**TABLE 470-2 INTERACTIONS OF SMOKING AND PRESCRIPTION DRUGS**

| Drug | Interaction |
|---|---|
| Amitriptyline | Increased clearance |
| Benzodiazepines | Less sedation |
| Beta blockers | Reduced lowering of heart rate and blood pressure |
| Caffeine | Faster metabolic clearance |
| Chlorpromazine | Decreased serum concentrations[a] |
| Clomipramine | Decreased serum concentrations[a] |
| Clozapine | Decreased serum concentrations[a] |
| Dextropropoxyphene | Less analgesia |
| Estrogens (oral) | Increased hepatic clearance |
| Flecainide | Increased first-pass clearance |
| Fluphenazine | Decreased serum concentrations[a] |
| Fluvoxamine | Decreased serum concentrations[a] |
| Haloperidol | Decreased serum concentrations[a] |
| Heparin | Faster clearance |
| Imipramine | Decreased serum concentrations[a] |
| Insulin | Delayed absorption due to skin vasoconstriction |
| Lidocaine | Increased first-pass clearance |
| Mexiletine | Increased first-pass clearance |
| Naratriptan | Increased clearance |
| Olanzapine | Faster clearance |
| Pentazocine | Less analgesia, possible increased clearance |
| Propranolol | Increased first-pass clearance |
| Propoxyphene | Increased hepatic metabolism |
| Rivastigmine | Increased clearance |
| Tacrine | Increased clearance |
| Tacrine | Faster metabolic clearance |
| Theophylline | Faster metabolic clearance |
| Thiothixene | Faster metabolic clearance |
| Trazodone | Decreased serum concentrations[a] |
| Verapamil | Increased clearance |

[a]Clinical implications uncertain.

All forms of burned tobacco generate toxic and carcinogenic smoke similar to that of cigarette smoke. The differences in disease consequences of use relate to frequency of use and depth of inhalation. The risk of upper airway cancers is similar among cigarette, pipe, and cigar smokers, whereas those who have smoked only pipes and cigars have a much lower risk of lung cancer, heart disease, and chronic obstructive pulmonary disease. However, cigarette smokers who switch to pipes or cigars do tend to inhale the smoke, increasing their risk; and it is likely that comparable inhalation and frequency of exposure to tobacco smoke from any of these forms of tobacco use will lead to comparable disease outcomes.

A resurgence of cigar, bidi, and water pipe use among adolescents of both genders has raised concerns that these older forms of tobacco use are once again causing a public health problem. A variety of devices are currently sold that deliver nicotine by electronically heating materials containing nicotine, the so-called electronic cigarettes. Although these devices are marketed as substitutes for cigarettes and as cessation tools, the composition of the vapor and nicotine delivery varies widely from product to product, raising questions of both safety and efficacy in the absence of regulatory oversight.

## LOWER TAR AND NICOTINE CIGARETTES

Filtered cigarettes with lower machine-measured yields of tar and nicotine commonly use ventilation holes in the filters and other engineering designs to artificially lower the machine measurements. Smokers compensate for the lowered nicotine delivery by changing the manner in which they puff on the cigarette or the number of cigarettes smoked per day, and tar and nicotine deliveries are not reduced with use of these products. Cigarette design changes that reduce machine-measured tar and nicotine lead to deeper inhalation of the smoke and an increase in the carcinogenicity of the smoke inhaled by smokers. The presentation of more carcinogenic smoke to the alveolar portions of the lung has resulted in an increase in the risk of lung cancer, and possibly chronic obstructive pulmonary disease, among smokers over the past six decades. This change in cigarette product is also one cause of the dramatic rise in rates of adenocarcinoma of the lung observed over the past half century. There has been no increase in risk of lung cancer or adenocarcinoma of the lung in never smokers over time.

## CESSATION

The process of stopping smoking is commonly a cyclical one, with the smoker sometimes making multiple attempts to quit and failing before finally being successful. Approximately 70–80% of smokers would like to quit smoking. More than one-half of current smokers attempted to quit in the last year, but only 6% quit for 6 months, and only 3% remain abstinent for 2 years. Clinician-based smoking interventions should repeatedly encourage smokers to try to quit and to use different forms of cessation assistance with each new cessation attempt rather than focusing exclusively on immediate cessation at the time of the first visit.

Advice from a physician to quit smoking, particularly at the time of an acute illness, is a powerful trigger for cessation attempts, with up to half of patients who are advised to quit making a cessation effort. Other triggers include the cost of cigarettes, media campaigns, and changes in rules to restrict smoking in the workplace.

## PHYSICIAN INTERVENTION (TABLE 470-3)

All patients should be asked whether they smoke, how much they smoke, how long they have smoked, their past experience with quitting, and whether they are currently interested in quitting. Intensity of smoking and smoking within 30 min of waking are useful measures of the intensity of nicotine addiction. Even those who are not interested in quitting should be encouraged and motivated to quit; provided a clear, strong, and personalized message by the clinician that smoking

**TABLE 470-3 CLINICAL PRACTICE GUIDELINES**

| |
|---|
| **Physician Actions** |
| Ask: Systematically identify all tobacco users at every visit |
| Advise: Strongly urge all smokers to quit |
| Identify smokers willing to quit |
| Assist the patient in quitting |
| Arrange follow-up contact |
| **Effective Pharmacologic Interventions[a]** |
| First-line therapies |
| Nicotine gum (1.5) |
| Nicotine patch (1.9) |
| Nicotine nasal inhaler (2.7) |
| Nicotine oral inhaler (2.5) |
| Nicotine lozenge (2.0) |
| Bupropion (2.1) |
| Varenicline (2.7) |
| Second-line therapies |
| Clonidine (2.1) |
| Nortriptyline (3.2) |
| **Other Effective Interventions[a]** |
| Physician or other medical personnel counseling (10 min) (1.3) |
| Intensive smoking cessation programs (at least 4–7 sessions of 20- to 30-min duration lasting at least 2 and preferably 8 weeks) (2.3) |
| Clinic-based smoking status identification system (3.1) |
| Counseling by nonclinicians and social support by family and friends |
| Telephone counseling (1.2) |

[a]Numerical value following the intervention is the multiple for cessation success compared to no intervention.