ANXIETY DISORDERS

Panic Disorder

PD

DSM-5-TR 300.01 | ICD-10-CM F41.0

Recurrent unexpected panic attacks followed by a month or more of anticipatory fear or maladaptive behavior change.

LIFETIME PREVALENCE	TYPICAL ONSET	SEX RATIO	COURSE
~2-5% (US adults)	Late teens to mid-30s	2:1 female:male	Chronic; relapse off treatment

CLINICAL PICTURE

- Attacks crescendo within ten minutes with palpitations, dyspnea, chest tightness, dizziness, paresthesias, derealization, and fear of dying or losing control.
- Patients present repeatedly to emergency departments and cardiology, often after negative troponins, Holter monitoring, and normal stress tests.
- Nocturnal panic wakes roughly a quarter of patients out of non-REM sleep with no dream trigger, and is frequently misattributed to sleep apnea.
- Between attacks, persistent worry about the next attack and interoceptive vigilance toward heartbeat and breathing dominate daily experience.
- Avoidance spreads outward from exercise and caffeine to crowds, driving, and travel, often reaching criteria for comorbid agoraphobia.
- Many patients over-rely on an unopened bottle of lorazepam or on a trusted companion; that safety signal quietly blocks corrective learning.

DIAGNOSTIC CRITERIA AT A GLANCE

- Recurrent unexpected panic attacks, defined as abrupt surges of intense fear peaking within minutes and including at least four of thirteen listed symptoms.
- At least one attack is followed by a month or more of persistent concern about additional attacks or about their meaning and consequences.
- Alternatively or additionally, a month or more of significant maladaptive change in behavior organized around preventing further attacks.
- Not attributable to substances, hyperthyroidism, or cardiopulmonary disease, and not better explained by another mental disorder.
- Panic attacks alone are a specifier applicable across many diagnoses; only recurrent unexpected attacks support panic disorder itself.

NEUROBIOLOGY & PHYSIOLOGY

- The fear network centers on amygdala projections to periaqueductal gray, locus coeruleus, parabrachial nucleus, and hypothalamic effector sites.
- The false suffocation alarm model ties panic to hypersensitive medullary CO2 chemoreceptors; 35% CO2 inhalation reliably provokes attacks in patients.
- Sodium lactate, yohimbine, and caffeine challenges provoke panic in patients but not controls, implicating noradrenergic and adenosine signaling.
- Reduced GABA-A benzodiazepine receptor binding and altered serotonergic modulation of brainstem nuclei are documented on PET imaging.
- Heritability approximates **40%**, and first-degree relatives carry several-fold elevated risk with no single dominant gene identified.
- Joint hypermobility, mitral valve prolapse, asthma, and vestibular dysfunction show elevated comorbidity rates with panic disorder.

PSYCHOLOGICAL MECHANISMS

- Clark's catastrophic misinterpretation model: benign bodily sensations get read as imminent heart attack, suffocation, fainting, or insanity.
- Anxiety sensitivity, the fear of arousal sensations themselves, is a measurable prospective risk factor and a direct target of treatment.
- Interoceptive conditioning pairs subtle early somatic cues with the full alarm, so attacks feel spontaneous while being internally triggered.
- Safety behaviors such as carrying medication, sitting near exits, or checking the pulse prevent disconfirmation of catastrophic predictions.
- Childhood separation anxiety, early parental loss, and respiratory illness raise later panic risk through learned interoceptive threat value.

DIFFERENTIAL & COMORBIDITY

- Exclude arrhythmia, thyrotoxicosis, pheochromocytoma, hypoglycemia, seizure aura, pulmonary embolism, and stimulant or cannabis intoxication.
- Alcohol and benzodiazepine withdrawal reproduce panic faithfully; build a substance timeline before diagnosing a primary anxiety disorder.
- **Agoraphobia** co-occurs in roughly a third to a half of cases and is coded as a separate diagnosis under DSM-5-TR conventions.
- Depression, other anxiety disorders, bipolar disorder, and alcohol use disorder are the leading comorbidities and each worsens prognosis.
- Panic disorder independently elevates suicide attempt risk; screen directly rather than attributing all distress to the attacks themselves.

Treatment EVIDENCE-BASED MANAGEMENT

PHARMACOLOGIC

- **SSRIs** are first-line: **sertraline 25-200 mg/day** or **escitalopram 5-20 mg/day**, begun at half the usual starting dose to limit activation.
- Titrate to target over 2-4 weeks; full response typically requires **8-12 weeks** at an adequate dose rather than an early switch.
- **Venlafaxine XR 75-225 mg/day** is an effective SNRI alternative with comparable efficacy and a need for blood pressure monitoring.
- Benzodiazepines such as clonazepam may bridge the first 2-4 weeks, but they undermine exposure learning and risk dependence if continued.
- Continue medication at least **12 months** after remission and taper slowly, since abrupt discontinuation reliably triggers rebound panic.

PSYCHOTHERAPY

- **Panic-focused CBT** over **12-15 sessions**, combining psychoeducation, cognitive restructuring, and exposure, is the gold-standard treatment.
- Interoceptive exposure using hyperventilation, spinning, and straw breathing is the active ingredient and is also the most commonly omitted one.
- Breathing retraining is optional and can itself become a safety behavior; keep it subordinate to direct exposure to arousal sensations.
- **Panic-focused psychodynamic psychotherapy** has randomized trial support as an alternative for patients who decline or fail **CBT**.
- Gains from **CBT** persist at two-year follow-up and protect against relapse better than medication stopped at the same time point.

ADJUNCT & SUPPORTIVE

- Monitor with the **Panic Disorder Severity Scale** plus a daily attack diary recording triggers, duration, and safety behaviors used.
- Eliminate escalating caffeine, nicotine, and energy drinks; graded aerobic exercise doubles as naturalistic interoceptive exposure.
- Coordinate with cardiology and emergency clinicians to stop repeat workups that keep reinforcing the catastrophic illness narrative.
- Digital and telehealth **CBT** protocols show non-inferior outcomes and reach patients whose avoidance prevents office attendance.
- Reserve intensive outpatient or partial hospitalization for panic with severe housebound agoraphobic avoidance or active suicidality.

CLINICAL PEARLS

- Interoceptive exposure is the mechanism; CBT without it usually explains why treatment stalled.
- A rescue benzodiazepine carried but never used still works as a safety signal and blocks learning.
- Nocturnal panic is not sleep apnea; ask about waking in abrupt terror with no dream content.

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NOTE

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