

Non-Rapid Eye Movement Sleep Arousal Disorders

DSM-5-TR 307.46 | ICD-10-CM F51.3 SLEEPWALKING, F51.4 SLEEP TERRORS

Incomplete arousals from slow-wave sleep producing sleepwalking or sleep terrors with unresponsiveness, autonomic surge, and amnesia for the event.

CHILDREN

~29% sleepwalk at some point

ADULTS

~1.5-2.5% sleepwalking

PEAK AGE

Ages 8-12; usually remits

FAMILY HISTORY

~80% have affected relative

CLINICAL PICTURE

- Episodes emerge from slow-wave sleep in the first third of the night, typically within 90 minutes of falling asleep.
- Sleep terrors open with a scream, wide-open eyes, tachycardia, mydriasis, drenching sweat, and inconsolable panic lasting several minutes.
- Sleepwalkers show open eyes with a blank stare and can perform complex acts including dressing, cooking, driving, or leaving the house.
- The person is largely unresponsive to communication and hard to rouse, and forced awakening produces confusion and occasionally aggression.
- Amnesia for the episode is the rule, with at most fragmentary imagery rather than a coherent dream narrative.
- Sleep-related eating and sexsomnia are recognized variants that carry injury, nutritional, and significant forensic consequences.

DIAGNOSTIC CRITERIA AT A GLANCE

- Recurrent episodes of incomplete awakening from sleep, usually during the first third of the major sleep episode, as sleepwalking or sleep terrors.
- Little or no dream imagery is recalled and there is amnesia for the episode itself the following morning.
- The person is relatively unresponsive during the episode and is difficult to console or to fully awaken.
- Clinically significant distress or impairment is required, and substances or a medical condition must not account for the episodes.
- Specify sleepwalking type, including sleep-related eating and sexsomnia subtypes, or sleep terror type.

NEUROBIOLOGY & PHYSIOLOGY

- These are disorders of sleep-state dissociation in which motor and limbic circuits wake while frontoparietal association cortex remains asleep.
- Intracerebral recordings show persistent slow-wave activity in frontal cortex alongside waking-type activity in cingulate and motor regions.
- Genetic loading is strong, with **HLA-DQB1*05:01** enrichment and roughly 80% of probands having an affected first-degree relative.
- Any driver of sleep fragmentation or increased slow-wave pressure precipitates episodes: fever, sleep deprivation, alcohol, stress, and noise.
- Sleep apnea and periodic limb movements are the commonest medical triggers because their arousals repeatedly fracture slow-wave sleep.
- Sedative-hypnotics, especially **zolpidem**, along with lithium, sodium oxybate, and some antidepressants can precipitate episodes.

PSYCHOLOGICAL MECHANISMS

- Episode content is not symbolic and should not be interpreted, since the behavior reflects released motor programs rather than psychological meaning.
- Adult-onset cases carry substantially more psychiatric comorbidity and more daytime sleepiness than childhood-onset cases do.
- Family distress and fear of injury drive presentation far more often than any complaint from the patient, who is amnesic for events.
- Anxiety, shame, and hypervigilance about episodes generate insomnia that deepens slow-wave rebound and paradoxically worsens the disorder.
- Forensic contexts demand careful documentation, since sleepwalking violence has been raised as a legal defense and requires objective evidence.

DIFFERENTIAL & COMORBIDITY

- Sleep-related hypermotor epilepsy features brief stereotyped events recurring many times a night and often needs video EEG to separate.
- Nightmare disorder wakes the person fully alert with vivid recall late in the night, the opposite pattern on essentially every axis.
- REM sleep behavior disorder occurs late in the night with dream enactment and recall, begins after age 50, and often heralds synucleinopathy.
- Screen for and treat obstructive sleep apnea, restless legs syndrome, and shift work, which are the correctable precipitating conditions.
- Injury risk is the dominant safety concern: falls, falls from windows, driving while asleep, and assault during confusional arousal.

Treatment EVIDENCE-BASED MANAGEMENT

PHARMACOLOGIC

- Most cases need no medication at all; remove precipitants first and reserve drugs for high frequency or documented injury risk.
- Clonazepam 0.25-1 mg** at bedtime is the most commonly used agent and suppresses arousals, though the evidence is largely observational.
- Tricyclics such as low-dose **imipramine** and SSRIs including **paroxetine** have supportive case-series evidence in adults.
- Melatonin** is sometimes added, particularly in children, with a favorable safety profile but limited efficacy data.
- Deprescribe **zolpidem** and other Z-drugs plus sedating agents that provoke complex nocturnal behavior before adding anything new.

PSYCHOTHERAPY

- Psychoeducation and reassurance that childhood episodes usually remit by adolescence resolves most of the family distress driving referral.
- Scheduled awakenings** 15 to 30 minutes before the habitual episode time is effective for predictable childhood sleepwalking.
- Hypnosis has repeated case-series support in adults and can produce durable remission in motivated patients.
- CBT-I** and work on anticipatory anxiety reduce the sleep deprivation that fuels the slow-wave rebound driving episodes.
- Relaxation and stress management address the psychological precipitants that are common in adult-onset presentations.

ADJUNCT & SUPPORTIVE

- Safety-proof the environment with door and window alarms, removal of firearms, ground-floor sleeping, and clear uncluttered floors.
- Enforce adequate and regular sleep, since sleep deprivation is the most reliable experimental trigger for provoking episodes.
- Order polysomnography when episodes are violent, injurious, stereotyped, medicolegally relevant, or begin in adulthood.
- Avoid evening alcohol and treat fever promptly, since both increase slow-wave pressure and precipitate clusters of events.
- Advise the family against forcibly waking the person and instead guiding them calmly back to bed to avoid confusional aggression.

- CLINICAL PEARLS**
 - First third of night with amnesia is NREM parasomnia; late night with recall is REM.
 - Sleep deprivation is the strongest trigger; more sleep beats more medication.
 - New onset in adulthood: rule out apnea, seizures, and zolpidem.

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NOTE

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