The nonmedical use of prescription drugs is a significant problem in the United States. The purpose of this Committee Opinion is to guide obstetrician–gynecologists in their role in prescribing drugs of potential abuse and working with women who abuse or are dependent on prescription drugs.

The National Survey on Drug Use and Health assesses the nonmedical use of illicit and prescription drugs, alcohol, and tobacco products among civilian, noninstitutionalized individuals aged 12 years and older in the United States (1). Over-the-counter drugs and legitimate use of prescribed medication are not included in the study. The 2010 National Survey on Drug Use and Health report indicated that 2.4 million individuals used psychotherapeutic drugs (pain relievers, tranquilizers, stimulants, or sedatives) for nonmedical reasons for the first time within the past year, or approximately 6,600 individuals per day, and 7.0 million individuals used a prescription psychotherapeutic drug in the month before the survey without a medical indication (1). Nonmedical use of prescription drugs is the third most common drug category of abuse after marijuana and tobacco (1). The percentage of individuals in the population who abuse psychotherapeutics has remained stable since 2002; however, the rate of death from unintentional overdose increased to approximately 27,000 deaths in 2007 (2). Among the 3 million individuals who used illicit drugs for the first time in 2010, 26.2% started with psychotherapeutics, predominantly pain relievers (1).

Nonmedical Use of Prescription Drugs

ABSTRACT: The nonmedical use of prescription drugs, particularly opioids, sedatives, and stimulants, has been cited as epidemic in the United States, accounting for increasing numbers of emergency department visits and deaths from reactions and overdoses. The prevalence of prescription drug abuse is similar among men and women. Those who abuse prescription drugs most often obtain them from friends and family either through sharing or theft. Physicians should screen all patients annually and early in prenatal care with a validated questionnaire for the nonmedical use of prescription drugs. They should provide preventive education for all patients and referral for treatment, when psychologic or physical drug dependence is identified. Physicians should also educate patients in the proper use, storage, and disposal of prescription drugs.

Prescription drug abuse is defined as the intentional use of a medication without a prescription, in a way other than as prescribed, or for the experience or feeling that it causes (3). Drug addiction is characterized by an inability to consistently abstain from drug use, impairment in behavior control, a craving or increased need for drugs, a diminished recognition of significant problems with one’s behavior and interpersonal relationships, and a dysfunctional emotional response (4). Physical dependence occurs because of normal adaptations to chronic exposure to a drug. Those who are physically drug dependent usually experience withdrawal symptoms when the drug is abruptly discontinued. They often develop a tolerance to the drug and require higher doses for the same effect (3). Drug dependency is not a synonym for drug addiction or drug abuse.

Although men are more likely to engage in substance abuse, the rate of prescription drug abuse among women is similar to men. Adolescent girls and women older than 35 years have significantly greater rates of abuse and dependence on psychotherapeutic drugs than men (5, 6). In older populations, changes in drug metabolism and the potential for drug interactions increase the health dangers of prescription drug misuse and abuse (3). Individuals who report nonmedical use of prescription drugs often report concurrent use of other drugs and alcohol.

Sources of Misused Prescription Drugs

The majority of individuals who misused prescription pain relievers (55%) received them for free from a friend.
Opioids produce varying degrees of euphoria depend-
ing on the drug’s affinity for micro-opioid receptor
binding and the ability to cross the blood-brain barrier.
Prescription opioids available in the United States include
morphine, methadone, codeine, hydrocodone, oxycodone,
propoxyphene, fentanyl, tramadol, hydromorphone, and
buprenorphine.

Overdose of opioids may lead to oversedation, aspira-
tion of stomach contents, respiratory depression, and
death. Acute opioid overdose is treated with naloxone
and respiratory support. Chronic exposure to opioids may
trigger a deregulation of the endogenous opioid receptor
system, resulting in biologic or psychologic dependence.
Withdrawal from opioid dependence is uncomfortable,
but not life-threatening for a woman who is not pregnant.
However, for pregnant women who are opioid-dependent,
abrupt withdrawal from opioids can be life-threatening to
the fetus (11). Withdrawal symptoms in opioid-depen-
dent individuals include agitation, anxiety, muscle aches,
and gastrointestinal distress. Prescription opioids are
often coformulated with acetaminophen, aspirin, or ibu-
profen. Use of acetaminophen at doses exceeding 4 g/d is
associated with liver damage and may lead to liver failure
and death (12). Aspirin and ibuprofen may precipitate
intestinal bleeding and are usually contraindicated
during pregnancy. Individuals may unknowingly con-
sume dangerous amounts of the coformulated drug.

Sedatives and Tranquilizers
Sedatives (barbiturates) and tranquilizers (benzodiaze-
epines) are used as anxiolytics, sleep aids, and to treat
psychologic and neurologic conditions. Data from the
2010 National Survey on Drug Use and Health report
indicated that 7.6% of women reported ever having used
tranquilizers and 2.4% reported ever having used seda-
tives not prescribed to them or taking them to experi-
ence the effect (1). White women abused sedatives and
tranquilizers significantly more frequently than women
of any other race or ethnicity. Women older than 35
years are more likely to abuse sedatives and those aged
18 years to 50 years are more likely to abuse tranquilizers
(1). Abuse of sedatives often occurs in conjunction with
other substances or medications. The combination of
sedatives with opioids can potentiate the effect of an opi-
oid and can increase the risk of an overdose. Long-term
use and abuse of sedatives and tranquilizers can produce
dependence and addiction. Abrupt withdrawal from
these drugs, particularly from benzodiazepines and bar-
iturates, can be severe and life-threatening, and includes
seizures, acute heart conditions, and acute psychiatric
conditions (13).

Stimulants
Drugs such as amphetamines, methamphetamine,
and methylphenidate increase alertness and are used for
treatment of narcolepsy or attention-deficit/hyperactivity
disorder. They are also prescribed for short-term man-
agement of weight loss. Stimulants are misused to achieve
anorexic effects, heightened attention and wakefulness

Issues Specific to Women
Although there are known risk factors for drug abuse,
(eg, living in a community where drugs are easily avail-
able, tobacco use, and a family history of substance use),
patients who are not suspected also may be misusing
prescription drugs. Prescription drug abuse can lead to
adverse social consequences, such as poor judgment and
impaired decision making; increased unprotected sex;
and arguments, fights, and domestic violence, including
child abuse. The neurobehavioral effects of prescription
drug abuse, especially when mixed with alcohol, have
been cited as precipitating factors in injuries and deaths
caused by the individual engaging in drug misuse.

Prescription drug misuse does not by itself guar-
antee child neglect or prove inadequate parenting (8).
Paradoxically, a woman who pursues assistance for a
substance abuse problem may become involved with
legal and child welfare agencies, potentially leading to the
loss of custody of her children. Substance abuse treat-
ment that supports the family as a unit has been proved
to be effective for maintaining maternal sobriety and
child well-being (9). A woman must not be unnecessarily
separated from her family in order to receive appropriate
treatment.

Prescription Drugs of Abuse
Prescription drugs that are abused are most often avail-
able in tablet or capsule form. To enhance psychoactive
effects, they can be crushed or dissolved and inhaled,
injected, or used as enemas or suppositories.

Opioids
According to the 2010 National Survey on Drug Use
and Health, opioid pain relievers are the most frequently
abused prescription drugs (1). The number of individuals
who received treatment for nonmedical pain reliever abuse
more than doubled between 2004 and 2009, accounting
for 1,244,679 medical treatment visits in 2009, which far
exceeded medical treatment visits for other drugs of abuse
(10). White women are more likely to abuse prescription
pain relievers than women of any other race or ethnicity (1). The 2010 National Survey
on Drug Use and Health report indicated that 23% of
women aged 18 years to 34 years reported ever having
used prescription pain relievers not prescribed to them
or taking them to experience the effect. When abused,
opioids produce varying degrees of euphoria depend-
or relative, 17.3% obtained them as prescribed from one
physician, 4.4% bought them from a drug dealer, and
0.4% ordered them online (1). Adolescents who misuse
prescription drugs often acquire medications prescribed
to other family members, taking the medications without
the knowledge or permission of the person to whom they
were prescribed (7). Alternatively, a visitor or worker in
the home may steal the medication from an unsecured
cabinet.
for academic enhancement, hallucinations, euphoria, and altered perception. Nonmedical use of stimulants is most common among students and women younger than 50 years. The 2010 National Survey on Drug Use and Health report indicated that 6.7% of women reported ever having used stimulants not prescribed to them (1). White women were two to four times more likely to abuse stimulants than women of any other race or ethnicity (1). These drugs can be ingested or crushed for inhalation or injection. Adverse effects of stimulants include hypertension, tachycardia, arrhythmia, and psychologic or neurologic dysfunction. Prolonged abuse of stimulants can result in addiction. Withdrawal symptoms include fatigue, depression, and sleep disturbances.

Anesthetics
Ketamine, a dissociative anesthetic, is the most commonly abused anesthetic. It is a “club drug,” a psychoactive substance abused by adolescents and young adults at bars, nightclubs, concerts, and parties. Ketamine is often diverted from veterinary practices, and is usually snorted or injected intramuscularly (13). Acute side effects include central nervous system depression, psychomotor agitation, rhabdomyolysis, abdominal pain, and urinary tract symptoms. Chronic abuse can lead to psychosis, cognitive impairment, and dependence.

Management of the Patient Misusing Prescription Drugs
All women should be screened annually for substance abuse, including prescription drug abuse, using a validated questionnaire such as the 4 P's (Box 1) (14). Other screening tools more specific to prescription drug misuse are in development. Laboratory drug testing for prescription drugs is not appropriate for routine well-women care. A standard urine testing panel does not detect synthetic opioids and does not detect some stimulants and benzodiazepines (15). However, when combined with a thorough medical history, physical examination, and screening questionnaire, biophysical drug testing can help the clinician provide appropriate interventions to the patient (16). If prescription drug abuse is identified, the health care provider should follow with a brief motivational intervention as described in the American College of Obstetricians and Gynecologists’ Committee Opinion Number 423, Motivational Interviewing: A Tool for Behavior Change (17). Given the potential consequences of prescription drug misuse during pregnancy, counseling on the use of effective contraception methods should be included in the intervention. If drug dependence is revealed, the patient should be referred to a substance abuse treatment specialist (see Resources). The problem of substance abuse is not only one of physiologic dependence to a drug, but also of strong emotional and psychologic dependence and habituation. Physical withdrawal symptoms and psychologic cravings following abrupt discontinuation of opioids, sedatives, and stimulants often result in a return to drug use. Women with a substance abuse disorder should be managed by physicians trained in the appropriate methods to safely withdraw medications or regulate maintenance therapy. Underlying medical or psychologic conditions that contribute to the substance abuse should be evaluated and treated appropriately.

Unless there are specific indications, two drugs, methadone and buprenorphine, can be legally used for opioid withdrawal and maintenance treatment (18). When used within a treatment program, methadone and buprenorphine reduce criminal behavior and morbidity related to opioid addiction and reduce disease transmission related to intravenous drug use (19). For opioid maintenance, methadone is dispensed on a limited dose basis within state-licensed opioid treatment programs. Specially trained and licensed physicians can dispense buprenorphine from their offices. The advantage of buprenorphine over methadone is the ability to receive multiple doses of the drug from a local primary care physician, negating frequent visits to a drug treatment program. However, diversion of buprenorphine is an emerging epidemic. Diversion is defined as obtaining medication with the intent to redistribute it to others (20). In some areas, buprenorphine and methadone are as readily available on the street as marijuana (21).

Overdose from methadone can lead to respiratory depression and arrhythmias such as torsade de pointes. The use of methadone as a prescribed pain reliever, not as part of a drug treatment program, is discouraged because of the high rate of drug diversion and the morbidity and mortality associated with its use.

Prescription Drug Abuse in Pregnancy
All women should be screened early during pregnancy for substance use, including prescription drug abuse, with a validated questionnaire such as, but not limited to, The
4 P’s (Box 1) (14). If biophysical testing for evidence of substance use is indicated as a result of clinical observation or to comply with state law, the health care provider should be aware of the potential for false-positive and false-negative results of urine toxicology for drug use, the typical urine drug metabolite detection times, and the legal and social consequences of a positive test result. It is incumbent on the health care provider, as part of the procedure in obtaining consent before testing, to provide information about the nature and purpose of the test to the patient and how the results will guide management (22). The American College of Obstetricians and Gynecologists’ Committee Opinion Number 524, Opioid Use, Dependence, and Addiction in Pregnancy, contains detailed information for the prenatal health care provider on managing a patient using opioids during pregnancy (23). There are excellent programs that provide nonjudgmental integrated prenatal care, education, and substance abuse treatment for pregnant women who misuse prescription drugs. One such program is Kaiser Permanente’s Early Start (24). Up-to-date information concerning individual state policies on substance abuse during pregnancy can be found in the monthly Guttmacher Institute’s State Policies in Brief (see Resources).

Emergency Department Visits and Overdose

In 2009, more than 1.2 million emergency department visits occurred because of the misuse or abuse of prescription drugs. During the same period, 974,000 emergency department visits occurred because of the abuse of illegal drugs (10). Unintentional opioid analgesic overdose deaths have dramatically increased since 1999, reaching 11,500 deaths in the United States in 2007—more than the number of deaths from heroin and cocaine combined (25). Women in the postpartum period who abused prescription drugs during pregnancy and are not involved in substance abuse treatment are particularly at risk of overdose because their physiologic drug requirement decreases as their blood volume and body mass decreases (26). In addition, women who were abstinent from drug use during pregnancy often resume drug use postpartum, but without the tolerance to their prepregnancy drug doses, leaving them susceptible to overdose.

Pain Management

Patients who are prescribed opioid medications for legitimate pain control are unlikely to abuse them (27). However, education on the medications prescribed, including interactions and potential for overdose, should be stressed to help avoid emergency department visits and overdose deaths. Physicians also should be aware of individuals who try to exploit practitioner sensitivity to patient pain. Use of patient pain contracts and drug testing may help to reduce this exploitation. Referral to a pain management expert should be considered for patients with intractable pain.

Regulatory policies vary by state, and physicians should be aware of the laws and regulations in their states. With appropriate documentation of pain levels and patient management, a physician should not fear disciplinary action from regulatory agencies. More information on specific state policies and laws are available at the Office of National Drug Control Policy web site (see Resources).

Avoiding Diversion

Patient education is central in preventing intentional and unintentional drug diversion. When prescribing medications that may be misused, physicians should educate their patients on proper use, storage, and disposal of medications:

- Patients should be instructed to take the medication only as it is prescribed to them. They should be cautioned to not share the medication with anyone else, including friends and relatives who may feel that taking the patient’s medication may help them.
- Medication that may be abused should be stored in secure places to prevent misuse by others, particularly youth who may obtain them without anyone knowing.
- Unused medications should be taken to a pharmacy for proper disposal, or thrown away mixed in coffee grounds or kitty litter to discourage recovery of the medications by someone intending to misuse the drug.

Regulations to Prevent Nonmedical Use of Prescription Drugs

Various attempts at the state and national levels have been made to regulate the distribution and use of prescription drugs in order to reduce misuse and overdose. In 2002, the U.S. General Accountability Office concluded that prescription drug monitoring programs helped reduce drug diversion (28). Prescription drug monitoring programs usually require pharmacists to enter information pertaining to prescriptions for controlled substances into a state database to allow monitoring of prescribing and filling practices. Data include the prescriber, the patient, the drug, the dosage, and the amount dispensed. The 2005 National All Schedules Prescription Electronic Reporting Act was reauthorized in 2010, which funds federal grants to states for the establishment or improvement of prescription drug monitoring programs (29, 30). As of January 2012, 48 states had enacted prescription drug monitoring programs (31). Access to the prescription monitoring program’s database varies from state to state.

Methods to help reduce both prescription drug abuse and diversion include tamper-resistant packaging, prescribing only the amount of medication that would typically be used for a particular condition or procedure, not offering prescription refills without a consultation, and using special prescription forms for prescribing con-
trolled medications. Health care providers should be aware of the requirements for their states.

**Summary**

All women should be screened annually and early in pregnancy for nonmedical use of prescription drugs and should be counseled when abuse is suspected or identified. In the case of drug dependence, physicians should offer referrals for treatment to mitigate withdrawal symptoms and address drug-seeking behavior. Women’s health care providers should

- follow suggestions on prescribing to reduce drug abuse and diversion.
- educate patients who have been prescribed medications to be the sole user of the drug.
- give instructions for safe medication storage and disposal.
- consider referral to a pain management expert for women with chronic pain.
- be aware of state laws addressing the prescribing of opioids and other potential drugs of addiction.

**Resources ⇔**

**American College of Obstetricians and Gynecologists**


**Other Resources**

The following list is for information purposes only. Refer to these sources and web sites does not imply the endorsement of the American College of Obstetricians and Gynecologists. This list is not meant to be comprehensive. The exclusion of a source or web site does not reflect the quality of that source or web site. Please note that web sites are subject to change without notice.


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