **Volume:** 57    **Issue:** 1    **Page Range:** 56 - 66

**Abstract:** Background: In adult animals and humans, nicotine can produce short-term cognitive enhancement and, in some cases, neuroprotection. Recent work in animals, however, suggests that exposure to nicotine during adolescence might be neurotoxic. We tested for evidence of acute and chronic effects of tobacco smoking on cognition in adolescents who smoked tobacco daily and were compared with adolescent nonsmokers. Methods: Verbal working memory, verbal learning memory, selective, divided, sustained attention, mood, symptoms of nicotine withdrawal, and tobacco craving were examined in 41 adolescent daily smokers and 32 nonsmokers who were similar in age, gender, and education. Analyses were controlled for general intelligence, reading achievement, parental educational attainment, baseline affective symptoms, and lifetime exposure to alcohol and cannabis. Results: In adolescent smokers, cessation of tobacco use increased tobacco craving, symptoms of nicotine withdrawal, and depressed mood. Adolescent smokers were found to have impairments in accuracy of working memory performance irrespective of recency of smoking. Performance decrements were more severe with earlier age of onset of smoking. Adolescent smokers experienced further disruption of working memory and verbal memory during smoking cessation. As a group, male smokers initiated smoking at an earlier age than female smokers and were significantly more impaired during tests of selective and divided attention than female smokers and nonsmokers. Conclusion: Adolescent daily tobacco smokers experience acute impairments of verbal memory and working memory after smoking cessation, along with chronic decrements in cognitive performance that are consistent with preclinical evidence that neurotoxic effects of nicotine are more severe when exposure to nicotine occurs at earlier periods in development.

**Title:** Randomized trial of single versus multi-session group smoking cessation intervention for adolescents

**First Author:** Joffe A      **Authors:** Joffe A, Ash S, Sheng P

**Source:** The Journal of Adolescent Health    **Year:** 2005    **Volume:** 36    **Issue:** 2    **Page Range:** 118 - 118

**Abstract:** The purpose of this study was to determine whether a lunchtime multi-session (MS) group smoking cessation program is more effective than a single session (SS) to assist adolescent smokers in quitting. Multi-session interventions were reformatted for lunch period from two classroom based programs previously shown to be effective: NOT Program (American Lung Association) and Kickin Butts. Interventionists were trained by ALA staff or Kickin Butts developer. Schools were randomly assigned to one of the two programs. Students were provided lunch and a small incentive at each session attended. Single session intervention involved general principles of smoking cessation and teen-oriented cessation pamphlets. NOT program-2 sessions/week for 10 wks.; Kickin Butts-2 sessions/wk. for 7.5 wks. Protocol approved by all relevant IRBs. Participants were: mean age=15.8 (SD 1.2); 53 % female; 56% African-American, 29% Caucasian; mean nicotine dependence score (NDS) 9.77 (SD 3.3, range 4-16). Single session (n=205) and multi-session students (n=202) did not differ by age, race/ethnicity, gender or NDS. With ITT analyses, there were no sig. differences in quit rates at EOP (47/205 SS vs. 54/202 MS), 1 month (37/205 SS vs. 48/202 MS); 3 mos. (42/174 SS vs. 37/168 MS); 6 mos. (23/83 SS vs. 25/85 MS); and 12 mos. (17/83 SS vs. 18/85 MS) (all chi square NS). Controlling for age and gender, MS students attending 50% or more of sessions were 2.5 times more likely (95% CI 1.45-4.28) than SS students to report quitting at end of program and 2.45 times more likely (95% CI 1.37, 4.40) than SS students to report quitting 1 month later. However, by 3mos. differences in reported quit rates disappeared (OR 1.23, 95% CI .67, 2.23).

**Title:** The effects of the acupuncture treatment for smoking cessation in high school student smokers

**First Author:** Kang H    **Authors:** Kang H, Shin K, Kim K, Youn B

**Source:** Yonsei Medical Journal    **Year:** 2005    **Volume:** 46    **Issue:** 2    **Page Range:** 206 - 212

**Abstract:** The use of alternative medicine for smoking cessation have been increasing steadily in recent years. A series of clinical group studies was performed to clarify the effect, outcome and success rate of an acupuncture treatment for smoking cessation. This study was conducted for four weeks using 238 smoking students at 2 high schools. The subjects were separated into two groups: 159 students were treated with acupuncture on the anti-smoking acupoints of the ear, which is known to be effective for cessation of smoking (case group), and 79 students were treated at other sites of the ear, which is known to be effective for cessation of smoking (case group), and 79 students were treated at other sites of the ear (control group). The acupuncture treatment was alternately administered at each side of the ears on a weekly basis for 4 weeks. The smoking cessation success was only 1 case (0.6%) in the case group and none in the control group after 4 weeks. the change in the taste of tobacco and the intensity of the desire to smoke. In addition, the reduction in cigarette consumption was not significant. It is believed that the site of auricular acupuncture for smoking cessation is not important. However, there was a significant tendency in terms of the reduction in cigarette consumption, the taste of tobacco and the intensity of the desire to smoke in the case group, indicating that auricular acupuncture in smoking cessation has some effect.

**Title:** To what extent do smokers plan quit attempts?

**First Author:** Larabie LC    **Authors:** Larabie LC

**Source:** Tobacco Control    **Year:** 2005    **Volume:** 14    **Issue:** 6    **Page Range:** 425 - 428

**Abstract:** Little is known about the extent to which quit attempts are planned ahead or initiated immediately following a sudden decision to quit. This is important because if most smokers quit abruptly, rather than plan ahead, this could impact heavily upon recommendations to health care professionals on the kind of smoking cessation advice they deliver to patients. This paper aims to address this gap in knowledge by examining detailed smoking histories taken from smoking and ex-smoking patients. The design is Face-to-face in depth semi-structured interviews. There were 146 smoking and ex-smoking patients within a family medicine practice were recruited by means of screening 700 consecutive patients (14 years of age and older) and inviting eligible patients to participate. To be eligible, patients had to have smoked a minimum of five cigarettes per day for at least six months in their lives and made at least one serious quit attempt that lasted at least 24 hours. There were no refusals. Ex-smokers (n = 67) were defined as those who had not smoked for six months. The remainder were classified as smokers (n = 79). Participants were asked to describe, in their own words, their most recent quit attempt and whether they had planned the quit attempt in advance, what were the triggers, and how long they abstained. A quit attempt was defined as planned if smokers set a quit date at some future time point. An unplanned quit attempt was defined as a sudden decision not to smoke any more cigarettes including those that might be remaining in the current pack. Information was also collected on methods used to quit and reasons for quitting. A majority (51.6%) of quit attempts were reported as being unplanned. The figure was higher for ex-smokers than for smokers (67.1% v 36.7%, p < 0.001). Most quit attempts were unaided (64%) and made for reasons of health (64%). The finding that so many quit attempts are unprepared suggests that models of smoking cessation should place greater emphasis on the dynamic nature of motivation to quit. This is on area that requires further investigation.

**Title:** Assessing attitudinal ambivalence towards smoking and its association with desire to quit among teen smokers

**First Author:** Lipkus IM **Authors:** Lipkus IM, Pollak KI, McBride CM, Schwartz-Bloom R, Lyna P, Bloom PN

**Source:** Psychology and Health **Year:** 2005 **Volume:** 20 **Issue:** 3 **Page Range:** 373 - 387

**Abstract:** Most smokers have some conflicting thoughts and feelings about their smoking; that is, they feel ambivalent. Whether felt ambivalence can be adequately measured and then used to predict the desire to quit among teen smokers has yet to be explored. Hence, among 402 teen smokers involved in a smoking cessation intervention, we first examined the psychometric properties of an eight-item ambivalence scale via exploratory and confirmatory analyses. After excluding one item, the scale was internally consistent and formed a single factor. We also report on whether felt ambivalence towards smoking assessed at baseline and at four and eight months post-baseline was related to the desire to quit in cross-sectional and prospective analyses. In all cross-sectional and prospective analyses, smokers who felt increasingly ambivalent reported a stronger desire to quit. These results suggest that ambivalence might be a useful construct to explore further and experimentally induce to assess its effects on desire to quit.

**Title:** Safety and efficacy of the nicotine patch and gum for the treatment of adolescent tobacco addiction

**First Author:** Moolchan ET **Authors:** Moolchan ET, Robinson ML, Ernst M, Cadet JL, Pickworth WB, Cadet JL, Pickworth WB, Heishman SJ, Schroeder JR

**Source:** Pediatrics **Year:** 2005 **Volume:** 115 **Issue:** 4 **Page Range:** 407 - 414

**Abstract:** Objectives. To determine the safety and efficacy of the nicotine patch and gum for adolescents who want to quit smoking. Design: Double-blind, double dummy, randomized 3-arm trial with a nicotine patch (21 mg), nicotine gum (2 and 4 mg), or a placebo patch and gum; all participants received cognitive-behavioral group therapy. Setting. Inner-city, outpatient clinic on the East Coast. Subjects. Thirteen to 17-yr-old adolescents who smoked >10 cigarettes per day (CPD), scored >5 on the Fagerstrom test of Nicotine Dependence, and were motivated to quit smoking. Intervention. Twelve weeks of nicotine patch or gum therapy with cognitive-behavioral therapy, with a follow-up visit at 6 months (3 months after the end of treatment.) Main Outcome Measures. Safety assessed on the basis of adverse event reports for all 3 groups, prolonged abstinence, assessed through self-report and verified with exhaled carbon monoxide (CO) levels of <6ppm, in intent-to-treat analyses, and smoking reduction (CPD and thiocyanate concentrations) among trial completers. Results. A total of 120 participants were randomized (72% white, 70% female; age 15.2 ± 1.33 years; smoking 18.8 ± 8.56 CPD; Fagerstrom Test of Nicotine Dependence score; 7.04 ± 1.29 from 1999 to 2003. Participants started smoking at 11.2 ± 1.98 years of age and had been smoking daily for 2.66 ± 1.56 years; 75% had at least 1 current psychiatric diagnosis. Mean compliance across groups was higher for the patch (mean 78.4-82.8%) than for the gum (mean 38.5-50.7%). Both the patch and gum were well tolerated, and adverse events were similar to those reported in adult trials. Changes in mean saliva cotinine concentrations throughout treatment were not statistically significant. Intent-to-treat analyses of all randomized participants showed CO-confirmed prolonged abstinence rates of 18% for the active-patch group, 6.5% for the active-gum group, and 2.5% for the placebo group; the difference between the active-patch and placebo arms was statistically significant. There was no significant effect of patch versus gum or gum versus placebo on cessation outcomes. Abstinence rates at the 3-month follow-up assessment were sustained but were not significantly associated with treatment group. Mean smoking rates, but not CO or thiocyanate concentrations, decreased significantly in all 3 arms but not as a function of treatment group. Conclusions. Nicotine patch therapy combined with cognitive-behavioral intervention was effective, compared with placebo, for treatment of tobacco dependence among adolescent smokers.



**Title:** Determinants of smoking cessation among adolescents in South Africa

**First Author:** Panday S **Authors:** Panday S, Reddy SP, Ruiters RAC, Bergstrom E, de Vries H

**Source:** Health Education Research **Year:** 2005 **Volume:** 20 **Issue:** 5 **Page Range:** 586 - 599

**Abstract:** Data is required on the motivational determinants of smoking cessation among a multi-ethnic sample of adolescents in South Africa. The I-Change Model was used to explore the determinants of smoking cessation among a sample of 1267 Black African, Colored and White Grade 9-11 monthly smokers and former smokers in the Southern Cape-Karoo region. Across the ethnic groups, former smokers displayed a more positive attitude toward non-smoking, were surrounded by a social environment that was more supportive of nonsmoking, displayed higher self-efficacy not to smoke in stressful, routine and social situations, and were more positive about their intention not to smoke in the next year. The I-Change Model can be used to address the cognitions of smoking in a multi-ethnic society like South Africa. However, some ethnic tailoring will be required. Black African students will benefit from a focus on attitudinal cognitions and cultural factors that motivate smoking. Colored students require the involvement of their social environment, while White students will benefit from the development of refusal skills in social situations.

**Title:** Development and evaluation of a tobacco cessation motivational program for adolescents based on physical attractiveness and oral health

**First Author:** Semer N **Authors:** Semer N, Ellison J, Mansellm C, Hoika L, MacDougall W, Gansky S, Walsh M

**Source:** Journal of Dental Hygiene **Year:** 2005 **Volume:** 79 **Issue:** 4 **Page Range:** 1 - 17

**Abstract:** Little is known about how to motivate youth to participate in smoking cessation programs. This paper reports an investigation of the feasibility and acceptability of an intervention that used vanity and oral health issues associated with tobacco use to motivate adolescent tobacco users to enter a school-based tobacco cessation program. Methods and Materials. Sixty-four continuation high school students aged 14 to 19 (31% female) and living in rural California participated in a youth-oriented, vanity and oral health-focused intervention designed to motivate tobacco users to join a six-week tobacco cessation group. Following the intervention, 21 of 37 (57%) regular smokers signed up for the cessation program. Of these smokers, seven (33%) did not indicate on the baseline questionnaire any desire to quit smoking. Of the 21 smokers who signed up to participate in the cessation program, 16 (76%) actually participated (10 males and six females), eight (50%) completed all treatment sessions, and four (25%) reported that they quit smoking at the end of the program. Findings suggest that overall program evaluations were very favorable. Findings were interpreted to provide support for the feasibility and acceptability of using physical appearance and oral health-oriented programs to motivate adolescent tobacco users to enter school-based cessation programs. Further study is needed to determine the effectiveness of such programs.

**Title:** The A-R-T of tobacco use counseling with adolescents: a new office approach

**First Author:** Spigarelli MG **Authors:** Spigarelli MG, Heyman RB

**Source:** Patient Care **Year:** 2005 **Volume:** 37 **Issue:** 25 **Page Range:** 39 - 12

**Abstract:** Every physician is well aware of the importance of preventing or stopping tobacco use among young patients and parents, yet the perceived obstacles to providing such counseling are daunting-so much so that many providers spend very little time on it. Each clinician quickly finds that there is no ideal intervention-that perfect 1- or 2-line statement or question that fits easily into a busy office visit and is effective. To counter that trend, we offer a practical approach to counseling that provides the clinician with feedback that the process is working, and, ultimately, encourages continued prevention efforts. Our approach also nurtures the developing relationship between parent and child, which can form the basis for a tobacco-free life for that child.

**Title:** Reducing cigarette smoking among working adolescents: results from the Smart Study

**First Author:** Stoddard AM      **Authors:** Stoddard AM, Fagan P, Sorensen G, Hunt M, Frazier L, Girod K

**Source:** Cancer Causes and Control      **Year:** 2005      **Volume:** 16      **Issue:** 10      **Page Range:** 1159 - 1164

**Abstract:** The SMART Teens against the Risks of Tobacco Study was designed to test the feasibility and tobacco control intervention methods for employed teens. A randomized controlled pilot study tested the efficacy of a behavioral intervention delivered September, 1999, and August, 2000. Baseline and final survey data were collected on 560 teens in four and five control stores. Results: Although smoking prevalence decreased and intention to quit increased more among teens intervention stores compared to those in the control stores, the differences were not statistically significant. Conclusions: The worksite holds promise as a possible venue for tobacco prevention and cessation interventions youth although further research is needed to increase the efficacy of interventions for this setting.

**Title:** Adolescent smoking: are infrequent and occasional smokers ready to quit?

**First Author:** Turner LR      **Authors:** Turner LR, Veldhuis CB, Mermelstein R

**Source:** Substance Use & Misuse      **Year:** 2005      **Volume:** 40      **Issue:** 8      **Page Range:** 1127 - 1137

**Abstract:** We examined motivation for cessation and plans to quit among 945 high school students in 2001 at three levels of smoking frequency (regular, occasional, and infrequent). Surveys were completed at six Illinois high schools. In multivariate models, females compared to males) and white students (compared to nonwhite students) were more likely to plan to quit, but plans to quit did not differ by smoking level. In multivariate models to predict motivation for cessation, regular smokers were significantly less motivated to quit than were occasional and infrequent smokers, and occasional smokers were less motivated than infrequent smokers: demographic variables were nonsignificant. Infrequent and occasional smokers are motivated to quit and intend to quit soon, making them an attractive target for cessation programs.

**Title:** Multilevel logistic regression modeling with correlated random effects: application to the Smoking Cessation for Youth Study

**First Author:** Wang K      **Authors:** Wang K, Lee AH, Hamilton G, Yau KK

**Source:** Statistics in Medicine      **Year:** 2005      **Volume:** 3864      **Issue:** 3876      **Page Range:** 25 - 22

**Abstract:** A multilevel logistic regression model is presented for the analysis of clustered and repeated binary response data. At the subject level, serial dependence is expected between repeated measures recorded on the same individual. At the cluster level, correlations of observations within the same subgroup are present due to the inherent hierarchical setting. Two random components are therefore incorporated explicitly within the linear predictor to account for the simultaneous heterogeneity and autoregressive structure. Application to analyze a set of longitudinal data from an adolescent smoking cessation intervention that motivated this study is illustrated.

## 2004 Publications

**Title:** Opportunities for youth smoking cessation: findings from a national focus group study

**First Author:** Balch G   **Authors:** Balch G, Tworek C, Barker D, Sasso B, Mermelstein R, Giovino G

**Source:** Nicotine & Tobacco Research   **Year:** 2004   **Volume:** 6   **Issue:** 1   **Page Range:** 9 - 17

**Abstract:** To identify opportunities for smoking cessation among adolescents, we conducted six computer-assisted telephone focus groups with 48 male and female high school student smokers and former smokers from six states across the United States. All of the participants were aged 15-17 years, and were divided in three groups, 'established smokers,' 'late experimenters,' and 'quitters.' These adolescents considered addiction to cigarettes real, powerful, stealthy, insidious, harmful, and avoidable. They considered quitting smoking achievable and desirable. Many of the established smokers and some experimenters would not consider quitting until an indefinite future, when they expected adult responsibilities to help them quit. Quitters had been encouraged by friends who did not smoke around them or offer them cigarettes; they also associated more with nonsmoking friends. Some adolescents, especially quitters, reported that parents had tried to help them quit; some smokers reported that parents had provided them with cigarettes. Some adolescents reported school rules and enforcement that made it hard to smoke; while others reported school rules and enforcement that made it easy and tempting to smoke. These adolescents were not aware of the availability of professional help nor were they interested in it, many did not even consider their smoking urgent or 'intense' enough for professional help. Perceptions of cessation programs were nonexistent or negative. Participants in the study were aware of nicotine replacement therapies but less so of prescription medications. These findings suggest that it is critical to educate adolescents about what good cessation programming is and is not, why it is needed, how it might help, and where it is offered.

**Title:** Tobacco cessation in adolescent females in Appalachian communities

**First Author:** Denham SA   **Authors:** Denham SA, Meyer MG, Toborg MA

**Source:** Family & Community Health   **Year:** 2004   **Volume:** 27   **Issue:** 2   **Page Range:** 170 - 181

**Abstract:** Adolescents who live in tobacco-growing areas use tobacco at earlier ages and more frequently than other youth. These adolescents, like all tobacco users, have many health risks. To be successful, cessation efforts targeting these youth must reflect the cultural, social, and economic import of tobacco in their communities. Six focus groups with girls aged 12 to 14 who lived in tobacco-growing communities in Appalachian Ohio, Tennessee, and Virginia and 20 interviews with key informants were conducted. Barriers identified by informants included community norms around tobacco use, family use of tobacco, school practices and policies, peer influences, youth attitudes, and logistical difficulties with cessation program efforts. Key findings indicated: (1) the social community in tobacco-growing communities is a significant influence in tobacco use; (2) family is important among young people in tobacco-growing communities and influences cessation positively and negatively; (3) parental smoking was an influence to smoke (4) some parents condone and even facilitate tobacco use by their children, but others actively discourage use; and (5) concern for the health of younger brothers and sisters elicits a strongly protective reaction from youth in discussions of health risks related to secondhand smoke. Youth in tobacco-growing regions have many similarities to others, but they also have unique cultural characteristics pertinent in the development and delivery of tobacco cessation programs.

**Title:** Stage of change and smoking cessation outcomes among adolescents

**First Author:** Dino GA   **Authors:** Dino GA, Kamal K, Horn K, Kalsekar I, Fernandes A

**Source:** Addictive Behaviors   **Year:** 2004   **Volume:** 29   **Issue:** 5   **Page Range:** 935 - 940

**Abstract:** This study examined the association between stage of change and smoking cessation outcomes among youth receiving two interventions of varying intensity: a 10-min brief self-help smoking cessation intervention (BI) or the American Lung Association's 10-week, Not-on-Tobacco (N-O-T) smoking cessation program. At baseline, the participants were classified in to three stages (e.g. precontemplation, contemplation, and preparation) based on their intention to change their smoking behavior. Smoking behavior, stage of change, self-efficacy, and beliefs about smoking were assessed at baseline and 3 months postbaseline. Results demonstrated that the relationship between stage of change and cessation outcomes varied by treatment intensity. Logistic regressions analyses revealed that BI participants in the preparation stage were 25 times more likely to quit smoking at postbaseline than were participants in the contemplation or precontemplation stages. In contrast, N-O-T was effective for youth regardless of baseline stage. Additionally, N-O-T participants demonstrated greater forward stage movement from baseline to postbaseline than did BI participants.

**Title:** Adolescent smoking cessation: development of a school nurse intervention

**First Author:** Hamilton G      **Authors:** Hamilton G, O'Connell M, Cross D

**Source:** Journal of School Nursing      **Year:** 2004      **Volume:** 20      **Issue:** 3      **Page Range:** 169 - 175

**Abstract:** The purpose of this study was to examine the feasibility of a range of strategies to engage and to enhance secondary school nurse involvement in teenage smoking prevention and cessation. School nurses were willing to assist students to quit smoking, but they felt unprepared. Information provided by nurses involved in a three-stage review, pilot-testing, and trial design resulted in the development of a resource for nurses. This resource comprised individual student approaches (brief intervention based on motivational interviewing and written activities designed to help students examine their smoking behavior), approaches to assist parents (letter of support for parents of students who smoke), and school newsletter items. Each component of the resource was found by school nurses to be appropriate, useful, and complementary to their other school-wide approaches to assist adolescents to quit smoking. Nurses also reported an interest to expand or to enhance their smoking cessation role in the school.

**Title:** Exploring the relationship between mental health and smoking cessation: a study of rural teens

**First Author:** Horn K      **Authors:** Horn K, Dino G, Kalsekar I, Massey CJ, Manzo-Tennant K, McGloin T

**Source:** Prevention Science      **Year:** 2004      **Volume:** 5      **Issue:** 2      **Page Range:** 113 - 126

**Abstract:** This study examined the association between mental health and smoking cessation among rural youth. Participants were 113 male and 145 female adolescents ages 14-19 from rural West Virginia and North Carolina. Participants were enrolled in the American Lung Association's 10-week Not On Tobacco (N-O-T) program or a 15-min single dose brief intervention. Baseline and postprogram measures were completed on smoking status (i.e. quit, reduction), nicotine dependence, smoking history, and depression and anxiety. Results showed that more N-O-T participants quit and reduced smoking than did brief intervention participants. Intervention group, baseline smoking rate, and the Group x Gender, Group x Anxiety, and Group x Depression interactions were significant predictors of change in smoking behavior from baseline to postprogram. In conclusion, more N-O-T participants demonstrated favorable changes in smoking than did brief intervention participants. Approximately 1/3 of youth exhibited mental health pathology; more females than males. Levels of depression and anxiety improved from baseline to postprogram, overall. Although the extent of the impact of mental health on cessation outcomes was inconclusive, findings suggest that rural youth who smoke may be at risk for pathological depression and anxiety. Future cessation programming with rural youth should consider the inclusion of coping and stress management skills and mental health referral protocols as significant program components.

**Title:** Time spent with friends who smoke and quit attempts among teen smokers

**First Author:** Jones DN      **Authors:** Jones DN, Schroeder JR, Moolchan ET

**Source:** Addictive Behaviors      **Year:** 2004      **Volume:** 29      **Issue:** 4      **Page Range:** 723 - 729

**Abstract:** Social interactions as well as pharmacological effects can reinforce smoking behavior in adolescents and pose challenges to smoking cessation. We hypothesized that time spent with friends who smoke would be inversely related to both the number and duration of previous quit attempts for teens receiving smoking cessation treatment. Demographic and smoking related data were collected from 98 adolescent smokers enrolled in an accruing smoking cessation study (68% female, 70% Caucasian, mean age 15.3 years.) Among smokers who had at least one quit attempt, time spent with but not with their duration, suggesting a potential relationship between an adolescent's affiliation with smoking peers, smoking identity, and fewer quit attempts.

**Title:** Randomized clinical trial of the efficacy of bupropion combined with nicotine patch in the treatment of adolescent smokers

**First Author:** Killen JD **Authors:** Killen JD, Robinson TNA, Ammerman S, Hayward C, Rogers J, Stone C, Samuels, D, Levin SK, Green, S, Schatzberg AF

**Source:** Journal of Consulting and Clinical Psychology **Year:** 2004 **Volume:** 72 **Issue:** 4 **Page Range:** 729 - 735

**Abstract:** Adolescent smokers (N=211) were randomized to 1 of 2 groups: (a) nicotine patch plus bupropion SR (sustained release;150 mg per day) or (b) nicotine patch plus placebo. Group skills training sessions were conducted each week by research staff. Abstinence rates at Weeks 10 and 26 were as follows (a) patch plus bupropion, 23% and 8%, (b) patch plus placebo, 28% and 7%. Despite the lack of a treatment effect, a large majority of adolescents in both treatment groups reduced their consumption to a few cigarettes per day or less and maintained this reduction over time. Similarly, an examination of survival curves revealed that by the end of treatment many had managed to avoid a return to daily smoking. These findings are encouraging and suggest new avenues for research. For example, treatments of the kind examined in this report, augmented by extended maintenance therapies, may yield higher long-term success rates.

**Title:** Adolescents' beliefs about the risks involved in smoking 'light' cigarettes

**First Author:** Kropp RY **Authors:** Kropp RY, Halpern-Felsher BL

**Source:** Pediatrics **Year:** 2004 **Volume:** 114 **Issue:** 4 **Page Range:** 445 - 451

**Abstract:** Light cigarettes have been marketed by the tobacco industry as being a healthier smoking choice, a safe alternative to cessation, and a first step toward quitting smoking altogether. Research, however, has failed to show a reduction in smoking-related health risks, an increase in rates of smoking cessation, a decrease in the amount of carbon monoxide or tar released, or a reduction in the rates of cardiovascular disease or lung cancer associated with light cigarette use, compared with regular cigarette use. Nevertheless, more than one-half of adolescent smokers in the United States smoke light cigarettes. This study is the first to investigate adolescents' perception of the risks associated with smoking light cigarettes, as well as adolescents' attitudes and knowledge about the delivery of tar and nicotine, health risks, social effects, addiction potential, and ease of cessation with light cigarettes, compared with regular cigarettes.

**Title:** Development of a culturally appropriate smoking cessation program for Chinese-American youth

**First Author:** Ma GX **Authors:** Ma GX, Shive SE, Tan Y, Thomas P, Man VL

**Source:** The Journal of Adolescent Health **Year:** 2004 **Volume:** 35 **Issue:** 3 **Page Range:** 206 - 216

**Abstract:** To identify potential cultural factors to enhance the efficacy of smoking cessation curricula for Asian-American adolescents, Chinese-Americans, and to present the process and challenges of implementing a culturally specific curriculum. Chinese-American male (n = 17) youth smokers, aged 14-19 years, were recruited from community-based Asian-American organizations in the Delaware Valley Region of Pennsylvania and New Jersey. A 36-item questionnaire was developed to measure smoking behavior, attitudes, and culturally related factors. Focus groups were conducted. Cultural themes were addressed, such as interdependency and collective orientation of the Asian culture, importance of harmony in Asian families, and culturally related factors for smoking initiation and maintenance. A pre-post quasi-experimental research design was used. Data were analyzed using the Mann-Whitney U test to determine differences in the intervention and control groups in smoking behavior and the Chi-square test for differences in program characteristics. Participants almost never read their native language, they disagreed that their friends would accept them more if they were nonsmokers, and they thought they smoked because of high parental expectations. Asian teens perceived that a high percentage of their Asian-American peers smoke. The most important facilitator characteristics, program processes, relevant cultural factors and topics were identified for the program. Two groups were compared, a standard smoking cessation curriculum (SC) and a culturally modified program (ACT) for Asian adolescents. A 23.1% quit rate for the SC program and an 18.2% quit rate for the ACT program at 3-month follow-up was achieved. Among participants who continued to smoke, there was a larger reduction in reported weekend and weekday cigarette use among ACT participants, than the Standard (SC) group. There was a reduction of 6.7 cigarettes on a typical weekday and 6 cigarettes on a typical weekend day for ongoing smokers of the ACT group. Given the positive results among a high-risk population, the ACT program needs to be tested among a larger population of Chinese-Americans.

**Title:** Quit attempts among African American teenage smokers seeking treatment: gender differences

**First Author:** Moolchan ET      **Authors:** Moolchan ET, Schroeder JR

**Source:** Preventive Medicine      **Year:** 2004      **Volume:** 39      **Issue:** 6      **Page Range:** 1180 - 1186

**Abstract:** African Americans experience disproportionate smoking-related mortality. Because established smoking during youth predisposes to adult smoking and serious health consequences, characterizing ethnic differences in adolescent smokers' self-quit attempts may inform ethnic-specific approaches to youth smoking cessation. In this study African American and European American teenage smokers applying to a teenage smoking cessation study (2000-2003) provided smoking-related data, including characteristics of previous cessation attempts and prior use of nicotine replacement therapy (NRT). Tobacco dependence was assessed using the Fagerstrom Test of Nicotine Dependence (FTND). Results indicated that of 980 (15.5 F 1.3 years, 41.8% African American, 59.9% female) participants, African Americans boys were significantly less likely than European American boys to report a prior quit attempt (OR = 0.35, 95% CI 0.17-0.73, P = 0.0049) or to have used NRT (OR = 0.60, 95% CI 0.36-0.998, P = 0.049) after adjusting for years smoked and FTND score. African American girls were more likely to report a prior request for cessation treatment than European American girls after adjusting for FTND and years smoked (OR = 2.19, 95% CI 1.37-3.48, P = 0.001). While increasing education and outreach to African American boys and enhancing access to formal cessation programs for African American girls who smoke may be beneficial, our findings warrant extension to non-treatment-seeking teenage smokers.

**Title:** Smoking cessation for high school students: impact evaluation of a novel program

**First Author:** O'Connell ML      **Authors:** O'Connell ML, Freeman M, Jennings G, Chan W, Greci LS, Manta ID, Katz D

**Source:** Behavior Modification      **Year:** 2004      **Volume:** 28      **Issue:** 1      **Page Range:** 133 - 146

**Abstract:** This pilot study was designed to evaluate the feasibility and the impact of a smoking cessation program that would meet the specific needs of high school students. Feedback from focus groups conducted with adolescent smokers at a Connecticut high school was used to develop a tailored intervention. Intervention components included commonly used behavioral strategies, with additional options to assist students to quit smoking. Including use of bupropion, concomitant support for parent smoking cessation, stress management, and physician counseling. On completion, 20 of the 22 enrolled students remained committed to quitting. Twenty-seven percent of students quit smoking and 69% of those who continued to smoke reduced the number of cigarettes smoked per day by an average of 13. Providing additional options to students and additional support for concomitant parental cessation may enhance the appeal of adolescent smoking-cessation programs. Further investigation into efficacy of bupropion use for adolescent cessation is warranted.

**Title:** Tobacco smoking trajectory and associated ethnic differences among adolescent smokers seeking cessation treatment

**First Author:** Robinson M      **Authors:** Robinson M, Berlin I, Moolchan ET

**Source:** The Journal of Adolescent Health      **Year:** 2004      **Volume:** 35      **Issue:** 3      **Page Range:** 217 - 224

**Abstract:** Purpose: To examine smoking trajectories in a clinical sample of adolescent smokers seeking cessation treatment, including (a) smoking onset (initial, daily) and time intervals from initial to daily smoking and from daily smoking to treatment request, (b) associations between current level of tobacco dependence and smoking history, and (c) differences in smoking trajectory between African-American and non-African-American youth. Methods: Four hundred and thirty-two adolescent smokers (aged 13-17 years, 61.8% female, 32% African American) responding to various media advertisement completed a telephone interview as part of pre-eligibility screening for a smoking cessation trial. Smoking trajectory data included age at onset of initial and daily smoking, intervals between those time points, and cigarettes smoked per day (CPD). Tobacco dependence was assessed using the Fagerstrom Test for Nicotine Dependence (FTND). Data were analyzed using regression models and multiple analyses of covariance. Results: Initial smoking occurred at a mean age of less than 12 years and daily smoking was associated with higher FTND scores and longer duration from daily smoking to treatment request. For the entire sample, the time interval from initial to daily smoking was 1.14 years. When the sample was divided into early (before age 14 years) and later (at or after age 14 years) initiators, early initiators showed a slower progression from initial to daily smoking compared with late initiators (16 months vs. 6 months). Compared with non-African-American teen smokers, African-American youth reported a 1-year delay in onset of both initial and daily smoking. Conclusions: Early age of daily smoking and short.

**Title:** Factors associated with physician interventions to address adolescent smoking

**First Author:** Sims TH **Authors:** Sims TH, Meurer JR, Sims M, Layde PM

**Source:** Health Services Research **Year:** 2004 **Volume:** 39 **Issue:** 3 **Page Range:** 571 - 586

**Abstract:** To determine the percent of adolescent Medicaid patients with medical record documentation about tobacco use status and cessation assistance; and factors associated with providers documenting and intervening with adolescent smokers. Secondary analysis of data collected in 1999 from medical records of Wisconsin Medicaid health maintenance organization (HMO) recipients 11 to 21 years old. Random reviews and data collection were related to visits from January 1997 to January 1999. Data collected included patient demographics, provider type, number of visits, and whether smoking status and cessation interventions were documented. Medical charts were reviewed and a database was created using a data abstraction tool developed and approved by a committee to address tobacco use in Medicaid managed care participants. Among adolescents seen by a physician from 1997 to 1999, tobacco use status was documented in 55 percent of patient charts. Most often tobacco use status was documented on history and physical or prenatal forms. Of identified adolescent smokers, 50 percent were advised to quit, 42 percent assisted, and 16 percent followed for smoking cessation. Pregnant patients were more likely to have tobacco use documented than non pregnant patients (OR=10.8, 95 percent CI=4.9 to 24). The odds of documentation increased 21 percent for every one-year increase in patient age. Providers miss opportunities to intervene with adolescents who may be using tobacco. Medical record prompts, similar to the tobacco use question on prenatal forms and the tobacco use vital sign stamp, are essential for reminding providers to consistently document and address tobacco use among adolescents

**Title:** Characteristics of smoking and cessation behaviors among high school students in New Jersey

**First Author:** Steinberg MB **Authors:** Steinberg MB, Delnevo CD, Foulds J, Peozner E

**Source:** The Journal of Adolescent Health **Year:** 2004 **Volume:** 35 **Issue:** 3 **Page Range:** 231 - 233

**Abstract:** Treatment for adolescent smokers requires understanding of use patterns, attitudes, and practices relating to cessation. Results of the 1999 New Jersey Youth Tobacco Survey show that frequent smokers have higher daily consumption, more difficulty abstaining, high interest in quitting, and lower self-efficacy. These findings may help in developing effective treatment strategies. After peaking in 1996-1997, the prevalence of cigarette smoking among high school seniors now appears to be gradually declining (1), owing in part to price increases and tobacco control activities after the 1998 Master Settlement Agreement with the tobacco industry. Despite these encouraging reductions, significant numbers of youth still become regular and dependent smokers in adulthood. Although statewide interventions may eventually reduce overall youth prevalence (3), treatment remains critical, and little is known about how to help current youth smokers quit. (4), A better understanding of the patterns of adolescent smoking, dependence, and quitting behaviors is needed. We describe high school students' attitudes and behaviors related to cessation in the context of their cigarette smoking.

**Title:** Help the adolescent patient quit smoking

**First Author:** Syed TS **Authors:** Syed TS

**Source:** Journal of Pediatric and Adolescent Gynecology **Year:** 2004 **Volume:** 17 **Issue:** 5 **Page Range:** 357 - 361

**Abstract:** With over 3 million teens smoking, cessation efforts have moved to the forefront of adolescent tobacco control. Experimentation and escalation of cigarette use occurs during adolescence; by age 18, 71% of adults reported regular smoking. During the 1990s, current cigarette smoking (>1 cigarette within the previous 30 days of the survey) in teens increased. After a peak of 36.4% in 1997, the rate declined to 21.9% (7.3% - 32.7%) in 2003. Females have similar rates compared to males with 27.7% of high school senior girls reporting current smoking. Healthy People 2010, a national prevention agenda, identified tobacco use as one of the top 10 major health issues. This report challenges clinicians to reduce smoking among young people to impact future morbidity and mortality.<sup>5</sup> Adolescent female health care providers are in a prime position for this task as cigarette use is linked with several health related risks in women. This article will describe effective office strategies to treat adolescent cigarette use and discuss health issues pertinent to young females who smoke.

**Title:** School-based smoking cessation programs for adolescents: what predicts attendance?

**First Author:** Turner LR **Authors:** Turner LR, Mermelstein R, Berbaum M, Veldhuis C

**Source:** Nicotine & Tobacco Research **Year:** 2004 **Volume:** 6 **Issue:** 3 **Page Range:** 559 - 568

**Abstract:** The present study examined contextual and individual predictors of attendance in a 10-session school-based teen smoking cessation program. Participants were 349 students at 29 Illinois high schools. Predictor variables included demographics, smoking history, psychosocial variables, and social environment variables. School-level characteristics of interest included proportion of low-income students, group size, and program timing. Overall attendance was predicted by higher motivation and less stress at baseline. Students also were more likely to attend if they had already tried to quit, were more dependent on nicotine, and had more positive smoking expectancies. Percentage of low-income students and program timing also predicted program attendance; students were more likely to attend the program at schools with lower percentages of low-income students and where the program was offered during the school day. We also examined predictors of attendance before and after quit week (week 5). Early in the program, only the school-level variables (program timing and percentage of low-income students) predicted attendance. After quit week, the school variables also were important, and baseline motivation and perceived stress also predicted attendance at these sessions. Results highlight the importance of individual characteristics in determining program participation, as well as the importance of considering school context and programmatic issues when planning school-based smoking cessation programs.

**Title:** Smoking topography and trajectory of asthmatic adolescents requesting cessation treatment

**First Author:** Zimmerman DM **Authors:** Zimmerman DM, Sehnert SS, Epstein DH, Pickworth WB, Robinson ML, Moolchan ET

**Source:** Preventive Medicine **Year:** 2004 **Volume:** 39 **Issue:** 5 **Page Range:** 940 - 942

**Abstract:** Teenage smokers cite health concerns as their primary motivators for tobacco smoking cessation. Smoke exposure aggravates the clinical course of asthma, yet few reports have examined the association between asthma and smoking topography and trajectory. **Methods:** Before their enrollment in a smoking cessation trial, we assessed the smoking topography (i.e. puff volume, maximum puff velocity, puff duration, and interpuff interval) and smoking trajectory (i.e. age of first cigarette, age of daily smoking, time to treatment request, and prior quit attempts) in 30 self-reported asthmatic and 92 nonasthmatic tobacco-dependent teenagers (mean age 15.2 & 1.3 years, 28.7% African American). Approximately one-half of asthmatics use prescribed medications for their asthma. **Results.** There was no significant difference in smoking topography or smoking trajectory variables between asthmatic and nonasthmatic adolescents, nor between medicated and nonmedicated asthma subgroups. **Conclusions.** Although tobacco smoking exacerbates asthmatic symptoms, these data suggest that age of smoking initiation, as well as smoking topography characteristics in asthmatic adolescents, does not differ from those of adolescents without asthma. These findings highlight the need for more effective health counseling of asthmatic youth regarding the physical and behavioral effects of smoking.



## 2003 Publications

**Title:** The risk of smoking in relation to engagement with a school-based smoking intervention

**First Author:** Aveyard P **Authors:** Aveyard P, Markham WA, Almond J, Lancashire E, Chen KK

**Source:** Social Science & Medicine **Year:** 2003 **Volume:** 56 **Issue:** 4 **Page Range:** 869 - 882

**Abstract:** Health promotion interventions cannot work if people do not engage with them. The aim of this study was to examine whether disengagement from an adolescent smoking prevention and cessation intervention was an independent risk factor for regular smoking 1 and 2 years later. The data were taken from a cluster randomised controlled trial, in the West Midlands, UK, based on the transtheoretical or stages of change model. In this trial, 8352 13-14-year old school pupils enrolled, and the data in this report were based on the 7413 and 6782 pupils present at 1 and 2 years follow-ups, respectively. The intervention group undertook three sessions using an interactive computer programme. At the end of the programme, pupils recorded their responses to it. Pupils were classed as engaged if they thought the intervention was both useful and interesting; all others were classed as disengaged. Random effects logistic regression related the number of times engaged to regular smoking at 1 and 2 years follow-up, adjusted for school absences and 11 potential confounders. The majority of pupils were engaged by the intervention. For participants using the intervention three times but not engaging once, the odds ratios (95% confidence intervals) for smoking at 1 and 2 years relative to the controls were 1.83 (1.41-2.39) and 1.70 (1.38-2.11). For those engaging three times, they were 0.79 (0.60-1.03) and 0.96 (0.75-1.21). There was no interaction with baseline intention to smoke, classified by stage of change, but there was a borderline significant interaction with baseline smoking status, with disengagement acting as a stronger risk factor among baseline never-smokers. We conclude that disengagement from interventions is a risk factor for smoking independently of experimentation with cigarettes. The best explanation is that disengagement from school, an established risk factor for smoking, generalises to disengagement from didactic school-based health promotion programmes.

**Title:** Adolescent and young adult tobacco prevention and cessation: current status and future directions

**First Author:** Backinger CL **Authors:** Backinger CL, Fagan P, Matthews E, Grana R

**Source:** Tobacco Control **Year:** 2003 **Volume:** 12 **Issue:** 0 **Page Range:** iv46-iv53

**Abstract:** Objective: To summarize the evidence on adolescent and young adult prevention and cessation, and provide future directions for research. Data sources: Data were collected from published literature. Searches for adolescent prevention were conducted using PubMed, PsycInfo, and ERIC; and for cessation, PubMed and two major reviews that span January 1978 to May 2002. PubMed, PsychInfo, and SSCI were searched for young adults from January 1990 to May 2002. Study selection: Data included smoking prevention studies published from January 1990 to May 2002 and conducted in the USA; all identified smoking cessation studies for adolescents. Young adult data were limited to initiation and cessation studies. Data extraction: extraction of data was by consensus of the authors. Data synthesis: Results of the review are qualitative in nature using a consensus approach of the authors. Conclusions: School based curricula alone have been generally ineffective in the long term in preventing adolescents from initiating tobacco use but are effective when combined with other approaches such as media and smoke-free policies. Prevention research should consider multiple approaches and the social conditions that influence the development of youth problem behaviors including tobacco use. Because youth smoking cessation has been understudied to date, scientifically rigorous adolescent smoking cessation studies need to be conducted with attention to high risk smokers and less than daily smokers. Tobacco prevention and cessation for young adults needs focused attention. Prevention and cessation programmes need to address other tobacco products in addition to cigarettes.

**Title:** Youth tobacco cessation: filling the gap between what we do and what we know

**First Author:** Curry SJ **Authors:** Curry SJ

**Source:** American Journal of Health Behavior **Year:** 2003 **Volume:** 27 **Issue:** 0 **Page Range:** S99 – S102

**Abstract:** Each day, over 2000 youth under the age of 18 become daily smokers, and the age of smoking initiation is going down. Although the prevalence of smoking among youth has shown encouraging downward trends in the last few years, smoking prevalence among youth remains higher than among adults. Recent data from the Youth Risk Behavior Surveillance System indicate that 28.5% of high school students reported current cigarette smoking. Most youth smokers believe that they will not be smoking in 5 years, and over half (57.4%) report trying to quit in the previous 12 months. Unfortunately, longitudinal studies show that among high school seniors 73% of daily smokers remained daily smokers 5 to 6 years later; most smoking cessation attempts are unsuccessful.

**Title:** Predictors of 6-month tobacco abstinence among 1,224 cigarette smokers treated for nicotine dependence

**First Author:** Ferguson JA **Authors:** Ferguson JA, Patten CA, Schroeder DR, Offord KP, Eberman KM, Hurt RD

**Source:** Addictive Behaviors **Year:** 2003 **Volume:** 28 **Issue:** 7 **Page Range:** 1203 - 1218

**Abstract:** This study examined baseline characteristics associated with abstinence from tobacco 6 months after treatment for nicotine dependence. A total of 1224 cigarette smokers (619 females, 605 males) receiving clinical services for treatment of nicotine dependence between January 1, 1995 and June 30, 1997 were studied. The intervention involves a 45-min consultation with a nicotine dependence counselor. A treatment plan individualized to the patient's needs is then developed. The main outcome measure was the self-reported 7-day point prevalence abstinence from tobacco obtained by telephone interview 6-months after the consultation. A bootstrap resampling methodology for predictor variable selection was used to identify a set of multivariate predictors of 6-month tobacco abstinence. Five variables were multivariate associated with tobacco abstinence: male gender, no current psychiatric diagnosis, higher stage of change, longest duration of previous abstinence from tobacco of <1 or > or =30 days, and Fagerstrom Test for Nicotine Dependence (FTND) score of < or =5. Assessment of these variables may be useful clinically by assisting health care providers in tailoring nicotine dependence interventions to enhance outcomes.

**Title:** Patterns of smoking, quit attempts and services for a cohort of 15- to 19-year-olds

**First Author:** Grimshaw GM **Authors:** Grimshaw GM, Stanton A, Blackburn C, Andrews K, Grimshaw C, Vinogradova Y, Robertson W

**Source:** Child: Care, Health and Development **Year:** 2003 **Volume:** 29 **Issue:** 6 **Page Range:** 451 - 464

**Abstract:** Examined patterns of smoking among 15- to 19-year-olds within mixed urban and suburban area and explored preference for the nature of services to assist quitting. Questionnaires were sent to young people registered with health services in the Borough of Solihull. The survey contained demographic questions relating to educational attainment and family, smoking status, history and quit attempts, use of facilities for quit attempts. Qualitative themes explored attitudes and experience of quitting, utilization of cessation services, barriers to access and nicotine replacement therapy. Results indicate that 3 in 5 reported smoking a cigarette sometime, 17.2% current regular smokers, 7.2% current occasional smokers. Median age of starting smoking was significantly lower for current regular smokers, distinguishable in 2 groups; weekend smokers and all week smokers. More quit attempts had been made or planned by current regular smokers but were often short lived. Weekend smokers had a slightly longer duration of quitting. 82% were optimistic about quitting in the future although the majority had already made 1 quit attempt. Knowledge and use of existing services was poor, with concerns about privacy and confidentiality. Models based on autonomy were identified as potentially useful.

**Title:** Maintaining addiction: tobacco cessation policy and substance abuse treatment for youth

**First Author:** Kurst-Swanger K **Authors:** Kurst-Swanger K, Stockweather D

**Source:** Journal of Child & Adolescent Substance Abuse **Year:** 2003 **Volume:** 12 **Issue:** 3 **Page Range:** 71 - 86

**Abstract:** Examines how institutions, which are part of the substance abuse treatment industry, address the connection between tobacco and other drugs in youth. Results suggest that the majority of treatment programs are routinely assessing tobacco use of the youth in their care, but only a small proportion follow through with tobacco cessation as an integral part of treatment planning

**Title:** Application of a better practices framework to review youth tobacco use cessation

**First Author:** Maule CO **Authors:** Maule CO, Moyer CA, Lovato CY

**Source:** American Journal of Health Behavior **Year:** 2003 **Volume:** 27 **Issue:** 0 **Page Range:** S132 - S143

**Abstract:** Objective: To describe the better Practices model and its application to review youth tobacco cessation practices. Methods: Growing emphasis on evidence-based practice in health has drawn attention to methods for the identification of 'best practices'. Canadian organizations and government collaborated to develop a framework for 'better' practices. Results: An international group of experts used the model to develop recommendations for the practice of youth cessation and further research needed to advance the field. Conclusions: Tension persist between the need for rigor in research and the need for practical intervention guidance. The Better Practices model provided a framework for action recognizing these needs, and its use resulted in a number of valuable products.

**Title:** Teen smoking cessation

**First Author:** Mermelstein R **Authors:** Mermelstein R

**Source:** Tobacco Control **Year:** 2003 **Volume:** 12 **Issue:** 0 **Page Range:** i25 – i34

**Abstract:** Interest in adolescent smoking cessation has increased dramatically over the past several years, as researchers and practitioners have acknowledged the high rates of adolescents who smoke regularly and the low probability that adolescents who are regular smokers will stop on their own. The evidence base behind smoking cessation interventions for adolescents is also now starting to grow, but unfortunately the studies to date have frequently been plagued by major methodological problems. This paper summaries research conducted on adolescent smoking cessation, notes some of the methodological limitations of prior work, highlights approaches that show promise, discusses some of the challenges involved in addressing adolescent smoking cessation, and makes recommendations for future work.

**Title:** Characteristics of African American teenage smokers who request cessation treatment: implications for addressing health disparities

**First Author:** Moolchan ET **Authors:** Moolchan ET, Berlin I, Robinson ML, Cadet JL

**Source:** Archives of Pediatrics & Adolescent Medicine **Year:** 2003 **Volume:** 157 **Issue:** 6 **Page Range:** 533 - 538

**Abstract:** Background: Ethnoracial disparities in both tobacco-related mortality and treatment outcome for smoking cessation have been reported among adults. But there is a dearth of information on ethnoracial differences among adolescent smokers. Objective: To compare smoking-related characteristics in African American and non- African teenaged applicants for a smoking cessation trial. Participants, Design, and Setting: Four hundred thirty-two teenaged smokers (mean (SD) age, 15,6 (1.5) years: 61.8% female: 31.9% African American) responded via telephone to various media advertisements. Self-reported sociodemographic, smoking-related, and clinical data were obtained to determine pre-eligibility for trial participations. Main Outcome Measures: The number of cigarettes smoked per day. Fagerstrom Test for Nicotine Dependence (FTND) score, motivation to quit, self-reported health problems and medication use. Results: Compared with non-African Americans, African Americans had lower FTND scores (mean (SD) score. 5.31 (2.24) vs 6.18 (2.18):P<.01), and smoked fewer cigarettes per day (mean (SD) number of cigarettes 12.6 (8.3) vs 15.4 (7.5) cigarettes; P<.04). The FTND scores were similar in both groups when adjusted for the number of cigarettes smoked per day. African American and non-African American teenagers reported similar motivation to quit (mean (SD) score, 8.64 (1.68) vs 8.53 (1.59) respectively). No difference was found in frequency of physical health problems (EG asthma) diagnosed psychiatric conditions, or prescribed psychiatric medication although fewer African American teenaged smokers took medication for physical problems (21.2% vs 36.7%). Conclusions: Cessation treatment interventions designed for African American youths should include lower FTND-defined levels, or the use of other instruments that do not focus on the number of cigarettes smoked per day. Our findings also highlight the importance of ethnocultural issues in treatment research that aims to address health disparities.

**Title:** Smoking and quitting among Irish teenage males

**First Author:** Niall M    **Authors:** Niall M, Fenton H, Moran A

**Source:** Irish Medical Journal    **Year:** 2003    **Volume:** 93    **Issue:** 9    **Page Range:** 272 - 273

**Abstract:** Nicotine addiction in adulthood is usually preceded by exposure to cigarettes in adolescence. A minimal exposure may be sufficient to produce addiction. Strategies to reduce adult smoking must address those factors, which influence teenage smoking. In this study we aimed to establish the prevalence of smoking in male secondary schools, to measure the association between student's smoking status and parental, peer and sibling smoking and to describe attempted quitting. An anonymous questionnaire was given to 1070 male secondary school pupils in two schools in County Louth. Twenty-seven percent of respondents smoked every day or on most days. Having a best friend who smoked was associated with personal smoking (O.R. 11.75, C.I. 8.6-16.08) as was sibling smoking (O.R. 3.49, C.I. 2.67-4.57.) Seventy percent of smokers stated that they wanted to stop and 75% that they had tried to stop. Only five smokers (1.2%) had been advised to quit by their general practitioner. We conclude that smoking is as prevalent among teenage boys in Ireland as it has been shown to be elsewhere and that most teenagers are unable rather than unwilling to stop.

**Title:** Differences in adolescent smoker and nonsmoker perceptions of strategies that would help an adolescent quit smoking

**First Author:** Patten CA    **Authors:** Patten CA, Offord KP, Ames SC, Decker PA, Corghan IT, Dornelas EA, Pingree S, Boberg EW, Gustafson DH, Ahluwalia JS, Wolter TD, Hurt RD

**Source:** Annals of Behavioral Medicine    **Year:** 2003    **Volume:** 26    **Issue:** 2    **Page Range:** 124 - 133

**Abstract:** This study assessed adolescent smoker and nonsmoker perceptions of strategies that would help an adolescent smoker in his or her attempt to stop smoking. Surveys were distributed primarily in the schools at 4 geographic and ethnically diverse study sites. Respondents were 965 adolescents (49% female; 46% minority). Current smokers (n = 232) were asked to rate the extent to which they agreed or disagreed that supportive behaviors of friends and family, quitting strategies, or learning about quitting strategies would be helpful if they decided to quit. Nonsmokers (n = 733) were asked to indicate the degree to which they agreed or disagreed that these behaviors and strategies would be helpful if a friend decided to quit. Responses to each of the 33 attitude items were rated on a 5-point scale ranging from strongly disagree to strongly agree. Marked differences were observed between smokers and nonsmokers in the level of agreement on each item. In general, smokers reported far less enthusiasm for cessation strategies than nonsmokers. After adjusting for gender, age, and other covariates, smoking status was the strongest independent predictor of the number of items endorsed as agree or strongly agree. The results have implications for the design of peer-based and other interventions for adolescent smokers.

**Title:** Adolescent smoking: epidemiology and approaches for achieving cessation

**First Author:** Prokhorov AV    **Authors:** Prokhorov AV, Suchanek hudmon K, Stancic N

**Source:** Pediatric Drugs    **Year:** 2003    **Volume:** 5    **Issue:** 1    **Page Range:** 1 - 10

**Abstract:** The initiation of smoking typically occurs during adolescence. To date, most adolescent smoking control efforts have focused on prevention; attempting to identify and influence factors that contribute to experimentation and initiation. However, given the large number of adolescent smokers, it is important that effort also be directed toward facilitating cessation. Many adolescents are addicted to cigarettes and report withdrawal symptoms that are similar to those experienced by adults. Relapse rates are high; few adolescents who try to quit on their own are successful. Clinician delivered smoking cessation interventions have a positive impact in adults and should be applied to adolescents to promote and sustain abstinence. Although pharmaceutical aids for cessation have been shown to be well tolerated and effective in adults, less is known about their use in adolescents. As such, clinicians are encouraged to explore whether pharmaceutical aids have been approved for use in adolescents in their country and to use discretion when considering their use in patients <18 years of age. Because pediatricians are in a unique position to facilitate tobacco cessation counseling, they should routinely ask their patients whether they use tobacco, advise users to quit, assess readiness to quit, assist with quitting, and arrange follow-up counseling. Tobacco cessation efforts can be enhanced by teaming with other health professionals (e.g. nurses, dentists, pharmacists, social workers) or worksite and community-based organizations that provide health promotion services.

**Title:** Differences in evaluations of a tobacco awareness and cessation program by adolescents in four stages of change

**First Author:** Stevens SL      **Authors:** Stevens SL, Colwell B, Miller K, Sweeney D, McMillan C, Smith DW

**Source:** Addictive Behaviors      **Year:** 2003      **Volume:** 28      **Issue:** 3      **Page Range:** 471 - 482

**Abstract:** Determined whether adolescents in 4 stages of change provided significantly different ratings on evaluations of a tobacco awareness and cessation program and the program facilitators. A systematic sample of 639 adolescents (aged 12-18 yrs) in 4 stages of change (precontemplation, contemplation, preparation, and action) was used for analysis. Analysis of variance revealed significant differences in ratings on 'Cessation Skills', 'Situation Management', 'Overall Facilitator', and 'Facilitator Likeability' evaluations between the groups. Follow-up analysis revealed that adolescent precontemplators provided significantly lower ratings than those in preparation and action, and adolescents in action provided significantly higher ratings than precontemplators and contemplators. This study suggests a need to assess the stage of the adolescent at the beginning of the program in order to provide the facilitator the opportunity to engage and motivate adolescents who are in the precontemplation and contemplation stage of change. This study also provides important information for facilitator training, program planning, and program delivery.

## 2002 Publications

**Title:** Adolescent reports of physician counseling for smoking

**First Author:** Alfano CM      **Authors:** Alfano CM, Zbikowski SM, Robinson LA, Klesges RC, Scarinci IC

**Source:** Pediatrics      **Year:** 2002      **Volume:** 109      **Issue:** 3      **Page Range:** 47 - 53

**Abstract:** Objective: Physicians can play an important role in reducing adolescent smoking by counseling their adolescent patients. The appropriate delivery of smoking prevention and cessation messages depends on adequate screening of adolescents, identification of smokers, and adolescents' willingness to disclose their smoking. The present study assessed adolescent reports of physician screening and counseling and adolescents' willingness to disclose smoking, as well as demographic and health status differences in these rates. Methods: Adolescents (n = 5016), ages 16 to 19, completed a survey on smoking and health. Reports of the prevalence of physician screening, counseling, and adolescents' willingness to disclose their smoking were examined, and logistic regression analyses assessed demographic and health status differences in these prevalence estimates. Results: Overall, 43.4% of the sample reported physician screening, 42.1% reported receiving counseling, and only 28.8% of adolescents reported both. Furthermore, 79.3% of smokers reported that they would admit their smoking if asked. Screening, counseling, and disclosure rates differed by gender, neighborhood income level, smoking status, and asthma status. Conclusions: More intensive provider-delivered intervention is needed. Efforts should focus on helping providers to identify smoking correctly and to communicate appropriate prevention or cessation messages. Persistence and sensitivity with boys, experimental smokers, and youths with chronic health conditions should be a focus of provider training, because the lower willingness of these youths to disclose their smoking may be a barrier to their identification and intervention.

**Title:** Evaluation of the effects of a smoking cessation intervention using the multilevel thresholds of change model

**First Author:** Freels SA      **Authors:** Freels SA, Warneke RB, Johnson TP, Flay B

**Source:** Evaluation Review      **Year:** 2002      **Volume:** 26      **Issue:** 1      **Page Range:** 40 - 58

**Abstract:** The multilevel thresholds of change model is used to analyze the effect of a smoking cessation intervention on stage of readiness to quit across a 2-year follow-up period. The intervention targeted to females with high school or less education consisted of a televised component and a written manual. Any exposure to the intervention had a significant effect on stages that precede quitting but not on quitting; participation in the intervention had significant effects at all levels of change, including quitting. The written component had a stronger independent effect than the televised component. Intervention effects were strongest within women who were initially precontemplative.

**Title:** Methodological issues in measuring treatment outcome in adolescent smoking cessation studies

**First Author:** Mermelstein R     **Authors:** Mermelstein R, Colby S, Patten C, Prokhorov A, Brown R, Myers M, Adelman W, Hudmon K, McDonald P

**Source:** Nicotine & Tobacco Research     **Year:** 2002     **Volume:** 4     **Issue:** 4     **Page Range:** 395 - 403

**Abstract:** As the prevalence of adolescent smoking and, notably, regular smoking has increased over the last decade, researchers and practitioners have called for a consideration of treatment programs to promote cessation among adolescents who smoke. The adolescent smoking cessation treatment field is still in its infancy though. The literature addressing adolescent cessation is rather limited to date, often plagued by methodological problems and characterized by little success. Many basic methodological questions remain for researchers to address before we will be able to answer questions such as which treatment approaches work best for which adolescent smokers. The purpose of this paper is to review briefly what is known about adolescent smoking cessation, to identify some important methodological issues to consider in treatment outcome studies, and to make recommendations to researchers to help provide a common ground for future comparisons of results across studies. We will address the natural history of adolescent smoking cessation, treatment outcomes, validity of self-reports and biochemical validation and research recommendations.

**Title:** What motivates adolescent smokers to make a quit attempt?

**First Author:** Riedel BW     **Authors:** Riedel BW, Robinson LA, Klesges RC, McLain-Allen B

**Source:** Drug and Alcohol Dependence     **Year:** 2002     **Volume:** 68     **Issue:** 2     **Page Range:** 167 - 174

**Abstract:** A sample of 120 US adolescent smokers (80 males, 40 females; mean age 15.87 yrs), most of whom were referred by school personnel after being caught with cigarettes at school (n=113), reported motivations for making a quit attempt during a smoking cessation project. Most students (n=76) were randomly assigned to a four session cessation program that included discussion of a number of motivational topics, and the remaining students were assigned to a self-help control group that received a pamphlet recommending strategies for quitting. Reported motivations for quitting did not differ significantly across the two treatment conditions. Concern about future health (73%) was the most popular reason given for making a quit attempt, followed by concern about current health (65%). Concerns about physical appearance (59%), the cost of cigarettes (52%), and athletic performance (51%) were also listed as motivators by a majority of the participants. Future health was the most popular choice for the most important motivator to quit (35%). Females and participants with fewer best friends smoking were more likely to report that the prevalence of non-smoking teenagers, the relationship between smoking and weight, and physical appearance concerns were motivators to quit.

**Title:** Feasibility of computerized scheduled gradual reduction for adolescent smoking cessation

**First Author:** Riley W     **Authors:** Riley W, Jerome A, Behar A, Zack S

**Source:** Substance Use & Misuse     **Year:** 2002     **Volume:** 37     **Issue:** 2     **Page Range:** 255 - 263

**Abstract:** The purpose of this project was to modify a smoking cessation Program that uses computerized scheduled gradual reduction for use with adolescent smokers and to test the feasibility of this cessation approach in group support and minimal contact modalities. Utilizing a lesson plan approach with high school marketing students in five high schools and student survey feedback, the LifeSign program was modified to be an acceptable smoking cessation program for adolescent smokers. In the first study, 17 adolescent smokers used the modified program with seven associated weekly group support sessions. At the end of treatment, 29% had quit smoking, and over half of those who continued to smoke reduced their smoking rate by 50%. In the second study, the LifeSign for Teens program was evaluated with 18 adolescent smokers in a minimal contact format. At the end of treatment, 17% had quit smoking, and mean smoking rate reductions of 43% were found among those who continued smoking. At 1-year follow-up, all subjects who had quit at post treatment reported continuous abstinence. The results of these two small trials suggest that a computerized scheduled gradual reduction approach may be an accepted and potentially efficacious approach for smoking cessation among adolescent smokers.

**Title:** A critique of evaluated adolescent smoking cessation programmes

**First Author:** Stanton WR      **Authors:** Stanton WR, Smith KM

**Source:** Journal of Adolescence    **Year:** 2002      **Volume:** 25      **Issue:** 4      **Page Range:** 427 - 438

**Abstract:** Rates of adolescent smoking appear to be on the increase, with a number of authors documenting increases in the 1990's. However, the issue of prevention rather than cessation has received greater attention in tobacco control programmes among youth. This review provides details of published school based and other tobacco cessation programmes for adolescents and compares their efficacy. Variations in outcome measures were noted with the programmes. Environmental risk factors such as economic deprivation, concurrent use of alcohol and illicit substances and a minority ethnic background have been associated with greater smoking rates among youth. It is suggested that tobacco cessation initiatives need to be considered in the context of improving adolescents' lifestyle choices. Specific cessation programmes should also address issues such as appropriate follow-up and validation.

## 2001 Publications

**Title:** Effectiveness of a high school smoking cessation program

**First Author:** Adelman WP      **Authors:** Adelman WP, Duggar AK, Hauptman P, Joffe A

**Source:** Pediatrics      **Year:** 2001      **Volume:** 107      **Issue:** 4      **Page Range:** 50 - 57

**Abstract:** Objective: To evaluate the impact of a school-based smoking cessation program targeting adolescents interested in quitting. Design: Randomized clinical trial over one school year. Setting: Large public high school. Participants: Students interested in quitting smoking. Intervention: Seventy-four students were randomized to receive either: 1) a 6-week, 8-session, classroom-based, smoking cessation curriculum designed for adolescents (n+35) or 2) an informational pamphlet on how to quit smoking with promise of the classroom curriculum in 3 months (n+39). Outcome Measures. Change in smoking behavior measured by: 1) self-reported smoking cessation and exhaled carbon monoxide, 6 parts per million (smoke-free): 2) self-reported quit attempts; and 3) change in cigarettes per day (cpd) at the end of the 6-week curriculum and then 4, 10, and 20 weeks later. Saliva cotinine was also measured at these points to validate these outcome measures. Analysis: Intention-to-treat. Results: Participants in the classroom group attended an average of 4.4 sessions. At the end of the curriculum, the classroom group was significantly more likely to be smoke-free (59% vs 17%), to have tried to quit smoking (82% vs 54%), and to reduce mean cpd (7.0 vs 1.0). Four weeks later, these differences persisted: smoke-free (52% vs 20%), quit attempt (85% vs 60%), and reduction in mean cpd (6.6 vs 1.6). Changes in saliva cotinine were consistent with reported outcome measures; those who were smoke-free had a significant reduction in saliva cotinine at the end of the intervention, and at 4 weeks. At 10 and 20 weeks after the curriculum, 41% and 31%, respectively, of the classroom group remained smokefree. Once participants in the pamphlet group underwent the classroom intervention (average attendance of 2.2 sessions) their cessation rates were similar to the initial group: 31% at the end of the curriculum and 27% 10 weeks later. Conclusion: A school-based curriculum for adolescent smoking cessation is more effective than an informational pamphlet alone and reduces cigarette use by adolescents. More research is needed to test the reproducibility, sustainability, and generalizability of this curriculum to offer more smoking cessation options to teenagers.

**Title:** Advancing the science of adolescent tobacco use cessation

**First Author:** Backinger CL      **Authors:** Backinger CL, Leischow SJ

**Source:** American Journal of Health Behavior    **Year:** 2001      **Volume:** 25      **Issue:** 3      **Page Range:** 183 - 190

**Abstract:** Objective: To examine how science is advancing in order to address adolescent tobacco use cessation. Methods: Review of the published scientific literature from 1995 to September 2000 and National Cancer Institute youth tobacco cessation research portfolio. Results: Because of methodological limitations, results of behavioral interventions are inconclusive. Two studies have been published evaluating the nicotine patch for adolescent smoking cessation, though neither employed a randomized, placebo-control design. Both of these studies found the nicotine patch to be ineffective. Conclusions: Although much is known about youth tobacco use, additional research is needed to find answers to best help youth to quit smoking.

**Title:** Predictors of smoking cessation from adolescence into young adulthood

**First Author:** Chen PH **Authors:** Chen PH, White HR, Pandina RJ

**Source:** Addictive Behaviors **Year:** 2001 **Volume:** 26 **Issue:** 4 **Page Range:** 517 - 529

**Abstract:** Although smoking cigarettes is hazardous to health and cessation has positive health benefits, few smokers are able to successfully quit. The purpose of this study was to examine the predictors of smoking cessation in a nonclinical sample of 134 male and 190 female, young adult, regular (daily) smokers within a social learning and maturing-out framework. Four waves of prospective, longitudinal data from a community sample followed from adolescence into young adulthood were analyzed. Logistic regression analyses were used to test the effects of differential associations, definitions, differential reinforcement, and changes in adult role status on smoking cessation in young adulthood. Becoming married to a nonsmoker and decreases in the proportion of friends who smoked were significant predictors of cessation. Current smokers and stoppers did not differ significantly in terms of prior intensity of cigarette use or alcohol abuse/dependence. They also did not differ in terms of psychological characteristics, including depression and prior coping use of cigarettes. Social networks were more important than social roles for predicting cessation in young adulthood. Thus, smoking cessation programs should focus on social learning processes.

**Title:** A 2-year efficacy study of Not On Tobacco in Florida: an overview of program successes in changing teen smoking behavior

**First Author:** Dino GA **Authors:** Dino GA, Horn K, Goldcamp J, Fernandes A, Kalsekar I, Massey C

**Source:** Preventive Medicine **Year:** 2001 **Volume:** 33 **Issue:** 6 **Page Range:** 600 - 605

**Abstract:** Background: Adolescent smoking has been an issue of major concern in the United States. This has led to a need for the development, evaluation, and dissemination of effective youth cessation programs. The purpose of this paper is to report the results of a 2-year demonstration study (1999-2000) of the American Lung Association's teen smoking cessation program, the Not On Tobacco (NOT) program. Methods: The study used a 'matched' design wherein each NOT school was matched to a brief intervention (BI) school. The study consisted of 20 NOT and 20 BI Florida high schools encompassing 627 students. The primary outcome measures were carbon monoxide-validated quit and reduction rates for NOT and BI schools at 5.2 months postprogram. Results: NOT smoking cessation and reduction outcomes were significantly better than those of the brief intervention. Further, data indicate that NOT was more effective than the brief intervention for females compared with males; males showed successful quit attempts in both intervention groups. Overall, more NOT youth either quit or reduced smoking than did BI youth. Conclusions: These positive smoking behavior changes suggest that NOT is an effective teen smoking cessation option.

**Title:** Predictors of late-onset smoking and cessation over 10 years

**First Author:** Ellickson PL **Authors:** Ellickson PL, McGuigan KA, Klein DJ

**Source:** The Journal of Adolescent Health **Year:** 2001 **Volume:** 29 **Issue:** 2 **Page Range:** 101 - 108

**Abstract:** Purpose: To identify predictors of smoking onset and cessation between early (age 13 years) and late adolescence (age 18 years) and between late adolescence (age 18 years) and young adulthood (age 23 years). Methods: We employed logistic regression to predict smoking initiation and cessation for an ethnically diverse sample of 3056 adolescents recruited from 30 West Coast schools in 1985 and observed from age 13 to age 23 years. Fifty-six percent of the sample was female. Predictors tapping sociodemographic characteristics, environmental influences, attitudes and beliefs about smoking, bonds with school, and problem behavior were measured at age 13 years (older teenager models) and at age 18 years (young adult models). Results: Robust predictors of both initiation and cessation across the two developmental periods included doing poorly in middle/high school and prior smoking behavior. Predictors common to three of the four models included being young for one's grade cohort and intending to smoke in the next 6 months. Early deviant behavior and drinking fostered initiation among older teenagers, but problem behavior as an older teenager did not predict young adult initiation. Smokers who had few or no high school friends who smoked and felt able to resist prosmoking pressures at age 18 years were more likely to quit by age 23 years. Being female predicted initiation by age 18 years; being African-American, Hispanic, or Asian inhibited it. Conclusions: The strong association of prior smoking behavior and intentions with later smoking status among both adolescents and young adults underscores the importance of starting smoking prevention early and continuing it through high school. Such programs might also consider the greater vulnerability of females, youth who are young for their grade cohort, and those who are doing poorly in school.



**Title:** Kicking the initiation': do adolescent ex-smokers differ from other groups within the initiation continuum?

**First Author:** Kremers SPJ      **Authors:** Kremers SPJ, Mudde AN, de Vries H

**Source:** Preventive Medicine      **Year:** 2001      **Volume:** 33      **Issue:** 5      **Page Range:** 392 - 401

**Abstract:** Background: Current research on the continuum of smoking initiation has largely focused on phases of progressing frequency of smoking. To gain more insight into reasons some adolescents do, and others do not, proceed to advanced levels of smoking behavior, a continuum in which two categories of ex-smoking are proposed is examined. Methods: Standardized scores on psychosocial predictors of smoking among adolescent nonsmoking deciders and quitters were compared cross-sectionally with those of the categories of never smokers, triers, experimenters, and regular smokers (n = 23,317). Results: Never smokers, triers, experimenters, and regular smokers had significantly different characteristics with regard to psychosocial predictors of smoking (P < 0.01), with scores of never smokers indicating that they were least at risk of smoking in the future and those of regular smokers indicating that they were most at risk. Scores of nonsmoking deciders showed that they were less at risk than triers and experimenters and more at risk than never smokers. Quitters seemed to have less risky psychosocial characteristics than experimenters and more risky characteristics than nonsmoking deciders. Conclusions: Studying transitions of smoking behavior based on six possible phases (i.e., never smoking, nonsmoking deciding, trying, experimenting, regular smoking, and quitting) might lead to more valid insights into predictors of adolescent smoking behavior.

**Title:** Promoting adolescent smoking cessation is worth the effort

**First Author:** McFee RB      **Authors:** McFee RB, Boykan R, Lasner H, Mazure B

**Source:** Archives of Pediatrics & Adolescent Medicine      **Year:** 2001      **Volume:** 155      **Issue:** 3      **Page Range:** 419 - 420

**Abstract:** We read with great interest the article by Hurt et al titled 'Nicotine Patch Therapy in 101 Adolescent Smokers' published in the January 2000 issue of the ARCHIVES. Their article is an important contribution to the field of adolescent smoking cessation a field that is still in its infancy. We recently did a Medline query examining the number of studies offering treatment options to physicians for adolescent smoking cessation compared with those for illnesses and disease processes that affect proportionately fewer persons. Although an estimated 1 million adolescents begin smoking annually, and although a cigarette smoking continues to be the largest cause of preventable illness and death in the United States, the number of studies dedicated to smoking cessation interventions was woefully small. Research on muscular dystrophy and cystic fibrosis severe but certainly less prevalent health problems outnumbered smoking cessation research by greater than 25 to 1 and 10 to 1, respectively.

**Title:** Tobacco use outcomes of adolescents treated clinically for nicotine dependence

**First Author:** Patten CA      **Authors:** Patten CA, Ames SC, Ebbert JO, Wolter TD, Hurt RD, Gauvin TR

**Source:** Archives of Pediatrics & Adolescent Medicine      **Year:** 2001      **Volume:** 155      **Issue:** 7      **Page Range:** 831 - 837

**Abstract:** Objective: To evaluate the tobacco use outcomes and baseline characteristics of adolescents treated for nicotine dependence. Design: Retrospective cohort study. Setting: Mayo Clinic Nicotine Dependence Center, Rochester, Minn. Patients: Ninety-six adolescents (60 boys, 36 girls) receiving clinical services for treatment of nicotine dependence between January 1, 1988, and November 30, 1997. Their mean age was 15.6 years (range, 11-17 years), and 91.7% were white. Intervention: The Nicotine Dependence Center intervention involves a 45-minute consultation with a nicotine dependence counselor. A treatment plan individualized to the patient's needs is then developed. Telephone follow-up is conducted at 6 and 12 months. As part of this study, a long-term follow-up was conducted by telephone at a mean of 5.3 years (range, 1.6-10.6 years) following the intervention. Main Outcome Measures: Self-reported 7-day point-prevalence abstinence from tobacco at 6 and 12 months, and 30-day point-prevalence tobacco abstinence at the long-term follow-up. Results: The tobacco abstinence rates were 17.7% (17/96 patients) at 6 months, 7.3% (7/96 patients) at 12 months, and 11.5% (11/96 patients) at the long-term follow-up. A high proportion of the sample had smoking-related medical morbidity and psychiatric diagnoses documented in the medical record prior to or at the time of the intervention. Conclusions: Adolescents utilize the medical community to seek treatment for nicotine dependence. The 6-month tobacco abstinence rate is higher than the estimates of the natural history of smoking cessation in adolescents. Medical and psychiatric diagnoses are common in this population.

**Title:** Nicotine dependence, withdrawal symptoms, and adolescents' readiness to quit smoking

**First Author:** Prokhorov AV      **Authors:** Prokhorov AV, Hudmon KS, de Moor CA, Kelder SH, Conroy JL, Ordway N

**Source:** Nicotine & Tobacco Research    **Year:** 2001    **Volume:** 3    **Issue:** 2    **Page Range:** 151 - 155

**Abstract:** The purpose of this study was to characterize nicotine dependence and nicotine withdrawal symptoms among adolescent smokers and to investigate associations between these key factors and adolescents' readiness to quit smoking. A total of 5624 high school students participated in a school-based survey. Of 1111 adolescents who were current or former smokers, the following stage-of-change distribution for smoking cessation was observed: precontemplation, 52.5%; contemplation, 16.0%; preparation, 7.5%; action, 13.2%; and maintenance, 10.8%. Among current smokers, 18.1% were substantially dependent on nicotine, 45.2% had moderate dependence, and 36.7% had no dependence. Higher proportions of current smokers than successful quitters reported withdrawal symptoms with their most recent quit attempts. Precontemplators exhibited significantly higher mean nicotine dependence scores than did students in the contemplation or preparation stages ( $F(2,837) = 12.03$ ;  $p < 0.0001$ ). A similar trend was observed for withdrawal-symptom scores across the stages of change. The nicotine dependence and withdrawal-symptom scores were significantly correlated ( $r = 0.44$ ,  $p < 0.001$ ). Nicotine dependence and nicotine withdrawal appear to interfere with adolescents' abilities and readiness to quit smoking, suggesting a potential role for nicotine replacement therapy in the treatment of tobacco use and dependence among adolescents.

**Title:** Smoking cessation in adolescents: the role of nicotine dependence, stress, and coping methods

**First Author:** Siqueira LM      **Authors:** Siqueira LM, Rolnitzky LM, Rickert VI

**Source:** Archives of Pediatrics & Adolescent Medicine    **Year:** 2001    **Volume:** 155    **Issue:** 4    **Page Range:** 489 - 495

**Abstract:** Objectives: To compare perceived reasons for continued smoking and withdrawal symptoms between current smokers and quitters in an inner-city adolescent population. To examine the relationship of nicotine dependence, stress, and coping methods between smokers and quitters and, using the Transtheoretical Model of Change, among adjacent smoking cessation stages. Design: A cross-sectional study using a self-administered questionnaire. Participants: The study comprised 354 clinic patients between the ages of 12 and 21 years who reported past or present smoking. Main Outcome Measures: Demographic characteristics, smoking status, perceived reasons for continued smoking, attempts to quit, and withdrawal symptoms, as well as standardized scales assessing nicotine dependence, stress, and coping methods. Results: The overall prevalence of smoking in this population was 26%. Smokers were significantly more likely to report smoking more cigarettes per day as well as higher levels of physical addiction ( $P < .01$ ), greater levels of perceived stress ( $P < .02$ ) than quitters ( $P < .01$ ). Three of 20 withdrawal symptoms (cravings, difficulty dealing with stress, and anger) were reported more frequently among current smokers who had attempted to quit in the last 6 months than among former smokers ( $P < .01$ ). Conclusion: Interventions for inner-city adolescents who smoke should be designed to target those with the highest levels of nicotine dependence, stress, and decreased use of cognitive coping methods because they are the least likely to quit on their own, rather than developing stage-specific models.

**Title:** School-based tobacco use prevention and cessation: where are we going?

**First Author:** Sussman S **Authors:** Sussman S

**Source:** American Journal of Health Behavior    **Year:** 2001    **Volume:** 25    **Issue:** 3    **Page Range:** 191 - 199

**Abstract:** Discusses the past, present, and future directions of school-based tobacco use prevention and cessation research. Topics covered include: origins of tobacco use prevention research; how prevention research advanced with empirical etiologic work; the genesis of comprehensive social influences programming and its contents; multiple modalities of programming beyond the school setting; and the rebirth of teen cessation programming and the issue of dissemination. There are many avenues of teen tobacco use prevention and cessation research and practice that need continued exploration, particularly regarding effects mediation and teen cessation.

## 2000 Publications

**Title:** Stages of change versus addiction: a replication and extension

**First Author:** Abrams DB **Authors:** Abrams DB, Herzog TA, Emmons KM, Linnan L

**Source:** Nicotine & Tobacco Research **Year:** 2000 **Volume:** 2 **Issue:** 3 **Page Range:** 223 - 229

**Abstract:** Data from the Working Well trial (n = 2379) were used to test the capacity of 19 variables to predict smoking cessation at 1- and 2-year follow-ups. Among the core constructs of transtheoretical model (TTM), stage of change was the best predictor. The processes of change and the pros and cons of smoking were relatively ineffective predictors. Among other variables, self-efficacy, cigarettes per day, duration of longest quit attempt during the previous year, and the contemplation ladder were the most effective stand-alone predictors. A composite of cigarettes per day and quit duration was particularly effective for predicting cessation. Consistent with Farkas et al., multivariate analyses including the composite variable (cigarettes per day and quit duration) and the stages of change revealed the composite variable to be the better predictor of cessation.

**Title:** Association between household and workplace smoking restrictions and adolescent smoking

**First Author:** Farkas AJ **Authors:** Farkas AJ, Gilpin EA, White MM, Pierce JP

**Source:** Journal of the American Medical Association **Year:** 2000 **Volume:** 284 **Issue:** 6 **Page Range:** 717 - 722

**Abstract:** Context: Recent marked increases in adolescent smoking indicate a need for new prevention approaches. Whether workplace and home smoking restrictions play a role in such prevention is unknown. Objective: To assess the association between workplace and home smoking restrictions and adolescent smoking. Design, Setting, and Subjects: Data were analyzed from 2 large national population-based surveys, the Current Population Surveys of 1992-1993 and 1995-1996, which included 17,185 adolescents aged 15 to 17 years. Main Outcome Measures: Smoking status of the adolescents surveyed, compared by presence of home and workplace smoking restrictions. Results: After adjusting for demographics and other smokers in the household, adolescents who lived in smoke-free households were 74% (95% confidence interval [CI], 62%-88%) as likely to be smokers as adolescents who lived in households with no smoking restrictions. Similarly, adolescents who worked in smoke-free workplaces were 68% (95% CI, 51%-90%) as likely to be smokers as adolescents who worked in a workplace with no smoking restrictions. Adolescent smokers were 1.80 (95% CI, 1.23-2.65) times more likely to be former smokers if they lived in smoke-free homes. The most marked relationship of home smoking restrictions to current adolescent smoking occurred in households where all other members were never-smokers. Current smoking prevalence among adolescents in homes without smoking restrictions approached that among adolescents in homes with a current smoker but with smoking restrictions. Conclusions: Parents with minor children should be encouraged to adopt smoke-free homes. Smoke-free workplaces can also augment smoking prevention. These findings emphasize the importance of tobacco control strategies aimed at the entire population rather than at youth alone.

**Title:** Attitude toward secondhand smoke, smoking, and quitting among young people

**First Author:** Glantz SA **Authors:** Glantz SA, Jamieson P

**Source:** Pediatrics **Year:** 2000 **Volume:** 106 **Issue:** 6 **Page Range:** 1 - 3

**Abstract:** Objective. To assess the impact of attitudes toward secondhand smoke among young people. Methods: Three hundred nonsmokers and 300 smokers (smoked a cigarette in last 30 days) 14 through 22 years of age in the United States were surveyed with random-digit dialing. The results of this cross-sectional survey were analyzed using logistic regression to determine predictors of nonsmoking and intent to stop among current smokers. Results. Controlling for age, ethnicity, and education, nonsmokers were more likely to consider smoking risky than smokers (odds ratio (OR)+3.46). Nonsmokers were twice as likely to consider secondhand smoke dangerous than smokers (OR+1.47). Among the variables in our model, the only statistically significant predictor of planning to stop smoking or having actually stopped was believing that secondhand smoke harmed nonsmokers, which more than doubled the chances of planning to stop or having stopped smoking (relative risk+2.17). Conclusions. Educating young people about the dangers of secondhand smoke and empowering nonsmokers to speak out should be a strong element of any tobacco control program.

**Title:** Evaluation of a self-directed smoking prevention and cessation program

**First Author:** Higgs PE **Authors:** Higgs PE, Edwards D, Harbin RE, Higgs PC

**Source:** Pediatric Nursing **Year:** 2000 **Volume:** 26 **Issue:** 2 **Page Range:** 150 - 153

**Abstract:** This study evaluates a youth subject-directed smoking prevention and cessation program titled Breathe Easy! The program was delivered at two sites and a control group was recruited from two additional sites. Surveys were administered prior to the program and either 1 month or 6 months after completion at the exposure sites. The same survey administration procedure was used as the control. After controlling for invalid responses and including only those that completed both surveys, 251 exposure subjects and 159 control subjects remained for analysis. At sites with 1-month follow-up, no significant difference was noted between intervention and control groups. At the sites with 6-month follow-up, prevalence dropped from 18.7% to 8.9% which is statistically significant, while at the control site prevalence changed from 14.1% to 9.4% which is not significant. Additional outcomes examined in the exposed group showed trends toward smoking cessation and prevention at higher rates than those of the unexposed group.

**Title:** Investing in youth tobacco control: a review of smoking prevention and control strategies

**First Author:** Lantz PM **Authors:** Lantz PM, Jacobsen PD, Warner KE, Wasserman J, Pollack HA, Berson J, Ahlstrom A

**Source:** Tobacco Control **Year:** 2000 **Volume:** 9 **Issue:** 1 **Page Range:** 47 - 63

**Abstract:** Objective: To provide a comprehensive review of interventions and policies aimed at reducing youth cigarette smoking in the United States, including strategies that have undergone evaluation and emerging innovations that have not yet been assessed for efficacy. Data Sources: Medline literature searches, books, reports, electronic list servers, and interviews with tobacco control advocates. Data Synthesis Interventions and policy approaches that have been assessed or evaluated were categorized using a typology with seven categories (school Based, community interventions, mass media/public education, advertising restrictions, youth access restrictions, tobacco excise taxes, and direct restrictions on smoking). Novel and largely untested interventions were described using nine categories: Youth smoking prevention and control efforts have had mixed results. However, this review suggests a number of prevention strategies that are promising, especially if conducted in a coordinated way to take advantage of potential synergies across interventions. Several types of strategies warrant additional attention and evaluation, including aggressive media campaigns, teen smoking cessation programmes, social environment changes, community interventions, and increasing cigarette prices. A significant proportion of the resources obtained from the recent settlement between 46 US states and the tobacco industry should be devoted to expanding, improving and evaluating 'youth centered' tobacco prevention and control activities.

**Title:** Intentions to quit smoking in substance-abusing teens exposed to a tobacco program

**First Author:** McDonald CA **Authors:** McDonald CA, Roberts S, Descheemaeker N

**Source:** Journal of Substance Abuse Treatment **Year:** 2000 **Volume:** 18 **Issue:** 3 **Page Range:** 291 - 308

**Abstract:** In 1993-94, fifty-five clients at an adolescent residential drug treatment facility with an innovative tobacco prevention, education and cessation program reported their tobacco attitudes, intentions, and behavior at admission and discharge. Of entering clients, 93% were current smokers and 93% felt the facility should help clients quit smoking. Clients interested in quitting increased from 61% at admission to 87% at discharge, as measured by the precontemplation/contemplation ladder of Rustin and Tate (1993). Clients who wanted to immediately quit smoking increased from 15% to 29%. Sixty-five percent of the teens studied said the tobacco-free activities were extremely helpful. At discharge, 16% of the smokers reported having quit tobacco and all four nonsmokers remained smoke-free. During the preceding year there was a naturally occurring quit rate of 1%. As a result of this work, the facility required residential clients to be nicotine-free as of July 1996.

**Title:** Current concepts in adolescent smoking

**First Author:** Pletcher JR      **Authors:** Pletcher JR, Schwarz DF

**Source:** Current Opinion in Pediatrics    **Year:** 2000    **Volume:** 12    **Issue:** 5    **Page Range:** 444 - 449

**Abstract:** This review discusses important research findings regarding adolescent tobacco use reported from April 1999 to March 2000. Although the vast majority of adult smokers began before 18 years of age, a significant number of college students seem to be initiating smoking behaviors. Recent literature reviews pointed to cultural as well as neurochemical factors that lead to increased tobacco consumption while creating barriers to quitting. Psychosocial and behavioral correlates of cigarette smoking revealed the role that tobacco use plays in coping with cultural, social, and intrapsychic demands. In addition to understanding why and how adolescents initiate and maintain cigarette smoking, recent studies also attempted to uncover the correlates of quitting behavior. However, recent reports of school-based intervention trials revealed that reproducible, long-term success rates may not be achievable with a single program or approach. Finally, several recent studies explored the role that health care providers play in prevention and intervention, as well as the pitfalls of well-meaning office interventions.

**Title:** Addressing the 'costs of quitting' smoking: a health promotion issue for adolescent girls in Canada

**First Author:** Seguire M    **Authors:** Seguire M, Chalmers K

**Source:** Health Promotion International    **Year:** 2000    **Volume:** 15    **Issue:** 3    **Page Range:** 227 - 235

**Abstract:** While intense efforts have been implemented to address the problem of cigarette smoking, the prevalence of tobacco use among adolescents, in particular young women, remains high. Older adolescent girls are joining their younger counterparts in taking up the smoking habit. The literature has examined the reasons for young people starting to smoke: However, little is known about the smoking cessation process in adolescents. This paper reports findings from an in-depth qualitative study of 25 girls ages 18 and 19 which uncovered the struggles young women experience as they attempt to quit smoking. These struggles and losses are referred to as the 'costs' of quitting smoking. The 'costs' reflect not only their real experiences when attempting to quit smoking, but also reflect 'anticipated' struggles and losses. The study addressed the 'costs' in relation to the social, emotional and physiological domains of the adolescent girl's life. Findings from this research project provide theoretical direction for the development of comprehensive health promotion interventions. If health care professionals are to assist in reducing cigarette smoking among young women, the 'costs' which girls see to quitting smoking must be considered.

**Title:** Smoking among teenage girls

**First Author:** Wagner EF      **Authors:** Wagner EF, Atkins JH

**Source:** Journal of Child & Adolescent Substance Abuse    **Year:** 2000    **Volume:** 9    **Issue:** 4    **Page Range:** 93 - 110

**Abstract:** The current paper reviews the existing literature about smoking among teenage girls. We begin with a summary of recent epidemiological data concerning gender differences in the rates of various smoking behaviors among adolescents. We next focus on how gender may influence smoking initiation, maintenance, and cessation among adolescents. Specifically, we examine weight control motives, social influences, mood management motives, and image-related motives as particularly important factors in teenage girls' smoking. We then offer a brief review of some of the more popular adolescent smoking interventions. We conclude the paper with recommendations for ways in which the effectiveness of smoking prevention and intervention programs for girls may be improved.

## 1999 Publications

**Title:** Cluster randomized controlled trial of expert system based on the transtheoretical ('stages of change') model for smoking prevention and cessation in schools

**First Author:** Aveyard P **Authors:** Aveyard P, Cheng KK, Almond J, Sherratt E, Lancashire R, Lawrence T, Griffin C, Evans O

**Source:** British Medical Journal **Year:** 1999 **Volume:** 319 **Issue:** 7215 **Page Range:** 948 - 953

**Abstract:** Objectives: To examine whether a year long programme based on the transtheoretical model of behaviour change, incorporating three sessions using an expert system computer program and three class lessons, could reduce the prevalence of teenage smoking. Design: Cluster randomised trial comparing the intervention to a control group exposed only to health education as part of the English national curriculum. Setting: 52 schools in the West Midlands region. Participants: 8352 students in year 9 (age 13-14 years) at those schools. Main outcome measures: Prevalence of teenage smoking 12 months after the start of the intervention. Results: Of the 8352 students recruited, 7444 (89.1%) were followed up at 12 months. The intention to treat odds ratio for smoking in the intervention group relative to control was 1.08 (95% confidence interval 0.89 to 1.33). Sensitivity analysis for loss to follow up and adjustment for potential confounders did not alter these findings. Conclusions: The smoking prevention and cessation intervention based on the transtheoretical model, as delivered in this trial, is ineffective in schoolchildren aged 13-14.

**Title:** Adolescent tobacco use and cessation

**First Author:** DuRant RH **Authors:** DuRant RH, Smith JA

**Source:** Primary Care **Year:** 1999 **Volume:** 26 **Issue:** 3 **Page Range:** 553 - 575

**Abstract:** Over one third of high school students in the United States smoke cigarettes, and close to 10% use spit tobacco. Tobacco use clusters with alcohol use, other substance abuse, and other health risk behaviors among teenagers. Public health and law enforcement policy changes, combined with effective substance use prevention programs in both elementary and middle school, are needed to prevent the early age of onset of tobacco use by youth. Primary care providers can play a key role in identifying children and adolescents who smoke or use spit tobacco and helping them discontinue their tobacco use.

**Title:** Feasibility evaluation of Not On Tobacco: the American Lung Association's new stop smoking programme for adolescents

**First Author:** Horn K **Authors:** Horn K, Dino G, Gao X, Momani A

**Source:** Health Education **Year:** 1999 **Volume:** 99 **Issue:** 5 **Page Range:** 192 - 206

**Abstract:** Presents a feasibility study on the American Lung Association's new teenage smoking cessation programme, Not On Tobacco (N-O-T). Examines participant and facilitator reactions to N-O-T. Examines participant and facilitator reactions to N-O-T, facilitator training recruitment, participant attendance and retention, and immediate post-programme efficacy. Evaluation: A review of Not-On-Tobacco evaluation studies conducted between 1998 and 2003 included data from 6130 N-O-T participants from 489 schools in six states (Florida, North Carolina, New Jersey, Ohio, Wisconsin and West Virginia). Both intent-to-treat and compliant quit rates were calculated at several follow-up points. End-of-program results from the controlled studies revealed aggregate quit rates of 15% (intent-to-treat analysis) and 19% (compliant analysis). End-of-program field-based evaluations revealed aggregate quit rates of 27% and 31%, respectively. The end-of-program intent-to-treat quit rate from all 6130 youth across evaluations is 18%. In addition, those N-O-T participants who did not quit smoking consistently showed significant reductions in the amount they smoked. In one follow-up conducted months after the end of a clinic, 50% of non-quitters had cut their cigarettes per day in half. Process data indicates that participants feel very positive about N-O-T. Eighty percent youth in one study believed the program helped in areas of their lives beyond smoking cessation. These areas included feeling better about themselves (55.4%), dealing better stress (54.6%), exercising more (43.1%), making new friends (36.9%), dealing better with family (33.8%), eating better (30.0%), and going to school more often (20.8%). A large majority (84.6%) believed the program helped to make a positive change in their smoking behavior.

**Title:** Smoking intervention with adolescent substance abusers: initial recommendations

**First Author:** Myers MG **Authors:** Myers MG

**Source:** Journal of Substance Abuse Treatment **Year:** 1999 **Volume:** 16 **Issue:** 4 **Page Range:** 289 - 298

**Abstract:** Recent increases in adolescent cigarette smoking have provided an impetus for developing effective youth smoking-cessation interventions. Adolescents treated for substance abuse are a particularly important target for tobacco use intervention given the high prevalence and persistence of smoking among this subgroup of youth.

**Title:** Effects of thirty-four adolescent tobacco use cessation and prevention trials on regular users of tobacco products

**First Author:** Sussman S **Authors:** Sussman S, Lichtman K, Ritt A, Pallonen UE

**Source:** Substance Use & Misuse **Year:** 1999 **Volume:** 34 **Issue:** 11 **Page Range:** 1469 - 1503

**Abstract:** Since 1991, adolescent tobacco use rates have increased while adult use has steadily decreased. The failure of adolescent tobacco use cessation and prevention programs to reduce this overall smoking rate indicates that research must be advanced in this area. As a start, the current status of cessation and prevention research that targets adolescent regular tobacco users should be stated. This paper contributes to that goal by reviewing the last two and a half decades of research in this area. A total of 34 programs, equally divided between cessation and prevention (targeting regular tobacco users), are presented and relevant data are provided for each. Among the cessation studies, an emphasis of programming on immediate consequences of use, and instruction in coping strategies, may have led to relatively successful programs. Prevention studies arguably may have achieved lower success rates but were applied to a larger sample with a longer follow-up period. Despite showing some success, it is apparent that the scientific status of cessation research is less refined than prevention research. More research is needed to define the most successful approaches for cessation of adolescent tobacco use.

## 1998 Publications

**Title:** Exploring perceptions of smoking cessation among high school smokers: input and feedback from focus groups

**First Author:** Balch GI **Authors:** Balch GI

**Source:** Preventive Medicine **Year:** 1998 **Volume:** 27 **Issue:** 5 **Page Range:** A55 – A63

**Abstract:** Background: Despite many approaches to smoking cessation for youths, few programs have been thoroughly evaluated and found successful. To help the American Medical Association develop, implement, and evaluate an effective program, formative research was conducted. Methods: Four focus groups were conducted with high school smokers in the Chicago area to obtain input into interventions. Subsequently, five similar focus groups were conducted in Delaware and Denver, and a focus group of school health providers was conducted as well, to obtain feedback on a draft protocol and ideas. Results: Participants did not consider quitting smoking serious or urgent. They are unfamiliar with the idea of a smoking cessation program. People they would trust to help them quit include people who care about them, successful quitters, and psychologists. They had mixed reactions to physicians. They did not trust school personnel and locations. Participants found it hard to imagine what might draw them to a cessation program, except money, small enticements, and short sessions. They might keep coming to progress toward their own objectives or for interesting activities. Lecturing, nagging, and preaching would repel them. They doubted that a program would do anything else. They were highly sensitive about confidentiality. Conclusions: Attracting participants is critical. Program component ideas include personal physicians; adding other topics for a more attractive bundle; ensuring confidentiality; and ensuring no lecturing, preaching, or nagging.

**Title:** Brief motivational interviewing in a hospital setting for adolescent smoking: a preliminary study

**First Author:** Colby SM **Authors:** Colby SM, Monti PM, Barnett NP, Rohsenow DJ, Weissman K, Spirito A, Woolard RH, Lewander WJ

**Source:** Journal of Consulting and Clinical Psychology **Year:** 1998 **Volume:** 66 **Issue:** 3 **Page Range:** 574 - 578

**Abstract:** This study tested the feasibility and efficacy of a brief smoking intervention for adolescents in a hospital setting. Forty adolescent patients were randomized to receive either brief advice or a motivational interview, a nonconfrontational therapeutic intervention. Feasibility of brief smoking interventions with teen patients was supported by high rates of recruitment, retention, and quit attempts, and long periods of continuous abstinence. Although between-groups differences on smoking measures were not significant at 3-month follow-up, an effect size of  $h = .28$  was noted. The sample showed significant decreases in smoking dependence and number of days smoked. Baseline stage of change, smoking rate, and depression were significant prospective predictors of smoking outcome. Implications for smoking intervention research with adolescents are discussed.

**Title:** A positive response to teen smoking: why N-O-T? Not On Tobacco

**First Author:** Dino GA **Authors:** Dino GA

**Source:** NASSP Bulletin **Year:** 1998 **Volume:** 82 **Issue:** 601 **Page Range:** 46 - 58

**Abstract:** Part of a special section on school health issues. The writers discuss the Not On Tobacco (N-O-T) program, a school-based adolescent smoking cessation program. The N-O-T program is designed to provide an effective, easy-to-use, and available method for helping adolescents quit smoking. It is thought that the program will be an effective intervention because of the strong theoretical foundation for the N-O-T curriculum, ongoing national level evaluation, extensive emphasis on program delivery, and strong collaboration among researchers and practitioners.

**Title:** Teenage smoking, attempts to quit, and school performance

**First Author:** Hu T **Authors:** Hu T, Lin Z, Keeler TE

**Source:** American Journal of Public Health **Year:** 1998 **Volume:** 88 **Issue:** 6 **Page Range:** 940 - 943

**Abstract:** Objectives: This study examined the relationship between school performance, smoking, and quitting attempts among teenagers. Methods: A logistic regression model was used to predict the probability of being a current smoker or a former smoker. Data were derived from the 1990 California Youth Tobacco Survey. Results: Students' school performance was a key factor in predicting smoking and quitting attempts when other sociodemographic and family income factors were controlled. Conclusions: Developing academic or remedial classes designed to improve students' school performance may lead to a reduction in smoking rates among teenagers while simultaneously providing a human capital investment in their futures.

**Title:** Nicotine dependency and adolescents: preventing and treating

**First Author:** Lamkin LP **Authors:** Lamkin LP, Houston TP

**Source:** Primary Care **Year:** 1998 **Volume:** 123 **Issue:** 135 **Page Range:** 123 - 135

**Abstract:** Tobacco use is the leading cause of preventable death in the United States. In 1988, the US Surgeon General issued a major report demonstrating that cigarettes and other forms of tobacco are addicting; that most tobacco users use it regularly because they are addicted to nicotine; and that they find it difficult to quit because they are addicted. This article includes current research on Tobacco Cessation for Youth and an Over View of Intervention.



**Title:** Stages of acquisition and cessation for adolescent smoking: an empirical integration

**First Author:** Pallonen UE      **Authors:** Pallonen UE, Prochaska JO, Velicer WF, Prokhorov AV, Smith NF

**Source:** Addictive Behaviors      **Year:** 1998      **Volume:** 23      **Issue:** 3      **Page Range:** 303 - 324

**Abstract:** Adolescent cigarette smoking acquisition and cessation were integrated into a single nine-stages-of-change continuum using the transtheoretical model of change framework. Findings in a high school student sample (n > 700) showed that a few of the never smokers were planning to try smoking, and half of the current smokers were contemplating quitting. More than half of former smokers were long-term quitters. The high pros of smoking scores assessing coping benefits of cigarettes were related to smoking acquisition and the high con (disadvantages) scores to long-term abstinence. Never smokers were most tempted to try smoking when they anticipated that smoking would help reduce negative and increase positive mood. Current and former smokers were tempted due to peer cigarette offers and negative mood. These temptations were significantly reduced among ex-smokers.

**Title:** Beyond stages of change: the quitting continuum measures progress towards successful smoking cessation

**First Author:** Pierce JP      **Authors:** Pierce JP, Farkas AJ, Gilpin EA

**Source:** Addiction      **Year:** 1998      **Volume:** 93      **Issue:** 2      **Page Range:** 277 - 286

**Abstract:** Objective: To extend the quitting continuum to categorize smokers in the early stages of the process of smoking cessation. Design: A prospective computer assisted telephone interview study with initial interviews in 1990 and reinterviews in 1992. Setting and Participants: In California, 2514 current smokers and quitters of less than 5 years duration, selected randomly from a large scale cross-sectional survey in 1990. Results: We focus on smokers with high addiction (> or = 15 cigarettes/day) and without a strong quitting history (> or = 1 week in last year or > or = 1 year ever) at baseline (N = 822). Having an intention to quit and a limited quitting history (1-6 days in last year) was predictive of progress at follow-up into higher continuum levels ultimately associated with successful cessation. Furthermore, smokers with one trait were much more likely to progress than those with none. Accordingly, the lowest level of the earlier continuum was further subdivided into three subgroups (making eight levels overall). Over approximately a 2-year period, most smokers either progressed or regressed only one or two levels along the quitting continuum. Conclusions: Better than expected progress along this expanded quitting continuum could be a criterion for a successful intervention. Tailored interventions that move smokers to a higher level on the continuum should be a priority for future research.

**Title:** Self-initiated quitting among adolescent smokers

**First Author:** Sussman S      **Authors:** Sussman S, Dent CW, Severson H, Burton D, Flay BR

**Source:** Preventive Medicine      **Year:** 1998      **Volume:** 27      **Issue:** 5      **Page Range:** A19 – A28

**Abstract:** Objectives: This paper reviews the literature regarding predictors of adolescent self-initiated smoking cessation and investigates self-initiated smoking cessation among a large sample of alternative high school youth in southern California. Youth transfer to alternative schools because of academic or behavioral problems, and they are at relatively high risk for cigarette smoking. Methods: Several demographic (e.g., gender), behavioral (e.g., level of smoking), and psychosocial (e.g., risk-taking) predictors of adolescent smoking cessation were investigated. The alternative high school cohort provided a sufficient sample size of quitters (defined as no use in the past 30 days, measured after a 1-year period) to permit a prospective examination of adolescent smoking cessation. Results: Although nine demographic, behavioral, or psychosocial variables discriminated among quitters and nonquitters in univariate analyses, only level of baseline smoking, smoking intention, and perceived stress were predictors in a final multivariable model. Conclusions: Based on the literature review and findings among the cohort, smoking cessation programs for adolescents should include counteraction of problem-prone attitudes, support of wellness attitudes, provision of motivation to quit strategies, and assistance with overcoming withdrawal symptoms.

## 1997 Publications

**Title:** The conflict between least harm and no-use tobacco policy for youth: ethical and policy implications

**First Author:** Pentz MA **Authors:** Pentz MA, Sussman S, Newman T

**Source:** Addiction **Year:** 1997 **Volume:** 92 **Issue:** 9 **Page Range:** 1165 - 1173

**Abstract:** This paper examines policy and ethical implementation issues associated with local drug policies that are aimed at producing a 'least harm' approach toward youth, with particular application to tobacco policy as an example of a legal, but addictive drug. Research is reviewed which shows the inconsistencies between federally mandated enforcement of zero tobacco use, the Synar Amendment and local community and school policies which appear to relax enforcement of no-use policies for the purpose of retaining youth in school. The inconsistencies are described from the perspective of a 'least harm' approach, in that tobacco use may be considered less harmful than absence from school, or use of other substances. The conflict between law and intent to reduce harm is examined with implications for long-term enforcement of federal policy, and for effectiveness of tobacco and other drug abuse prevention programs and other drug policies. Several strategies for reducing the conflict are recommended. These include provision of support-orientated smoking cessation programs for youth on school campuses and in community organizations, and promoting consistent no-use norms across all drugs and across multiple channels that affect youth --mass media, school, point of purchase settings and public settings and events.

**Title:** Smoking behavior on the first day of a quit attempt predicts long-term abstinence

**First Author:** Westman EC **Authors:** Westman EC, Behm FM, Simel DL, Rose JE

**Source:** Archives of Internal Medicine **Year:** 1997 **Volume:** 157 **Issue:** 3 **Page Range:** 335 - 340

**Abstract:** Background: The nicotine patch has been widely used for smoking cessation, but not all smokers quit using the patch. Knowing which smokers are likely to succeed with the nicotine patch may improve the efficiency of nicotine patch use. Objective: To identify predictors of smoking abstinence using baseline characteristics, smoking behavior, and withdrawal symptoms. Methods: Using 2 randomized clinical trials of pharmacologic treatment, brief counseling, and quit date formats in the outpatient research clinic setting, predictors of smoking cessation were derived in 1 sample (n = 159), then prospectively validated in an independent sample (n = 48). Subjects smoked 1 pack of cigarettes per day or more and were motivated to quit smoking. Self-report of abstinence at 6 months verified by exhaled carbon monoxide of 8 ppm or less was used. Results Abstinence at 6 months was 24% in the derivation set and 25% in the validation set. Using logistic regression, a model containing quit date abstinence (odds ratio, 10.6; 95% confidence interval [CI], 2.9-38.7) and baseline nicotine dependence (odds ratio, 0.75; 95% CI, 0.6-1.0 per unit increase in Fagerstrom score) provided the optimal predictive ability and was validated in the independent set. Quit date abstinence improved the likelihood of 6-month abstinence by 4.1 over baseline (95% CI, 2.6-6.4) for low-nicotine-dependent smokers and 1.2 (95% CI, 0.6-2.2) for high-nicotine-dependent smokers. Quit date smoking altered the likelihood of 6-month abstinence by 0.2 (95% CI, 0.0-0.8) for low-dependent smokers and 0.1 for high-dependent smokers (95% CI, 0.0-0.6). Conclusions: Abstinence on the quit date and low-nicotine dependence improve the likelihood of smoking abstinence at 6 months. Smoking on the quit date may be an indication for postponing the cessation attempt or adjusting the therapy for smoking cessation.

## 1996 Publications

**Title:** Young smokers' attitudes about methods for quitting smoking: barriers and benefits to using assisted methods

**First Author:** Hines D    **Authors:** Hines D

**Source:** Addictive Behaviors    **Year:** 1996    **Volume:** 21    **Issue:** 4    **Page Range:** 531 - 535

**Abstract:** There is currently little information about how smokers choose a particular method to stop smoking. Young adult smokers rated likelihood of success as the most important criteria for choosing a stop-smoking method but saw only a small difference in likelihood of success between common assisted and unassisted methods. They rated cost, convenience, and quitting on own as other important criteria. Almost all would choose an unassisted method for their next quit attempt. The smokers then rated their probability of using a stop-smoking program or a nicotine patch under various conditions of cost, convenience, and increased likelihood of success. The results showed that the smokers indicated a moderate-high probability of using the two assisted methods under assumptions of convenience and likelihood of success that are currently realistic. However, they were extremely sensitive to cost of the method. When the stop-smoking program or nicotine patch was free, the estimated probability of use was over 50% for all tested conditions; however, at a cost of +25 the estimated probability dropped below 20% for all conditions. Young smokers would be likely to choose assisted methods when attempting to stop if they appreciated the increased likelihood of success with these methods and if the cost was not high.

**Title:** Prevalence, reliability and bias of adolescents' reports of smoking and quitting

**First Author:** Stanton WR    **Authors:** Stanton WR, McClelland M, Elwood C, Ferry D, Silva PA

**Source:** Addiction    **Year:** 1996    **Volume:** 91    **Issue:** 11    **Page Range:** 1705 - 1714

**Abstract:** A follow-up of smoking behavior to age 18 in a longitudinal study of a birth cohort enabled an assessment of the prevalence of smoking and quitting among adolescents approaching adulthood. There was a dramatic increase in number of daily smokers (15% at age 15 years to 31% at age 18 years), and in a climate of expected decreases in smoking, a history of never smoking to age 15 years was not as protective against future smoking as anticipated. Among 15-year-olds who had experimented with smoking, only 11% per year stopped by age 18 years. Cessation rates for adolescent daily smokers were low (3% had not smoked in the last year at age 18 years), and previously have not been widely reported. We also examined some methodological issues related to self-reported prevalence rates, in particular reliability, validity and sources of bias, finding confirmation of the accuracy of information from prospective longitudinal studies and supporting the conclusion that adolescents' recall for information beyond a 1-year period is inconsistent.

## 1995 Publications

**Title:** The relative effectiveness of a peer-led and adult-led smoking intervention program

**First Author:** Prince F    **Authors:** Prince F

**Source:** Adolescence    **Year:** 1995    **Volume:** 30    **Issue:** 117    **Page Range:** 187 - 194

**Abstract:** This study compared a six-session peer-led smoking intervention program for high school-age youth to the same program led by adults. Ninety-three students participated in the study and were divided into peer-led, adult-led, and control groups. Number of cigarettes smoked was assessed by self-report through pretest, posttest and one-month follow-up measures. Self-efficacy was measured post-and follow-up. Student feedback regarding the helpfulness of program components was also assessed. There was a significant difference in the number of cigarettes smoked by students in both peer-led and adult-led groups when compared to the control group ( $p = .0001$ ). Smoking reduction continued to take place in both treatment groups at the one-month follow-up measure. Those students who were exposed to fewer smoking individuals in their daily lives were able to maintain a reduction in smoking when measured one month after completion of the program.