

- methodological analysis of the alcohol treatment outcome literature. In: Hester R, Miller W, eds. *Handbook of alcoholism treatment approaches*. 2nd ed. Boston: Allyn and Bacon, 1995:12-44.
79. Miller WR, Rollnick S. *Motivational interviewing: preparing people to change addictive behavior*. New York: Guilford, 1991.
 80. Monti P, Adams D, Kadden R, Cooney N. *Treating alcohol dependence*. New York: Guilford, 1989.
 81. Nace EP. Inpatient treatment of alcoholism: a necessary part of the therapeutic armamentarium. *Psychiatr Hosp* 1990;21:1.9-12.
 82. Nigam R, Schottenfeld R, Kosten TR. Treatment of dual diagnosis patients: a relapse prevention group approach. *J Subst Abuse Treat* 1992;9(4):305-309.
 83. O'Connell DF. The use of transcendental meditation in relapse prevention counseling. *Alcohol Treat Q* 1991;8(1):53-68.
 84. O'Farrell TJ. Couples relapse prevention sessions after a behavioral marital therapy couples group program. In: O'Farrell TJ, ed. *Treating alcohol problems: marital and family interventions*. New York: Guilford, 1993:305-326.
 85. O'Farrell TJ, Choquette KA, Cutter HS, Brown ED, McCourt WF. Behavioral marital therapy with and without additional couples relapse prevention sessions for alcoholics and their wives. *J Stud Alcohol* 1993;54(6):652-666.
 86. O'Malley SS, Jaffe AJ, Chang G, Schottenfeld RS, Meyer RE, Rounsaville B. Naltrexone and coping skills therapy for alcohol dependence. *Arch Gen Psychiatry* 1992;49:881-887.
 87. Peters RH, Witty TE, O'Brien JK. The importance of the work family with structured work and relapse prevention. *J Appl Rehab Counsel* 1993;24(3):3-5.
 88. Pickens R, Hatsukami D, Spicer J, Svikis D. Relapse by alcohol abusers. *Alcohol Clin Exp Res* 1985;9(3):244-247.
 89. Rawson RA, Obert JL, McCann MJ, Marinelli CP. Relapse prevention models for substance abuse treatment. Special issue: psychotherapy for the addictions. *Psychotherapy* 1993;30(2):284-298.
 90. Rawson RA, Obert JL, McCann MJ, Marinelli CP. Relapse prevention strategies in outpatient substance abuse treatment. Special series: psychosocial treatment of the addictions. *Psychol Addict Behav* 1993;7(2):85-95.
 91. Rosellini G, Worden M. *Of course you're angry*. Center City, MN: Hazelden, 1985.
 92. Rosellini G, Worden M. *Of course you're anxious*. Center City, MN: Hazelden, 1989.
 93. Rustin TA. *Quit and stay quit: medical treatment program for smokers*. Houston, TX: Discovery Publishing, 1990.
 94. Sandahl C. Determinants of relapse among alcoholics: a cross-cultural replication study. *Int J Addict* 1984;19(8):833-848.
 95. Saunders B, Allsop S. Alcohol problems and relapse: can the clinic combat the community? *J Community Appl Soc Psychol* 1991;1(3):213-221.
 96. Saxe L, Dougherty D, Esty J, Fine M. The effectiveness and costs of alcoholism treatment. Health technology case study 22. Washington, DC: Office of Technology Assessment, 1983.
 97. Shiffman S. Relapse following smoking cessation: a situational analysis. *J Consult Clin Psychol* 1982;50:71-86.
 98. Shiffman S, Read L, Maltese J, Rapkin D, Jarvik M. Preventing relapse in ex-smokers: a self-management approach. In: Marlatt GA, Gordon J, eds. *Relapse prevention: a self-control strategy for the maintenance of behavior change*. New York: Guilford, 1985:472-520.
 99. Smith JW, Frawley PJ. Treatment outcome of 600 chemically dependent patients treated in a multimodal inpatient program including aversion therapy and pentothal interviews. *J Subst Abuse Treat* 1993;10(4):359-369.
 100. Simpson DD, Joe GW, Lehman WE, Sells SB. Addiction careers: etiology, treatment and 12-year follow-up outcomes. *J Drug Issues* 1986;12:107-123.
 101. Stanislav SW, Sommi RW, Watson WA. A longitudinal analysis of factors associated with morbidity in cocaine abusers with psychiatric illness. *Pharmacotherapy* 1992;12(2):114-118.
 102. Stephens RS, Roffman RA, Simpson EE. Treatment adult marijuana dependence: a test of the relapse prevention model. *J Consult Clin Psychol* 1994;62(1):92-99.
 103. Sternberg B. Relapse in weight control: definitions, processes and prevention strategies. In: Marlatt GA, Gordon J, eds. *Relapse prevention: a self-control strategy for the maintenance of behavior change*. New York: Guilford, 1985:521-545.
 104. Tims F, Leukefeld C, eds. *Relapse and recovery in drug abuse*. NIDA research monograph no. 72. Rockville, MD: NIDA, 1987.
 105. Tracy JI. Assessing the relationship between craving and relapse. *Drug Alcohol Rev* 1994;13(1):71-77.
 106. Tucker JA, Vuchinich RE, Gladso JA. Environmental influences on relapse in substance use disorders. Special issues: environmental factors in substance misuse and its treatment. *Int J Addict* 1990-91;25(7A-8A):1017-1050.
 107. Volpicelli JR, Alterman AI, Hayashida M, O'Brien CP. Naltrexone in the treatment of alcohol dependence. *Arch Gen Psychiatry* 1992;49:876-880.
 108. Wadsworth R, Spampneto AM, Halbrook BM. The role of sexual trauma in the treatment of chemically dependent women: addressing the relapse issue. *J Counsel Dev* 1995;73(4):401-406.
 109. Wanigaratne S. *Relapse prevention for addictive behaviors*. London: Blackwell Scientific Publications, 1990.
 110. Washton A. *Staying off cocaine: cravings, other drugs and slips*. Center City, MN: Hazelden 1990:1990.
 111. Wells EA, Peterson PL, Gaine RR, Hawkins JD, et al. Outpatient treatment for cocaine abuse: a controlled comparison of relapse prevention and twelve-step approaches. *Am J Drug Alcohol Abuse* 1994;20(1):1-17.
 112. Zackon F. Relapse. "re-joyment" observations and reflections. *J Chem Depend Treat* 1989;2(2):67-80.
 113. Zackon F, McAuliffe W, Ch'ien J. *Addict aftercare: recovery training and self-help*. DHHS publication no. (ADM) 85-1341. Rockville, MD: NIDA, 1985.
 114. Zinberg S, Wallace J, Blume S, eds. *Practical approaches to alcoholism psychotherapy*. 2nd ed. New York: Plenum, 1985.

Suggested Client Educational Videotapes

Living sober. Skokie, IL: Gerald T Rogers Production [(800) 227-9100], 1994. This is an interactive video series that focuses on the most common relapse issues such as resisting social pressures, coping with cravings, managing feelings, dealing with family and interpersonal conflict, building a recovery network and sponsorship, and coping with relapse warning signs.

49 COGNITIVE AND BEHAVIORAL THERAPIES

Bruce S. Liese and Lisa M. Najavits

Psychotherapies that focus primarily on individuals' thoughts and behaviors are generally known as cognitive-behavioral therapies. There have been many different cognitive-behavioral therapies; some have attended mostly to cognitive processes, some have attended mostly to behavioral processes, while others have been equally attentive to both. Cognitive-behavioral therapies have typically been active, structured, directive, focused, and present-oriented. Dobson and Block (1) review the historical and philosophical bases of cognitive-behavioral therapy. They credit Ellis (2) and Beck (3) with introducing the first cognitive-behavioral therapies (Rational Emotive Therapy and Cognitive Therapy, respectively), and they cite other important early contributors to cognitive-behavioral therapy (4-11).

Early applications of cognitive-behavioral therapy were to depression

(12), anxiety (13), and various other problems including anger, stress, somatic disorders, sexual dysfunction, and pain (14, 15). More recently, cognitive-behavioral therapies have been applied to such complex problems as personality disorders (16-18), schizophrenia (19, 20), crises (21, 22), and suicidal behavior (23). Consistent with this focus on more complex problems, cognitive-behavioral therapies have increasingly been applied to substance abuse (24-30). In fact, two recent multi-site, randomized, controlled studies of alcohol and substance abuse have included cognitive-behavioral therapies as main treatment conditions. In Project MATCH (31), funded by the National Institute on Alcohol Abuse and Alcoholism, the cognitive-behavioral treatment developed by Kadden and colleagues (26) is based on a manual by Monti and colleagues (29). In the Collaborative Cocaine Treat-

ment study (32), funded by the National Institute on Drug Abuse, the cognitive-behavioral treatment was developed by Beck and colleagues (24).

In this chapter two major cognitive-behavioral theories of substance abuse are reviewed, principles of treatment are discussed, and specific techniques are described. To illustrate the use of cognitive-behavioral therapy for substance abuse, the case example of "Carla" is used throughout the chapter. Carla, a 32-year-old woman, enters psychotherapy for depression, including crying spells, sleep problems, weight gain, and poor concentration. She reports that she has always had difficulties with intense feelings like anger, loneliness, and boredom. She admits that she has no friends because "people always stab you in the back." She states: "I've seen over a dozen therapists, and they've all given up on me." When the therapist asks Carla how she copes with her problems, she admits, "I smoke pot every day." Carla explains that smoking marijuana helps her "relax and enjoy life." She has tried to reduce her marijuana use, but says, "I can't fall asleep at night without smoking a joint." She recently quit her job as a child care worker after learning that her employer had implemented random drug screening. The therapist concludes that Carla's depression is at least partly related to her marijuana use. Carla reluctantly agrees: "Marijuana *might* be contributing to some of my problems."

COGNITIVE-BEHAVIORAL THEORIES OF SUBSTANCE ABUSE

The application of cognitive-behavioral theories to substance abuse is a relatively recent occurrence. Indeed, for most of this century up until the mid 1980s, the field of psychotherapy largely ignored substance abuse, viewing it as a superficial symptom of more important underlying problems. However, as substance abuse has become more widely recognized, interest in developing effective treatments has increased among both cognitive-behavioral and psychodynamic theorists (33).

In this section, two major cognitive-behavioral theories of substance abuse are described: relapse prevention (27) and cognitive therapy (24). These theories provide the conceptual foundation for treatment strategies discussed later in this chapter. Both of these cognitive-behavioral theories make the following assumptions:

1. Substance abuse is mediated by complex cognitive and behavioral processes.

2. Substance abuse and associated cognitive-behavioral processes are, to a large extent, learned.
3. Substance abuse and associated cognitive-behavioral processes can be modified, particularly by means of cognitive-behavioral treatment.
4. A major goal of cognitive-behavioral substance abuse treatment is to facilitate the acquisition of specific skills for resisting substance use and general coping skills for reducing the problems associated with substance abuse.
5. Cognitive-behavioral therapies require comprehensive case conceptualizations that serve as the basis for selecting specific cognitive-behavioral techniques.
6. In order to be effective, cognitive-behavioral therapies must be provided in the context of warm, supportive, collaborative therapeutic relationships.

Relapse Prevention: Marlatt and Gordon

Most cognitive-behavioral treatments are derived at least in part from the ground-breaking work of Marlatt and Gordon (27). Their relapse prevention model is important for several reasons: it was the first major cognitive-behavioral approach to substance abuse; it provides practical, flexible interventions that can be applied by a wide range of clinicians; it can be used adjunctively with other treatments; and, it provides a straightforward conceptual model for understanding substance abuse. Their sensitive descriptions of substance abusers' subjective experiences, as well as their clear articulation of a theoretical model and specific interventions, have contributed to making Marlatt and Gordon's text the seminal cognitive-behavioral work on substance abuse (34, 35). Some popular relapse prevention concepts and techniques have included the identification and avoidance of high-risk situations, exploration of the decision chain leading to drug use, lifestyle modification (e.g., choosing friends who do not use), and learning from "slips" in order to prevent future relapses. Originally developed for addictive behaviors, relapse prevention has since been adapted for a wide variety of psychological and behavioral problems (36, 37).

Marlatt and Gordon's (27) cognitive-behavioral model is illustrated in Figure 49.1. According to their model, the potential for relapse begins with a high-risk situation, defined as any circumstance "that poses a threat to the individual's sense of control and increases the risk of potential relapse" (38, p. 37). The most common high-risk situations are negative emotional states, interpersonal conflicts, and social pressure (39). Individuals with effective coping re-

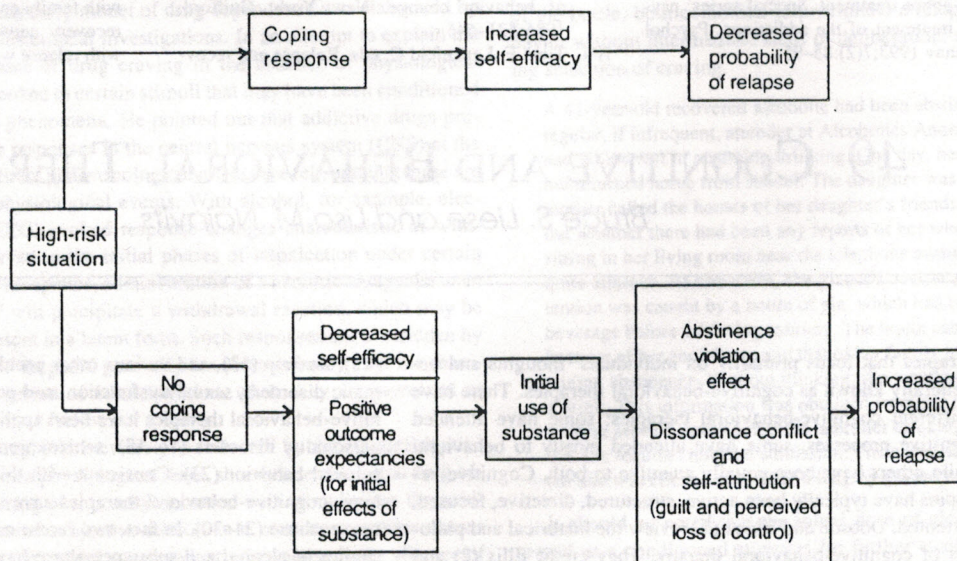


Figure 49.1. A cognitive-behavioral model of the relapse process. (Reprinted by permission from Marlatt GA. Relapse prevention: theoretical rationale and overview of the model. In: Marlatt GA, Gordon JR, eds. Relapse prevention: maintenance strategies in the treatment of addictive behavior. New York: Guilford Press, 1985:38. Copyright 1985 by Guilford Press.)

sponses (e.g., alcohol and drug refusal skills) are most likely to develop self-efficacious beliefs (i.e., self-confidence) about their abilities to refrain from substance use. Self-efficacy, in turn, decreases their probability of relapse.

In contrast to individuals with effective coping responses, those without effective coping responses have decreased self-efficacy regarding their abilities to resist substance use. They are more likely to expect positive effects from initial substance use. Decreased self-efficacy and positive outcome expectancies lead to initial substance use (i.e., a "slip"), which may lead to the abstinence violation effect (AVE). The AVE is a form of cognitive dissonance that results from the discrepancy between a commitment to abstinence and subsequent use (e.g., "I've violated my abstinence, so I might as well give up on recovery."). The AVE, characterized by feelings of guilt and a perceived loss of control, increases the probability of relapse.

Carla's high-risk situations usually involve negative emotions. She lacks constructive cognitive and behavioral strategies for regulating these emotions and therefore she believes that she must smoke marijuana to feel good. She has attempted to quit many times, but she views even a single "hit" as complete failure (the AVE). Thus, each use leads to a downward spiral of extended marijuana use. To reduce her dependence on marijuana it will be essential for Carla to develop more effective cognitive and behavioral coping strategies.

Cognitive Therapy of Substance Abuse: Beck and Colleagues

The cognitive therapy of substance abuse, developed by Beck, Liese, and colleagues (24, 40-43), is based on the same basic principles as cognitive therapy for other problems, such as depression (12), anxiety (13), and personality disorders (16). Like other cognitive-behavioral substance abuse therapies, cognitive therapy has been substantially influenced by the work of Marlatt and Gordon (27).

Cognitive therapy is based on the premise that substance abuse involves numerous complex behaviors driven largely by drug-related beliefs, automatic thoughts, and facilitating beliefs. Complex behaviors involve the acquisition and consumption of substances as well as actions to avoid the negative consequences of substance abuse (e.g., lying about drinking to avoid conflicts with a spouse). Drug-related beliefs involve positive ("anticipatory") beliefs about the effects of substance use (e.g., "Nothing feels as great as getting stoned!"), as well as negative ("relief-oriented") beliefs about the effects of refraining from substance use (e.g., "If I quit now, I'll get the

shakes."). Automatic thoughts are brief, abbreviated ideas that spontaneously flash across a person's mind. Some automatic thoughts manifest themselves as sharp visual images, like frozen frames from a movie (e.g., the image of taking a gulp of ice-cold beer on a hot summer's day). Facilitating beliefs involve permission to use despite prior commitments to stop using.

The cognitive model is presented in Figure 49.2. Based on the work of Marlatt and Gordon (27), this model views substance use as being triggered by activating stimuli (synonymous with "high-risk situations"). Activating stimuli are categorized according to whether they occur internally or externally. For example, internal cues may include negative feelings (e.g., anxiety, boredom), positive feelings (e.g., joy, excitement), memories (e.g., flashbacks of being abused), and physiological sensations (e.g., cravings, pain). Examples of external cues include interpersonal conflicts, sights and sounds (e.g., seeing or hearing a beer can popped open), other substance users, problems at school or work, and celebration times (e.g., parties, holidays).

In response to internal and external cues, people use psychoactive substances because they believe they will either increase positive feelings (i.e., pleasure), or they will alleviate negative feelings (i.e., pain). These anticipatory and relief-oriented beliefs lead to automatic thoughts and images (e.g., "I need a drink!" "I want a hit!"), that result in craving for the substance. Following these cravings, individuals may give themselves permission to use (e.g., "I'll quit soon." "Just one won't hurt me."). Permissive beliefs lead to action plans, which eventually lead to continued use or relapse.

Carla's depression activates a string of thoughts and beliefs: "No one likes me and that's why I'm alone. Life sucks. Only pot makes me feel better." As Carla imagines herself smoking a joint her cravings grow so strong that she starts to believe, "I'll never quit." She tries to resist her cravings, but after a few minutes she gives herself permission to smoke: "Just a few tokes won't hurt me." Her cravings grow even stronger as she searches her closet for marijuana and imagines herself getting high. After just one hit Carla says to herself, "I've blown it again; I'm nothing but a damn addict!" (and she continues smoking). This vicious cycle recurs each time she smokes: depressed feelings, drug-related beliefs, automatic thoughts, strong cravings, permission to use, marijuana use, and the exacerbation of her depressed feelings.

Recently, Liese and Franz (42) have proposed a model for the development of substance abuse. As shown in Figure 49.3, individuals are more likely to abuse substances if they have had difficult or traumatic early life experiences. Such experiences contribute to basic beliefs about their own unlovability and inadequacy (e.g., "My situation will never improve"), which in turn increase the likelihood of experimentation with drugs and alcohol. As substance use continues, positive substance-related beliefs become increasingly salient.

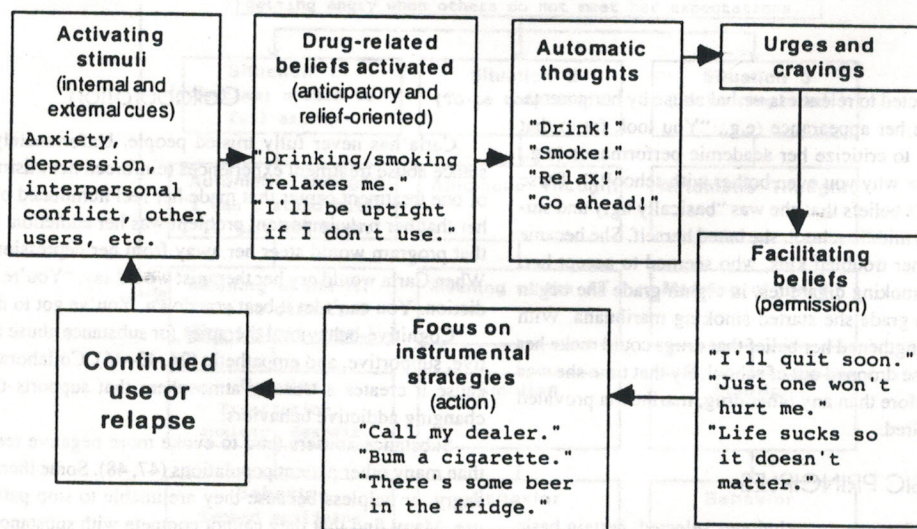


Figure 49.2. Cognitive therapy model of substance abuse. (Reprinted by permission from Liese BS, Franz RA. Treating substance use disorders with cognitive therapy: lessons learned and implications for the future. In: Salkovskis P, ed. *Frontiers of cognitive therapy*. New York: Guilford Press, 1996:477. Copyright 1996 by Guilford Press.)

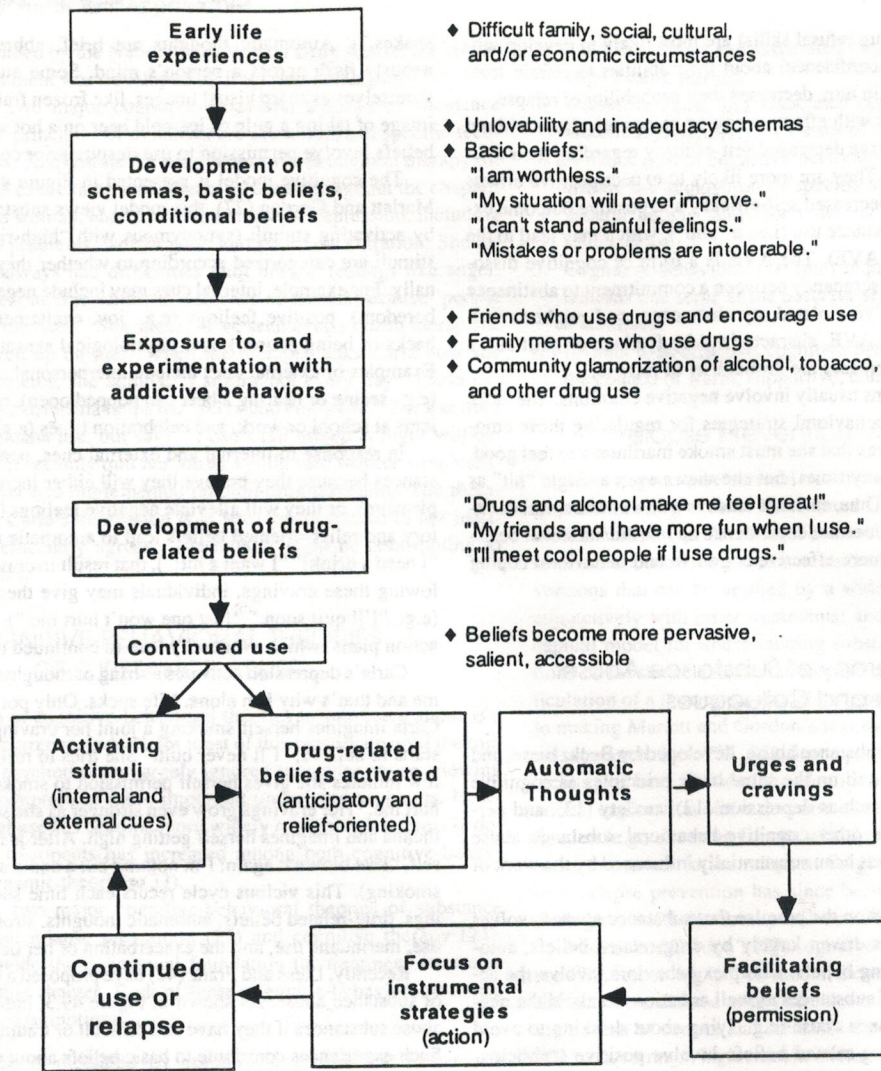


Figure 49.3. A cognitive-developmental model of substance abuse. (Reprinted by permission from Liese BS, Franz RA. Treating substance use disorders with cognitive therapy: lessons learned and implications for the future. In: Salkovskis P, ed. *Frontiers of cognitive therapy*. New York: Guilford Press, 1996:482. Copyright 1996 by Guilford Press.)

As a child, Carla was subjected to relentless verbal abuse by her parents. Her mother tended to criticize her appearance (e.g., "You look fat in that dress!") and her father tended to criticize her academic performance (e.g., "You're so stupid. I don't know why you even bother with school!"). These messages contributed to Carla's beliefs that she was "basically ugly and stupid." By the time Carla entered middle school, she hated herself. She became increasingly involved with other troubled kids, who seemed to accept her. By seventh grade Carla was smoking cigarettes, in eighth grade she began drinking alcohol, and in ninth grade she started smoking marijuana. With each new substance, Carla strengthened her belief that drugs could make her feel good. In eleventh grade, she dropped out of school. By that time she was smoking marijuana heavily. More than any other drug, marijuana provided the "numbing" effects she desired.

BASIC PRINCIPLES

Regardless of the specific therapeutic techniques selected, certain basic principles are important to all cognitive-behavioral substance abuse treatments. These principles include collaboration, case conceptualization, structure, and psychoeducation.

Collaboration

Carla has never fully trusted people. Unfortunately, some of her substance abuse treatment experiences reinforced her mistrust. She dropped out of one treatment center that made her feel humiliated by continually telling her that her *only* important problem was her addiction. Carla's counselor in that program would steer her away from her depression or other problems. When Carla would cry her therapist would say, "You're giving in to your addiction. You can't let it beat you down. You've got to fight back."

Cognitive-behavioral therapies for substance abuse are highly collaborative, supportive, and empathetic (24, 40-46). Collaboration is important because it creates a trusting atmosphere that supports the difficult work of changing addictive behaviors.

Substance abusers tend to evoke more negative responses in therapists than many other patient populations (47, 48). Some therapists feel frustrated, angry, or helpless because they are unable to stop patients from substance use. Many find that they cannot compete with substances that provide more intense and immediate effects than therapy. Some therapists feel frustrated because they cannot relate to the chronically impaired lives of such patients. Cognitive-behavioral therapists are strongly encouraged to directly con-

front their prejudiced thoughts about patients who abuse substances (41, 42). For example, rather than thinking "This drug addict will never change," therapists are taught to think, "If I am patient, this person may eventually make some important changes." Therapists are also encouraged to use effective communication skills with patients. For example, they are discouraged from lecturing and cajoling patients; instead, active listening and roleplaying are recommended. When patients want to discuss non-substance-related problems, therapists are encouraged to spend appropriate time discussing, rather than minimizing, these problems. Therapists are also encouraged to regularly elicit feedback about patients' responses to therapy by asking such questions as, "What was most and least helpful about our talk today?" and "How will you implement the things we've talked about?"

At the very least, collaboration is important for retaining patients in treatment (41). When Carla first entered cognitive-behavioral therapy she was guarded and suspicious. To her surprise, Carla's therapist listened in a warm, caring, and nonjudgmental manner. By having such a therapist, Carla was helped to draw her own conclusions about her substance use. At first Carla was skeptical. However, she began to trust her therapist and she continued treatment. Though her progress was extremely slow (she was still smoking marijuana after 9 months of treatment), her therapist maintained a warm, accepting attitude.

Cognitive-behavioral substance abuse treatments emphasize the importance of adapting treatment to individuals, rather than expecting individuals to adapt to treatment. For example, some treatments make therapy more engaging by using inspirational quotations and stories, simplified cognitive-be-

havioral therapy forms, and summary session handouts (46), others use reward systems (49, 50), while others call patients at home when they miss sessions (24).

Case Conceptualization

Substance use patients comprise an extremely heterogeneous group. Some have no coexisting psychiatric problems while others have one or more psychiatric syndromes (e.g., depression, anxiety, posttraumatic stress disorder [PTSD], schizophrenia, bipolar illness, or personality disorders). Some are highly motivated to change while others deny that they have serious problems. Some have major coexisting life problems, such as AIDS or homelessness, while others are stable and high-functioning.

The case conceptualization involves the process of assessing patients' backgrounds, presenting problems, psychiatric diagnoses, developmental profiles, and cognitive-behavioral profiles (24, 40, 42). This process may be facilitated by the use of standardized assessment instruments. Sobell, Toneatto, and Sobell (51) provide an excellent review of clinical instruments useful for the conceptualization of patients with substance use problems. Additionally, Beck (52) has developed a case conceptualization diagram (Fig. 49.4) that can be used effectively with patients who abuse substances. This diagram enables therapists to organize information about the development and maintenance of patients' substance use, as well as other problems.

Carla's case conceptualization diagram is presented in Figure 49.4. Her presenting problems include daily marijuana use and depressive symptoms.

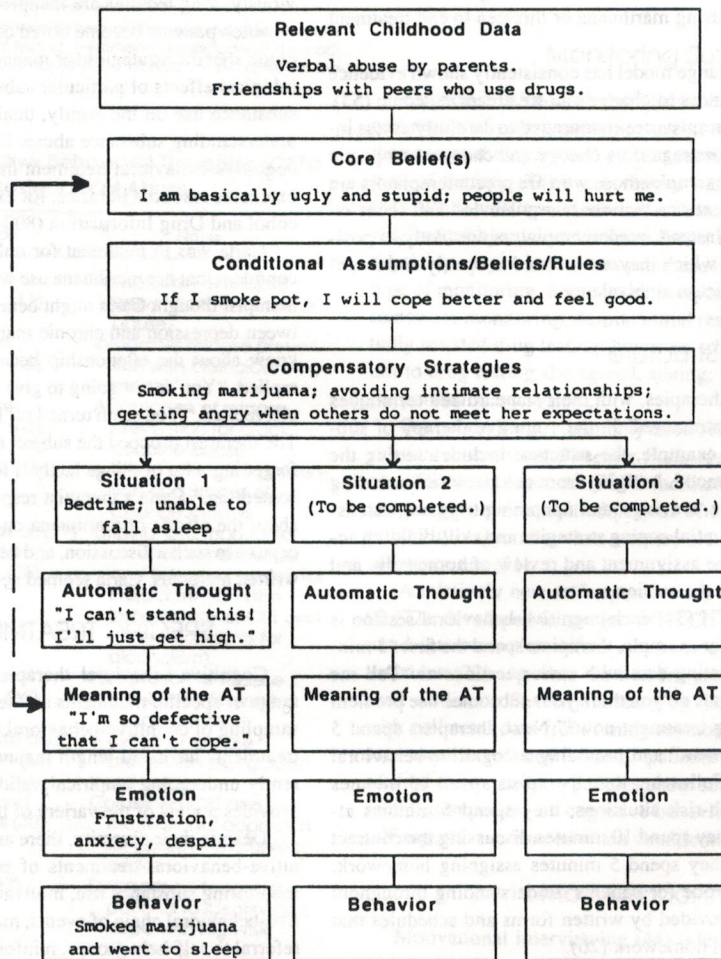


Figure 49.4. Cognitive Conceptualization Diagram. (Reprinted by permission from Beck JS. Cognitive therapy: basics and beyond. New York: Guilford Press, 1995:139. Copyright 1993 by Judith S. Beck.)

Her Axis I psychiatric diagnoses include marijuana dependence and major depression. On Axis II she has some borderline personality features (e.g., affective instability, intense interpersonal relationships, impulsivity, chronic feelings of boredom and emptiness). As previously discussed, relevant childhood data include parents that were verbally abusive and friends that used drugs. Carla's core beliefs are "I am basically ugly and stupid" and "People will hurt me." Important conditional beliefs involve the use of marijuana to reduce pain ("If I smoke pot, I will cope better and feel good." and "If I try to cope without smoking marijuana, I will fail.") Carla's most salient compensatory strategy is to smoke marijuana. For example at bedtime, when Carla is unable to fall asleep, she thinks: "I can't stand this! I'll just get high" (and she does).

The case conceptualization would be incomplete without an assessment of motivation to change. Prochaska, DiClemente, and Norcross (53, 54) have developed a system for assessing individuals' readiness to change. Substance abusers who believe that they have no problems are considered to be in the precontemplation stage. Those who believe that they may have problems are in the contemplation stage. Those taking steps to get ready for change are in the preparation stage. Those who have changed for at least 24 hours are in the action stage. And those who have endured change for at least 6 months are in the maintenance stage.

Like most other substance abusers, Carla has experienced dramatic fluctuations in her readiness to change. Upon entering cognitive-behavioral therapy she was highly motivated to reduce her depression, but only minimally motivated to reduce her marijuana use. As her therapist elicited background information from Carla, her ambivalence about change became apparent. Carla's therapist was able to use this information to "meet Carla where she was at" in the change process. At no time did Carla's cognitive-behavioral therapist demand that she stop using marijuana or threaten to end treatment if she continued to use.

Research on the stages of change model has consistently shown evidence of a relationship between readiness to change and treatment outcome (53). Hence, cognitive-behavioral therapists are encouraged to carefully assess individuals' thoughts and behaviors regarding change and choose therapeutic interventions accordingly. For example, those who are precontemplators are unlikely to benefit from interventions that are heavy-handed and focus on specific methods of changing. Instead, precontemplators are likely to positively respond to discussions in which they are listened to openly and empathetically and encouraged to discuss ambivalence.

Structure

Most cognitive-behavioral therapies, with their standardized techniques and procedures, are relatively structured. In the cognitive therapy of substance abuse (24, 40, 42), for example, the structure includes setting the agenda, checking the patient's mood, bridging from the last visit (including a review of substance use, urges, cravings, and upcoming triggers), discussion of problems (including potential coping strategies and skill-building activities), frequent summaries, the assignment and review of homework, and feedback from the patient about the session.

Similarly, in Project MATCH (31) each cognitive-behavioral session is highly structured. In session 1, for example, therapists spend the first 45 minutes building rapport and collecting data with such questions as "Tell me about yourself." and "How serious do you think your substance use problem is?" and "Why are you seeking treatment now?" Next, therapists spend 5 minutes "conceptualizing treatment" and providing a cognitive-behavioral explanation of alcohol abuse. Following this, therapists spend 15 minutes teaching patients to assess high-risk situations, they spend 5 minutes attempting to boost motivation, they spend 10 minutes discussing the contract and ground rules, and finally they spend 5 minutes assigning homework. Therapists are encouraged to probe for patients' understanding throughout sessions. Structure is further provided by written forms and schedules that are completed in sessions and as homework (26).

Cognitive-behavioral therapies for substance abuse are also offered in group settings. For example, in a new cognitive-behavioral treatment group for substance abuse and PTSD (46), there are eight behavioral sessions, eight

cognitive sessions, and eight interpersonal sessions. Each session contains the following (46, p. 16): a review of group members' use since the last session; a tally of group members' attendance, abstinence, and homework completion; reading of a brief inspirational quotation; an introduction to the agenda by the leader; discussion of the agenda topic (with opportunities to practice new skills); homework review, and closure.

Early in therapy Carla became irritated with her therapist because she viewed the structure of cognitive-behavioral therapy as "controlling." At one point she said to her therapist, "You remind me of my parents!" As time progressed, however, she grew to appreciate the consistency provided by structured therapy and understand how structure facilitates the accomplishment of goals.

Psychoeducation

Cognitive-behavioral therapies usually incorporate significant psychoeducational efforts, particularly early in treatment. The complexity of biological, behavioral, cognitive, and spiritual problems associated with substance abuse requires that cognitive-behavioral therapists be well informed about these areas.

Psychoeducation is a delicate process. Just as individuals vary in their readiness to change, they also vary in their readiness to attend to educational interventions. Both timing and style of delivery determine the value of psychoeducational presentations. Rather than randomly lecturing patients, cognitive-behavioral therapists elicit knowledge from patients in areas relevant to their circumstances and needs. When patients expose knowledge deficits, therapists offer opportunities for patients to learn more by means of brief lectures, written materials, videotapes, or workbooks on a variety of topics. Obviously, long lectures are inappropriate. ("Too long" is defined as the point at which patients become bored or distracted). Areas for education might include specific strategies for managing cravings, general coping skills, physiological effects of particular substances, high-risk behaviors, the impact of substance use on the family, dual diagnosis, and psychological models for understanding substance abuse. Information in these areas may be found in cognitive-behavioral treatment manuals or they may be obtained free from extensive resource libraries, for example the National Clearinghouse for Alcohol and Drug Information (800-729-6686).

Carla was in treatment for only a short time when her therapist became confident that her marijuana use was contributing to her depression. When the therapist thought Carla might benefit from learning about the relationship between depression and chronic marijuana use, he asked Carla: "What do you know about the relationship between depression and marijuana use?" She replied, "You're not going to give me a big lecture now, are you?" The therapist replied, "You seem turned off by the idea," and Carla agreed that she was. The therapist dropped the subject until some time later when Carla said, "I'm forgetting a lot of things lately. I feel like I'm getting Alzheimer's disease or something." Carla's therapist responded by asking, "Would you like to hear about the effects of marijuana on memory?" At this time, Carla seemed receptive to such a discussion, and her therapist gave her a brief lecture and some written materials. Carla seemed genuinely interested at this time.

SPECIFIC TREATMENTS AND TECHNIQUES

Cognitive-behavioral therapies for substance abuse comprise a wide range of specific treatments and techniques (55, 56). Tables 49.1-49.3 list a sampling of cognitive-behavioral therapies for substance abuse. Most listed treatments have full-length manuals, and most have undergone or are currently undergoing empirical validation. While the list is not exhaustive, it provides a view of the variety of treatments available.

Despite their diversity, there are several strategies common to most cognitive-behavioral treatments of substance abuse. These strategies include monitoring substance use, motivational interviewing, identifying the cognitive-behavioral chain of events, management of cravings, case management, referral to self-help groups, reinforcement contingencies, focus on retention, attention to coexisting psychiatric disorders, emphasis on harm reduction, enhancement of social support, and lifestyle change. Each of these strategies is briefly described in this section.

Table 49.1 A Sampling of Cognitive Behavioral Therapies (CBTs) for Substance Abuse: General Models

Population	Treatment	Authors	Notes
General	Relapse prevention	Mariatt and Gordon (27)	First comprehensive CBT developed for substance abuse; ground-breaking theoretical and practical model.
General	Cognitive therapy	Beck et al. (24)	Cognitive therapy applied to substance abuse.
General	Contingency management	Anker and Crowley (57)	Community reinforcement approach with contingency management as central theme.
General	Behavior therapy	Higgins et al. (50)	Behavioral model emphasizing positive reinforcement (e.g., payment for clean urine screens; social reinforcement).
General	Cue exposure	Childress et al. (58)	A behavioral extinction model to eliminate response to drug-related cues.
General	Aversion therapy	Holder et al. (59)	Aversion methods used to create conditioned negative response to drug cues.
General	Network therapy	Galanter (60)	Use of the patient's social network to provide social reinforcement and monitoring of substance use.

Treatments are included in this table if a treatment manual has been developed and is being (or has been) subjected to empirical testing. Treatments are included if they address alcohol or major psychoactive drugs of abuse (i.e., not nicotine or caffeine). The table is selective, not comprehensive.

Table 49.2 A Sampling of Cognitive Behavioral Therapies (CBTs) for Substance Abuse: Specific Substances of Abuse

Substance	Treatment	Authors	Notes
Cocaine	Relapse prevention	Carroll et al. (61)	Adaptation of relapse prevention for cocaine abuse.
Cocaine	Neuro-behavioral	Rawson et al. (62)	Integrates relapse prevention with biological stage model.
Crack cocaine	Relapse prevention	Wallace et al. (63)	Adaptation of relapse prevention for crack cocaine abuse.
Cocaine	Intensive outpatient	Washton (64)	A blend of relapse prevention and Stages of Change models.
Alcohol	Relapse prevention	Monti et al. (29) Kadden et al. (26)	Original CBT manual for alcohol dependence and adapted version for Project MATCH (the largest study of CBT and other treatments for alcoholism).
Marijuana	Relapse prevention	Roffman et al. (65)	Adaptation of relapse prevention for marijuana abuse.
Opioids	Recovery training/self-help	McAulliffe and Ch'ien (66)	A hybrid of relapse prevention plus guided self-help.
Alcohol	Guided self-change	Sobell and Sobell (30)	Combined CBT and motivational approach for nonsevere problem drinkers.
Alcohol	Relapse prevention	Annis (67)	Emphasis on teaching patients to identify and cope with high-risk situations.

Treatments are included in this table if a treatment manual has been developed and is being (or has been) subjected to empirical testing. Treatments are included if they address alcohol or major psychoactive drugs of abuse (i.e., not nicotine or caffeine). The table is selective, not comprehensive.

Table 49.3 A Sampling of Cognitive Behavioral Therapies (CBTs) for Substance Abuse: Dual Diagnosis

Disorder	Treatment	Authors	Notes
Schizophrenia	Relapse prevention	Ziedonis and Fisher (68)	Uses the stages of change model and CBT to treat schizophrenics with substance abuse.
PTSD	CBT	Najavits et al. (46)	Adapts CBT to the themes and problems of patients with PTSD and substance abuse.
Bipolar disorder	Relapse prevention	Weiss et al. (69)	Adapts relapse prevention to bipolar disorder, with emphasis on medication compliance.
Borderline personality disorder	Dialectical behavior therapy	Linehan (70)	Dialectical behavior therapy applied to substance abuse.

Treatments are included in this table if a treatment manual has been developed and is being (or has been) subjected to empirical testing. Treatments are included if they address alcohol or major psychoactive drugs of abuse (i.e., not nicotine or caffeine). The table is selective, not comprehensive. Each of these models is currently undergoing empirical testing; and all were funded by the NIDA Behavioral Therapies Development Program.

Monitoring Substance Use

Cognitive-behavioral therapists actively monitor the types, quantities, and routes of recent substance use at each treatment session. By doing so, they assess their patients' current substance use status and estimate the impact of therapy. There are various methods for monitoring substance use (51). While self-report is the most common, urine and breathalyzer tests provide more objective data. Some forms of urine and breathalyzer testing are relatively easy to implement and some insurance companies will pay for this type of monitoring. Some patients report that they have been helped by substance use monitoring, despite initial resistance to it. For example, Carla initially resisted drug testing; however, when her therapist urged Carla to submit to drug testing she agreed, stating: "I'd like to see how long it takes to get pot out of my system."

One of the most commonly used self-report instruments for monitoring substance use is the *Timeline Followback* (TLFB) (71). Originally developed for alcohol use, the TLFB facilitates patients' recall of their substance use patterns over specified periods of time. This method has demonstrated reliability, especially when memory aids are used to facilitate recollection of substance use (51).

A relatively new self-report battery for assessing substance use is Form 90 (72), developed for project MATCH. Form 90 is a calendar-based structured interview that offers measures of alcohol consumption and related variables (72). Another method for assessing substance use is the widely used Addiction Severity Index (73). These instruments can be augmented with collateral data from family members, probation officers, or other persons who have knowledge of patients' substance use. Regardless of the method chosen, asking patients about substance use at each session is an essential component of cognitive-behavioral treatment and the accuracy of self-reports is enhanced when confidentiality is assured (51).

Motivational Interviewing

Motivational interviewing (44) refers to the process of communicating with patients in ways that facilitate their readiness to change substance use behaviors. Motivational interviewing is designed to address ambivalence and move patients from one stage of motivation to the next. There are five principles underlying motivational interviewing (44, p. 5): (a) express em-

	Abstinence	Continued smoking
Advantages	<ul style="list-style-type: none"> • Less depressed • Maybe feel better about myself • My kids won't have a mother who has a drug problem • Save money • Good for my health 	<ul style="list-style-type: none"> • Fall asleep easier • Helps me deal with my problems • Easier than quitting
Disadvantages	<ul style="list-style-type: none"> • I have no other method for feeling better • I'll have trouble falling asleep • Can't forget my problems 	<ul style="list-style-type: none"> • Depression • Spend money • Could get into legal problems • Bad for my health

Figure 49.5. Advantages-Disadvantages Analysis. (Reprinted by permission from Beck AT, Wright FD, Newman CF, Liese BS. Cognitive therapy of substance abuse. New York: Guilford Press, 1993:138. Copyright 1993 by Guilford Press.)

pathy, (b) help patients to see discrepancies in their lives, (c) avoid argumentation, (d) roll with resistance, and (e) support patients' development of self-efficacy.

A standard cognitive therapy technique for motivating patients is the advantages-disadvantages (A-D) analysis (24, 40, 42). In the A-D analysis, a four-cell matrix is drawn (Fig. 49.5) and patients are helped to list and evaluate the advantages and disadvantages of using versus not using substances. Carla's A-D analysis is presented in Figure 49.5. By completing this analysis, Carla and her therapist gain a greater appreciation for her ambivalence about marijuana use. The therapist, of course, focuses her attention on the disadvantages of using and the advantages of abstinence. But, moreover, Carla's therapist helps her imagine how she might achieve some of the advantages of smoking marijuana (e.g., falling asleep at night and dealing with her problems) without actually smoking it. For example, Carla's therapist teaches her relaxation techniques to help her fall asleep at night.

Identifying the Cognitive-Behavioral Chain of Events

The chain of events (i.e., precursors) associated with substance use include particular circumstances, feelings, beliefs, thoughts, and actions. Virtually all cognitive-behavioral treatments attempt to identify precursors that trigger substance use. An important assumption of cognitive-behavioral therapies is that patients can learn to manage these precursors (and thereby manage their substance use) after learning how they operate in their lives.

Liese and Franz (42) have developed a worksheet for identifying the cognitive-behavioral events leading to substance use (Fig. 49.6). This worksheet, which is actually a blank version of the cognitive model in Figure 49.2, provides a standardized form for collecting data while simultaneously teaching patients about the cognitive-behavioral dynamics of their substance use.

When Carla revealed that she had smoked marijuana on the day before one of her sessions, her therapist asked the following questions: "What led

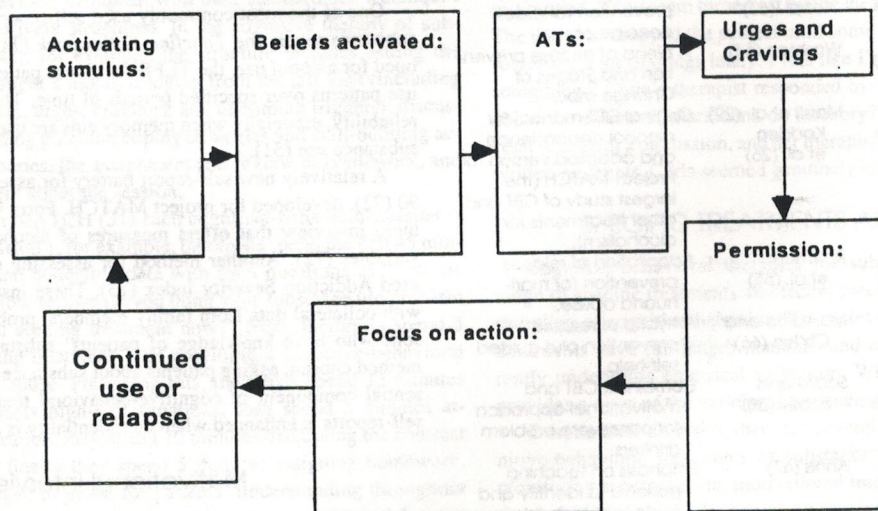


Figure 49.6. Cognitive Model Worksheet (completed with patient). (Reprinted by permission from Liese BS, Franz RA. Treating substance use disorders with cognitive therapy: lessons learned and implications for the future. In: Salkovskis P, ed. Frontiers of cognitive therapy. New York: Guilford Press, 1996:490. Copyright 1996 by Guilford Press.)

to your smoking? What were you doing prior to the time you began to smoke? What was going on around you? What were you feeling? What were your beliefs? Your automatic thoughts? How did you give yourself permission? To facilitate this process, Carla's therapist said, "Imagine that you're watching a videotape replay of the scene and let's figure out what triggered you to smoke."

Annis' (67) relapse prevention approach places substantial emphasis on high-risk situations in the cognitive-behavioral chain of events. In fact, she has developed several standardized measures for assessing and monitoring such situations: the Inventory of Drinking Situations (74), the Inventory of Drug-Taking Situations (75) and the Situational Confidence Questionnaire (76). After identifying triggers, patients are taught to avoid them when possible and cope with them when they are unavoidable. Most cognitive-behavioral therapies identify craving as an important high-risk link in the cognitive-behavioral chain and most offer skills for managing cravings.

Management of Cravings

As patients attempt to overcome substance abuse, cravings are inevitable. There are numerous cognitive-behavioral strategies for managing cravings. Perhaps the most parsimonious are the distraction techniques. In one behavioral technique, patients snap rubber bands worn on their wrists to distract themselves from cravings. The cognitive version of this technique is thought-stopping wherein patients silently shout "stop!" (to themselves) when experiencing cravings. Cognitive-behavioral therapists can also use cognitive strategies such as flash cards, imagery, advantages-disadvantages analyses, and daily thought records to reinforce beliefs and thoughts that reduce cravings. For other examples of cognitive techniques, see McMullin (77).

Most cognitive techniques for managing cravings involve distinguishing between "addictive beliefs" (beliefs that promote substance use) and "control beliefs" (beliefs that promote abstinence). Beck and colleagues (24, p. 312) provide a list of addictive beliefs associated with craving, including the following:

- "Craving can drive you crazy."
- "I don't have any control over the craving."
- "I can't stand the physical symptoms I have while craving."
- "The craving makes me so nervous, I can't stand it."
- "When I'm really craving drugs, I can't function."
- "Either I'm craving drugs or I'm not; there's nothing in between."
- "When craving drugs it's okay to use alcohol."
- "The craving is stronger than my will power."

In one of her first sessions, Carla described herself as struggling with most of these addictive beliefs. Carla's therapist asked her to respond to each belief with control beliefs that would contradict these addictive beliefs. For example, in response to the first belief, "Craving can drive you crazy," Carla responded with such control beliefs as, "The cravings won't drive me crazy," and "The cravings will eventually go away." She also generated some humorous responses like, "I'm already crazy so I can't get any crazier!" and "What the hell, it's fun to be crazy!" Carla wrote these responses on index cards, which served as anti-craving flash cards. In fact, at a later date, Carla explained that, "the humorous cards were the ones that really helped me."

Case Management

Substance abusers typically suffer from variety of serious life problems, including health, legal, employment, family, and housing problems. In some cases these are the sequelae of substance use (e.g., a heroin abuser who has contracted HIV by sharing needles). In other cases these life problems may have led to substance abuse (e.g., a teenage girl who uses alcohol to cope with ongoing sexual abuse). Actively addressing these real life issues is considered a necessary component of cognitive-behavioral therapy.

There are numerous opportunities for cognitive-behavioral therapists to provide case management services. For example, they might refer patients for specialized assistance (e.g., medical, legal, or vocational counseling), give patients listings of sober houses, help patients fill out welfare forms, re-

view newspaper job listings during sessions, monitor patients' important visits to their physicians, help patients complete domestic abuse restraining orders, or call detoxification hospital units to determine whether beds are available. Thus, therapists must be familiar with community resources, including legal services, detoxification centers, HIV testing sites, and self-help groups.

Referral to Self-Help Groups

It is important for cognitive-behavioral therapists to be familiar with self-help groups and make appropriate referrals to these groups. Such group may include Alcoholics Anonymous (78) and other 12-step programs (Cocaine Anonymous, Narcotics Anonymous; Al-Anon for family members; Codependents Anonymous, Gamblers Anonymous, Overeaters Anonymous). In addition to the more traditional self-help groups, a new generation of self-help groups has recently arisen, based on cognitive-behavioral principles. These groups include Rational Recovery (79) and Moderation Management (80). It is important for cognitive-behavioral therapists to become familiar with these groups and make appropriate referrals. However, it is not considered beneficial to proselytize or coerce patients to attend such groups (81).

Providing basic information about the process and content of self-help groups is important in the treatment of substance abuse. Ideally, therapists might attend several groups in order to personally observe them. At the very least, cognitive-behavioral therapists should provide patients with lists of self-help groups, encourage them to attend, and follow-up with questions about groups. There are numerous issues that may be addressed in therapy relating to self-help groups. For example, therapists may address how patients feel about going to first group meetings; how they manage anxiety about speaking at such groups or socializing with others; how they find the right group for them; how they distinguish between more and less helpful aspects of groups; and how they respond to others in groups who do not believe in psychotherapy or medication. In short, self-help groups may be important adjuncts to cognitive-behavioral substance abuse treatment and they may even occasionally become the focus of therapy.

Reinforcement Contingencies

All cognitive-behavioral models implement reinforcement of some kind. Such reinforcement is usually positive (e.g., praise, payment vouchers), though some programs have investigated negative contingencies (e.g., inducing nausea). In some treatments (e.g., behavior therapy), positive reinforcement is the central mechanism of treatment (49, 50). Formal systems are devised, such as paying patients for clean urines with increasing rates of pay for longer periods of abstinence (e.g., \$1.50 for the first urine; \$3.00 for the third). In some programs, patients are provided with vouchers for items such as sports equipment and movie passes.

Another version of contingency management involves the use of social reinforcement contracts. Social reinforcement is a central technique in some behavior therapies and in network therapy (60) in particular. In negative reinforcement models, the patient agrees to have some aversive experience that will aid in diminishing substance use. Extinction models (58) in contrast, rely on eliminating responses to drug cues. Even in cognitive-behavioral treatments that do not formally provide rewards for behavior change, reinforcement manifests itself as session-by-session monitoring of goals, with therapist praise for successive approximations of abstinence.

Focus on Retention

Substance abuse patients have notoriously high treatment dropout rates (82). Thus, it is important to explicitly discuss retention with substance-abusing patients, especially when sessions are missed. In short, therapists are encouraged to do "whatever is reasonable" to retain patients in therapy. Some therapists, particularly in the past, believed in ejecting patients from treatment if they used substances. However, in cognitive-behavioral therapies, this approach is virtually never indicated.

Techniques for maximizing retention include general psychotherapeutic strategies such as cultivating rapport, collaboration, and alliance, as well as

Cognitive ther

n of Events

Substance use and actions. Various precursors that cognitive-behavioral (and thereby in their lives. Identifying the cog- 6). This work- in Figure 49.2, neously teach- substance use. the day before ons: "What led

substance therapy. New

specific cognitive techniques such as the exploration of cognitions associated with missed sessions (41). In addition, behavioral strategies are encouraged, including the provision of transportation and onsite babysitting, incentives (e.g., snacks and coffee in the waiting-room), writing patients' appointment times on cards, and confirming appointments via telephone prior to each session.

Attention to Coexisting Psychiatric Disorders

Psychiatric disorders, including depression, anxiety, PTSD, bipolar disorder, and personality disorders tend to coexist with substance abuse (83). Such comorbidity presents significant treatment challenges, since these disorders are intricately bound to substance abuse in complex cyclical patterns. Abstinence from substances may either decrease or increase psychological symptoms. For example, Carla's anxiety and sleep problems increase when she stops using marijuana and most of her depressive symptoms decrease only after extended periods of abstinence.

The etiologies of dual diagnoses are typically complex and multifactorial. While psychiatric disorders might lead some people to "self-medicate," resulting in alcohol or drug problems, substance abuse might lead others to develop psychiatric problems (e.g., cocaine addicts who develop secondary anxiety disorders and depression). Comorbid disorders are known to affect treatment outcome, as seen in a classic study by Woody and colleagues (84), in which psychiatric severity predicted differential response to psychotherapy, including cognitive-behavioral therapy.

In treating dually diagnosed patients, the most important step is the initial assessment (i.e., conceptualization) and monitoring of symptoms throughout treatment. In monitoring it is important to understand the relationships between psychiatric symptoms and drug use, cravings, and withdrawal (85). Following initial assessment, patients with coping skills deficits are taught general coping skills for managing their lives. While previously many patients were told to first become abstinent before comorbid disorders could be addressed (e.g., "First get clean, and then we'll talk about your depression"), most cognitive-behavioral models support more integrated treatments (i.e., treatments that simultaneously address multiple disorders). For example, the cognitive-behavioral dual diagnosis models listed in Table 49.3 take such an approach. In cases where clinicians cannot directly provide dual diagnosis treatment, referral to adjunctive treatments is recommended. Thus, Carla was treated for depression and marijuana dependence with cognitive-behavioral therapy and antidepressants (for depression). She was also encouraged to attend 12-step and relapse prevention groups (though she rarely did so).

Emphasis on Harm Reduction

While abstinence is still widely regarded as the ultimate treatment goal, harm reduction is increasingly recognized as an important transitional goal by many cognitive-behavioral therapists (86, 87). Rather than take an "all-or-none" stance, cognitive-behavioral therapists are likely to accept that some patients elect to reduce their substance use. Indeed, for a subsample of patients, harm reduction (rather than abstinence) may be the most appropriate goal.

Examples of harm reduction strategies include conducting "experiments" to see what abstinence feels like; praising patients for the achievement of transitional goals; and, the replacement of one drug (e.g., heroin) with another drug (e.g., methadone). The most important feature of harm reduction is therapists' attitudes of basic respect for patients and a willingness to accept their decisions and goals.

References

1. Dobson KS, Block L. Historical and philosophical bases of the cognitive-behavioral therapies. In: Dobson KS, ed. *Handbook of cognitive-behavioral therapies*. New York: Guilford Press, 1988:3-38.
2. Ellis A. *Reason and emotion in psychotherapy*. Secaucus, NJ: The Citadel Press, 1962.
3. Beck AT. *Thinking and depression: 1. Idiosyncratic content and cognitive distortions*. *Arch Gen Psychiatry* 1963;9:36-46.
4. D'Zurilla TJ, Goldfried MR. Problem-solving and behavior modification. *J Abnorm Psychol* 1971;78:107-126.
5. Goldfried MR, Decenteo ET, Weinberg L. Systematic rational restructuring as a self-control technique. *Behav Ther* 1974;5:247-254.
6. Guidano VF, Liotti G. Cognitive processes and emotional disorders: a structural approach to psychotherapy. New York: Guilford Press, 1983.
7. Mahoney MJ. *Cognition and behavior modification*. Cambridge, MA: Ballinger, 1974.
8. Maultsby MC. *Rational behavior therapy*. Englewood Cliffs, NJ: Prentice-Hall, 1984.
9. Meichenbaum DH. *Cognitive behavior modification*. New York: Plenum, 1977.
10. Rehm L. A self-control model of depression. *Behav Ther* 1977;8:787-804.

Enhancement of Social Support

Substance abuse may be associated with extreme impairment of family and social functioning. In fact, the behaviors of some substance abusers result in their experience of "hitting bottom" (e.g., losing their jobs, being evicted from their homes, legal problems, medical problems, and so forth). Many cognitive-behavioral treatments involve family members in an effort to promote social support and compliance with treatment.

Several of the therapies listed in Tables 49.1-49.3 directly involve patients' social networks. In network therapy (60) and behavior therapy (50), for example, family or close friends are invited to attend sessions with patients and actively become involved in treatment contracting. In other treatments, such as cognitive therapy (24), family sessions are provided to enable family members to learn about the treatment and to help secure support for patients' efforts.

Lifestyle Change and Associated Coping Skills

The reduction of substance use is a necessary but not sufficient criterion for treatment success. The lure of substances is likely to remain powerful unless lifestyle change is facilitated in therapy. Virtually every cognitive-behavioral treatment encourages some degree of lifestyle change. This may range from informal discussions of lifestyle options to formal planning of, and participation in activities together (66). Other techniques include contracting for engaging in new activities, referring patients to external resources to develop alternative pursuits (e.g., helping patients sign up for volunteer work), and conducting inventories to identify healthy activities.

In cognitive-behavioral therapy, patients are taught such essential coping skills as communication and mood regulation. To a large extent, these skills are necessary to support any substantial lifestyle changes. Communication skills are taught mostly by means of roleplaying and didactic instruction. Mood regulation is taught by means of cognitive-behavioral techniques (e.g., daily thought records).

SUMMARY AND CONCLUSIONS

Over the past decade, numerous cognitive-behavioral therapies of substance abuse have been developed. These structured, focused, collaborative approaches have been based on the assumption that substance abuse is mediated by complex cognitive-behavioral processes. In this chapter, an overview of cognitive-behavioral substance abuse theories and techniques has been presented. According to Rotgers, these approaches "have been among the most productive of the last quarter century with respect to the advancement of empirically validated knowledge of the origins and treatment of psychoactive substance use disorders" (56, p. 198).

Recently Liese and Franz (42) have described 10 lessons learned from applying cognitive therapy to substance abuse. Specifically, cognitive-behavioral therapists should (a) be knowledgeable about a wide variety of psychoactive drugs, addictive behaviors, and traditional treatment modalities; (b) communicate and collaborate with other addiction treatment personnel; (c) understand and address the role of drugs in mood regulation; (d) conceptualize and treat coexisting psychopathology; (e) explore the development of all patients' drug use problems; (f) address therapeutic relationship issues; (g) confront patients appropriately and effectively; (h) stay focused in sessions; (i) use techniques appropriately and sparingly; and (j) never give up on addicted patients. It is assumed that many more lessons will be learned as cognitive-behavioral therapies continue to be applied to substance abuse.

11. Spivack G, Platt JJ, Shure MB. The problem-solving approach to adjustment. San Francisco: Jossey-Bass, 1976.
12. Beck AT, Rush AJ, Shaw BF, Emery G. Cognitive therapy of depression. New York: Guilford Press, 1979.
13. Beck AT, Emery G, Greenberg RL. Anxiety disorders and phobias: a cognitive perspective. New York: Basic Books, 1985.
14. Foreyt JP, Rathjen DP, eds. Cognitive behavior therapy: research and application. New York: Plenum, 1978.
15. Kendall PC, Hollon SD, eds. Cognitive-behavioral interventions: theory, research, and procedures. New York: Academic Press, 1979.
16. Beck AT, Freeman A, et al. Cognitive therapy of personality disorders. New York: Guilford Press, 1990.
17. Layden MA, Newman CF, Freeman A, Morse SB. Cognitive therapy of borderline personality disorder. Boston: Allyn and Bacon, 1993.
18. Linehan MM. Cognitive-behavioral treatment of borderline personality disorder. New York: Guilford Press, 1993.
19. Kingdon DG, Turkington D. Cognitive-behavioral therapy of schizophrenia. New York: Guilford Press, 1994.
20. Perris C. Cognitive therapy with schizophrenic patients. New York: Guilford Press, 1989.
21. Dattilio FM, Freeman A, eds. Cognitive-behavioral strategies in crisis intervention. New York: Guilford Press, 1994.
22. Roberts AR, ed. Crisis intervention and time-limited cognitive treatment. Thousand Oaks, CA: Sage, 1995.
23. Freeman A, Reinecke MA. Cognitive therapy of suicidal behavior: a manual for treatment. New York: Springer, 1993.
24. Beck AT, Wright FD, Newman CF, Liese BS. Cognitive therapy of substance abuse. New York: Guilford Press, 1993.
25. Ellis A, Velten E. Rational steps to quitting alcohol. Fort Lee, NJ: Barricade Books, 1992.
26. Kadden R, Carroll K, Donovan D, Cooney N, Monti P, Abrams D, et al. Cognitive-behavioral coping skills therapy manual: a clinical research guide for therapists treating individuals with alcohol abuse and dependence. NIAAA Project MATCH Monograph Series, Volume 3. Washington, DC: U.S. Department of Health and Human Services, 1995.
27. Marlatt GA, Gordon JR. Relapse prevention: maintenance strategies in the treatment of addictive behavior. New York: Guilford Press, 1985.
28. Miller WR, Munoz RF. How to control your drinking. Englewood Cliffs, NJ: Prentice-Hall, 1976.
29. Monti PM, Abrams DB, Kadden RM, Cooney NL. Treating alcohol dependence: a coping skills training guide. New York: Guilford Press, 1989.
30. Sobell MB, Sobell LC. Problem drinkers: guided self-change treatment. New York: Guilford Press, 1993.
31. Project MATCH Research Group. 1993 Project MATCH: rationale and methods for a multisite clinical trial matching patients to alcoholism treatment. Alcohol Clin Exp Res 1993;17:1130-1145.
32. Crits-Christoph P, Siqueland L, Blaine J, et al. The NIDA Collaborative Cocaine Treatment Study: rationale and methods. Arch Gen Psychiatry (in press).
33. Najavits LM, Weiss RD. The role of psychotherapy in the treatment of substance use disorders. Harvard Rev Psychiatry 1994;2:84-96.
34. Rawson RA, Obert JL, McCann MJ, Marinelli-Casey P. Relapse prevention models for substance abuse treatment. Psychotherapy 1993a;30:284-298.
35. Rawson RA, Obert JL, McCann MJ, Marinelli-Casey P. Relapse prevention strategies in outpatient substance abuse treatment. Psychol Addict Behav 1993b;7:85-95.
36. Brownell KD, Marlatt GA, Lichtenstein E, Wilson GT. Understanding and preventing relapse. Am Psychol 1986;41:765-782.
37. Wilson PH. Principles and practice of relapse prevention. New York: Guilford Press, 1992.
38. Marlatt GA. Relapse prevention: theoretical rationale and overview of the model. In: Marlatt GA, Gordon JR, eds. Relapse prevention: maintenance strategies in the treatment of addictive behavior. New York: Guilford Press, 1985:3-70.
39. Cummings C, Gordon JR, Marlatt GA. Relapse. Prevention and prediction. In: Miller WR, ed. The addictive behaviors: treatment of alcoholism, drug abuse, smoking, and obesity. Oxford, England: Pergamon Press, 1980:291-321.
40. Liese BS. Brief therapy, crisis intervention, and the cognitive therapy of substance abuse. Crisis Intervention and Time-Limited Treatment 1994;1:11-29.
41. Liese BS, Beck AT. Back to basics: fundamental cognitive therapy skills for keeping drug-dependent individuals in treatment. NIDA Res Monogr (in press).
42. Liese BS, Franz RA. Treating substance use disorders with cognitive therapy: lessons learned and implications for the future. In: Salkovskis P, ed. Frontiers of cognitive therapy. New York: Guilford Press, 1996:470-508.
43. Wright FD, Beck AT, Newman CF, Liese BS. Cognitive therapy of substance abuse: theoretical rationale. NIDA Res Monogr 1992;137:123-146.
44. Miller WR, Rollnick S. Motivational interviewing: preparing people to change addictive behavior. New York: Guilford Press, 1991.
45. Najavits LM, Weiss RD. Variations in therapist effectiveness in the treatment of patients with substance use disorders: an empirical review. Addiction 1994;89:679-688.
46. Najavits LM, Weiss RD, Liese BS. Group cognitive-behavioral therapy for women with PTSD and substance use disorder. J Subst Abuse Treat 1996;13:13-22.
47. Imhof J. Countertransference issues in alcoholism and drug addiction. Psychiatr Ann 1991;21:292-306.
48. Najavits LM, Griffin ML, Luborsky L, et al. Therapists' emotional reactions to substance abusers: a new questionnaire and initial findings. Psychotherapy 1995;32:669-677.
49. Higgins ST, Budney AJ, Bickel WK, Foerg FE, Donham R, Badger GJ. Incentives improve outcome in outpatient behavioral treatment of cocaine dependence. Arch Gen Psychiatry 1994;51:568-576.
50. Higgins ST, Delaney DD, Budney AJ, et al. A behavioral approach to achieving initial cocaine abstinence. Am J Psychiatry 1991;148:1218-1224.
51. Sobell LC, Toneatto T, Sobell MB. Behavioral assessment and treatment planning for alcohol, tobacco, and other drug problems: current status with an emphasis on clinical applications. Behav Ther 1994;25:533-580.
52. Beck JS. Cognitive therapy: basics and beyond. New York: Guilford Press, 1995.
53. Prochaska JO, DiClemente CC, Norcross JC. In search of how people change: applications to addictive behaviors. Am Psychol 1992;47:1102-1114.
54. Prochaska JO, Norcross JC, DiClemente CC. Changing for good. New York: William Morrow and Co., 1994.
55. Morgan TJ. Behavior treatment techniques for psychoactive substance use disorders. In: Rotgers F, Keller DS, Morganstern J, eds. Treating substance abuse: theory and technique. New York: Guilford Press, 1996:202-240.
56. Rotgers F. Behavioral theory of substance abuse treatment: bringing science to bear on practice. In: Rotgers F, Keller DS, Morganstern J, eds. Treating substance abuse: theory and technique. New York: Guilford Press, 1996:174-201.
57. Anker A, Crowley T. Use of contingency contracts in specialty clinics for cocaine abuse. NIDA Res Monogr 1982;41:452-459.
58. Childress A, Ehrman R, McLellan A, O'Brien C. Update on behavioral treatments for substance abuse. NIDA Res Monogr 1988;90:183-192.
59. Holder H, Longabaugh R, Miller W, Rubonis A. The cost effectiveness of treatment for alcoholism: a first approximation. J Stud Alcohol 1991;52:517-540.
60. Galanter M. Network therapy for addiction: a model for office practice. Am J Psychiatry 1993;150:28-36.
61. Carroll KM, Rounsaville BJ, Keller DS. Relapse prevention strategies for the treatment of cocaine abuse. Am J Drug Alcohol Abuse 1991;17:249-265.
62. Rawson RA, Obert JL, McCann MJ, Smith DP, Scheffey E. The neurobehavioral treatment manual: a therapist manual for outpatient cocaine addiction treatment. Beverly Hills, CA: Matrix Center, 1989.
63. Wallace BC. Crack cocaine. New York: Brunner/Mazel, 1991.
64. Washton AM. Cocaine addiction: treatment, recovery, and relapse prevention. New York: WW Norton, 1989.
65. Roffman RA, Stephens RS, Simpson EE, Whitaker DL. Treatment of marijuana dependencies: preliminary results. J Psychoactive Drugs 1990;22:129-137.
66. McAuliffe WE, Ch'ien JMN. Recovery training and self-help: a relapse prevention program for treated opiate addicts. J Subst Abuse Treat 1986;3:9-20.
67. Annis HM. A relapse prevention model for the treatment of alcoholics. In: Miller WR, Heather N, eds. Treating addictive behaviors: process of change. New York: Plenum, 1986:407-433.
68. Ziedonis D, Fisher W. Motivation-based assessment and treatment of substance abuse in patients with schizophrenia. Directions in Psychiatry 16. New York: Hartherleigh Co., 1996.
69. Weiss RD, Greenfield SF, Najavits LM. Integrating psychological and pharmacological treatment of dually diagnosed patients. NIDA Res Monogr 1995;150:110-128.
70. Linehan MM. Dialectical behavior therapy for treatment of borderline personality disorder: Implications for the treatment of substance abuse. NIDA Res Monogr 1993;137:201-216.
71. Sobell LC, Sobell MB. Timeline Followback. A technique for assessing self-reported alcohol consumption. In: Litten RZ, Allen J, eds. Measuring alcohol consumption: psychosocial and biological methods. Totowa, NJ: Humana Press, 1992:41-72.
72. Miller WR. Form 90: a structured assessment interview for drinking and related behaviors. NIAAA Project MATCH Monograph Series, Volume 5. Washington, DC: U.S. Department of Health and Human Services, 1996.
73. McLellan T, Kushner H, Metzger D, et al. The fifth edition of the Addiction Severity Index. J Subst Abuse Treat 1992;9:199-213.

74. Annis HM, Graham JM, Davis CS. Inventory of Drinking Situations (IDS): users guide. Toronto: Addiction Research Foundation, 1987.
75. Annis HM, Martin G, Graham JM. Inventory of Drug-Taking Situations: Users guide. Toronto: Addiction Research Foundation, 1988.
76. Annis HM, Graham JM. Situational Confidence Questionnaire SCQ 39: Users guide. Toronto: Addiction Research Foundation, 1988.
77. McMullin RE. Handbook of cognitive therapy techniques. New York: WW Norton, 1986.
78. Alcoholics Anonymous World Services. Alcoholics Anonymous. 3rd edition. New York: Alcoholics Anonymous World Services, 1976.
79. Trimpey J. Rational recovery from alcoholism: the small book. 3rd edition. Lotus, CA: Lotus Press, 1989.
80. Kishline A. Moderate drinking: the new option for problem drinkers. Tucson, AZ: See Sharp Press, 1994.
81. Weiss RD, Najavits LM. Overview of treatment modalities and settings: Pharmacotherapy, psychotherapy, twelve-step programs. In: Kranzler HR, Rounsaville BJ, eds. Dual diagnosis: substance abuse and comorbid medical and psychiatric disorders (in press).
82. Crits-Christoph P, Siqueland L. Psychosocial treatment for drug abuse: selected review and recommendations for national health care. Arch Gen Psychiatry 1996;53:749-756.
83. Regier DA, Farmer ME, Rae DS, Locke BZ, Keith SJ, Judd LL, Goodwin FK. Comorbidity of mental disorders with alcohol or other drug abuse: results from the Epidemiological Catchment Area ECA study. JAMA 1990;264:2511-2518.
84. Woody GE, Luborsky LL, McLellan AT, et al. Psychotherapy for opiate addicts: Does it help? Arch Gen Psychiatry 1983;40:639-645.
85. Mirin SM, Weiss RD. Substance abuse and mental illness. In: Frances RJ, Miller SI, eds. Clinical textbook of addictive disorders. New York: Guilford Press, 1991:271-298.
86. Marlatt GA, Larimer ME, Baer JS, Quigley LA. Harm reduction for alcohol problems: moving beyond the controlled drinking controversy. Behav Ther 1993;24:461-504.
87. Marlatt GA, Tapert SF. Harm reduction: Reducing the risks of addictive behaviors. In: Baer J, Marlatt G, McMahon R, eds. Addictive behaviors across the lifespan. Newbury Park, CA: Sage Publications, 1993:243-273.

50 NETWORK THERAPY

Marc Galanter

There is a need for innovative techniques to enhance the effectiveness of psychotherapy with abusers of alcohol and other drugs in the office treatment setting in individual practice. Augmentation of treatment by group and family therapy in the multimodality clinic setting has led to considerably more success (1, 2), and in the clinic, these therapies may be supplemented by a variety of social rehabilitation techniques. Groups such as AA also offer invaluable adjunctive support. Nonetheless, a model for enhancing therapeutic intervention in the context of insight-oriented individual therapy would be of considerable value, given the potential role of the individual practitioner as primary therapist for many patients with addictive problems.

A LEARNING THEORY APPROACH

Classical Conditioning of Addiction Stimuli

An important explanatory model of drug dependence was elaborated by Wikler (3) based on his clinical investigations. In an attempt to explain the spontaneous appearance of drug craving in the absence of physiological withdrawal, Wikler looked to certain stimuli that may have been conditioned to evoke withdrawal phenomena. He pointed out that addictive drugs produce counteradaptive responses in the central nervous system (CNS) at the same time that their direct pharmacological effects are felt, and that these are reflected in certain physiological events. With alcohol, for example, electroencephalogram (EEG) evoked response changes characteristic of withdrawal may be observed in the initial phases of intoxication under certain circumstances (4). With opiates, administration of a narcotic antagonist to an addict who is "high" will precipitate a withdrawal reaction, which may be said to have been present in a latent form. Such responses are overridden by the direct effect of the drug and generally are observed only after the cessation of a prolonged period of administration, when they are perceived as physiological withdrawal feelings or craving.

Hence, the drug euphoria inevitably is followed by the counteradaptive responses that occur on a physiological level, shortly after the initial drug administration. The pairing of this administration with stimuli from the environment or with internal subjective stimuli in a consistent manner causes these stimuli to elicit the central counteradaptive response in the absence of prior drug administration. Wikler primarily discussed conditioning or a psychophysiological response. With regard to the issues presented here, however, it should be pointed out that the conditioned stimulus of the drug or the affective state may lead directly to the behavioral response before the addict

consciously experiences withdrawal feelings. The addict may therefore automatically act to seek out drugs by virtue of this conditioning upon entry into his or her old neighborhood, or upon experiencing anxiety or depression, all of which may have become conditioned stimuli. O'Brien and associates (5) have demonstrated the conditioning of addicts of opiate withdrawal responses to neutral stimuli, such as sound and odor. This conditioning, produced in a laboratory setting, provided experimental corroboration of Wikler's hypothesis. Ludwig and associates (6) have demonstrated the direct behavioral correlates of such conditioned stimuli in relation to alcohol administration. They found that, for the alcoholic, the alcohol dose itself might serve as a conditioned stimulus for enhancing craving, as could the appropriate drinking context.

The following example illustrates the precipitation of drug-seeking by a stimulus previously conditioned through its association with drug-taking behavior. Two conditioned stimuli, a subjective anxiety state and the visual cue of the bottle, both combined to precipitate a relapse into drug-seeking behavior without intermediate steps of deliberation, and without the intervening sensation of craving.

A 41-year-old recovered alcoholic had been abstinent for 6 years. She was regular, infrequent, attendee at Alcoholics Anonymous (AA) meetings and had no interest in resuming drinking. One day, her 10-year-old daughter had not returned home from school. The daughter was sufficiently late so that her mother called the homes of her daughter's friends and then the police to find out whether there had been any reports of her whereabouts. The mother was sitting in her living room near the telephone awaiting a possible call and was quite anxious. At one point, she glanced over at a liquor cabinet and her attention was caught by a bottle of gin, which had been her preferred alcoholic beverage before achieving sobriety. The liquor cabinet was placed in the office because of her confidence and that of her family in the reliability of her maintaining abstinence. Without thinking, she went over to the bottle and poured a drink. This information was obtained from her in an interview by a detoxification service, some 6 months later; her drinking had increased to the point that she required hospital admission. The particular incident had been forgotten and was elicited only after a lengthy guided interview.

It should be noted that the initial dose of alcohol described here is served as a conditioned stimulus for further alcohol seeking. As noted previously, the enhancement of craving by an initial alcohol dose has been demonstrated in an experimental context. It is by this mechanism that a small amount of the addictive agent has been observed to precipitate "loss of control", i.e., unmoderated alcohol or drug use.