

ICSD-3-TR

International Classification of Sleep Disorders

Third Edition, Text Revision

Summary of Diagnostic Criteria Changes

SUMMARY OF DIAGNOSTIC CRITERIA CHANGES

Although the task force and AASM Board of Directors established a high threshold for criteria changes, there are several changes that users should note. A complete list of changes to criteria content (excepting minor edits and clarifications) is provided in Table 1. The most noteworthy of these changes include the following:

- Chronic Insomnia Disorder, Criterion F**, now reads: “The sleep disturbance and associated daytime symptoms are not solely due to another current sleep disorder, medical disorder, mental disorder, or medication/substance use.” Users should consult Note 6 for further explanation of this change. In addition, Note 6 also refers users to the Differential Diagnosis section for discussion of the complex issue of comorbid chronic insomnia disorder and obstructive sleep apnea.
- Treatment-Emergent Central Sleep Apnea** The presence of associated signs or symptoms is now required to establish this diagnosis.
- Sleep-Related Hypoxemia Disorder** This diagnosis was previously employed when hypoxemia due to sleep-related hypoventilation was suspected but could not be diagnosed in the absence of CO₂ monitoring. The pertinent criterion (B) now reads: “The desaturation is not fully explained by sleep-related hypoventilation, obstructive sleep apnea, or other sleep-related breathing disorder.” The diagnosis is now intended, as the criterion states, for “hypoxemia not due to hypoventilation.” Users should consult Note 2, for further guidance on this issue.
- Narcolepsy, Type 1, Criterion B** for this diagnosis previously required cataplexy and Multiple Sleep Latency Test (MSLT) findings, with the proviso that an overnight sleep-onset REM period (SOREMP) could substitute for one of the MSLT SOREMPs. Based on what is now well-established evidence, cataplexy and an overnight SOREMP can fulfill criterion B.

Table 1. Summary of changes.

ICSD-3 Criterion	ICSD-3-TR Criterion
<i>Insomnia Disorder (Chronic and Short-Term)</i>	
The sleep/wake difficulty is not better explained by another sleep disorder.	The sleep disturbance and associated daytime symptoms are not solely due to another current sleep disorder, medical disorder, mental disorder, or medication/substance use.
<i>Sleep-Related Breathing Disorders</i>	
Obstructive Sleep Apnea (Adult)	
A. The presence of one or more of the following: <ol style="list-style-type: none"> 1. The patient complains of sleepiness, nonrestorative sleep, fatigue, or insomnia symptoms. 4. The patient has been diagnosed with hypertension, a mood disorder, cognitive dysfunction, coronary artery disease, stroke, congestive heart failure, atrial fibrillation, or type 2 diabetes mellitus 	A. The presence of one or more of the following: <ol style="list-style-type: none"> 1. The patient complains of sleepiness, fatigue, insomnia, or other symptoms leading to impaired sleep-related quality of life. 4. Deleted

Obstructive Sleep Apnea (Pediatric)	
<p>Criteria A and B must be met</p> <p>A. The presence of one or more of the following:</p> <ol style="list-style-type: none"> 1. Snoring. 2. Labored, paradoxical, or obstructed breathing during the child's sleep. 3. Sleepiness, hyperactivity, behavioral problems, or learning problems. <p>B. PSG demonstrates one or both of the following:</p> <ol style="list-style-type: none"> 1. One or more obstructive apneas, mixed apneas, or hypopneas, per hour of sleep <p>C. A pattern of obstructive hypoventilation, defined as at least 25% of total sleep time with hypercapnia ($\text{PaCO}_2 > 50$ mm Hg) in association with one or more of the following:</p> <ol style="list-style-type: none"> a. Snoring. b. Flattening of the inspiratory nasal pressure waveform. c. Paradoxical thoracoabdominal motion. <p>(N.B. This was a formatting error. See correction at right (ICSD-3-TR Criterion))</p>	<p>Criteria A-C must be met</p> <p>A. The presence of one or more of the following:</p> <ol style="list-style-type: none"> 1. Snoring. 2. Labored, paradoxical, or obstructed breathing during the child's sleep. 3. Sleepiness, hyperactivity, behavioral problems, or learning and other cognitive problems. <p>B. Polysomnography demonstrates one of the following:</p> <ol style="list-style-type: none"> 1. One or more obstructive apneas, mixed apneas, or hypopneas per hour of sleep. 2. A pattern of obstructive hypoventilation, defined as at least 25% of total sleep time with hypercapnia ($\text{PaCO}_2 > 50$ mm Hg) in association with one or more of the following: <ol style="list-style-type: none"> a. Snoring. b. Flattening of the inspiratory nasal pressure waveform. c. Paradoxical thoracoabdominal motion. <p>C. The symptoms are not better explained by another current sleep disorder, medical disorder, medication or substance use.</p>
Central Sleep Apneas	
<p>Snoring</p>	<p>Snoring has been removed as a symptom criterion in all central sleep apnea disorders.</p>

Central Sleep Apnea Due to High-Altitude Periodic Breathing	
<p>A. Recent ascent to high altitude.</p> <p>B. The presence of one or more of the following:</p> <ol style="list-style-type: none"> 1. Sleepiness. 2. Difficulty initiating or maintaining sleep, frequent awakenings, or nonrestorative sleep. 3. Awakening with shortness of breath or morning headache. 4. Witnessed apnea. <p>C. The symptoms are clinically attributable to high-altitude periodic breathing or PSG, if performed, demonstrates recurrent central apneas or hypopneas primarily during NREM sleep at a frequency of ≥ 5/hour</p>	<p>A. The breathing disturbance occurs at high altitude.</p> <p>B. The presence of one or more of the following:</p> <ol style="list-style-type: none"> 1. Sleepiness. 2. Difficulty initiating or maintaining sleep, frequent awakenings, or nonrestorative sleep. 3. Awakening with shortness of breath or morning headache. <p>C. Witnessed periodic breathing or polysomnography performed at altitude demonstrates recurrent central apneas or central hypopneas, with a central apnea-hypopnea index ≥ 5 events/h.</p>
Primary Central Sleep Apnea of Infancy	
<p>A. Apnea or cyanosis is noted by an observer or an episode of sleep related central apnea or desaturation is detected by monitoring.</p> <p>C. PSG or alternative monitoring such as hospital or home apnea monitoring shows either:</p> <ol style="list-style-type: none"> 1. Recurrent, prolonged (> 20 seconds duration) central apneas. 2. Periodic breathing for $\geq 5\%$ of total sleep time. 	<p>A. Apnea or cyanosis is noted by an observer, or an episode of sleep-related central apnea, desaturation, or bradycardia is detected by hospital monitoring in the postnatal period.</p> <p>C. Polysomnography or alternative monitoring such as portable apnea monitoring shows one of the following:</p> <ol style="list-style-type: none"> 1. Recurrent, prolonged (> 20 seconds duration) central apneas. 2. Recurrent central apneas of shorter duration associated with bradycardia or oxygen desaturation. 3. Periodic breathing for $\geq 5\%$ of total sleep time after a chronological age of 3 months.
Primary Central Sleep Apnea of Prematurity	
<p>C. PSG or alternative monitoring such as hospital or home apnea monitoring shows either:</p> <ol style="list-style-type: none"> 1. Recurrent prolonged (> 20 seconds duration) central apneas. 2. Periodic breathing for $\geq 5\%$ of total sleep time. 	<p>C. Polysomnography or alternative monitoring such as hospital or home apnea monitoring shows either:</p> <ol style="list-style-type: none"> 1. Recurrent prolonged (> 20 seconds duration) central apneas. 2. Recurrent central apneas of shorter duration associated with bradycardia or oxygen desaturation.

Treatment-Emergent Central Sleep Apnea	
<p>B. PSG during use of positive airway pressure without a backup rate shows significant resolution of obstructive events and emergence or persistence of central apnea or central hypopnea with all of the following:</p> <ol style="list-style-type: none"> 1. Central apnea—central hypopnea index [CAHI] \geq 5/hour. 2. Number of central apneas and central hypopneas is \geq 50% of total number of apneas and hypopneas. 	<p>B. PSG during use of continuous positive airway pressure shows significant resolution of obstructive events and emergence or persistence of central apnea or central hypopnea with all the following:</p> <ol style="list-style-type: none"> 1. Five or more central respiratory events (central apneas or central hypopneas) per hour of sleep. 2. The total number of central apneas plus central hypopneas is $>$ 50% of the total number of apneas and hypopneas. <p>C. The presence of at least one of the following symptoms or signs thought to be attributable to the central events:</p> <ol style="list-style-type: none"> 1. Sleepiness. 2. Difficulty initiating or maintaining sleep, frequent awakenings, or nonrestorative sleep. 3. Awakening short of breath. 4. Witnessed apneas.
<i>Sleep-Related Hypoventilation Disorders</i>	
Congenital Central Alveolar Hypoventilation Syndrome	
<p>B. Mutation of the <i>PHOX2B</i> gene is present</p>	<p>B. Central nervous system autonomic dysfunction is present, most often due to a mutation of the <i>PHOX2B</i> gene.</p>
Sleep-Related Hypoxemia Disorder	
<p>B. Sleep related hypoventilation is not documented.</p>	<p>B. The desaturation is not fully explained by sleep-related hypoventilation, obstructive sleep apnea, or other sleep-related breathing disorder.</p>

Central Disorders of Hypersomnolence

Narcolepsy Type 1

B. The presence of one or both of the following:

1. Cataplexy (as defined under Essential Features) *and* a mean sleep latency of ≤ 8 minutes and two or more sleep-onset REM periods (SOREMPs) on an MSLT performed according to standard techniques. A SOREMP (within 15 minutes of sleep onset) on the preceding nocturnal polysomnogram may replace one of the SOREMPs on the MSLT.
2. CSF hypocretin-1 concentration, measured by radioimmunoassay, is ≤ 110 pg/mL (using a Stanford reference sample) or $<1/3$ of mean values obtained in normal subjects with the same standardized assay.

B. The presence of one or both of the following:

1. Cataplexy (as defined under Essential Features) *and* either:
 - a. Mean sleep latency of ≤ 8 minutes and two or more sleep-onset REM periods (SOREMPs) on a Multiple Sleep Latency Test (MSLT) performed in accordance with current recommended protocols.
 - b. A SOREMP (within 15 minutes of sleep onset) on nocturnal polysomnogram.
2. CSF hypocretin-1 concentration, measured by radioimmunoassay, is ≤ 110 pg/mL (using a Stanford reference sample) or less than one-third of mean values obtained in normal subjects with the same standardized assay.

Idiopathic Hypersomnia

Added:

C. Polysomnography and Multiple Sleep Latency Test (MSLT) findings are not consistent with a diagnosis of narcolepsy type 1 or 2.

Kleine-Levin Syndrome

C. The patient has normal alertness, cognitive function, behavior, and mood between episodes.

D. The patient must demonstrate at least *one* of the following during episodes:

1. Cognitive dysfunction.
2. Altered perception.
3. Eating disorder (anorexia or hyperphagia).
4. Disinhibited behavior (such as hypersexuality).

C. The patient has normal or near normal sleep and wakefulness, cognition, behavior, and mood between episodes, at least during the first years of the syndrome.

D. The patient must demonstrate at least one of the following during episodes:

1. Cognitive dysfunction.
2. Derealization.
3. Major apathy.
4. Disinhibited behavior (such as hypersexuality or hyperphagia).

Hypersomnia Due to a Medical Disorder	Hypersomnia Associated with a Medical Disorder
C. If an MSLT is performed, the mean sleep latency is ≤ 8 minutes, and fewer than two sleep onset REM periods (SOREMPs) are observed.	Deleted.
<i>Circadian Rhythm Sleep-Wake Disorders</i>	
<p>Sleep logs and, whenever possible, actigraphy monitoring...</p> <p>(N.B. This change applies to all CRSWDs except Jet Lag. Required duration of these assessments varies across diagnoses)</p>	Sleep logs are required, accompanied by actigraphy monitoring, whenever possible...
<i>Parasomnias</i>	
Sleep Enuresis	Sleep-Related Urologic Dysfunction
<p>Primary Sleep Enuresis</p> <p>Criteria A-D must be met</p> <ul style="list-style-type: none"> A. The patient is older than five years. B. The patient exhibits recurrent involuntary voiding during sleep, occurring at least twice a week. C. The condition has been present for at least three months. D. The patient has never been consistently dry during sleep. <p>Secondary Sleep Enuresis</p> <p>Criteria A-D must be met</p> <ul style="list-style-type: none"> A. The patient is older than five years. B. The patient exhibits recurrent involuntary voiding during sleep, occurring at least twice a week. C. The condition has been present for at least three months. D. The patient has previously been consistently dry during sleep for at least six months. 	<p>Sleep Enuresis</p> <p>Criteria A-C must be met</p> <ul style="list-style-type: none"> A. The patient exhibits recurrent involuntary voiding during sleep, occurring at least once per month. B. The condition has been present for at least three months. C. The patient is older than five years. <p>Nocturia</p> <p>Criteria A-D must be met</p> <ul style="list-style-type: none"> A. The patient exhibits three or more nightly episodes of urination arising from sleep. B. Each episode of urination is followed by sleep or the intention to sleep. C. The condition has been present for at least three months. D. The patient is older than five years. <p>Nocturnal Urinary Urge Incontinence</p> <p>Criteria A-C must be met</p> <ul style="list-style-type: none"> A. The patient or care provider reports or observes urinary urgency and leakage after arising from sleep. B. Sleep-related wetness episodes must occur at least once per week. C. The condition has been present for at least three months.

Sleep-Related Movement Disorders

Sleep-Related Leg Cramps	Nocturnal Muscle Cramps
A. A painful sensation in the leg or foot associated with sudden, involuntary muscle hardness or tightness, indicating a strong muscle contraction.	A. A painful sensation in a muscle associated with sudden, involuntary muscle hardness or tightness, indicating a strong muscle contraction.
Sleep-Related Bruxism	
A. The presence of regular or frequent tooth grinding sounds occurring during sleep. B. The presence of one or more of the following clinical signs: 1. Abnormal tooth wear consistent with above reports of tooth grinding during sleep. 2. Transient morning jaw muscle pain or fatigue; and/or temporal headache; and/or jaw locking upon awakening consistent with above reports of tooth grinding during sleep.	A. The presence of repetitive jaw-muscle activity characterized by grinding or clenching of the teeth in sleep. B. The presence of one or more of the following clinical symptoms or signs consistent with the above reports of tooth grinding or clenching during sleep: 1. Abnormal tooth wear. 2. Transient morning jaw muscle pain or fatigue, or temporal headache.