In attempts to permanently stop caffeine use, more than 70% of individuals in a U.S. metropolitan county reported at least one caffeine withdrawal symptom (47% experienced headache), and 24% experienced headache plus one or more other symptoms as well as functional impairment due to withdrawal. Among individuals who abstained from caffeine for at least 24 hours but were not trying to permanently stop caffeine use, 11% experienced headache plus one or more other symptoms as well as functional impairment. Caffeine consumers can decrease the incidence of caffeine withdrawal by using caffeine daily or only infrequently (e.g., no more than 2 consecutive days). Gradual reduction in caffeine over a period of days or weeks may decrease the incidence and severity of caffeine withdrawal.

Development and Course

Symptoms usually begin 12–24 hours after the last caffeine dose and peak after 1–2 days of abstinence. Caffeine withdrawal symptoms last for 2–9 days, with the possibility of withdrawal headaches occurring for up to 21 days. Symptoms usually remit rapidly (within 30–60 minutes) after re-ingestion of caffeine. Doses of caffeine significantly less than the individual's usual daily dose may be sufficient to prevent or attenuate caffeine withdrawal symptoms (e.g., consumption of 25 mg by an individual who typically consumes 300 mg).

Caffeine is unique in that it is a behaviorally active drug that is consumed by individuals of nearly all ages, with rates of caffeine consumption and overall level of caffeine consumption increasing with age. Although caffeine withdrawal among children and adolescents has been documented, relatively little is known about risk factors for caffeine withdrawal among this age group. The use of highly caffeinated energy drinks is increasing in young people, which could increase the risk for caffeine withdrawal.

Risk and Prognostic Factors

Temperamental. Heavy caffeine use has been observed among individuals with mental disorders, including eating disorders and alcohol and other substance use disorders, as well as among individuals who smoke cigarettes and those who are incarcerated. Thus, these individuals could be at higher risk for caffeine withdrawal upon acute caffeine abstinence.

Environmental. The unavailability of caffeine is an environmental risk factor for incipient withdrawal symptoms. While caffeine is legal and usually widely available, there are conditions in which caffeine use may be restricted, such as during medical procedures, pregnancy, hospitalizations, religious observances, wartime, travel, and research participation. These external environmental circumstances may precipitate a withdrawal syndrome in vulnerable individuals.

Genetic and physiological. Genetic factors appear to increase vulnerability to caffeine withdrawal, but no specific genes have been identified.

Culture-Related Diagnostic Issues

Habitual caffeine consumers who fast for religious reasons may be at increased risk for caffeine withdrawal.

Sex- and Gender-Related Diagnostic Issues

Metabolism of caffeine is slower in females who use oral contraceptives and in the luteal phase of the menstrual cycle, and caffeine metabolism becomes progressively slower in the second and third trimesters of pregnancy compared with the first trimester and the nonpregnant state. These features reduce the rate of clearance and may diminish withdrawal, although they can also lengthen the duration of caffeine-associated adverse symptoms. It is unlikely that doses <300 mg/day are associated with adverse reproductive outcomes in pregnancy.

Functional Consequences of Caffeine Withdrawal

Caffeine withdrawal symptoms can vary from mild to extreme, at times causing functional impairment in normal daily activities. Rates of functional impairment in studies conducted largely in the United States range from 10% to 55% (median 13%), with rates as high as 73% found among individuals who also show other problematic features of caffeine use. Examples of functional impairment include being unable to work, exercise, or care for children; staying in bed all day; missing religious services; ending a vacation early; and canceling a social gathering. Caffeine withdrawal headaches may be described by individuals as "the worst headaches" ever experienced. Decrements in cognitive and motor performance have also been observed.

Differential Diagnosis

Other medical conditions and medication side effects. Caffeine withdrawal can mimic migraine and other headache disorders, viral illnesses, sinus conditions, tension, other drug withdrawal states (e.g., from amphetamines, cocaine), and medication side effects. The final determination of caffeine withdrawal should rest on a determination of the pattern and amount consumed, the time interval between caffeine abstinence and onset of symptoms, and the particular clinical features presented by the individual. A challenge dose of caffeine followed by symptom remission may be used to confirm the diagnosis.

Caffeine-induced sleep disorder. Caffeine withdrawal is distinguished from caffeine-induced sleep disorder (e.g., caffeine-induced sleep disorder, insomnia type, with onset during withdrawal) because the sleep symptoms are in excess of those usually associated caffeine withdrawal, predominate in the clinical presentation, and are severe enough to warrant clinical attention.

Comorbidity

Caffeine withdrawal may be associated with major depressive disorder, generalized anxiety disorder, panic disorder, antisocial personality disorder, moderate to severe alcohol use disorder, and cannabis and cocaine use.

Caffeine-Induced Mental Disorders

The following caffeine-induced mental disorders are described in other chapters of the manual with disorders with which they share phenomenology (see the substance/medication-induced mental disorders in these chapters): caffeine-induced anxiety disorder ("Anxiety Disorders") and caffeine-induced sleep disorder ("Sleep-Wake Disorders"). These caffeine-induced mental disorders are diagnosed instead of caffeine intoxication or caffeine withdrawal only when the symptoms are sufficiently severe to warrant independent clinical attention.

Unspecified Caffeine-Related Disorder

F15.99

This category applies to presentations in which symptoms characteristic of a caffeine-related disorder that cause clinically significant distress or impairment in social, occupational, or other important areas of functioning predominate but do not meet the full criteria for any specific caffeine-related disorder or any of the disorders in the substance-related and addictive disorders diagnostic class.

Cannabis-Related Disorders

Cannabis Use Disorder
Cannabis Intoxication
Cannabis Withdrawal
Cannabis-Induced Mental Disorders
Unspecified Cannabis-Related Disorder

Cannabis Use Disorder

Diagnostic Criteria

A. A problematic pattern of cannabis use leading to clinically significant impairment or distress, as manifested by at least two of the following, occurring within a 12-month period:

1. Cannabis is often taken in larger amounts or over a longer period than was intended.
2. There is a persistent desire or unsuccessful efforts to cut down or control cannabis use.
3. A great deal of time is spent in activities necessary to obtain cannabis, use cannabis, or recover from its effects.
4. Craving, or a strong desire or urge to use cannabis.
5. Recurrent cannabis use resulting in a failure to fulfill major role obligations at work, school, or home.
6. Continued cannabis use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of cannabis.
7. Important social, occupational, or recreational activities are given up or reduced because of cannabis use.
8. Recurrent cannabis use in situations in which it is physically hazardous.
9. Cannabis use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by cannabis.
10. Tolerance, as defined by either of the following:
    a. A need for markedly increased amounts of cannabis to achieve intoxication or desired effect.
    b. Markedly diminished effect with continued use of the same amount of cannabis.
11. Withdrawal, as manifested by either of the following:
    a. The characteristic withdrawal syndrome for cannabis (refer to Criteria A and B of the criteria set for cannabis withdrawal).
    b. Cannabis (or a closely related substance) is taken to relieve or avoid withdrawal symptoms.

Specify if:

In early remission: After full criteria for cannabis use disorder were previously met, none of the criteria for cannabis use disorder have been met for at least 3 months but

for less than 12 months (with the exception that Criterion A4, "Craving, or a strong desire or urge to use cannabis," may be met).

In sustained remission: After full criteria for cannabis use disorder were previously met, none of the criteria for cannabis use disorder have been met at any time during a period of 12 months or longer (with the exception that Criterion A4, "Craving, or a strong desire or urge to use cannabis," may be present).

Specify if:

In a controlled environment: This additional specifier is used if the individual is in an environment where access to cannabis is restricted.

Code based on current severity/remission: If a cannabis intoxication, cannabis withdrawal, or another cannabis-induced mental disorder is also present, do not use the codes below for cannabis use disorder. Instead, the comorbid cannabis use disorder is indicated in the 4th character of the cannabis-induced disorder code (see the coding note for cannabis intoxication, cannabis withdrawal, or a specific cannabis-induced mental disorder). For example, if there is comorbid cannabis-induced anxiety disorder and cannabis use disorder, only the cannabis-induced anxiety disorder code is given, with the 4th character indicating whether the comorbid cannabis use disorder is mild, moderate, or severe: F12.180 for mild cannabis use disorder with cannabis-induced anxiety disorder or F12.280 for a moderate or severe cannabis use disorder with cannabis-induced anxiety disorder.

Specify current severity/remission:

F12.10 Mild: Presence of 2–3 symptoms.
F12.11 Mild, In early remission
F12.11 Mild, In sustained remission
F12.20 Moderate: Presence of 4–5 symptoms.
F12.21 Moderate, In early remission
F12.21 Moderate, In sustained remission
F12.20 Severe: Presence of 6 or more symptoms.
F12.21 Severe, In early remission
F12.21 Severe, In sustained remission

Specifiers

"In a controlled environment" applies as a further specifier of remission if the individual is both in remission and in a controlled environment (i.e., in early remission in a controlled environment or in sustained remission in a controlled environment). Examples of these environments are closely supervised and substance-free jails, therapeutic communities, and locked hospital units.

Changing severity across time in an individual may also be reflected by changes in the frequency (e.g., days of use per month or times used per day) and/or dose (e.g., amount used per episode) of cannabis, as assessed by individual self-report, report of knowledgeable others, clinician's observations, and biological testing.

Diagnostic Features

Cannabis use disorder includes problems associated with use of substances derived from the cannabis plant and chemically similar synthetic compounds. In these substances, the primary component with psychoactive effects (and hence, addiction potential) is the cannabinoid delta-9-tetrahydrocannabinol (delta-9-THC or THC). Cannabinoids have diverse effects in the brain, prominent among which are actions on CB_1 and CB_2 cannabinoid receptors found throughout the central nervous system.

Cannabis is used in many forms. It is most commonly smoked in a cigarette-like form (often called "joints" or "reefers"), and also in pipes, water pipes (bongs or hookahs), or hollowed-out cigars ("blunts"). More recently developed methods include "vaping" (vaporizing) by heating without combustion plant cannabis material to release psychoactive components for inhalation, and "dabbing," in which a concentrated cannabis product (butane hash oil, known as "dabs"), created through butane extraction of THC from cannabis plant material, is heated and inhaled. Vaping and dabbing are gaining popularity, particularly among youth. Cannabis can also be ingested orally in food (edibles) or beverages. Inhalation typically produces more rapid and intense onset of effects than oral administration. Hashish or hash oil, a concentrated extraction of the cannabis plant, is also used. Across products, cannabis potency (THC concentration) varies greatly, averaging 10%–15% in typical cannabis plant material, 30%–40% in hashish, and 50%–55% in hash oil. During the past two decades, the potency of seized illegal plant cannabis has steadily increased, and legal cannabis products may have even higher THC potency (e.g., 20% for plant material and 68% for cannabis extracts). Synthetic oral THC formulations (pill/capsules/sprays) are also available for various medical uses (e.g., chronic pain; nausea and vomiting caused by chemotherapy or ano-rexia; weight loss among those with AIDS). Other entirely illicit synthetic cannabinoid compounds (e.g., K2, Spice, JWH-018, JWH-073) are in the form of plant material sprayed with a cannabinoid formulation. Although such synthetic cannabinoids are designed to mimic cannabis effects, their chemical composition, potency, effects, and duration of action are unpredictable, and they may cause more severe adverse effects than cannabis plant products, including seizures, cardiac conditions, psychosis, and even death.

In the United States, cannabis remains an illegal substance under federal law, while the legal status of cannabis varies by state. Thus, cannabis use under state law can involve an illicit product, a product authorized for medical purposes, or a completely legal product. The most common medical purpose for cannabis use is chronic pain, and the conditions approved for medicinal cannabis use vary from state to state. When cannabis or a cannabinoid is taken as indicated for a medical condition, tolerance and withdrawal (physiological dependence) may occur but should not be the primary basis for diagnosing cannabis use disorder. The efficacy of cannabis for different medical conditions continues to be debated, and cannabis use as medically advised should be taken into account when a cannabis use disorder diagnosis is being considered.

Patterns of cannabis use can range from light, infrequent use to heavy, frequent use. Individuals with DSM-5 cannabis use disorder use cannabis frequently (on average, 4 or more days a week), and some individuals may use cannabis throughout the day over a period of months or years. Because of the increasingly common perception that cannabis use is harmless, individuals may not recognize that symptoms of cannabis use disorder (e.g., withdrawal symptoms) are cannabis related. Additionally, among individuals with multiple substance use disorders, lack of clarity about whether symptoms are caused by cannabis or by other substances may lead to underreporting of cannabis use disorder symptoms.

Cannabis use disorder is defined by the same 11 criteria that define the other substance use disorders, as supported by considerable empirical evidence. These criteria, a cluster of behavioral and physical symptoms, lead to clinically significant impairment or distress and can include withdrawal, tolerance, craving, spending a great deal of time in activities related to the substance, and hazardous use (e.g., driving while under its influence). Some individuals who use cannabis multiple times per day do not perceive themselves as spending excessive time under the influence of cannabis or recovering from its effects, despite being intoxicated from cannabis or coming down from its effects most of the time, most days. An important marker of a severe cannabis use disorder is continued use despite negative effects on other important activities or relationships (e.g., school, work, sports, partner or parent relationship).

Regular cannabis users become tolerant to many acute cannabis effects, and cessation of regular cannabis use generally leads to a cannabis withdrawal syndrome. Cannabis withdrawal can cause significant distress, leading to continued use to relieve the symptoms and difficulty quitting use or relapse.

Associated Features

Individuals who regularly use cannabis often report using it to cope with mood, insomnia, anger, pain, or other physiological or psychological problems, and individuals diagnosed with cannabis use disorder frequently have other concurrent mental disorders. Careful assessment can reveal that cannabis use contributes to exacerbation of these symptoms, as well as other reasons for frequent use (e.g., the coping motives listed above; to experience euphoria; as an enjoyable social activity). Chronic intake of cannabis can produce a lack of motivation that resembles persistent depressive disorder.

Because some individuals may underreport the amount or frequency of their cannabis use, provider awareness of common signs and symptoms of cannabis use and intoxication facilitates better assessment of cannabis use disorder. Some additional signs of acute and chronic use are red eyes (conjunctival injection), cannabis odor on clothing, yellowing of fingertips (from smoking joints), chronic cough, burning of incense (to hide the odor), and exaggerated craving and impulse for specific foods, sometimes at odd times of the day or night.

Prevalence

Cannabinoids, especially cannabis, are the most widely used illicit psychoactive substances in the United States. The following prevalence data are drawn from U.S.-based studies, unless otherwise noted. Among youth (ages 12–17 years), the past-year prevalence of DSM-IV cannabis use disorder is 2.7%–3.1%. Among adults age 18 years and older, the prevalence is 1.5%–2.9%. Among cannabis users, the prevalence of DSM-IV cannabis use disorder is 20.4% among youth and 30.6% among adults. For DSM-5 cannabis use disorder, 12-month prevalence is approximately 2.5% among adults (1.4%, 0.6%, and 0.6% at mild, moderate, and severe levels, respectively). During the past decade, the prevalence of cannabis use disorder has decreased among adolescents. In contrast, among adults, some studies suggest that the prevalence of cannabis use disorder has either remained stable or increased—for example, among adults in the general population, patients in inpatient settings, and patients in the Veterans Health Administration. Globally, the age-standardized rate of cannabis use disorders was 289.7 per 100,000 people in 2016, a 25.6% increase over 1990. Prevalence varies widely across geographic regions, being lowest in Western Sub-Saharan Africa and highest in North America.

According to age, the prevalence of cannabis use disorder in the United States is highest among individuals ages 18–29 years (6.9%) and lowest among individuals age 45 years and older (0.8%). Rates of cannabis use disorder are greater in men than in women (3.5% vs. 1.7%) and in boys than in girls ages 12–17 years (3.4% vs. 2.8%), although gender differences have been narrowing in recent birth cohorts across several countries. Regarding ethnoracial differences, for adolescents ages 12–17 years, rates are highest among Hispanics (3.8%), followed by Whites (3.1%), African Americans (2.9%), and other ethnoracial groups (2.3%). Among adults, the prevalence of cannabis use disorder is 5.3% in American Indians and Alaska Natives, 4.5% in African Americans, 2.6% in Hispanics, 2.2% in Whites, and 1.3% in Asians and Pacific Islanders.

In the United States and other high-income countries, the number of individuals seeking treatment for cannabis-related problems has increased since the 1990s. However, among adults with cannabis use disorder, only 7%–8% received any type of cannabis-specific treatment in the past year, indicating that cannabis use disorder is a seriously undertreated condition.

Development and Course

The onset of cannabis use disorder can occur at any age but is most common during adolescence or young adulthood. The increasing acceptability and availability of medical and recreational marijuana may impact the development and course of cannabis use disorder, with increased onset among older adults.

Generally, cannabis use disorder develops over an extended period of time, although the progression may be more rapid in adolescents, particularly in those with conduct problems. Most individuals who develop a cannabis use disorder establish a pattern of cannabis use that gradually increases in frequency and amount. Beginning around 2010, cannabis has increasingly displaced alcohol and tobacco in the United States as the first psychoactive substance used during adolescence. This may be attributable to the decrease in perceived harmfulness of cannabis use among adolescents and adults and the fact that many now perceive cannabis use as less harmful than alcohol or tobacco use.

Cannabis use disorder among preteens, adolescents, and young adults is associated with preferences for novelty-seeking and risk-taking, norm-violating or other illegal behaviors, and conduct disorder. Milder cases of cannabis use disorder in youth primarily reflect continued use despite problems related to disapproval of use by peers, school administration, or family, and can place youths at risk for physical or behavioral consequences. In more severe cases, progression to using alone or using throughout the day interferes with daily functioning and takes the place of previously established, prosocial activities.

Cannabis use disorder among adults typically involves well-established patterns of daily cannabis use that continue despite clear psychosocial or medical problems. Many adults experience repeated desire to stop or have failed at repeated cessation attempts. Milder adult cases may resemble mild adolescent cases in that cannabis use is not as frequent or heavy but continues despite potential significant consequences of sustained use. The rate of use among U.S. middle-age and older adults is increasing, which may be atributable to increased availability and acceptability, along with a possible "baby boomer" cohort effect resulting from high prevalence of use among those who were young adults in the late 1960s and the 1970s.

Early onset of cannabis use (e.g., prior to age 15 years) is a robust predictor of the development of cannabis use disorder and other types of substance use disorders and mental disorders during young adulthood. Such early onset is often concurrent with other externalizing problems (e.g., symptoms of conduct disorder). However, early onset is also a predictor of internalizing problems and as such may reflect a general risk factor for the development of mental disorders.

Risk and Prognostic Factors

Temperamental. A history of conduct disorder in childhood or adolescence and antisocial personality disorder are risk factors for the development of many substance use disorders, including cannabis use disorder. Other risk factors include externalizing or internalizing disorders during childhood or adolescence. Youth with high behavioral disinhibition scores show early-onset substance use disorders, including cannabis use disorder and multiple substance involvement, and early conduct problems.

Environmental. Risk factors include unstable or abusive family situations, use of cannabis among immediate family members, a childhood history of emotional or physical abuse or the violent death of a close family member or friend, a family history of substance use disorders, and low socioeconomic status. As with all substances of abuse, the ease of availability of the substance is a risk factor; cannabis is relatively easy to obtain in most cultures, which increases the risk of developing a cannabis use disorder. Increasingly permissive U.S. state medical and recreational marijuana laws have reduced barriers to obtaining cannabis in about two-thirds of U.S. states. Living in a U.S. state that has legalized recreational

marijuana use increases the risk for adult cannabis use disorder. The risk of the disorder among past-year cannabis users is higher among Black, Native American, Hispanic, and Asian American adults and adolescents, relative to non-Hispanic Whites.

Genetic and physiological. Genetic influences contribute to the development of cannabis use disorders. Heritable factors contribute between 30% and 80% of the total variance in risk of cannabis use disorders, although studies have not yet definitively identified the specific genetic variants involved. Genetic and environmental influences shared between cannabis and other types of substance use disorders suggest a general common basis for substance use disorders that includes cannabis use disorder.

Culture-Related Diagnostic Issues

The acceptability of cannabis for medical and recreational use has varied widely over time and across cultural contexts. Currently, cannabis is one of the world's most commonly used psychoactive substances. In some cultural settings, cannabis use is influenced by ethnicity, religion, and sociocultural practices, such as political movements.

Sex- and Gender-Related Diagnostic Issues

Compared with men, women report more severe cannabis withdrawal symptoms, especially mood symptoms such as irritability, restlessness, and anger, and gastrointestinal symptoms such as stomachache and nausea, which may contribute to potential telescoping (faster transition from first cannabis use to cannabis use disorder).

Past-month cannabis use was reported by 7.0% of pregnant women in a nationally representative U.S. survey in 2016–2017. The rate of cannabis use is lower in pregnant compared with nonpregnant women, but resumption of use following delivery occurs in the majority who attain abstinence in pregnancy.

Diagnostic Markers

Detection of 11-nor-9-carboxy-delta-9-tetrahydrocannabinol (THCCOOH) in urine is often used as a biological marker of cannabis use. In frequent users, urine tests for THCCOOH often remain positive for weeks after last use, limiting the uses for these tests (e.g., remission status), and expertise in urine testing methods is needed to reliably interpret results. However, a positive result can be useful in working with individuals who deny all use despite concerns of family or friends. Tests for the presence of cannabinoids in blood that give more fine-grained results are under active development, and the development of detection using oral fluids may eventually offer the possibility of roadside tests to use in driving safety efforts.

Association With Suicidal Thoughts or Behavior

In a study of Iraq/Afghanistan-era veterans, after adjustment for multiple sociodemographic factors, psychiatric and other substance comorbidities, and past trauma, including combat, cannabis use disorder was still associated with increased risk of both suicidal and nonsuicidal self-injury. In a study of all U.S. Veterans Health Administration patients in 2005, any current substance use disorder was associated with increased suicide risk in both sexes but especially among women. In particular, men with cannabis use disorder had a suicide rate of 79 per 100,000 person-years, and women with cannabis use disorder had a suicide rate of 47 per 100,000 person-years. A review and meta-analysis of the international literature from 1990 through 2015 found evidence that chronic cannabis use, but not acute cannabis use, is associated with suicidal thoughts and behavior.

Functional Consequences of Cannabis Use Disorder

Functional consequences of cannabis use disorder are part of the diagnostic criteria. Many areas of psychosocial, cognitive, and health functioning may be compromised in relation to

cannabis use disorder. Although it can be difficult to distinguish the short-term impairments due to cannabis intoxication from the longer-term functional consequences of cannabis use disorder, cognitive function (particularly higher executive function) even while unintoxicated may become compromised in cannabis users in a cumulative dose-dependent relationship, which may contribute to difficulty at school or work. Accidents due to potentially dangerous activities while under the influence (e.g., driving, sports, at work) are also of concern. In particular, placebo-controlled studies and large-scale epidemiological studies show that cannabis use impairs driver reaction time, spatial perceptions, and decision-making. Cannabis use has also been linked to a reduction in goal-directed activity and decreased self-efficacy, labeled an *amotivational syndrome*, that manifests itself in poor school or work performance. Similarly, cannabis-associated problems with social relationships are commonly reported in those with cannabis use disorder. Cannabis use is associated with poorer life satisfaction and increased treatment and hospitalization for mental health problems.

Differential Diagnosis

Nonproblematic use of cannabis. Although the majority of individuals who use cannabis do not have problems related to its use, 20%–30% of cannabis users do experience symptoms and associated consequences consistent with a cannabis use disorder. Differentiating nonproblematic use of cannabis and cannabis use disorder can be challenging because individuals may not attribute cannabis-related social, behavioral, or psychological problems to the substance, especially in the context of polysubstance use. Also, failure to acknowledge heavy cannabis use and its role in associated problems is common among individuals referred to treatment by others (i.e., school, family, employer, criminal justice system).

Cannabis intoxication, cannabis withdrawal, and cannabis-induced mental disorders. Cannabis use disorder is differentiated from cannabis intoxication, cannabis withdrawal, and cannabis-induced mental disorders (e.g., cannabis-induced anxiety disorder) in that cannabis use disorder describes a problematic pattern of cannabis use that involves impaired control over cannabis use, social impairment due to cannabis use, risky cannabis use (e.g., driving while intoxicated), and pharmacological symptoms (the development of tolerance or withdrawal), whereas cannabis intoxication, cannabis withdrawal, and cannabis-induced mental disorders describe psychiatric syndromes that develop in the context of heavy use. Cannabis intoxication, cannabis withdrawal, and cannabis-induced mental disorders occur frequently in individuals with cannabis use disorder. In such cases, a diagnosis of cannabis intoxication, cannabis withdrawal, or a cannabis-induced mental disorder should be given in addition to a diagnosis of cannabis use disorder, the presence of which is indicated in the diagnostic code.

Comorbidity

Cannabis use disorder is highly comorbid with other substance use disorders (e.g., alcohol, cocaine, opioids). For example, compared with adults without cannabis use disorder, having a cannabis use disorder multiplies the risk for any other substance disorder by a factor of about nine. Cannabis has been commonly considered as a "gateway" drug because individuals who use cannabis have a substantially greater lifetime probability than nonusers of subsequently using other, more risky substances (e.g., opioids or cocaine). Among adults seeking treatment for a cannabis use disorder, many (63%) report problematic use of secondary or tertiary substances, including alcohol, cocaine, methamphetamine/amphetamine, and heroin or other opiates, and cannabis use disorder is often a secondary or tertiary problem among those with a primary diagnosis of other substance use disorders. Among adolescents in treatment, cannabis is frequently the primary substance of abuse (76%).

Among adults with DSM-5 cannabis use disorder, 64% had a past-year tobacco use disorder, and the odds of a comorbid tobacco disorder increased sharply as the severity of cannabis use disorder increased.

Co-occurring mental disorders are also common among those with cannabis use disorder and include major depressive disorder, bipolar I and II disorders, anxiety disorders, posttraumatic stress disorder, and personality disorders. In a Minnesota twin study, about half of adolescents with cannabis use disorder had internalizing disorders (e.g., anxiety, depression, posttraumatic stress disorder), and 64% had externalizing disorders (e.g., conduct disorder, attention-deficit/hyperactivity disorder).

Considerable concern has been raised about cannabis use as a risk factor in schizophrenia and other psychotic disorders. Cannabis use in critical periods is consistently associated with a threefold increase in the risk for psychosis. Differences in frequency of daily cannabis use and use of high-potency varieties of cannabis may have contributed to the striking variation in the incidence of psychotic disorder across 11 European sites. The population attributable fraction from regular cannabis in explaining hospital admissions for psychosis was estimated to be 17.7% (95% CI: 1.2%–45.5%) in Chile. On the other hand, some data suggest that childhood abuse may be the determining factor that increases the risk for cannabis abuse and for psychosis. Overall, cannabis use may contribute to the onset of an acute psychotic episode, can exacerbate some symptoms, and can adversely affect treatment of a major psychotic illness.

Regarding medical conditions, cannabinoid hyperemesis syndrome is a syndrome of nausea and cyclic vomiting associated with regular cannabis use that is increasingly seen in emergency departments as the prevalence of cannabis use increases. In addition, respiratory disorders (e.g., asthma, chronic obstructive pulmonary disease, pneumonia) are associated with regular cannabis use (by smoking, vaping, or e-cigarettes) regardless of tobacco co-use, as are some adverse cardiovascular outcomes.

Cannabis Intoxication

Diagnostic Criteria

A. Recent use of cannabis.

B. Clinically significant problematic behavioral or psychological changes (e.g., impaired motor coordination, euphoria, anxiety, sensation of slowed time, impaired judgment, social withdrawal) that developed during, or shortly after, cannabis use.

C. Two (or more) of the following signs or symptoms developing within 2 hours of cannabis use:

   1. Conjunctival injection.
   2. Increased appetite.
   3. Dry mouth.
   4. Tachycardia.

D. The signs or symptoms are not attributable to another medical condition and are not better explained by another mental disorder, including intoxication with another substance.

Specify if:

With perceptual disturbances: Hallucinations with intact reality testing or auditory, visual, or tactile illusions occur in the absence of a delirium.

Coding note: The ICD-10-CM code depends on whether or not there is a comorbid cannabis use disorder and whether or not there are perceptual disturbances.