Smoking Cessation Strategies for the 21st Century

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CARDIOLOGY PATIENT PAGE

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Cigarette smoking is the leading preventable cause of illness and premature death in the United States, claiming over 400 000 lives a year because it directly increases the risk of dying from heart disease, stroke, emphysema, and a variety of cancers.[1] Approximately 25% of adults in the United States continue to smoke, despite information about the unequivocally negative health consequences of smoking.[2] Part of the reason for continued cigarette smoking is the addictive nature of nicotine, a substance found in all types of tobacco products. In the 1988 *Surgeon General's Report on the Health Consequences of Smoking*,[3] nicotine was declared an addictive drug similar to heroin or cocaine. It is important to emphasize that nicotine itself is probably not responsible for most of the negative health consequences of smoking. Instead, persons who stop using nicotine-containing tobacco products experience an unpleasant withdrawal syndrome that may include such symptoms as depressed mood, disrupted sleep, irritability, frustration, anger, anxiety, difficulty concentrating, restlessness, decreased heart rate, and increased appetite or weight gain.[4] The extremely unpleasant nature of withdrawal from tobacco helps explain why many people who make an effort to stop smoking start up again, often within a matter of hours or days.

Help Is Available

Despite nicotine's powerful addictive properties, many effective treatments to help people stop smoking exist. In June 2000, the US Public Health Service released a Clinical Practice Guideline, *Treating Tobacco Use and Dependence*,[5] which summarized almost 25 years of scientific research on techniques for effective cessation of cigarette smoking. The Guideline found clear scientific evidence that 5 different medications are helpful in assisting people who wish to quit smoking and also found evidence that certain types of counseling increased a person's chance of quitting permanently. The Guideline recommended that smokers be offered both counseling and medication to increase their chance of success.

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Counseling for Smoking Cessation

Self-help materials, the most common type of counseling, were not found to be particularly effective.[5] Both individual counseling and group counseling, however, were found to increase the success rates for cessation of smoking. Proactive telephone calls are a relatively new form of delivering counseling and are also quite effective.[5] A number of states now have "quit lines" that can provide this kind of proactive counseling to residents at no charge.

Regardless of how counseling is delivered, certain types of information increase the chance of success. A problem-solving approach works well for many smokers. An example of this would be thinking about times of the day one is likely to smoke (eg, first thing in the morning or after meals) and then planning something to distract oneself when the urge strikes (eg, leaving the situation or deep breathing). Social support, in the form of encouragement, caring, and concern, clearly increases the success rate of smoking cessation. Social support can come both from healthcare providers (intra-treatment social support) and from family, friends, and other community members (extra-treatment social support).

Medication for Smoking Cessation

The US Food and Drug Administration (FDA) has approved 5 medications as smoking cessation aids, all of which are effective. Of these, 4 are nicotine-replacement therapies (gum, inhaler, nasal spray, and patch) thought to relieve nicotine withdrawal symptoms and urges to smoke while not exposing the user to the carbon monoxide, tar, and carcino-

Figure 1

TABLE 1. FDA-Approved Smoking Cessation Medications

Name	Forms	Dosage	Length of Use	Precautions/ Contraindications	Side Effects
Bupropion, sustained-release	Zyban (prescription only)	150 mg in morning for 3 days, then 150 mg twice a day	Begin 1–2 wks before quit date, then 7–12 wks	Seizure, eating disorder	Insomnia, dry mouth
Nicotine gum	Nicorette, Nicorette DS, Nicorette Mint, Nicorette Orange (OTC only)	Up to 24 pieces/day; <25 cigs/day → 2 mg; ≥25 cigs/day → 4 mg	Up to 12 wks		Sore mouth, dyspepsia
Nicotine inhaler	Nicotrol Inhaler (prescription only)	6–16 cartridges/day	Up to 6 mo		Mouth/throat irritation
Nicotine nasal spray	Nicotrol NS (prescription only)	8–40 doses/day	3–6 mo	Dependency	Nasal irritation
Nicotine patch	Nicoderm CQ (OTC only), generic/house brand patches (OTC and prescription)	21 mg/24 h; 14 mg/24 h; 7 mg/24 h;	4 wks; then 2 wks; then 2 wks		Local skin reaction
	Nicotrol (OTC only)	15 mg/16 h	8 wks		

OTC indicates over the counter. Zyban, Nicorette, and Nicoderm are products of Glaxo SmithKline; Nicotrol is a product of Pharmacia, Inc.

TABLE 2. Benefits of Smoking Cessation

Short-Term Benefits	Long-Term Benefits
Blood pressure returns to presmoking levels within 20 minutes.	Lung function improves up to 30% within 2 to 3 months.
Carbon monoxide levels drop within hours.	Risk of coronary heart disease is reduced by 50% after 1 year.
Money is saved each day by not buying cigarettes.	Risk of stroke is similar to that of a nonsmoker within 5 to 15 years.
Sense of smell and taste improve within days.	Patient enjoys increased self-esteem due to quitting smoking.
Patient earns greater self-respect because of a real sense of accomplishment in quitting.	

Based on references 3 and 7.

gens in cigarette smoke. The other, a non-nicotine agent called bupropion, appears to act on pathways in the brain that are involved in nicotine addiction. The Guideline[5] recommends that all smokers willing to make an attempt at quitting should be offered one or more of the medications listed in Table 1.

Benefits of Quitting Smoking

Because of the extremely addictive nature of cigarette smoking, patients should not become discouraged if initial attempts to stop are unsuccessful. Repeated attempts are worth the effort, not only from the perspective of the individual smoker, but also from that of their families and society at large, as well. The health consequences of continued cigarette smoking extend to healthy nonsmokers through passive or secondhand smoking.[6] Table 2 lists some of the physical and psychological benefits of smoking cessation. It is important to note that even smokers who quit in their 60s experience not only a better quality of life but a longer life expectancy compared with those who continue smoking.[7]

For more information, including a 5-Day Plan for quitting smoking and tips for the first week, visit the Tobacco Cessation Guideline at the Virtual Office of the Surgeon General, available at http://www.surgeongeneral.gov/tobacco/default.htm.

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