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Effect of Nicotine Replacement Therapy on Quitting by Young Adults in a Trial Comparing Cessation Services

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Abstract

Context—Young adult smokers have the highest smoking prevalence of all US age groups but are least likely to use evidence-based cessation counseling or medication to quit.

Objective—Use and effectiveness of nicotine patch was explored in a randomized trial evaluating smoking cessation interventions with this population.

Participants—Smokers aged 18-30 (n=3,094) were recruited through online and off-line methods and from telephone quit lines and analyzed.

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Abigail Halperin has no conflicts of interest.

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Erwin P. Bettinghaus is employed by Klein Buendel, Inc., a for-profit health communication research firm, and is a member of the Board of Directors for Klein Buendel, Inc.

David Tinkelman has no conflicts of interest.

Gary Cutter participated on data and safety monitoring committees for the following organizations focusing on medical research: Apotek, Biogen-Idex, Cleveland Clinic, Glaxo Smith Klein Pharmaceuticals, Gilead Pharmaceuticals, Modigenetech/Prolor, Merck/Ono Pharmaceuticals, Merck, Neuren, Revasio, Sanofi-Aventis, Teva, Vivus, National Heart, Lung, and Blood Institute (Protocol Review Committee), National Institute on Neurological Disorders and Stroke, National Multiple Sclerosis Society, and National Institute on Child Health and Development (OPRU oversight committee). He has consulted, received speaking fees, or served on advisory boards for the following organizations: Alexion, Allosyne, Bayer, Celgene, Coronado Biosciences, Consortium of MS Centers (grant), Diogenix, Klein-Buendel Incorporated, Medimmune, Novartis, Nuron Biotech, Receptos, Spiniflex Pharmaceuticals, Teva pharmaceuticals. He is employed by the University of Alabama at Birmingham and President of Pythagoras, Inc. a private consulting company located in Birmingham AL.

W. Gill Woodall has no conflicts of interest.

Design—Smokers were enrolled in a pretest-posttest trial, and randomized to one of three cessation services.

Setting—Trial delivering counseling services by self-help booklet, telephone quit line or online expert system in the 48 continental United States.

Intervention—Smokers could request a free two-week course of nicotine replacement therapy (NRT) patches from the project.

Main Outcome Measure—Follow-up surveys at 12-week and 26-weeks assessed smoking abstinence, use of NRT, counseling, and other cessation medications, and smoking-related variables.

Results—Overall, 69.0% of smokers reported using NRT (M=3.2 weeks) at 12-weeks and 74.8% (M=3.3 weeks) at 26-weeks. More smokers who were sent the free nicotine patches (n=1,695, 54.8%) reported using NRT than those who did not receive them (12-weeks: 84.3% v. 41.9%, p<.001; 26-weeks: 87.6% v. 51.1%, p<.001). NRT use was associated with greater smoking abstinence at 12-weeks (p<.001) and 26-weeks (p<.05), especially if used for more than two weeks (p<.001). Smokers assigned to a self-help booklet or cessation website and heavier smokers were most likely to use NRT (p<.05), while those reporting marijuana use and binge drinking used NRT less (p<.05).

Conclusions—Many young adults were willing to try NRT and it appeared to help them quit in the context of community-based cessation services. Strategies should be developed to make NRT available to this age group and support them in using it to prevent life-long smoking.

Introduction

Smoking in the United States has displayed only small declines recently,^{1,2} and prevalence among those aged 18-30 years is the highest of all adult age groups. Assisting smokers to quit is an established tobacco control method; however, young adults are less likely to seek help and use medications such as nicotine replacement therapy (NRT) during quit attempts than older adults.³⁻⁹ Many believe that they can quit before they are at risk for tobacco-related diseases but most do not.¹⁰⁻¹² The young adult years are a critical period when early intervention could prevent the establishment of life-long smoking and related harms.¹³

NRT products can improve likelihood of quitting in the context of community-based cessation services.¹⁴⁻²¹ Many telephone quit lines offer free or subsidized NRT, which increases the number of smokers who will seek cessation services, are motivated to quit, and succeed in quitting.^{14-16,19-28} Retrospective population-based studies that fail to find such effects likely due to differential forgetting.^{29,30}

In this paper, the use and effectiveness of nicotine patches were analyzed in a trial that enrolled over 3,000 young adult smokers aged 18-30 to test three behavioral smoking cessation modalities. All smokers were offered NRT as an additional support. Use beyond the free two-week course of patches provided was explored along with predictors of NRT use.

Method

Sample

Young adult smokers aged 18-30 were recruited between September 2007 and October 2009. Inclusion criteria were smoking at least one cigarette in the past 30 days, being between 18 and 30 years old, speaking and reading English, and residing in the continental United States. Smokers were recruited using four methods.³¹ First, and throughout the

recruitment period, invitations were issued to smokers who completed an online health risk assessment used on college campuses by a national network engaged in peer health education (n=397 smokers enrolled). Due to low yield from this method, three additional methods were implemented that directly advertised the trial to smokers using off-line promotions (e.g., posters, cards with study URL and handouts) by state tobacco control programs, employers, and unions (October 2008-October 2009; n=1,341 smokers enrolled), on-line advertisements on Google Adwords (January-October 2009; n=1,426 smokers enrolled), and screening by four state telephone quit lines (June-October 2009; n=189 smokers enrolled). Recruitment methods are fully-described elsewhere.³¹ Smokers who were interested in participating completed online enrollment and consent forms and a pretest survey.

Design and Procedures

The data are from a randomized three-group pretest-posttest trial. After pretesting, smokers were stratified by the 75 largest US media markets based on residential zip code and randomized individually to one of three cessation services by the online enrollment system: (1) smoking cessation website (n=1,092), (2) telephone quit line (n=1,160), or (3) self-help booklet (n=1,101). A web screen provided information on how to use each of the cessation services (a link and URL was provided for the website and for downloading the self-help booklet in PDF; a form was presented to schedule a proactive out-call from the quit line), an email was sent with this information, and email reminders to use the assigned intervention were sent by the online system. Posttests were attempted with all smokers at 12-weeks and 26-weeks after randomization. Smokers were first invited to complete the posttest online; non-respondents were contacted by telephone and then US mail to increase response. Participants did not receive any compensation for completing the surveys. All trial procedures were approved by the Western Institutional Review Board and the collaborating research organizations' institutional review boards.

Free Two-Week Course of Nicotine Patches

Smokers could request a free two-week course of nicotine patches from the project by completing a form online at the cessation website or booklet website, or from the quit line counselor. Two-week courses of free or subsidized NRT have been offered by several state tobacco quit lines and some have provided even longer courses.^{14-16,18-21,23-27,32} Smokers were sent one of two dosages of nicotine patches, as appropriate for their nicotine dependency, and based on their frequency of smoking reported in the pretest and product information guidelines. Instructions were included with the patches on how to use them based on protocols used by the quit lines. If smokers wanted to use more than two-weeks of patches or other NRT or prescription medication, they had to obtain these additional medications themselves at their own cost.

Measures

Three surveys were conducted – pretest, 12-week posttest, and 26-week posttest. In both posttest surveys, smokers were asked whether they had used NRT, prescription medication, smokeless tobacco, or herbal medicines/supplements to try to quit, and if so, for how many weeks. Two measures of use of NRT were used – ever used it (yes or no) and number of weeks using it (one to two weeks or greater than two weeks).

Smoking abstinence was assessed in two ways in both posttests. First, 30-day point prevalence abstinence was measured at 12- and 26-weeks by asking smokers how many days in the past 30 days they smoked a cigarette, even a puff, and their stage of readiness to quit. Smokers were considered abstinent if they had not smoked a cigarette in the past 30 days and declared that they had quit in the readiness question. Second, continuous

abstinence was estimated by considering smokers continuously abstinent who reported 30-day point prevalence abstinence at both 12- and 26-weeks. The 30-day assessment was used with young adults because some were light smokers who did not smoke every day or every week.

Smokers provided additional information on their smoking. In all three surveys, they reported whether they smoked every day or some days, smokeless tobacco use, quit attempts in the past year (at pretest) or since joining the study (at posttests), self-efficacy for quitting (at pretest) or staying quit (at posttests), and use of help in quitting (telephone, Internet, reading a self-help booklet, at a clinic or group, hypnosis or just tried on their own). The pretest also assessed nicotine dependence (i.e., time to first cigarette in morning; difficulty not smoking when around other smokers, number of cigarettes smoked per day), interest in learning more about their smoking and quitting, smoking by the spouse (if married or living with someone as married) and by the five people they spend the most time with, home rules on smoking, six other health risk behaviors (e.g., binge drinking, marijuana use, and nutrition), demographics (age, gender, pregnancy, Hispanic ethnicity, race, education, college enrollment, employment, and marital status, children under 18 living at home, and household income), Internet use (i.e., days per week and hours per day) and health status (i.e., health is excellent to poor; limited in activities because of impairment or health problem). In posttests, participants continuing to smoke were asked their likelihood of quitting in the next 3 months and whether they had set a quit date; participants not smoking were asked how long ago they had quit, 7-day smoking prevalence, and likelihood that they might smoke again.

Experimental Cessation Services

Smokers were randomized to one of three cessation services – website, telephone quit line, or self-help cessation booklet. The Real e Quit website service contained an expert system, Quit Coach,³³⁻³⁵ that provided tailored advice using an approach influenced by social cognitive theory³⁶ and the transtheoretic model.³⁷ The advice was delivered in text format and smokers could also read supplemental documents on issues such as benefits of quitting, strategies for stopping, using NRT, getting through early days of a quit, coping with nicotine withdrawal, and implementing a smokefree home. It also contained testimonial videos of young adult smokers who had quit, provided e-cards smokers could send to solicit social support for quitting, and had a blog by a smoking cessation counselor.

The telephone quit line service was provided by two organizations that offer state quit line services in the United States. The quit lines used standard counseling protocols commonly employed by quit lines nationwide. Proactive calls were placed by counselors to smokers; smokers provided a telephone number and best times and days on which to contact them in an online form when first randomized to the quit line group. Once reached, smokers were asked to enroll in quit line counseling and those that did were offered up to five counseling sessions. During the initial sessions, a quit date was set, support provided, and information given on the correct use of medications. During subsequent sessions, the counselor helped the tobacco user identify difficult situations and problem solving strategies to develop coping mechanisms during and after the cessation process.

The third condition made the National Cancer Institute's self-help cessation booklet, *Clearing the Air*, available for download in PDF format from the study website. All three cessation services provided information on NRT and advised smokers to use it.

Statistical Analysis

The data on NRT use from all participants regardless of cessation condition was analyzed. Chi-square tests were initially used to compare smoking abstinence between groups of smokers who did and did not use NRT. This relationship was also probed controlling for possible indicators of motivation to quit (i.e., smoking status [smoke every day, some days, not smoke now but have in the past] and readiness to quit), but since these covariates did not alter the results, the unadjusted analyses are reported. Multiple logistic regression models were employed to identify predictors of any NRT use. Potential predictors tested included demographics, Internet use, nicotine dependence, and experimental condition. All analyses were conducted on participants who completed each posttest (i.e., completers), since assessment of NRT use was available only in the posttests. The alpha criterion was set at $p=0.05$ (two-tailed).

Results

Profile of Sample

Initially, 3,353 smokers were enrolled, pretested, and randomized. However, 45 smokers assigned to the quit line condition did not receive proactive calls due to paperwork failure and 222 enrolled prior to implementing the offer of the free two-week supply of nicotine patches (8 smokers enrolled prior to the free patch offer and were not proactively called). These two groups were excluded, yielding a final sample of 3,094 analyzed.

At baseline, smokers had a mean age of 25.0 years and on average smoked 18.1 cigarettes per day, with 64% female and 84% non-Hispanic white. The largest number had a high school degree only (33.8%) or some college (34.2%), and only 13.2% had a college or postgraduate degree (11.5% did not complete high school; 7.3% obtained trade, technical or vocational education). Subsequently, 1,340 smokers completed the 12-week posttest (43.3%) and 1,036 smokers the 26-week posttest (33.5%). As reported elsewhere,³⁸ smokers successfully followed-up tended to be older, better educated, employed, spent more time using the Internet, smoked on fewer days, and were less addicted smokers (longer time to first cigarette in the day; went longer without smoking), had greater readiness to quit and made more quit attempts than smokers not successfully followed. They were also less confident in their ability to quit, had less smoking in their environment (i.e., fewer close persons who smoked and more home rules prohibiting smoking), had lower concomitant health risk behaviors (less stress and greater fruit and vegetable consumption) but more high risk drinking (binge drinking and driving under the influence) compared to those lost to follow-up.

Use of Nicotine Replacement Therapy (NRT)

Use of NRT was estimated for smokers completing the posttests. Overall, 69.0% in the 12-week posttest and 74.8% in the 26-week posttest reported using NRT to help them quit. Looking at the number of weeks using NRT, smokers were almost equally divided among those who used it for more than two weeks (31.4% at 12-weeks; 39.4% at 26-weeks), one to two weeks (37.6%; 35.4%), or never used NRT (31.0%; 25.2%). Those who reported using NRT, on average said they used it for 3.2 weeks at 12-weeks (2.4 weeks if those not using NRT were included as zero weeks) and 3.3 weeks at the 26-week posttest (1.9 weeks if those not using NRT were zero).

Use of NRT by Smokers Requesting Free Two-Week Course

A total of 1,695 smokers (54.8%) requested and were sent a free two-week course of nicotine patches. Use of NRT was high among smokers who requested the patches (and completed the posttests; $n=855$ at 12-weeks; $n=672$ at 26-weeks): 84.3% reported using

NRT at 12-weeks (37.8% for more than two weeks) and 87.6%, at 26-weeks (46.4% for more than two weeks). As expected, NRT use was far lower among those who did not request it from the project (41.9% at 12-weeks [$\chi^2=258.72$, $p<.001$] and 51.1% at 26-weeks [$\chi^2=167.00$, $p<.001$]), but approximately half of the non-requesters who used NRT did so for more than two weeks (20.3% at 12-weeks; 26.7% at 26-weeks). Thus, a substantial number of smokers used NRT without obtaining the free patches from the project. Still, more smokers receiving the free two-week course reported using NRT for more than two weeks than smokers not receiving this free NRT (12-weeks, $\chi^2=43.90$, $p<.001$; 26-weeks, $\chi^2=38.35$, $p<.001$).

Effect of Use of Nicotine Replacement Therapy on Quitting

NRT use was positively associated with quitting at both 12- and 26-weeks. More smokers who used NRT reported 30-day point prevalence abstinence at 12-weeks (19.4%) and continuous abstinence at 26-weeks (8.9%) than non-users (8.0%, 5.0%, respectively) (Table 1).

Predictors of Use of Nicotine Replacement Therapy

Predictors of any use of NRT and use for more than two weeks at 12- and 26-week follow-ups were explored (Table 2). Smokers assigned to use the self-help booklet or website cessation service were significantly more likely to report using NRT at both follow-ups (any NRT as well as NRT for two weeks or more) than those assigned to the quit line. Lighter smokers (<12 cigarettes per day) were least likely to use any NRT but light smokers were no more or less likely to use it for more than two weeks. Any use of NRT also was highest among males and smokers not currently using marijuana at 26-weeks. At 12-weeks, NRT use for more than two weeks was highest for smokers who were older, spent more time on the Internet, had higher nicotine dependence, binge drank alcohol less frequently, and were more confident they could quit smoking, while at 26-weeks, it was highest among non-Hispanic white smokers, those who were not enrolled in a college, and those who lived in homes where smoking is allowed for some places, times or people.

Discussion

NRT use for more than two weeks was associated with significantly higher quit rates among this sample of young adult smokers offered community-based behavioral assistance and free NRT. However, only half of the smokers who tried NRT used it for longer than two weeks. Just a free two-week course of nicotine patches was provided so smokers who used NRT more than two weeks had to obtain additional product. These smokers may have been more motivated to quit or initially successful at quitting, while those who slipped/relapsed stopped using NRT. Thus, motivation or early success might have accounted for their greater smoking abstinence. However, the positive relationship of NRT use with abstinence persisted when controlling for possible indicators of motivation, supporting the possibility that longer use of NRT conferred benefits. Although length of use was not randomized, the consistency with studies of other populations^{14,15,17,18} gives us confidence that the effects represent a real benefit of NRT use. Given its potential benefit, it was encouraging that a majority of young adult smokers were willing to try NRT, especially since young adults are unlikely to seek help to quit⁴⁻⁷ and under-utilize cessation medication.^{3,6,8,9} In the study context, these data may best generalize to smokers who received free or subsidized NRT from a community-based cessation program^{18,20,23,26,27} rather than purchased and used NRT on their own.

Offering a free two-week course of nicotine patches may have increased the number of young adult smokers who used NRT. According to diffusion of innovations theory,³⁹ the

ability to easily try a new product is associated with greater adoption. A free two-week supply may be just the stimulus needed for young adult smokers to try NRT. Unfortunately, half of smokers who tried NRT did not continue to use it for more than a couple of weeks. Some of these may have stopped because they failed in their quit attempt, decided not to quit,⁴⁰ had a negative experience with NRT, or could not afford an additional supply. Encouraging prolonged NRT use, even following initial failure is needed.

NRT was used by nearly twice as many young adult smokers in this trial as used any of the three behavioral smoking cessation services tested (not more than 38% of smokers used any of the assigned services³⁸), a finding that is common to smokers in all countries where these kinds of help are available.⁴¹ Research is needed to determine why smokers use NRT but are less likely to use behavioral support, since it is well known that combining NRT with counseling or self-help increases quit rates.⁴² It was very easy for smokers to request the free nicotine patches, especially when assigned to the website or self-help booklet where they only needed to submit an online form. However, smokers assigned to the quit line had to talk with a telephone counselor to receive NRT, which may explain why these smokers used NRT the least. Other facilitators of NRT use might include that patches can be worn under clothing where they cannot be seen and it takes less effort to use NRT than to participate in a counseling service.

Smokers should continue to be provided with basic advice on how to use NRT when initiating and maintaining a quit. This advice should reinforce their decision to try NRT and the importance of using it for more than two weeks, help them make and successfully execute quit plans that include NRT, and teach ways of managing negative side effects from NRT.³² The pharmaceutical companies may have created the interest and willingness in many young adults to try NRT, but marketing of NRT alone may not generate sufficient use needed to actually quit. In diffusion of innovations theory,³⁹ reaching the decision to use a new product is a major step but smokers may need support to use the product correctly, continue using it, and perform other tasks needed to quit and remain abstinent. Thus, more emphasis should be placed on convincing young adults to stick with a quit attempt and continue using NRT, even if they slip. Theories such as post-decisional regret models suggest that reinforcement may be essential to continued NRT use,^{43,44} especially with young smokers who believe they should be able to quit on their own, may drift in and out of smoking without a firm commitment to quit for good, and thus display a tendency to prematurely stop using NRT and abandon their quit attempts. Perhaps NRT can be presented as something they do on their own as part of self-managed quit attempts.

Still, there are challenges to obtaining and using NRT that need to be addressed. Distribution of free NRT may be effective to get more young adults to try it. Even offering an initial free short supply of nicotine patches in this trial doubled the number of smokers who tried NRT and kept using it for more than two weeks. Free NRT distribution plus telephone counseling has improved NRT use and produced more quits in the general smoker population.^{14,16} Pairing it with the self-help booklet in this trial boosted NRT use, which might be a relatively inexpensive combination strategy.

Cost of NRT may be a barrier for young adults, as many have low wage occupations and limited disposable incomes. Other studies have found stronger interest in free NRT distribution programs among smokers with lower income and education and without health insurance.^{14,19,32} States, health care organizations, health insurers, and others might consider providing easy access to low- or no-cost NRT to increase use of these medications by young adults.^{22,23} Promotional messages should compare the cost of NRT with the price of cigarettes, as well as the past and ongoing costs of smoking, to highlight the cost savings from quitting. Cost might be a barrier to smokers in minority racial groups and lower

income cohorts who have, in some studies, been very interested in free NRT programs.³² While supplying only a free two-week course of nicotine patches in this trial still may have been a cost barrier for extended use, one-third of smokers did use NRT for more than two weeks, suggesting that they found ways to acquire more of it.²⁰ Providing longer courses has elevated use of NRT and only a small proportion of smokers (<20%) purchased additional patches when given free short courses in previous studies.¹⁶⁻¹⁸ Also, when given the choice of amount of free NRT, over half of smokers obtained only a 14-30 day supply of free NRT compared with a third who obtained 31-60 day supplies.¹⁶ Thus, while cost barriers may need to be eliminated to achieve prolonged use of NRT by young adults, more research is needed to determine whether the additional investment in longer courses results in more successful quitting.^{17,18,26}

Co-abuse of marijuana and binge alcohol use impeded effective use of NRT. Brief advice accompanying NRT (or indeed any form of cessation assistance) should stress the importance of avoiding these behaviors while quitting (or stopping them altogether for general health benefits). Whether heavy drinking or use of marijuana interferes by lowering smokers' motivation to quit and thus to use NRT, or causing them to forget to use it cannot be discerned. It is also possible that smokers experiencing depression engage both substance abuse and smoking^{45,46} and their depression interferes with their ability to stay on NRT.

Finally, it may be especially challenging to get the youngest adults and those who are lighter smokers (or likely both) to use NRT. Younger and lighter smokers have been less interested in cessation medications and programs distributing free NRT in past studies.^{3,14,18,19,32,47} Light smokers may not consider themselves "addicted" and do not feel the need for any additional resources to help them stop. Further studies need to determine the levels of cigarette consumption where NRT begins to exert a positive effect on cessation outcomes.

There are several strengths and limitations to this analysis. The sample was recruited throughout the United States and was relatively diverse, which increases generalizability. The main limitation is the non-randomized comparison among different amounts of NRT use, which cannot rule out the possibility that prolonged use of NRT is a result of quitting success not a cause of it. More minor limitations are that the sample was limited to young adults aged 18-30 and smokers that had access to the Internet. Nearly all young adults aged 18-29 (96%) and most adults under age 65 (93% of 30-49 year olds; 85% of 50-64 year olds) have access to the Internet but use is somewhat lower among less affluent adults (75% of adults with annual incomes under \$30,000 go online and only 16% do not have a computer or access to the Internet).⁴⁸ Thus, the findings may not apply as well to poorer young adults. We did not assess for depression. Use of NRT and quit status were self-reported and susceptible to social desirability biases, demand effects, and memory errors. False reporting of quitting is relatively small,^{49,50} but we do not know the false reporting rate for use of NRT. Finally, a substantial proportion of smokers were lost to follow-up, a common problem in community-based cessation studies.^{14,15,17,18,51} Those who were followed-up tended to be more motivated to quit, but less confident in doing so, were older and better educated, and had fewer health risk behaviors (except for alcohol risk behavior), which may imply that quit rates were over-estimated.

NRT may be an effective aid to help young adult smokers break their addiction when participating in community-based cessation counseling. Many tried NRT when a short course of patches was provided free; obtained additional NRT on their own; and continued to use it for more than two weeks, a circumstance associated with abstinence. Trial use should be promoted through approaches such as Internet-based promotion and inexpensive follow-up such as email reminders that are readily scalable means to reduce smoking rates among young smokers.

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Table 1
Differences in smoking abstinence by use of nicotine replacement therapy among smokers who completed the 12- and 26-week posttests

	Any Use of NRT		Duration of Use of NRT		
	Used	Did Not Use	More than 2 weeks	1 to 2 weeks	Did Not Use
	12-week posttest				
N	922	415	420	502	415
30-day point prevalence abstinence	19.4%	8.0%**	29.1%	11.4%	8.0%**
	26-week posttest				
N	774	261	408	366	261
30-day point prevalence abstinence	22.0%	18.4%	31.4%	11.5%	18.4%**
Continuous abstinence	8.9%	5.0%*	12.5%	4.9%	5.0%**

* p<.05;

** p<.001

Table 2
Unadjusted percentage of NRT for statistically significant predictors (p<.05) in multiple logistic regressions on use of any NRT and use for more than two weeks

Predictor	Used NRT	Used NRT for more than 2 weeks
12-week Posttest (n=1,340)		
Experimental condition:		
Self-help booklet	76.3%	35.4%
Telephone quit line	55.9%	26.2%
Website	72.5%	31.7%
Number of cigarettes smoked per day:		
11 cigarettes or less	57.6%	
12-19 cigarettes	71.7%	
20 cigarettes	71.2%	
More than 20 cigarettes	78.9%	
Age:		
18-21 years old		19.8%
22-25 years old		31.0%
26-28 years old		36.6%
29-30 years old		35.2%
Binge drinking in past 2 weeks (less frequently):		
None		33.3%
Once		31.8%
Twice		34.8%
3 or more times		19.3%
Use of marijuana:		
Never		38.3%
In the past		30.1%
Some days		19.7%
Every day		24.6%
Time to first cigarette after waking up:		
30 minutes or less		33.6%
More than 30 minutes		23.8%
Internet use:		
7 hours or less in a week		29.3%
7.5-14 hours in a week		32.1%
15-28 hours in a week		33.1%
More than 28 hours in a week		31.9%
Confidence in quitting:		

Predictor	Used NRT	Used NRT for more than 2 weeks
Not at all confident		25.0%
Not very confident		22.7%
Somewhat confident		30.6%
Very confident		33.9%
Extremely confident		36.1%
26-week Posttest (n=1,036)		
Experimental condition:		
Self-help booklet	79.4%	43.9%
Telephone quit line	63.3%	33.3%
Website	79.6%	39.8%
Number of cigarettes smoked per day:		
11 cigarettes or less	64.5%	
12-19 cigarettes	77.0%	
20 cigarettes	78.7%	
More than 20 cigarettes	82.0%	
Gender:		
Female	73.2%	
Male	77.8%	
Use of marijuana:		
Never	77.1%	47.7%
In the past	77.2%	38.6%
Some days	60.3%	24.1%
Every day	65.9%	22.7%
Race/ethnicity:		
Non-Hispanic Whites		41.3%
Other		29.8%
College enrollment:		
Yes		30.7%
No		44.2%
Home smoking rules:		
Not allowed anywhere		35.1%
Allowed for some places, times, or people		46.7%
No rules		37.1%