Dissociative identity disorder: Epidemiology, pathogenesis, clinical manifestations, course, assessment, and diagnosis

AUTHOR: Brad Foote, MD
SECTION EDITOR: David Spiegel, MD
DEPUTY EDITOR: Michael Friedman, MD

All topics are updated as new evidence becomes available and our peer review process is complete.

Literature review current through: **Oct 2023.**
This topic last updated: **Mar 01, 2022.**

INTRODUCTION

Dissociative identity disorder (DID), formerly known as multiple personality disorder, is a complex, chronic condition characterized by disruption in autobiographical memory and in the sense of having a unified identity. The disorder has been most commonly conceptualized as originating in the context of severe trauma during the patient's childhood.

The epidemiology, pathogenesis, clinical manifestations, course, and diagnosis of DID are presented here. The epidemiology, pathogenesis, clinical manifestations, and diagnosis of posttraumatic stress disorder with dissociative features are discussed separately. (See "Dissociative aspects of posttraumatic stress disorder: Epidemiology, clinical manifestations, assessment, and diagnosis".)

DISSOCIATION

Dissociative identity disorder (DID) is one of several dissociative disorders. Dissociation has been defined as a disruption of and/or discontinuity in the normal integration of consciousness, memory, identity, emotion, perception, body representation, motor control, and behavior [1].

When one or more of these functions are disrupted, characteristic impairments can be seen. As examples:

- Consciousness – Impaired consciousness is characterized by decreased responsiveness to external stimuli.
- Memory – Memory impairment, referred to as “dissociative amnesia,” affects the ability to recall autobiographical information, which is often of a traumatic or stressful nature. (See "Dissociative amnesia: Epidemiology, pathogenesis, clinical manifestations, course, and diagnosis".)
- Identity – Dissociation can cause confusion about or discontinuities in one’s identity.
- Awareness of body, self, or environment – Symptoms of impairment include depersonalization and derealization.

EPIDEMIOLOGY

The prevalence of dissociative identity disorder (DID) is estimated to be approximately 1 percent in community-based studies. The prevalence of DID is higher among patients receiving mental health care, but with wide variation [2,3].

There are no epidemiologic studies of the national prevalence of DID. Samples drawn from the general population in Winnipeg, Canada and from adult women in central Turkey found prevalence rates for DID of 1.3 and 1.1 percent, respectively [2,3]. These findings suggest that DID is not a rare disorder, but instead may have a population prevalence comparable with that of schizophrenia.

Studies of inpatient psychiatric patients in nine countries (Norway, Finland, Switzerland, Turkey, Germany, Netherlands, Canada, United States, and China) found that the prevalence of DID in these inpatient samples ranged between 0 and 12 percent, with a median of 5 percent [4-15].

Studies of outpatients receiving mental health care in the United States and Turkey found the prevalence of DID to range from 0 to 7 percent, with a median of 2.5 percent [16-20].

In a prospective study, DID was diagnosed in 16 percent of a adolescents (age 11 to 17) admitted to a child and adolescent outpatient clinic in Turkey [21].

The American Psychiatric Association’s Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) introduced a new diagnostic entity, the dissociative subtype of

posttraumatic stress disorder (PTSD), which could be expected to be highly comorbid with DID. In a cohort of women seeking treatment in a hospital trauma program, among 47 patients diagnosed with this dissociative subtype of PTSD, 68 percent were found to also have a DID diagnosis [22].

Retrospective studies of patients with DID in mixed settings (inpatient, outpatient, and community) have reported the following sociodemographic characteristics:

- Seven studies of 388 patients reported a median age of 31.3 years (22.8 to 34.5 years) [3,12,14,23-26].
- Eleven studies of 737 patients found a median of 89 percent female (range 70 to 95 percent) [6,7,12,16,19,23-28]. Females may be overrepresented due to the predominance of females among those who seek psychiatric treatment. DID males may present more frequently in substance use disorder and criminal justice settings [29,30].

Comorbidity — DID has high rates of psychiatric comorbidity. Prevalence rates of disorders commonly co-occurring with DID include:

- PTSD – 79 to 100 percent [12,23,27,31,32]. (See "Posttraumatic stress disorder in adults: Epidemiology, pathophysiology, clinical features, assessment, and diagnosis".)
- Depression – 83 to 96 percent [12,24,28,31,33-35]. (See "Unipolar depression in adults: Epidemiology".)
- Substance use disorder – 83 to 96 percent when past and present substance use are included [12,23,27,28,31]. (See "Risky drinking and alcohol use disorder: Epidemiology, clinical features, adverse consequences, screening, and assessment".)
- Somatoform conditions. (See "Somatic symptom disorder: Epidemiology and clinical presentation" and "Somatic symptom disorder: Assessment and diagnosis".)
  - Headaches, 79 to 91 percent [28,35,36]
  - Nonepileptic seizures [23]
  - Conversion symptoms [32]
  - Somatoform disorder, 35 to 61 percent [24,27,28,32,34-36]
- Personality disorders – Avoidant personality disorder in 76 percent [37] and borderline personality disorder in 31 to 83 percent [12,24,27,28,31,34,35,38] of patients with DID.

Avoidant and borderline personality disorder features may be adaptations to chronic trauma that resolve as patients receive trauma-informed psychotherapy [39]. (See "Borderline personality disorder: Epidemiology, pathogenesis, clinical features, course, assessment, and diagnosis".)

Risk factors — Retrospective studies have found that a high proportion of patients diagnosed with DID report a history of severe, chronic childhood trauma, usually childhood physical and/or sexual abuse, which begins before age six. Ten studies with an aggregate sample of 658 patients with DID found the following rates of childhood trauma [12,23-27,31,35,40,41]:

- Childhood sexual abuse – 70 to 100 percent (median 83 percent)
- Childhood physical abuse – 60 to 95 percent (median 81 percent)
- Childhood trauma (any type) – 77 to 100 percent (median 94 percent)

Evidence supporting patient history of childhood abuse has been supported in 26 to 100 percent of DID cases (median 85 percent) [29,42-46].

In comparison, rates of childhood abuse reported by adults in the United States general population range from [47-51]:

- Eight to 17 percent of all respondents for physical abuse
- Six to 17 percent of women for sexual abuse
- Six to 11 percent of men for sexual abuse

The proportion of adults with a history of childhood abuse who subsequently experience symptoms of DID has not been studied.

There has been limited systematic study of the nature of childhood abuse suffered by patients with DID, but available data suggest that the abuse was early, extensive, and prolonged [12,25,27,40,41]:

- In 117 patients with DID, the majority of patients reported child abuse prior to the age of six years [12,40]
- In 130 patients with DID who experienced physical and/or sexual abuse [27]:
  - Fifty percent reported having been physically abused by four or more perpetrators
  - Seventy-six percent reported having experienced four or more types of sexual abuse

- In 102 patients with DID who reported experiencing sexual and/or physical abuse, the mean duration of abuse was 10 years [40]

PATHOGENESIS

Dissociative identity disorder (DID) is a controversial diagnosis. Its pathogenesis is not known. Conceptual models for the development of DID include a trauma model, supported by evidence on the association between a history of severe childhood trauma and dissociative symptoms, and a sociocognitive model.

Trauma model — This conceptualization of DID is based on a stress-diathesis model, which formulates illness as occurring in individuals with a predisposition to the illness (ie, the diathesis) who experience a significant "stress" (ie a life event or environmental factor). Predisposing factors proposed in DID include a person's inborn tendency to dissociate (ie, "dissociativity"). The primary stressors giving rise to DID in patients with high dissociativity are believed to be sexual abuse, physical abuse, or other severe trauma occurring during childhood. These factors are discussed further below.

Dissociativity — Dissociation is a common occurrence among people without mental illness. Normal dissociation is viewed as a capacity for a combination of intense focus (absorption) and detachment from distraction that can be mobilized and controlled [52,53]. Individuals' tendency to dissociate has been found to vary widely within various populations [54,55].

The concept of dissociation as a response to trauma is derived in part from an animal model of defensive response to life-threatening stress, such as an attack by a predator. Under such circumstances, animals may display freezing, tonic immobility, passivity, hypoarousal, and analgesia. Each of these have analogies in human dissociative symptoms [56].

Research evidence suggests that genetic and other biologic factors may influence dissociative reactions to stress. For example, three out of four large studies of healthy twin pairs drawn from the general population suggested a moderate to substantial genetic component to variation in dissociativity [57-60]. Further evidence reports a link between levels of dissociation with genes associated with dopamine metabolism, neuronal growth and repair, glucocorticoid response to trauma, and serotonin transport [60-62].

Neuroanatomical and imaging studies have been mixed in reporting an association between dissociative disorders and smaller hippocampus and amygdala volumes. Several studies have found evidence of a smaller hippocampus and other brain structures in patients who have suffered childhood sexual abuse or posttraumatic stress disorder (PTSD) [63-65], or in

individuals with dissociative amnesia [66]. Another study comparing volumes of specific brain areas found the hippocampus and amygdala were smaller in volume in individuals with DID compared with subjects without a psychiatric disorder [67]. These contrast with a study that suggests that smaller hippocampal volume might be present before the trauma and may be a risk factor for PTSD rather than a consequence of the trauma [68]. Other data suggest decreased cortical thickness and decreased cortical surface area in brain regions [69].

Analysis of neuroanatomical biomarkers find that a diagnosis of DID can be predicted with high degree of accuracy, suggesting a measurable basis for distinguishing individuals with DID from healthy individuals [70].

Other data examining regional brain volume in individuals with dissociative disorders and healthy controls include:

- A study comparing individuals with DID, dissociative disorder, not otherwise specified, and healthy controls found mean volumes of the hippocampus, parahippocampal gyrus, and amygdala to be smaller in patients with either dissociative disorder compared with the healthy controls. Additionally, greater differences found between the DID and control groups [71]. Furthermore, hippocampal volumes in the active DID group were reportedly smaller than hippocampal volumes in a sample of 10 individuals who were recovered from DID.

- Neuroanatomical data from brain magnetic resonance imaging studies report reduced whole brain, frontal, temporal and insular cortical volumes in individuals with DID (with comorbid PTSD) and individuals with PTSD only as compared to healthy controls [72]. Minor differences between the PTSD and the DID/PTSD group are thought to be associated with the severity of dissociative symptoms. Further analysis of this data suggests that individuals with DID (but not in the PTSD-only group) differed in a wide range of measurements likely correlated with higher severity of childhood trauma and dissociative symptoms [73].

Positron emission tomography studies confirm that the differences in brain region activation between more emotional and less emotional personality states in DID parallels the differences found between the hypoaroused (dissociated) and the hyperaroused subtypes of PTSD [74].

Childhood trauma — The most commonly reported “stress” postulated in this model is a history of early severe childhood physical or sexual abuse, or other severe trauma, including emotional abuse, particularly when it is accompanied by a lack of secure attachment to caregivers, a lack of comforting following overwhelming experiences, and perhaps genetic predisposition. These factors may contribute to a lack of integration of sense of self across

contexts and states [75,76]. Data on the prevalence and severity of a childhood trauma history in patients with DID are described above. (See 'Risk factors' above.)

DID is thought to be a potential outcome of physical or sexual abuse during childhood. Individuals who experience such abuse as adults may develop acute or posttraumatic stress disorder, but are not known to have developed DID. (See "Acute stress disorder in adults: Epidemiology, clinical features, assessment, and diagnosis" and "Posttraumatic stress disorder in adults: Epidemiology, pathophysiology, clinical features, assessment, and diagnosis" and "Dissociative aspects of posttraumatic stress disorder: Epidemiology, clinical manifestations, assessment, and diagnosis".)

The existence of a moderate to strong association between traumatic experience, especially childhood abuse, and dissociative symptoms and/or a dissociative disorder diagnosis has been replicated in hundreds of studies, with almost no contrary evidence [77,78].

Poor infant attachment — Poor mother-infant attachment has been postulated as an additional factor that may lead to DID in predisposed individuals [79-81]. Two longitudinal studies described cohorts of 168 and 56 poor, high-risk children who had been referred for social service intervention during infancy and who were followed through age 19. Both studies found that the quality of infant-mother attachment, as measured in the first two years of life, was a stronger predictor of self-reported dissociative experiences in late adolescence than was childhood trauma. Neither study evaluated participants for the presence of a dissociative disorder [79-81]. A prospective study of children whose caregivers were required to perform daily painful medical procedures on the child throughout early childhood found that the number of years of treatment and the number of hospitalizations before age five uniquely predicted dissociation in adolescence and adulthood [82]. A chronically ill control group that received painful procedures administered by health care professionals did not show elevated dissociation.

Proposed mechanisms — DID is proposed to occur in individuals predisposed to dissociation who experience sexual or physical abuse, or other severe repetitive childhood trauma, particularly when it occurs in the absence of secure attachment and comforting [75]. Dissociation and amnesia are hypothesized to arise as a defensive or adaptive reaction to trauma, based in part on the conflict between fear of the abuser and, in many cases, dependence on the abuser [83]. Dissociation can provide detachment from physical pain and a means of emotion regulation in the face of traumatic experiences and memories.

Dissociative amnesia has been proposed to be associated with warnings from the abuser to keep the abuse secret. Fragmentation of identity is thought to be more likely when trauma

occurs during developmental periods of identity consolidation.

Chronic abuse may lead to further dissociation through learning or habit formation. If the child's use of dissociation is repeatedly reinforced because it reduces the psychological pain related to betrayal and cognitive dissonance that arises from the abuse experiences, the dissociative response may become more automatic and more complete, eventually impeding integration of disparate aspects of identity, memory, and personality [84]. A child who is exposed to repeated trauma without emotional support may fail to develop a sense of self that remains subjectively intact across states and contexts. They could come to experience a subjective reality of two or more self-states, some without continual access to memories of the abuse. The child could eventually come to use fragmentation of personality to deal with other, present-day traumatic events, internal conflicts, intense affects, or troubling realities.

Sociocognitive model — An alternative model of DID, the "sociocognitive model," posits that an individual's symptoms of DID represent a role enactment consistent with cultural and interpersonal expectations [85]. Patients are proposed as learning to construe themselves as possessing multiple selves and coming to believe in fantasies that they were physically or sexually abused. DID symptoms are believed to be absorbed by patients through representations of DID in movies, books, and other media.

An overlapping model, the "fantasy model" of dissociation, focuses on a possible connection between the patient's fantasy-proneness and dissociation, suggesting that dissociation is associated with a tendency to fantasize a history of trauma.

An iatrogenic contribution to the patient's development of DID is postulated, suggesting that some clinicians who treat DID may inadvertently contribute to patients' manifestations of the disorder through suggestive psychotherapeutic techniques.

Proponents of the sociocognitive model have cited the following lines of research.

- A marked rise in the number of reported cases of DID in the 1980s and 1990s, accompanied by more frequent media depictions of the disorder.
    - It has been estimated that prior to 1980, only 200 DID cases had been reported in the world psychiatric literature, while several large series of cases with a total of 843 patients were published between 1981 and 1990 [2].
    - A study found journal articles on DID to be published at a rate of nine per year between 1971 and 1980, increasing to 60 per year between 1981 and 1990 [86].

- Research findings that individuals in hypnotic and other socially influenced situations can be influenced to enact suggested roles [85], including the roles of separate personality states [87].

- A number of studies have found an association between measures of dissociation and measures of fantasy-proneness [88].

Critics of the model have pointed out that:

- Many of these studies use a measure that has been shown to be a poor measure of dissociation [77].

- Dissociation predicted between 1 to 3 percent of the variance in suggestibility, indicating that dissociation is not strongly linked to suggestibility in the majority of cases. The association between trauma and dissociation was equally strong regardless of whether researchers studied objectively documented versus self-reported cases of child abuse. The sociocognitive/fantasy model suggests that self-report cases would have stronger associations between trauma and dissociation than documented cases.

- There has been no study of the sociocognitive model using clinical samples. Research has been conducted in laboratories and extrapolated to dissociative patients.

- There is an overwhelming amount of data supporting the trauma model [77].

CLINICAL MANIFESTATIONS

Dissociative identity disorder (DID), as characterized by DSM-5, presents with a disruption of identity characterized by the presence of two or more distinct personality states and recurrent gaps in recall of personal information or events. Manifestations of the disorder can include alterations in affect, behavior, consciousness, perception, cognition, and/or sensory-motor functioning [89].

Distinct personality states in DID are reported to be experienced by the patient or others as having different characteristics, such as ages, genders, sexual orientation, and abilities. Some researchers have suggested that the original personality state often constitutes the dominant presence. Four studies of 428 total subjects with DID reported a median number of personality states between 5 and 10 [23,25,26,41].

Researchers reporting data consistent with a trauma model of DID have described patient presentations featuring personality states associated with traumatic experiences (with

associated mood states, roles, or behaviors), such as a terrified, crying child [90] or an angry, persecutory figure [91,92]. More recent characterizations of DID personality states are less personified and more as fluctuating states associated with alterations in affect, behavior, consciousness, memory, perception, cognition, and/or sensory-motor functioning [93].

Some clinician researchers have suggested that DID is better conceptualized as a fragmentation of identity or as discontinuities in memory and identity experienced by the patient as intrusions into consciousness due to overlapping, shifting, and interference between states, rather than as "switching" between distinct personalities [94,95]. Dramatic presentations are believed to characterize only a subset of individuals with DID, contrary to stereotypical media portrayals of the disorder.

Other dissociative symptoms observed in patients with DID include:

- Amnesia – Individuals with DID experience recurrent episodes of amnesia. The presence of recurrent gaps in memory is required by DSM-5 diagnostic criteria for DID. Patients typically report that they have periods of time (most often hours) that they cannot remember. From secondary reports, these periods may be associated with certain mood states or behaviors (eg, angry outbursts).

- Depersonalization – Depersonalization is a feeling of detachment or estrangement from one's self (eg, feeling outside of one's body or that one is observing oneself from the outside). A review of seven studies of an aggregate sample of 443 patients with DID found a median of 77 percent (range 38 to 100) reported depersonalization [1].

- Derealization – Derealization is a feeling that the external world is strange or unreal. A review of seven studies of an aggregate sample of 458 patients with DID found a median of 63 percent (range 53 to 93) reported derealization [1].

- Self-alteration – Self-alteration is the sense that one part of one's self is markedly different from another part of one's self. A review of four studies of an aggregate sample of 353 patients with DID found a median of 98 percent (range 94 to 100) reported self-alteration [1].

- Trance state – A dissociative trance state involves a narrowing of awareness of one's immediate surroundings or stereotyped behaviors or movements that are experienced as being beyond one's control [96]. A review of seven studies of an aggregate sample of 693 patients with DID found a median of 91 percent (range 45 to 100) reported trance states [1].

Patients with DID may report somatoform symptoms – physical symptoms that suggest a general medical illness that cannot be explained by a presence of a general medical condition, substance use, or other mental disorder. A review of seven studies of an aggregate sample of 520 patients with DID found a median of 83 percent (range 40 to 92) reported somatoform symptoms [1]. (See "Somatic symptom disorder: Epidemiology and clinical presentation" and "Somatic symptom disorder: Assessment and diagnosis".)

Many individuals with DID report auditory hallucinations (eg, a voice giving suggestions or commands). The hallucinations have been described as chronic and typically present since childhood [97]. These hallucinations may reflect autohypnotic phenomena, rather than a psychotic process – they have been conceptualized as representing communication among dissociated states. This is consistent with reports that they are typically unaffected by antipsychotic medication [98]. A review of nine studies of an aggregate sample of 771 patients with DID found a median of 92 percent (range 64 to 100) reported auditory hallucinations [1]. (See "Psychosis in adults: Epidemiology, clinical manifestations, and diagnostic evaluation", section on 'Hallucinations'.)

Many people with DID experience suicidal ideation and behavior. In six studies of with a total of 553 patients with DID, 66 to 80 percent reported a history of suicide attempts [23,25,26,31,35]; suicidal ideation was more common (92 to 100 percent), measured in four studies of 218 patients with DID [23,28,31,41].

DSM-5 diagnostic criteria for DID suggest that the distinct personality states “may be described in some cultures as an experience of possession.” A review of 917 cases of “spirit possession” found a strong relationship between this condition and a history of trauma exposure [99].

DID often goes unrecognized. Patients diagnosed with DID have been reported in several studies to have received mental health care for an average of seven years prior to being diagnosed with the disorder [23,25,26,41]. Several factors can make diagnosis of DID difficult, including:

- Patients infrequently present with clearly visible switching among distinct personality states [1,95,100]. Patients later diagnosed with DID more commonly first present with other dissociative symptoms and comorbid conditions such as treatment resistant depression.

- Some patients experiencing dissociation may not be able to articulate their internal state in a coherent way, describing baffling experiences such as “losing time” or not remembering behavior with others, who report activities they have shared. Clinicians typically need to gently inquire about dissociative symptoms, rather than expecting

patients to volunteer this information. Most DID patients prefer to not think about or reveal dissociative symptoms. If patients endorse symptoms of depersonalization, derealization, and amnesia for complex behaviors, they should be further evaluated for a dissociative disorder.

- Most clinicians do not receive training in assessing dissociation and dissociative disorders and do not assess for DID [101,102].

High rates of comorbidity associated with DID can lead patients to present for treatment emphasizing symptoms leading to other psychiatric diagnoses, such as depression, chaotic interpersonal relations, and somatoform symptoms.

COURSE

While there are case reports and case series describing patients with dissociative identity disorder (DID) including among children, adolescents, and geriatric patients, there are no systematic, prospective longitudinal studies providing data on the course of the disorder. DID appears to have a fluctuating, typically chronic course, with periods of higher and lower severity of symptoms and functional impairment [103-105].

Most patients with DID have reported that symptoms of the disorder first appeared during childhood. Four studies including 199 patients reported a mean age of onset between 5 and 7.8 years old, supporting the trauma model's thesis that DID is a developmental trauma disorder [25,41,106,107].

ASSESSMENT

A diagnostic assessment of possible DID typically begins with the identification of amnesia and evaluation for other dissociative symptoms characteristic of the disorder, including depersonalization, derealization, auditory hallucinations, self-alteration, trance states, and somatoform symptoms. (See 'Clinical manifestations' above.)

Assessment can proceed from an initial screening question to more detailed inquiry if the initial response is affirmative, for example:

Amnesia:

- Do you have periods of time that you can't account for?

- Do you have any knowledge of what happened during these periods?
- What have you been told about these episodes by others who were present?
- Are there behaviors that you can't recall but circumstances suggest you may have done? (Examples include discovering new possessions that you don't remember buying, or finding yourself somewhere and not knowing how you got there.)

Depersonalization/derealization:

- Is there a typical circumstance (eg, a certain place, feeling, or interaction) that tends to precede or trigger the episodes?
- Do you feel like your body does not belong to you?
- Do you sometimes see yourself from a distance as if you watching a movie of yourself?
- Does it seem as if people and places around you seem distant, foggy, or unreal in some way?

Psychiatric assessment of a patient with possible DID should include evaluation for:

- Suicidal ideation or behavior
- A history of childhood sexual or physical abuse (see "Evaluation of sexual abuse in children and adolescents" and "Physical child abuse: Diagnostic evaluation and management")
- Use of alcohol and other drugs
- History of no response or very limited response to multiple psychiatric medications despite appropriate treatment for mood, anxiety, or psychotic disorders

A medical history and physical exam should be performed with follow-up on any initial findings.

DIAGNOSIS

DSM-5 diagnostic criteria for dissociative identity disorder (DID) are as follows [89]:

- A. Disruption of identity characterized by two or more distinct personality states, which may be described in some cultures as an experience of possession. The disruption in identity involves marked discontinuity in sense of self and sense of agency, accompanied by related alterations in affect, behavior, consciousness, memory, perception, cognition,

and/or sensory-motor functioning. These signs and symptoms may be observed by others or reported by the individual.

- B. Recurrent gaps in the recall of everyday events, important personal information, and/or traumatic events that are inconsistent with ordinary forgetting.
- C. The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.
- D. The disturbance is not a normal part of a broadly accepted cultural or religious practice.

  Note: In children, the symptoms are not better explained by imaginary playmates or other fantasy play.
- E. The symptoms are not attributable to the physiological effects of a substance (eg, blackouts or chaotic behavior during alcohol intoxication) or another medical condition (eg, complex partial seizures).

Addressing diagnostic challenges — A clinician uncertain of the nature and etiology of DID should consider adopting a participant-observation stance when evaluating a patient presenting with DID symptoms [108]. This involves acknowledging the patient's experience as fragmented while observing its manifestations and the patient's efforts to function in its presence. The approach gives the clinician and patient opportunities to enter a dialogue in terms that are meaningful to both parties, while preserving the clinician's options to offer further perspective at a later date.

Clinicians with strong biases for or against the disorder should take care to avoid either underdetection or overdiagnosis [109]. As examples:

- A clinician who places too much emphasis on a fear of iatrogenesis may fail to assess the patient for dissociative experiences.
- A clinician with a strong investment in DID may diagnose the disorder on the basis of weak evidence.

Differential diagnosis — DID should be distinguished from other conditions with overlapping features.

Intoxication — Intoxication with alcohol or benzodiazepines can lead to episodes of amnesia [110]. Cannabis, hallucinogens, ketamine, and ecstasy have been found to induce depersonalization [111]. A thorough assessment of a patient's substance use, (eg, substance

use disorder) can help to differentiate these causes of dissociation from DID. (See "Risky drinking and alcohol use disorder: Epidemiology, clinical features, adverse consequences, screening, and assessment" and "Substance use disorders: Clinical assessment".)

General medical conditions — Amnesia can be caused by general medical conditions, including various forms of dementia, and epileptic seizures. Patients should undergo a medical history and physical examination prior to a diagnosis of DID. Based on the findings, more extensive evaluation may be needed.

An observation which often proves helpful in distinguishing dissociative amnesia from amnesia due to medical causes is that a patient with dissociative amnesia will generally perform adequately on cognitive testing. They will likely demonstrate a well-preserved fund of general knowledge and ability to acquire new factual information, but exhibit specific deficits for autobiographical information. Patients with dementia or other organic amnesias will usually show the reverse, with autobiographical information preserved even as other memory deficits worsen. (See "Evaluation of cognitive impairment and dementia" and "Evaluation and management of the first seizure in adults".)

Posttraumatic stress disorder — Posttraumatic stress disorder (PTSD) and DID have been found to frequently co-occur and share a history of childhood physical and sexual abuse in many cases [104,112,113]. PTSD is distinguished from DID by the presence of multiple symptoms of re-experiencing, avoidance, and hyperarousal, where DID alone requires the presence of amnesia and multiple personality states. A dissociative subtype of PTSD shares prominent symptoms of amnesia and numbing with DID [114]. (See 'Comorbidity' above and "Dissociative aspects of posttraumatic stress disorder: Epidemiology, clinical manifestations, assessment, and diagnosis".)

Borderline personality disorder — Borderline personality disorder and DID have been found to frequently co-occur and share a history of childhood physical and sexual abuse in many cases [31,115]. The identity disturbance characteristic of borderline personality falls short of the severe fragmentation of identity, with amnesia between personality states, found in DID. (See 'Comorbidity' above and "Borderline personality disorder: Epidemiology, pathogenesis, clinical features, course, assessment, and diagnosis".)

Schizophrenia — Auditory hallucinations and other first rank symptoms of psychosis are shared by DID and schizophrenia [23,34,116]. Auditory hallucinations in DID are typically highly personified (ie, related to a particular identity state, and are usually experienced as a voice inside rather than outside the head). Patients with DID have generally reported hearing voices beginning in childhood and while the disorder causes distress or functional impairment, the

course typically fluctuates over time. In contrast, patients with schizophrenia typically experience hallucinations in concert with other psychotic symptoms such as disordered thinking, a flat affect, and pervasive deterioration in functioning beginning in their late teens to early twenties. (See "Schizophrenia in adults: Clinical features, assessment, and diagnosis".)

In some patients presenting with auditory hallucinations, the clinician may not be able to differentiate between DID and schizophrenia initially. A longer interval may be needed before the patient's diagnosis can be determined.

Bipolar disorder — Changes in mood caused by switching of personality status in DID can present as depression or can have characteristics of mania, such as hypersexuality or aggression. DID is the more likely diagnosis if these mood states do not last more than a few hours and begin and end abruptly, often in response to environmental stimuli. A bipolar patient typically does not switch from depression to mania in a few seconds, but this would be characteristic of behavioral state changes occurring in DID. Depression is a common comorbid condition and is often lifelong with little response to appropriate drug trials [98,117]. (See "Bipolar disorder in adults: Clinical features".)

Factitious disorder and malingering — A factitious disorder is diagnosed when the patient intentionally feigns medical or psychiatric symptoms for the purpose of assuming the sick role (eg, receiving caretaking or sympathy). Malingering adds to this presentation the purpose of achieving some specific external advantage, such as a disability income or avoiding work responsibility. DID patients have been distinguished from DID simulators on biological measures including cerebral brain flow patterns on positron emission tomography scans, heart rate, heart rate variability, blood pressure, and emotional arousal in laboratory research [118] and on psychological tests [119-121]. Individuals presenting with factitious and/or malingered imitations of DID typically present with stereotypic "good" and "bad" parts, and without the complex associated symptoms, distress and shame more common in genuine DID [39].

Features of the presentation that can help identify factitious disorder or malingering, distinguishing them from DID, include:

- The presence of an obvious benefit of the symptoms to the patient (eg, evading responsibility for a criminal act). However, DID individuals cannot be assumed to be feigning simply because they are involved in a forensic matter or seeking disability.

- A patient's high degree of attention seeking, including flaunting symptoms of DID [109]. Patients who have DID do not typically display symptoms ostentatiously or seem enthusiastic about discussing them, although a minority of DID patients are dramatic and may occasionally appear to seek attention related to their disorder [122].

- The presence of well-known symptoms of DID (switches to different personality states and amnesia) in the absence of other, lesser known dissociative symptoms [95,119]. (See "Factitious disorder imposed on self (Munchausen syndrome)".)

Nonpathological behavior — A patient's descriptions of ordinary forgetfulness (eg, "I can never remember where I put my car keys!") need to be distinguished from amnesia, which involves the absence of memory of extended periods of time, often hours.

A patient's metaphorical descriptions of themselves (eg, "When I'm out at the nightclub, I feel like a totally different person," or "I am of two minds about my work") should not be misinterpreted as a symptom of DID.

SOCIETY GUIDELINE LINKS

Links to society and government-sponsored guidelines from selected countries and regions around the world are provided separately. (See "Society guideline links: Dissociative disorders".)

SUMMARY AND RECOMMENDATIONS

Dissociative identity disorder (DID), formerly known as multiple personality disorder, is a complex, chronic dissociative condition characterized by two or more distinct personality states with marked discontinuity in sense of self with related alterations in affect, behavior, consciousness, memory, perception, cognition and/or sensory-motor functioning with recurrent gaps in autobiographical memory.

- The prevalence of DID has been estimated at approximately 1 percent in limited, community based studies. The rate of DID appears to be significantly higher among patients receiving mental health care, but with wide variation. (See 'Epidemiology' above.)

- Psychiatric conditions commonly comorbid with DID include posttraumatic stress disorder, borderline personality disorder, substance use disorder, depression, and somatoform disorder. (See 'Epidemiology' above.)

- The disorder has been most commonly conceptualized as occurring among individuals predisposed to dissociation who experience severe trauma during childhood. (See 'Pathogenesis' above.)

- The American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) diagnostic criteria for DID characterized the disorder as

involving switching among two or more distinct personality states and an extensive inability to recall important personal information. Some clinician researchers have suggested that DID is better conceptualized as a fragmentation of identity or as discontinuities in memory and identity rather than as “switching” between distinct personalities. (See 'Clinical manifestations' above.)

These disruptions are frequently accompanied by other manifestations of dissociation, including depersonalization, derealization, auditory hallucinations, and/or other dissociative symptoms.

- A clinician evaluating or treating a patient for possible DID should strike a balance between the need to ask questions about DID symptoms to identify whether or not the disorder is present and avoiding overly suggestive questions about multiple distinct personality states. (See 'Assessment' above.)

- The differential diagnosis of DID includes intoxication, borderline personality disorder, schizophrenia, bipolar disorder, factitious disorder, and malingering. (See 'Differential diagnosis' above.)

Topic 14700 Version 17.0

→