

Common Problems in Patients Recovering from Chemical Dependency

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Chemical dependency is a common, chronic disease that affects up to 25 percent of patients seen in primary care practices. The treatment goal for patients recovering from chemical dependency should be to avoid relapse. This requires physicians to have an open, nonjudgmental attitude and specific expertise about the implications of addiction for other health problems. First-line treatment for chemical dependency should be nonpharmacologic, but when medication is necessary, physicians should avoid drugs that have the potential for abuse or addiction. Medications that sedate or otherwise impair judgment also should be avoided in the recovering patient. Psychiatric illnesses should be aggressively treated, because untreated symptoms increase the risk of relapse into chemical dependency. Selective serotonin reuptake inhibitors may help to lower alcohol consumption in depressed patients, and desipramine may help to facilitate abstinence in persons addicted to cocaine. If insomnia extends beyond the acute or postacute withdrawal period, trazodone may be an effective treatment. If nonpharmacologic management of pain is not possible, nonaddictive medications should be used. However, if nonaddictive medications fail, long-acting opiates used under strict supervision may be considered. Uncontrolled pain in itself is a relapse risk. (Am Fam Physician 2003;68:1971-8. Copyright© 2003 American Academy of Family Physicians.)

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Chemical dependency is a significant public health problem¹; up to 25 percent of patients seen in primary care clinics have alcohol or drug disorders.² Family physicians who do not recognize substance abuse in their practices may not be screening effectively. Research now implicates pre-existing brain abnormalities in the development of addiction, noting differences in the brains of addicted persons even before being exposed to the substance of abuse.³

Current diagnostic criteria for chemical dependency stress tolerance to the substance, loss of control, difficulties in withdrawal, and the adverse impact of the addiction on daily function (*Table 1*).⁴ The screening, diagnosis, and treatment of chemical dependency are critical skills for family physicians and have been addressed extensively.⁵⁻⁹ However, relatively less attention has been given to enabling family physicians to provide long-term support to patients recovering from chemical addiction.

This article describes how to care for patients recovering from chemical depen-

ency, including special concerns that arise during the treatment of common medical conditions, to avoid adverse outcomes or relapse into addiction.

Physician Attributes and Charting Guidelines

Once an addicted patient becomes focused on recovery, extensive and difficult lifestyle changes must occur. Many recovering addicts have had negative experiences with health care professionals.¹⁰ Some negative experiences may be attributable to problems in physicians' attitudes, behaviors, or expertise in addiction medicine. Another possibility is inadvertent harm, such as relapse precipitated by a prescribed medication that altered the patient's vigilance and judgment.¹¹ Physicians must be cautious, sensitive, and nonjudgmental when caring for addicted patients. Heightened awareness of addiction and its ramifications, in addition to open discussion with addicted patients, should encourage trust and lay the foundation for a solid physician-patient relationship.

The patient should observe the formal recording of his or her sobriety date in the

The date of the patient's sobriety should be recorded in the medical record and confirmed at each visit.

TABLE 1
Criteria for Chemical Dependency

A maladaptive pattern of substance use, leading to clinically significant impairment or distress as manifested by three or more of the following (occurring at any time in the same 12-month period):

Tolerance: either a need for markedly increased amounts of the substance to achieve intoxication or desired effect

or

a markedly diminished effect with continued use of the same amount of the substance

Withdrawal: either the characteristic withdrawal syndrome for the substance

or

the same or a closely related substance is used to relieve or avoid withdrawal symptoms

Escalation: The substance often is taken in larger amounts or over a longer period than was intended.

There is persistent desire or unsuccessful efforts to cut down or control substance use.

A great deal of time is spent in activities necessary to obtain the substance, use the substance, or recover from its effects.

Important social, occupational, or recreational activities are reduced or given up because of substance use.

The substance use is continued despite knowledge of having a persistent or recurrent physical or psychologic problem that is likely to have been caused or exacerbated by the substance.

Adapted with permission from American Psychiatric Association. Diagnostic and statistical manual of mental disorders: DSM-IV. 4th ed. Washington, D.C.: American Psychiatric Association, 1994: 181. Copyright 1994.

medical chart.¹² This demonstrates the importance of recovery and the joint commitment of the physician and patient to success. At every patient visit, the sobriety date should be confirmed and the patient should be encouraged to remain in successful recovery. If the sobriety date changes, the physician should remain nonjudgmental, record the new sobriety date, and discuss the details of the

TABLE 2
General Guidelines: Caring for a Patient Recovering from Chemical Dependency

Physician attributes

Sensitive

Nonjudgmental

Supportive

Open

Aware

Charting guidelines

Record sobriety date in the patient chart.

Confirm sobriety date at every visit.

Record support or 12-step groups regularly attended.

Record current prescription and over-the-counter medications.

Update the medication list at every visit.

Prescribing guidelines

Use nonpharmacologic treatment as the first line of therapy.

Refer to physical therapy, counseling, or nutrition support, as appropriate.

Avoid mood-altering or addictive medications, including those that alter judgment.

Provide patient education regarding specific medications.

relapse. When planning for the success of the renewed recovery, the physician should inquire about and document the patient's use of support groups or 12-step programs, and ask if the patient's spouse, friends, and significant others are supportive of recovery or are themselves using alcohol or drugs.

Prescribing and General Care Guidelines

At every visit, the physician should review all of the medications, including nonprescription drugs and herbal supplements, that the patient is currently taking. Patients with chronic illnesses should be reminded that maintaining sobriety helps with the successful treatment of other medical and psychologic conditions.¹³ The relapsing patient is likely to be noncompliant,¹⁴ whereas patients in recovery are more likely to adhere to medical advice.¹³ If the recovering patient does not comply with medical advice for medical problems, this may signal a relapse.

Recovering patients may be reluctant to use medications, fearing that they will precipitate relapse. If appropriate, physicians should recommend nonpharmacologic treatment (e.g., lifestyle changes), as initial therapy.

Patients may require referrals to learn stress reduction and relaxation techniques, and healthy eating and exercise habits. When medications are necessary for medical conditions in recovering patients, mood-altering or addictive drugs should be avoided whenever possible. Even nonaddictive, nonprescription medications may alter the patient's judgment, triggering relapse behavior. Patient education may alleviate fears and reinforce patient skills to avoid relapse. General guidelines on caring for patients recovering from chemical dependency are provided in *Table 2*.

Treatment of Common Medical Problems During Recovery

When treating common medical problems such as respiratory illness, obesity, gastrointestinal conditions, and pain disorders in patients recovering from chemical dependency, physicians should avoid therapies that may cause relapse (*Table 3*).

When treating health problems in recovering addicts, physicians should avoid prescribing medications that are potentially addictive and that can alter judgment.

RESPIRATORY CONDITIONS

Patient education about the self-limited nature of most upper respiratory infections allows the recovering patient to choose whether to use medications to control symptoms. If medications are used, agents to be avoided include sedating antihistamines, stimulating decongestants, and potentially mood-altering cough preparations.¹⁵ Dextromethorphan acts on the brain's opioid receptors and may cause euphoric effects. Persons who abuse dextromethorphan, commonly adolescents, may develop respiratory depression and perceptual distortions while using

TABLE 3
Considerations in Treatment of Common Medical Conditions

<i>Condition</i>	<i>Instead of...</i>	<i>Consider...</i>
Upper respiratory infections	Sedating antihistamines (may cause fatigue and sedation, or alter judgment)	Nonsedating antihistamines (loratadine [Claritin], cetirizine [Zyrtec], fexofenadine [Allegra]), nasal steroids, azelastine (Astelin) nasal spray, ipratropium bromide (Atrovent) nasal spray (be careful using nasal sprays in addicts who snorted their drug of choice)
	Decongestants (may be stimulating and trigger relapse)	Saline nasal spray, sinus irrigation
	Dextromethorphan or opiate cough medications (may cause sedation and alter mood)	Benzonatate (Tessalon Perles), 100 to 200 mg three times a day as needed for cough; guaifenesin (Humibid L.A.), 600 to 1,200 mg twice a day as needed as an expectorant
Gastrointestinal conditions	Diphenoxylate-atropine (Lomotil)	Over-the-counter antidiarrheals, including loperamide (Imodium), or bismuth compounds
	Chlordiazepoxide; clidinium bromide (Librax)	Dicyclomine (Bentyl), 20 mg four times a day as needed; hyoscyamine sulfate (Levsin), 0.125 mg to 0.250 mg every four hours as needed
	Belladonna alkaloids; phenobarbital (Donnatal)	
Obesity	Stimulants (e.g., ephedra, phentermine [Fastin], sibutramine [Meridia])	Orlistat (Xenical)
Pain disorders	Opiate medications (may cause sedation and alter mood)	Acetaminophen, 500 to 1,000 mg orally every four hours as needed, nonsteroidal anti-inflammatory drugs
	Acetaminophen, dichloralphenazone, isometheptene mucate (Midrin) and migraine treatments containing butalbital Carisoprodol (Soma)	Triptans Orphenadrine (Norflex), 100 mg twice a day as needed

the drug.¹⁵ Cough medications containing opiates, such as codeine and hydrocodone, are particularly hazardous for recovering patients.¹⁶

Respiratory problems in recovering addicts who smoke offer an excellent opportunity for an intervention that targets nicotine dependency. The incidence of smoking is significantly higher in chemically dependent persons than in the general population. Combining pharmacotherapy with cognitive and behavior therapies may be helpful. Bupropion (Wellbutrin) and nicotine-replacement treatments significantly increase the chance of successful smoking cessation.¹⁷ Applying principles of addiction treatment, which often are familiar to recovering patients, to smoking cessation can promote success. Patients recovering from chemical dependency who quit smoking in early recovery do not have higher one-year relapse rates than addicted patients who continue to smoke.¹⁸ Recovering addicts with depression are less likely to successfully quit smoking and, therefore, benefit from depression treatment before attempting smoking cessation.

GASTROINTESTINAL CONDITIONS

Common gastrointestinal complaints such as gastroenteritis, gastritis, abdominal cramps, and diarrhea may occur in recovering patients. When treating abdominal cramps in these patients, special attention should be paid to avoidance of medications such as Donnatal,^{19(pp2571)} which contains

phenobarbital and scopolamine. If diarrhea occurs and treatment is appropriate, physicians should avoid opiate-containing medications such as Lomotil,^{19(pp3103)} diphenoxylate with atropine sulfate (Drug Enforcement Administration [DEA] schedule V drug), or Motofen,^{19(pp568)} difenoxin with atropine sulfate (DEA schedule IV drug), or other medications that are active in the central nervous system. Bismuth subsalicylate (Pepto-Bismol) and loperamide (Imodium) are safe for recovering patients to use. Simethicone is a safe antiflatulent. Caution is advised when using antiemetics such as prochlorperazine (Compazine)^{19(pp1489)} or promethazine (Phenergan)^{19(pp3432)} because they may affect the central nervous system.

OBESITY

As with addiction, obesity is a chronic illness that requires a comprehensive management approach, including education about the health risks associated with obesity, laboratory and other diagnostic studies to evaluate potential causes or complications of obesity, and assessment of the patient's readiness to make significant lifestyle changes. First-line therapy generally includes dietary education and appropriate exercise instruction that can be incorporated into the patient's schedule.

Medications such as phentermine (Fastin), phenylpropranolamine, ephedra, and sibutramine (Meridia) are systemic psychostimulants with the potential for abuse or addiction, and should not be used in recovering patients.²⁰ Orlistat (Xenical), a nonsystemic medication, may be used in conjunction with lifestyle changes in recovering patients who have no contraindications to the drug.²⁰

Treatment of Psychiatric Comorbidity

In patients recovering from chemical dependency, psychiatric symptoms are common but may be difficult to evaluate. Such symptoms may result from chemical use, acute or postacute withdrawal, or a primary psychiatric condition. If psychiatric symptoms persist or worsen with abstinence, the patient may have a primary psychiatric disorder.

The patient who has a chemical dependency and a primary psychiatric disorder is considered to be "dual diagnosed." A period of abstinence from two to eight weeks is optimal before the patient recovering from chemical dependency is diagnosed with an independent psychiatric disorder.²¹ However, the exact time frame may differ, depending on the potential comorbid diagnosis.^{21,22}

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When patients recovering from addiction also have psychiatric conditions, both illnesses must be treated aggressively. An untreated psychiatric disorder may lead to an increased rate of addiction relapse.²¹ It is important to consider potential alcohol-drug and drug-drug interactions, or possible life-threatening reactions that may occur if the patient relapses while taking psychiatric medications. For example, a patient taking neuroleptics who relapses to stimulant medications is at risk of hyperpyrexia.²¹ *Table 4* lists medications for use in patients with dual diagnoses.

When dealing with more complicated dual-diagnosis patients, especially those for whom bipolar disorder or schizophrenia are in the differential diagnosis, the primary care physician should consider appropriate consultation with an addiction psychiatrist. Consultation also is recommended when mood stabilizers, antipsychotics, or potentially addictive medications are being considered for patients recovering from addiction.

Patients with dual diagnoses of addiction recovery and psychiatric illness require aggressive management of both conditions.

DEPRESSION

Up to 80 percent of alcoholic patients experience depressive symptoms at some time in their lives, and at least 30 percent meet criteria for major depression according to the *Diagnostic and Statistical Manual of Mental Disorders*, 4th ed.²³ The serotonergic pathway has been implicated in the control of alcohol intake,²² and selective serotonin reuptake inhibitors (SSRIs) have been found to decrease alcohol consumption in addition to managing depression.²¹ In depressed patients recovering from cocaine addiction, desipramine (Norpramin) may help facilitate abstinence and decrease depression.²¹ Although other antidepressants

TABLE 4
Medications for Use in Dual Diagnosis

Category	Drugs and dosages	Considerations
Selective serotonin reuptake inhibitors	Sertraline (Zoloft), 25 to 200 mg per day Fluoxetine (Prozac), 10 to 80 mg per day Paroxetine (Paxil), 10 to 60 mg per day Citalopram (Celexa), 20 to 60 mg per day Fluvoxamine (Luvox), 50 to 300 mg per day	Selective serotonin reuptake inhibitors lower the rate of alcohol consumption in patients with depression and may help the recovering patient maintain sobriety.
Tricyclic antidepressants	Desipramine (Norpramin), 100 to 300 mg per day Nortriptyline (Pamelor), 30 to 150 mg per day Protriptyline (Vivactil), 15 to 60 mg per day	Desipramine may help facilitate abstinence in depressed patients addicted to cocaine.
Other antidepressants	Venlafaxine (Effexor), 75 to 375 mg per day Bupropion (Wellbutrin), 200 to 400 mg per day Mirtazapine (Remeron), 15 to 45 mg per day Trazodone (Desyrel), 150 to 400 mg per day	Most of these antidepressants have not been studied extensively in recovering patients.
Anxiolytics	Buspirone (BuSpar), 15 to 60 mg per day Benzodiazepines	All benzodiazepines should be avoided in recovering patients. If use is unavoidable, clonazepam (Klonopin) has a lower risk of abuse because of its long half-life.
Antipsychotics	Risperidone (Risperdal), 2 to 16 mg per day Olanzapine (Zyprexa), 5 to 20 mg per day Quetiapine fumarate (Seroquel), 50 to 800 mg per day	These medications have not been studied extensively in recovering patients; because they are active in the central nervous system, they should be monitored closely.
Anticonvulsants	Divalproex sodium (Depakote), 500 to 1,000 mg per day Gabapentin (Neurontin), 900 to 3,600 mg per day Carbamazepine (Tegretol), 1,000 to 1,600 mg per day	Divalproex and carbamazepine should not be used in patients with liver disease.

have not been studied extensively in persons recovering from chemical dependency, they are not contraindicated. Because tricyclic antidepressants have a sedative effect, they should be used with caution in this population.²²

ANXIETY DISORDERS

Benzodiazepines and sedatives often are prescribed for patients with generalized anxiety disorder, obsessive-compulsive disorder, phobias, and panic disorders. These drugs are addictive and should be avoided in patients recovering from chemical dependency.²⁴ Medications such as SSRIs, buspirone (BuSpar), beta blockers, and anticonvulsants may be better choices, depending on the needs of individual patients.²⁴ If there are no other alternatives, the benzodiazepine clonazepam (Klonopin) may be considered because of its long half-life.²⁴ Kava, a natural sedative that is extracted from the pepper plant, has sedation effects similar to those of alcohol. Therefore, pending further research, kava is not recommended for recovering patients.¹⁶

POST-TRAUMATIC STRESS DISORDER

Post-traumatic stress disorder is prevalent in patients with chemical dependency. Emotional trauma associated with sexual, physical, or mental abuse can be masked by chemical use. With abstinence, memories, nightmares, and severe emotional symptoms may reappear and become disabling.²¹ Education focused on recovery and development of coping skills through psychotherapy and gender-specific support groups can help.

Specific pharmacotherapy with SSRIs, clonidine (Catapres-TTS), and anticonvulsants can be useful for patients with post-traumatic stress disorder.²¹ Antipsychotics such as risperidone (Risperdal), olanzapine (Zyprexa), and quetiapine fumarate (Seroquel) also can provide some immediate relief without the risk of addiction that accompanies use of sedatives.²⁵ Referral to a psychiatrist who specializes in addiction should be considered when pharmacotherapy other than SSRIs is necessary.

INSOMNIA

Acute and postacute drug withdrawal can affect sleep in recovering addicts. Patients may have problems initiating sleep, staying asleep, or both. Treatment of patients with insomnia should include avoidance of stimulants, development of appropriate sleep hygiene, and use of relaxation techniques.

When pharmacotherapy is necessary, sedating antide-

pressants such as trazodone (Desyrel) or mirtazapine (Remeron) may be used judiciously.²⁶ Diphenhydramine (Benadryl) alters judgment and should be avoided.¹⁴ Non-benzodiazepine-schedule intravenous hypnotics, including zolpidem tartrate (Ambien) and zaleplon (Sonata), are indicated for the short-term treatment of insomnia in the general population. Because they depress the central nervous system and have the potential for abuse, however, these drugs should be avoided in patients recovering from chemical dependency.²⁶

Pain Management in the Patient Recovering from Chemical Dependency

Pain management in the recovering addict is challenging. Most physicians generally avoid prescribing narcotics, but unrelieved acute and chronic pain also may lead to

TABLE 5

Resources on Chemical Dependency for Health Care Professionals

Addiction Resource Guide

(<http://www.addictionresourceguide.com>)—a comprehensive online treatment facility directory

AlcoholMD

(<http://www.alcoholmd.com>)—provides information, education, and online services on health and alcohol for the general public, patients and their families, the recovery community, children, and health care professionals

American Society of Addiction Medicine

(<http://www.asam.org>)—mission includes educating physicians, medical and osteopathic students, and the public

Journal of Psychoactive Drugs

(<http://www.hafci.org/journal>)—a quarterly periodical with multidisciplinary information regarding the use and abuse of psychoactive drugs

National Institute on Drug Abuse

(<http://www.drugabuse.gov>)—has information for students, young adults, parents, teachers, researchers, and health professionals

Physician Leadership on National Drug Policy

(<http://plndp.org>)—a physician group committed to multidisciplinary and collaborative approaches to reduce the harmful use of illegal drugs

Substance Abuse and Mental Health Services Administration

(<http://www.samhsa.gov>)—the federal agency charged with improving prevention, treatment, and rehabilitative services for substance abuse and mental illnesses

TABLE 6
Resources for Patients and Families Dealing with Chemical Dependency

Addiction Resource Guide (a directory of addiction treatment facilities): <http://www.addictionresourceguide.com>
 Al-Anon/Alateen: <http://www.al-anon.org>
 Alcoholics Anonymous: <http://www.aa.org>
 AlcoholMD (resources for families): <http://www.alcoholmd.com>
 Cocaine Anonymous: <http://www.ca.org>
 Family physician's advice: <http://www.familydoctor.org>
 Hazelden (provides links to treatment centers and resources): <http://www.hazelden.org>
 Narcotics Anonymous: <http://www.na.org>
 National Institute on Drug Abuse: <http://www.drugabuse.gov>

relapse.^{27,28} Open physician–patient communication regarding the level of pain the patient is experiencing and the occurrence of drug cravings can decrease the risk of relapse.²⁹ The patient should be encouraged to increase contact with support systems, sponsors, and nonaddicted friends and family members. The patient must be assured that his or her pain will not be ignored and that therapy will be modified as needed. *Tables 5 and 6* list resources for physicians, patients, and families who are dealing with chemical dependency.

Treatment must include regular reassessment of the patient's level of pain and adjustment of strategies to prevent or relieve it. Whenever possible, nonpharmacologic pain management should be used alone or as adjunctive therapy. Heat, ice, rest, and elevation are the first line of therapy for pain. If symptoms are not relieved, physical therapy that includes ultrasonography, massage, and iontophoresis should be considered. Nontraditional therapies such as acupuncture, biofeedback, and relaxation training may be used alone or in combination whenever appropriate.³⁰

When pharmacologic therapy is necessary to manage pain, one physician should be responsible for prescribing all pain medications to avoid confusion and exploitation. Nonaddicting medications such as acetaminophen, aspirin, and nonsteroidal anti-inflammatory drugs can provide pain relief. Patients with migraine may benefit from the triptan medications, which are not contraindicated in patients recovering from chemical dependency.¹⁴

Recovering addicts may require higher dosages of analgesics for pain relief because of cross-tolerance.

A combination of acetaminophen, dichloralphenazone, and isometheptene mucate (Midrin) often is prescribed for headaches, but should be avoided in these patients because isometheptene mucate is a sympathomimetic and dichloralphenazone is a sedative.^{19(pp3366)}

If opiates are necessary for the management of chronic pain in recovering addicts, frequent office visits should be required. Safeguards, including a signed treatment contract for pain management, can lower the risk of relapse.³¹ Physicians should prescribe opiates in limited quantities (i.e., a supply sufficient to last only until the next appointment if the patient is taking the medication according to directions). Early refills should not be provided under any circumstances. Physicians may need to educate patients who are fearful of opiate use about the relapse risk associated with untreated pain. A physician who is considering the use of opiates for the management of chronic pain in a patient recovering from chemical dependency should collaborate with physicians who specialize in addiction medicine and pain management.

When treating acute pain in patients recovering from chemical dependency, the physician must consider the phenomena of cross-tolerance and cross-addiction. Research has shown that a given drug can affect several different neurotransmitters, leading to different effects.³² Cross-addiction allows an addicted person to substitute one class of drug for another because of a common neurochemical pathway.³² Therefore, physicians can substitute benzodiazepines for alcohol in a controlled environment to treat acute withdrawal, and patients addicted to heroin can be treated with methadone (Dolophine).

Cross-tolerance occurs when a patient develops tolerance to a medication to which he or she has not been exposed because of tolerance developed to another chemical substance. With regard to pain management, recovering addicts may be cross-tolerant and require higher dosages of pain medication than nonaddicted patients to achieve the same level of pain relief. The physician should remember that the correct dosage is the one that relieves the pain with the fewest side effects,²⁷ and that as a disease progresses, dosage escalation may be necessary.²⁹

Patients on methadone maintenance for opiate dependency require the addition of short-acting opiates to their regular dosage of methadone for episodes of severe acute pain.¹⁴ Physicians may consider giving the narcotic prescription to a trusted support person who will dispense the medication to the patient as directed. This may help to relieve anxiety about possible relapse.

Having patients keep a pain and medication diary is helpful and more reliable than recall during office visits. When pain treatment is expected to be lengthy or chronic, use of a long-acting opiate produces less euphoria and has a better steady state level.³⁰

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REFERENCES

1. Meyers MJ. Substance abuse and the family physician: making the diagnosis. *Fam Pract Recertif* 1999;21:53-76.
2. Miller N, Wesson D, eds. Introduction. Integration of addiction medicine: education, treatment and research. *J Psychoactive Drugs* 1997;29:231-2.
3. Leshner A. What we know: drug abuse is a brain disease. In: Graham AW, Schultz TK, Wilford BB, eds. Principles of addiction medicine. 2d ed. Chevy Chase, Md.: American Society of Addiction Medicine, 1998:29-36.
4. American Psychiatric Association. Diagnostic and statistical manual of mental disorders: DSM-IV. 4th ed. Washington, D.C.: American Psychiatric Association, 1994:181.
5. Enoch MA, Goldman D. Problem drinking and alcoholism: diagnosis and treatment. *Am Fam Physician* 2002;65:441-8.
6. Burge SK, Schneider FD. Alcohol-related problems: recognition and intervention. *Am Fam Physician* 1999;59:361-70,372.
7. Weaver MF, Jarvis MA, Schnoll SH. Role of the primary care physician in problems of substance abuse. *Arch Intern Med* 1999;159:913-24.
8. Giannini AJ. An approach to drug abuse, intoxication and withdrawal. *Am Fam Physician* 2000;61:2763-74.
9. Graham AW, ed. Principles of addiction medicine. 3d ed. Chevy Chase, Md.: American Society of Addiction Medicine, 2003:323-40,403-608.
10. Friedmann PD, Saitz R, Samet JH. Management of adults recovering from alcohol or other drug problems: relapse prevention in primary care. *JAMA* 1998;279:1227-31.
11. Beattie C, Umbricht-Schneider A, Mark L. Anesthesia and analgesia. In: Graham AW, Schultz TK, Wilford BB, eds. Principles of addiction medicine. 2d ed. Chevy Chase, Md.: American Society of Addiction Medicine, 1998:886-7.
12. Schulz J, Parran T. Principles of identification and intervention. In: Graham AW, Schultz TK, Wilford BB, eds. Principles of addiction medicine. 2d ed. Chevy Chase, Md.: American Society of Addiction Medicine, 1998:260.
13. Wartenberg AA. Management of common medical problems. In: Graham AW, Schultz TK, Wilford BB, eds. Principles of addiction medicine. 2d ed. Chevy Chase, Md.: American Society of Addiction Medicine, 1998:731-40.
14. Schulz JE. The integration of medical management with recovery. *J Psychoactive Drugs* 1997;29:233-7.
15. Schuckit MA. Drug and alcohol abuse: a clinical guide to diagnosis and treatment. 5th ed. New York: Kluwer Academic/Plenum Publishers, 2000:235.
16. Schuckit MA. Drug and alcohol abuse: a clinical guide to diagnosis and treatment. 5th ed. New York: Kluwer Academic/Plenum Publishers, 2000:145-8.
17. A clinical practice guideline for treating tobacco use and dependence: a US Public Health Service report. The Tobacco Use and Dependence Clinical Practice Guideline Panel, Staff, and Consortium Representatives. *JAMA* 2000;283:3244-54.
18. Schuckit MA. Drug and alcohol abuse: a clinical guide to diagnosis and treatment. 5th ed. New York: Kluwer Academic/Plenum Publishers, 2000:267-8.
19. Physicians' desk reference: PDR 2003. 57th ed. Montvale, N.J.: Thomson PDR, 2003.
20. Early JL, Frank A, Wadden T, Aronne L. Treatment strategies for weight management in primary care. *Fam Pract Recertif* 2000; 22(Suppl 1):13-20.
21. Brady KT, Roberts JM. The pharmacotherapy of dual diagnosis. *Psychiatr Ann* 1995;25:344-52.
22. Brady KT, Myrick H, Sonne S. Comorbid addiction and affective disorders. In: Graham AW, Schultz TK, Wilford BB, eds. Principles of addiction medicine. 2d ed. Chevy Chase, Md.: American Society of Addiction Medicine, 1998:983-92.
23. Raimo EB, Schuckit MA. Alcohol dependence and mood disorders. *Addict Behav* 1998;23:933-46.
24. Gastfriend D, Lillard P. Anxiety disorders. In: Graham AW, Schultz TK, Wilford BB, eds. Principles of addiction medicine. 2d ed. Chevy Chase, Md.: American Society of Addiction Medicine, 1998:993-1006.
25. Real-life experiences in treating post-traumatic stress disorder: a continuing education self-study program. University of Wisconsin Medical School, January 2002:27.
26. Longo LP, Johnson B. Addiction: Part I. Benzodiazepines—side effects, abuse risk and alternatives. *Am Fam Physician* 2000;61:2121-8.
27. Donovan MI, Evers K, Jacobs P, Mandleblatt S. When there is no benchmark: designing a primary care-based chronic pain management program from the scientific basis up. *J Pain Symptom Manage* 1999;18:38-48.
28. Wesson DR, Ling W, Smith DE. Prescription of opioids for treatment of pain in patients with addictive disease. *J Pain Symptom Manage* 1993;8:289-96.
29. Sees KL, Clark HW. Opioid use in the treatment of chronic pain: assessment of addiction. *J Pain Symptom Manage* 1993;8:257-64.
30. Savage SR. Principles of pain treatment in the addicted patient. In: Graham AW, Schultz TK, Wilford BB, eds. Principles of addiction medicine. 2d ed. Chevy Chase, Md.: American Society of Addiction Medicine, 1998:919-43.
31. The use of opioids for the treatment of chronic pain. A consensus statement from the American Academy of Pain Medicine and the American Pain Society. *Clin J Pain* 1997;13:6-8.
32. Giannini AJ. An approach to drug abuse, intoxication and withdrawal. *Am Fam Physician* 2000;61:2763-74.