

Anxiety And Substance Use Disorders: A Primer For Primary Care Physicians

Mim J. Landry, David E. Smith, M.D., David McDuff, M.D.,
and Otis L. Baughman III, M.D.

Abstract: Primary care physicians encounter many patients with primary and secondary anxiety and substance use problems. Some patients have a dual diagnosis of both an anxiety and a substance use disorder. Symptoms may be overdiagnosed, underdiagnosed, and misdiagnosed. This article provides the primary care physician with an overview of the relation between psychoactive substance use disorders and anxiety symptoms. Also described are drug use patterns and diagnostic criteria for psychoactive substance use disorders. A model for understanding the role of anxiety symptoms during drug use is provided. (J Am Board Fam Pract 1991; 4:47-53.)

Primary care physicians, especially rural family physicians, often are the first practitioners to see patients who have maladaptive drug use or psychiatric problems. In particular, primary care physicians treat many patients who have anxiety disorders, the most prevalent group of psychiatric conditions in the United States.¹ Indeed, physicians in family practice, general practice, internal medicine, and osteopathy write two thirds (66.8 percent) of all new prescriptions for antianxiety or anxiolytic medications.² They prescribe anxiolytics more frequently than psychiatrists—who prescribe more antidepressants than primary care physicians—however, psychiatrists typically provide a mental illness diagnosis for these patients while primary care physicians typically do not.³ Concurrently, primary care clinicians treat large numbers of patients with substance use disorders, whose complaints often are anxiety, insomnia, or depression, rather than substance use. In addition, medications, such as the benzodiazepines, which can be particularly useful and beneficial to one patient, may have adverse effects on another.

Physicians need to be knowledgeable about differential treatment outcomes, medication

abuse liability, and dual or multiple diagnoses, all within the practical time constraints of patient visits.

Physicians and other professionals who focus their work on the treatment of addictions have become aware of the complex interrelations among common psychiatric syndromes, especially the forms of anxiety; substance use and abuse, especially alcohol, illicit drugs, and prescribed medications; and ordinary medical illnesses. These increasingly common clinical problems can coexist in the same patient, mimic each other, and mask or exacerbate each other. Modern clinicians, especially those in primary care specialties, must become expert in the fine points of recognition, the subtleties of diagnosis, the risks and benefits of prescribing psychoactive medications, and the art of obtaining effective consultations and making appropriate referrals.

This article focuses on the subtleties of diagnosis and shows how concepts from addiction medicine can be integrated with current descriptive and criterion-based psychiatric diagnosis (as in the *Diagnostic and Statistical Manual of Mental Disorders [DSM-III-R]*) in the primary care setting. The care of ordinary medical patients can be improved by a clearer understanding of the meaning of symptoms and the ways by which prescribed or self-medication contributes to the alleviation or exacerbation of symptoms.

Anxiety and Anxiety Disorders

Anxiety disorders are the most common group of psychiatric problems (Robins, et al. reported

From the Haight Ashbury Training and Education Project, San Francisco; Haight Ashbury Free Clinics, San Francisco; Division of Alcohol and Drug Abuse, Department of Psychiatry, University of Maryland School of Medicine, Baltimore; and the Family Medicine Residency Program, Spartanburg Regional Medical Center, Spartanburg, SC. Address reprint requests to Haight Ashbury Training and Education Project, 409 Clayton Street, San Francisco, CA 94117.

8.3 percent of Americans experienced clinically significant anxiety symptoms in a 6-month period, but only 23 percent received some form of treatment).¹ However, the physician's decision to treat or how to treat must consider the severity of the problem and the risk-benefit ratio of the treatment selected. Symptoms of anxiety are a part of the human experience, but more severe anxiety creates dysfunction, and treatment decisions should rest upon an accurate diagnosis. It is clinically useful to separate anxiety symptoms into two groups: primary and secondary.

Primary anxiety includes what patients might refer to as "nervousness." In one large study, 25 percent of Americans considered themselves "nervous."¹ It also includes the symptoms that are common elements of many psychiatric disorders, as well as such specific anxiety disorders as generalized anxiety disorder, post-traumatic stress disorder, and panic.

Secondary anxiety includes symptoms that are caused by some other primary problem, e.g., medical illness, medications, or drug abuse. The physician should consider whether the patient has a neurological problem, endocrine disorder, prescription or street drug problem, alcohol withdrawal, or is consuming high doses of caffeine, over-the-counter cold preparations, diet pills, or nicotine.

It is also important to become familiar with the diagnostic criteria for the various anxiety disorders (panic disorder with or without agoraphobia, agoraphobia without panic disorder, social phobia, obsessive compulsive disorder, post-traumatic stress disorder, and generalized anxiety disorder).

The *DSM-III-R*, for example, describes the essential feature of generalized anxiety disorder (GAD) as being unrealistic or excessive anxiety and worry about two or more life circumstances for 6 months or longer, during which the patient has been bothered by these concerns more days than not.⁴ A minimum of six of the following 18 symptoms would be exhibited:

- *Motor tension*: (1) trembling, twitching, or feeling shaky; (2) muscle tension, aches, or soreness; (3) restlessness; (4) easy fatigability.
- *Autonomic hyperactivity*: (5) shortness of breath or smothering sensations; (6) palpitations or accelerated heart rate (tachycardia); (7) sweat-

ing, or cold clammy hands; (8) dry mouth; (9) dizziness or lightheadedness; (10) nausea, diarrhea, or other abdominal distress; (11) flushes (hot flashes) or chills; (12) frequent urination; (13) trouble swallowing or "lump in throat."

- *Vigilance and scanning*: (14) feeling keyed up or on edge; (15) exaggerated startle response; (16) difficulty concentrating or "mind going blank" because of anxiety; (17) trouble falling or staying asleep; (18) irritability.⁴ p 253

Substance Use Disorders

Substance use disorders are common in the general population and the primary care setting, but they are frequently undiagnosed. It is estimated that between 16 and 18 percent of family practice patients have a formal diagnosis of alcoholism.⁵⁻⁷ Understanding the nomenclature and definitions of addiction medicine can provide an important diagnostic foothold. There are two particularly useful ways of describing the use of psychoactive drugs: drug use patterns and drug use disorders.

Drug Use Patterns

Drug use patterns provide data that can be useful to form a diagnostic impression related to both psychiatric and substance use disorders.^{8,9} These patterns of volume and frequency of drug use provide important but incomplete clinical descriptions. It is necessary also to understand the distinctions among drug use, abuse, and addiction, especially as they apply to prescribed medications and prescription-other drug combinations. The cornerstone for understanding the distinctions among use, abuse, and addiction is the concept of drug-related dysfunction.

Experimental use is short-term, nonpatterned trials of a drug in which the user is motivated chiefly by curiosity and a desire to experience the anticipated effect. Such use generally begins socially among friends.

Social-recreational use occurs in social settings among friends or acquaintances who wish to share an experience perceived as acceptable and pleasurable. The primary motivation is social, and use is voluntary.

Circumstantial-situational use is a self-limited use of variable pattern, frequency, intensity, and duration. Use is motivated by a perceived need to achieve a known drug effect in order to cope

with a specific condition or situation or to enhance the enjoyment of a specific situation.

Intensified use is long-term patterned use occurring at least once a day. It is motivated by a perceived need or desire to obtain relief from a persistent problem or stressful situation. Use may be unrestrained (bingeing), but it is still motivated by a desire to obtain relief from a persistent problem or stressful situation.

Compulsive use is frequent, intense, and of relatively long duration, producing some degree of dependence; i.e., the user cannot stop at will without experiencing physiologic discomfort or psychological disruption. Again, binge patterns may be involved.

Substance Use Disorders: Definitions

Substance use is the nonproblematic and non-dysfunctional use of a psychoactive substance both within and outside a medical context. It includes therapeutically prescribed medications. It can also describe patterns of use that are non-medical in nature, e.g., occasional self-medication with prescribed, nonprescribed, licit, and illicit drugs. Some patients can successfully self-medicate their own anxiety with prescription medications that are stolen or borrowed. From a societal or legal perspective, this might be considered drug abuse, but conventionally, it is called drug *misuse*. Diagnostically, this medical mismanagement is not considered drug abuse. The term substance use describes experimental and situational drug use patterns (including illicit drug use), which do not cause dysfunction in the person's medical, social, or psychological spheres. Such drug use may be personally repugnant to the physician, but unless the drug use creates dysfunction, there is little or no basis for medical intervention or treatment. Substance *use* is not therefore a substance use disorder, irrespective of cultural definitions. Drug use can be a signal that serious problems do exist in the person's life, or it can be a relatively unimportant event. However, when faced with such drug use, the primary care physician can play a valuable role in drug education and prevention.

Substance abuse denotes the presence of dysfunction related to the person's drug use. The *DSM-III-R* criteria for psychoactive substance abuse hinge on the person's continued use of a drug despite knowledge of "persistent or re-

current social, occupational, psychologic, or physical problems caused or exacerbated by the use of the [drug]." ^{6 p 169} Alternately, there can be "recurrent use in situations in which use is physically hazardous." As can be seen, drug abuse is defined as the use of a psychoactive drug to such an extent that it *seriously interferes* with health or occupational and social functioning. There may or may not be tissue dependence or tolerance, but this is not a necessary criterion for diagnosis.

Substance addiction is a progressive, dysfunctional, pathological process that typically includes three aspects: (1) compulsion to use or reuse a drug, (2) loss of control because of the drug(s), and (3) continued use despite adverse consequences.⁹

The *DSM-III-R* describes the following nine criteria, of which three or more have been present for a month or more to diagnose psychoactive substance dependence:

1. Substance often taken in larger amounts or over a longer period of time than the person intended
2. A persistent desire or one or more unsuccessful efforts to cut down or control substance use
3. A great deal of time spent in activities necessary to get the substance, taking the substance, or recovering from its effects
4. Frequent intoxication or withdrawal symptoms when expected to fulfill major role obligations at work, school, or home, or when substance use is physically hazardous
5. Important social, occupational, or recreational activities given up or reduced because of substance use
6. Continued substance use despite knowledge of having a persistent or recurrent social, psychological, or physical problem that is caused or exacerbated by the use of the substance
7. Marked tolerance: need for markedly increased amounts of the substance in order to achieve intoxication or desired effect, or markedly diminished effect with continued use of the same amount
8. Characteristic withdrawal symptoms
9. Substance often taken to relieve or avoid withdrawal symptoms

Criteria 1 and 2 deal with loss of control; criterion 3 addresses time involvement; criteria 4 and 5 relate to social dysfunction; criterion 6 relates to continued use despite adverse consequences; and criteria 7, 8, and 9 relate to the development of tolerance and withdrawal. The critical point is that issues of tolerance, tissue dependence, and withdrawal are not necessary for establishing a drug addiction diagnosis.¹⁰

Substance dependence can be a confusing term because it has multiple meanings. The American Society on Addiction Medicine (ASAM) describes substance dependence as having two possible components: (1) psychological dependence, and (2) physical dependence.¹¹ *Psychological dependence* centers on the user's need for a drug to reach a level of functioning or feeling of well-being. Because this term is particularly subjective and almost impossible to quantify, it is of limited usefulness in making a diagnosis.

Physical dependence refers to tissue dependence, establishment of tolerance, and evidence of an abstinence syndrome or withdrawal symptoms upon cessation of drug use. Drug amount and chronicity are important variables: the higher the dosage and longer the period of consumption, the more likely the development of tolerance, dependence, and subsequent withdrawal symptoms. Physical dependence and tolerance are best understood as two of many possible consequences of chronic exposure to psychoactive substances that can or cannot include addiction or dysfunction.

Dependence on Prescribed Medications

Physicians whose patients have symptoms of alcohol withdrawal are confronted with a diagnostic red flag that alerts them that problems exist. Similarly, when physicians are faced with patients who have developed physical dependence and tolerance to a prescribed medication, such as a benzodiazepine, once again there are diagnostic signals. However, tolerance and dependence upon a prescribed psychoactive drug are not necessarily problematic. There are a number of issues that relate to addiction liability (Table 1). Certain patients, e.g., those with family or personal histories of alcohol or other drug-related dysfunctions, are at a higher risk for addiction.

There are legitimate circumstances for prescribing psychoactive medications for an ex-

Table 1. Issues That Contribute to Addiction Liability.

Pharmacological
The pharmacology of the drug
Absorption
Metabolism
Lipid solubility
Route of administration
Onset and duration of action
Amount and purity of drug
Euphorogenic and reinforcing qualities
Onset of action
Dependence-withdrawal qualities
Environmental
Total drug combinations
Set and setting of the drug use
Drug experience versus naïveté
Duration of use
User expectations
Social support network
Host susceptibility
Genetic predisposition to addiction
Family history of abuse-addiction
Personal history of abuse-addiction
Physical and emotional health
High psychic distress
Dual diagnosis of psychopathology and drug abuse

tended period of time despite the risk of dependency. For example, patients with severe, disruptive, and dysfunctional agoraphobia who cannot leave their homes would benefit greatly from benzodiazepine therapy, even when the potential for dependence exists. The benefit-risk ratio implies that it is more dysfunctional for the patient not to engage in social and occupational activities than the potential for dependence on the drug. The physician's decision to prescribe medications that have the potential for dependence must take into account the severity and dysfunctionality of the psychopathology. If the anxiety disorder is disruptive, dependence can be an acceptable side effect of treatment, especially when the physician provides the patient with dependence education, techniques such as drug holidays, and careful dosage regulation in order to reduce the dependence. This often requires extra time and more monitoring, but iatrogenic dependence should be accepted in managing severe acute problems or after failure of other treatments.

Diagnosis

When diagnosing a suspected anxiety disorder, the physician's first responsibility is

to discriminate between primary psychiatric disorders and secondary causes. In relation to drug use and anxiety symptoms, drug use can mimic, initiate or exacerbate, and mask anxiety

symptoms. Also, drug withdrawal can mimic anxiety symptoms. The key is to obtain a complete drug history. Figure 1 is a decision tree useful in the differential diagnosis between

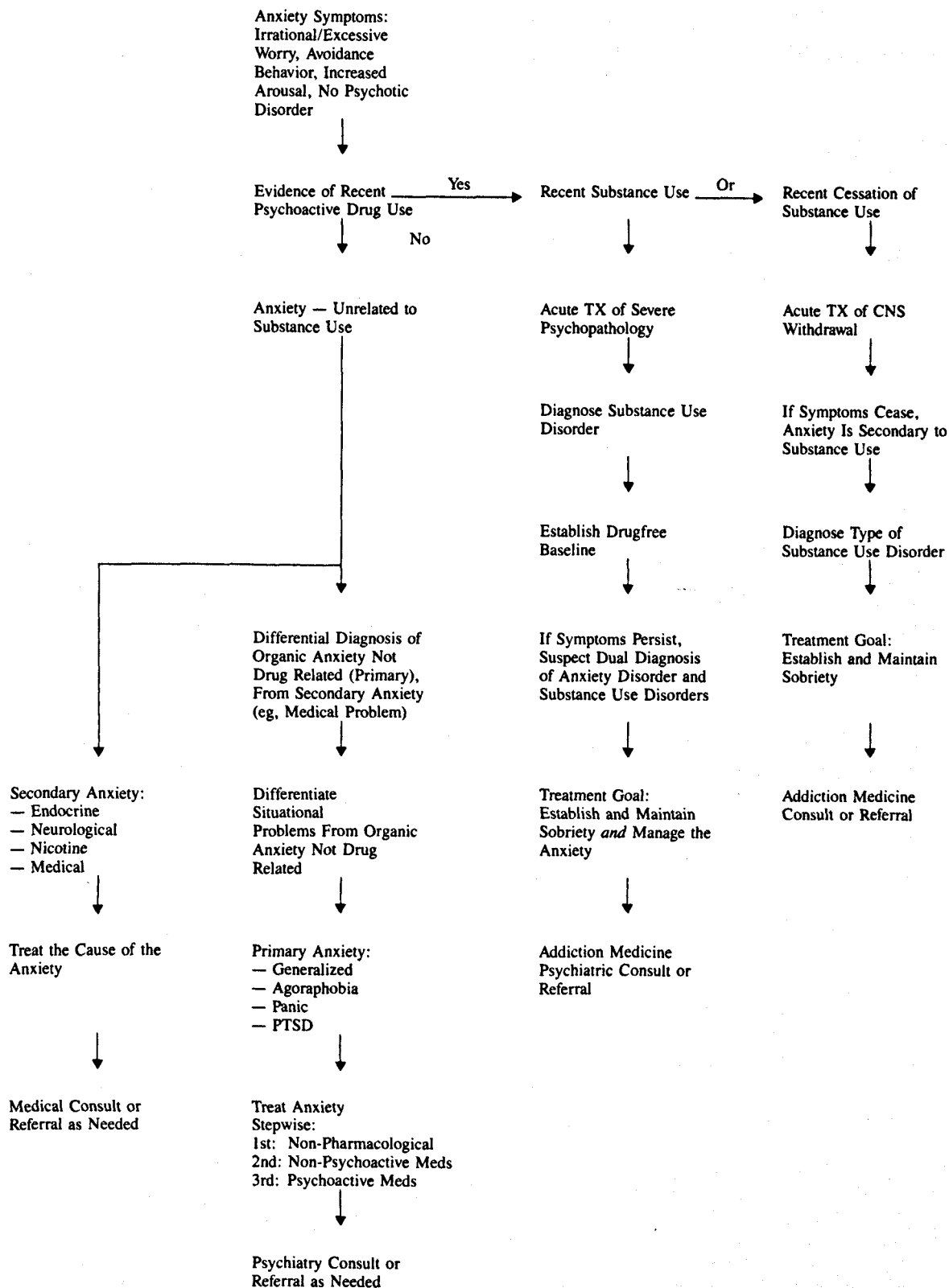


Figure 1. Differential diagnosis of anxiety and substance use.

anxiety disorders and substance-use-related anxiety symptoms.

Drug Use Can Mimic Anxiety Symptoms

Psychoactive drugs are termed psychoactive because they can alter a person's central nervous system (CNS) and thus alter mood. Therefore, one who ingests a CNS depressant may have symptoms of depression, and one who ingests a CNS stimulant may have symptoms of overstimulation or anxiety. In both, the amount, dose, and duration of drug use are important, as well as the psychological stability of the person. For example, a person who consumes "crack" cocaine or is prescribed Desoxyn™, especially at higher doses or for extended periods of time, may have symptoms of mild to severe anxiety, perhaps escalating to psychotic features. The person may claim to have no personal or family history of such problems, but if a careful drug history is taken, there will be a temporal relation between the drug ingestion and symptoms. It is irrelevant whether the drug is legal or illicit, prescribed or not. The important fact is that anxiety symptoms may not represent an endogenous anxiety disorder but may be caused by a CNS active drug. Psychiatric symptoms that are causally related to drug ingestion will fade over time as the drug is eliminated from the body. Treatment ranges from supportive counseling to medical management, depending upon the severity of the symptoms and the dosage of the drug ingested.

Drug Use Can Initiate or Exacerbate a Psychiatric Disorder

In many cases, drug use can prompt a psychiatric disorder or extend and exacerbate symptomatology. The use of drugs can initiate an episode of a psychiatric disorder in a person who has never experienced one before. It can prompt the re-appearance of a latent, hidden, psychiatric disorder or worsen an existing, currently symptomatic disorder. If drug use prompts the appearance of a psychiatric problem that lingers and becomes chronic, it must be treated. The course of the psychiatric problem becomes more important than the drug that initiated or exacerbated it. Once the psychiatric problem develops a life of its own, the initiating drug experience becomes important primarily in the

prevention of additional episodes and other substance abuse disorders.

Drug Use Can Mask Psychiatric Symptoms

In addiction theory and practice, it is not generally important to ask why a patient began to drink or take drugs, but to determine what happened when the person engaged in this behavior. Some persons engage in substance use to self-medicate a pre-existing disorder. The classic examples are those using sedative-hypnotics to blunt the effects of anxiety or stimulants to blunt depression. We believe that patients with primary addictive disease have roughly the same rates of concomitant psychopathology as the general population, once specific criteria have been met. These include: (1) clearing of all psychoactive drug acute effects and acute toxicity, whether drug of choice or prescribed medication; (2) clearing of chronic and secondary drug effects (e.g., disappearance of stimulant-induced insomnia and anorexia); (3) clearing of situational emotional states that relate to identification and early treatment (e.g., shame, embarrassment); (4) establishment of healthy eating, sleeping, and hygiene habits.

One hypothetical example of drug use that masks an affective disorder is the businessman who experiences daytime anxiety and poor sleep onset. He uses a benzodiazepine in the evenings in order to go to sleep, and during the daytime he uses alcohol, which is more socially appropriate at business lunches and dinners. He develops CNS tolerance to and dependence on the alcohol and the benzodiazepine. When he is detoxified, his symptoms of insomnia and anxiety will reemerge and linger past the expected withdrawal-related symptoms of insomnia and anxiety.

Drug Withdrawal Can Mimic Psychiatric Symptoms

Just as drug use can mimic psychiatric symptoms and disorders, so can drug withdrawal mimic psychiatric symptoms. Because patients often will not consult clinicians during active drug use but, rather, during times of crisis and withdrawal, it is important to differentiate between drug withdrawal symptoms and psychiatric disorders. Clearly, an accurate drug and psychiatric history is crucial.

Consider the patient who has symptoms of depression, lethargy, suicidal tendencies, and agitation. A good drug history would show that the patient recently ended a month-long period of cocaine-benzodiazepine use and was experiencing cocaine-benzodiazepine withdrawal. Otherwise, the patient could easily be given a diagnosis of depression, agitation and suicidal features, or perhaps an agitated depression with suicidal ideations.

Polydrug Use and Psychiatric Symptoms

The above descriptions of drug-induced psychiatric symptoms relate to the use of a single drug, such as a cocaine addict displaying cocaine-induced anxiety with panic or a cocaine withdrawal depression. The national trend, however, is the use of multiple drugs in combination (or serially) rather than single drug use.

A common adult combination is alcohol-cocaine-benzodiazepines, while adolescents use alcohol-cocaine-marijuana combinations. Polydrug use further complicates the diagnostic picture. A frequently used triad is cocaine, alcohol, and a benzodiazepine. Cocaine is used as an "upper," while alcohol and the benzodiazepine are used to self-medicate the side effects of cocaine overstimulation, which can include anxiety, insomnia, and paranoia. While intoxicated with cocaine, the person may have episodes of cocaine-induced anxiety with panic. However, as a result of a secondary dependence and tolerance on alcohol and a benzodiazepine, if a withdrawal is experienced, the patient would be expected to have episodes of anxiety and insomnia. The clinical picture may be similar but one represents a drug-induced intoxication state and the other represents a withdrawal state. Though symptoms are similar, the time course, prognosis, and treatment might be different. In this case, the cocaine intoxication-induced anxiety would be brief, and the anxiety possibly managed with supportive counseling or perhaps a one-time dose of a benzodiazepine. However, the CNS depressant-induced withdrawal anxiety and insomnia would have a longer time course and demand more aggressive medical management, including a formal sedative-hypnotic detoxification protocol.

Conclusion

Primary care physicians may have many patients with psychiatric symptoms in their medical practice. These symptoms, such as anxiety, can be reflective of endogenous psychiatric disorders, psychoactive substance use disorders, or other medical or environmental processes. It is important to screen patients routinely for psychiatric and substance use disorders. A first step is obtaining a good drug and psychiatric history and understanding drug use patterns, substance use disorders, and the relations between drug use and psychiatric symptoms.

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