

Unique features in the treatment of tobacco dependence in adolescence*

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Most adolescents who smoke consider themselves to be addicted to nicotine, recall withdrawal symptoms during previous attempts to stop smoking, and find it difficult to stop smoking. They often continue smoking well into adulthood.¹ Effective intervention with this group can dramatically attenuate the risk of tobacco-related morbidity and mortality. The teenage years present a critical window of opportunity for tobacco-dependence treatment to prevent decades of continued tobacco use and the severe morbidity and mortality that it causes.

Cigarette smoking is common among children; 23% of high school students and 8% of middle school students are current cigarette smokers. Non-cigarette tobacco products are frequently used. In national surveys, 13% of high school students and 5% of middle school students smoke cigars; 3% of high school students and 2% of middle school students smoke bidis and/or kreteks (flavored tobacco products); 10% of boys in high school and 4% of boys in middle school use spit tobacco.²

In contrast to the situation with adults, there has been a relative dearth of research into effective tobacco-dependence treatment programs for youth.³ Motivation enhanced, cognitive-behavioral, and social influence theory programs have shown modest benefit, even among tobacco-dependent adolescents. The most beneficial programs were school or classroom based and had multiple sessions (5 or more). The effect appears to be sustained over time.⁴ More intensive tobacco-dependence treatment programs are more effective than brief interventions; however, brief interventions can show benefit, particularly with less tobacco-dependent adolescents.⁵ A single randomized placebo controlled clinical trial demonstrated superior cessation rates with nicotine patch therapy compared to placebo when added to cognitive behavioral therapy among tobacco dependent adolescents who were motivated to quit.⁶ Given the demonstrated effectiveness and safety of first line tobacco-dependence treatments in adults and the grave harm of continued tobacco dependence, a trial of medically supervised pharmacotherapy plus ongoing follow-up is warranted in tobacco-dependent adolescents who are interested in stopping smoking.

Nicotine dependence in adolescents can be assessed by the use of the Fagerström questionnaire, modified for adolescents.^{7,8} [<http://cancercontrol.cancer.gov/TCRB/mftq.html>]. Autonomy over smoking behavior can also be assessed by the Hooked on Nicotine Checklist [<http://fmchapps.umassmed.edu/honc/TOC.htm>]⁹ Many youths become hooked before they even consider themselves to be smokers, because they don't smoke every day.

Level of nicotine dependence and history of experience with prior quit attempts can guide intensity of initial pharmacotherapy. Frequent follow-up, especially in the days to weeks surrounding the target stop date, is important to successfully facilitate smoking cessation in adolescents.

Although nicotine addiction is common, it does not drive the smoking behavior of all adolescents. Relationships, activities, emotions, and social ramifications may drive intermittent smoking. For these patients, adolescent-specific school- or community-based programs that teach usable social, behavioral, and coping skills are helpful.¹⁰ Intervention at this point is important, intermittent tobacco use in adolescents frequently progresses to regular tobacco use and long-term tobacco dependence.¹¹

Once willingness to stop smoking is identified, develop a mutually agreed upon treatment plan. Building a strong partnership between patient and physician facilitates development of a realistic plan that the adolescent is interested in, invested in, and willing to implement.¹²

Developing and implementing a mutually agreed upon plan for stopping smoking in the medical office setting (adapted from Adelman WP, 2006¹³)

- 1) Determine willingness to stop smoking
 - 2) Identify patterns of smoking, cigarettes smoked that may be most easily discarded, and triggers of tobacco smoking that may be avoided.
 - a. If patient smokes with friends before school or at parties, consider options to socialize without tobacco.
 - b. If patient smokes to manage boredom or anxiety, consider replacement activities where smoking is difficult, teach relaxation techniques, and encourage exercise.
 - 3) Determine if pharmacotherapy for tobacco dependence is indicated and appropriate. If so, instruct on its appropriate use.
 - 4) Teach coping skills.
 - 5) Set a Target Stop Date. Develop a plan to inform friends and relatives and recruit their help. Give written instructions.
 - 6) Frequent follow-up, especially in the days to weeks surrounding the Target Stop Date, is important to successful facilitation of smoking cessation.
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*Adapted from the American College of Chest Physicians Tobacco Dependence Treatment Toolkit, 3rd Edition. Additional information about treating tobacco dependence in adolescents and adults can be found in the American College of Chest Physicians Tobacco Dependence Treatment Toolkit, 3rd Edition.

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