CHAPTER 07

Sleep-wake disorders

This chapter has 42 four-character categories.

Code range starts with 7A00

Sleep-wake disorders are characterised by difficulty initiating or maintaining sleep (insomnia disorders), excessive sleepiness (hypersomnolence disorders), respiratory disturbance during sleep (sleep-related breathing disorders), disorders of the sleep-wake schedule (circadian rhythm sleep-wake disorders), abnormal movements during sleep (sleep-related movement disorders), or problematic behavioural or physiological events that occur while falling asleep, during sleep, or upon arousal from sleep (parasomnia disorders).

This chapter contains the following top level blocks:

* Insomnia disorders
* Hypersomnolence disorders
* Sleep-related breathing disorders
* Circadian rhythm sleep-wake disorders
* Sleep-related movement disorders
* Parasomnia disorders

Insomnia disorders (BlockL1‑7A0)

Insomnia disorders are characterised by the complaint of persistent difficulty with sleep initiation, duration, consolidation, or quality that occurs despite adequate opportunity and circumstances for sleep, and results in some form of daytime impairment. Daytime symptoms typically include fatigue, depressed mood or irritability, general malaise, and cognitive impairment. Individuals who report sleep related symptoms in the absence of daytime impairment are not regarded as having an insomnia disorder.

7A00 Chronic insomnia

Chronic insomnia is a frequent and persistent difficulty initiating or maintaining sleep that occurs despite adequate opportunity and circumstances for sleep and that results in general sleep dissatisfaction and some form of daytime impairment. Daytime symptoms typically include fatigue, depressed mood or irritability, general malaise, and cognitive impairment. The sleep disturbance and associated daytime symptoms occur at least several times per week for at least 3 months. Some individuals with chronic insomnia may show a more episodic course, with recurrent episodes of sleep/wake difficulties lasting several weeks at a time over several years. Individuals who report sleep related symptoms in the absence of daytime impairment are not regarded as having an insomnia disorder. If the insomnia is due to another sleep-wake disorder, a mental disorder, another medical condition, or a substance or medication, chronic insomnia should only be diagnosed if the insomnia is an independent focus of clinical attention. Insomnia attributable to use of substances or medications should be diagnosed as substance-induced insomnia according to the particular substance involved.

7A01 Short-term insomnia

Short-term insomnia is characterised by difficulty initiating or maintaining sleep of less than 3 months duration that occurs despite adequate opportunity and circumstances for sleep and results in general sleep dissatisfaction and some form of daytime impairment. Daytime symptoms typically include fatigue, depressed mood or irritability, general malaise, and cognitive impairment. Individuals who report sleep related symptoms in the absence of daytime impairment are not regarded as having an insomnia disorder. If the insomnia is due to another sleep-wake disorder, a mental disorder, another medical condition, or a substance or medication, short-term insomnia should only be diagnosed if the insomnia is an independent focus of clinical attention. Insomnia attributable to use of substances or medications should be diagnosed as substance-induced insomnia according to the particular substance involved.

7A0Z Insomnia disorders, unspecified

Hypersomnolence disorders (BlockL1‑7A2)

Hypersomnolence disorders are characterised by a complaint of daytime sleepiness that is not due to another sleep-wake disorder (e.g. disturbed nocturnal sleep, misaligned circadian rhythm, or breathing disorder). Individuals with excessive sleepiness may show irritability, concentration and attention deficits, reduced vigilance, distractibility, reduced motivation, anergia, dysphoria, fatigue, restlessness, and lack of coordination.

7A20 Narcolepsy

Narcolepsy is a disorder characterised by daily periods of irrepressible need to sleep or daytime lapses into sleep occurring for at least several months, accompanied by abnormal manifestations of REM sleep. Multiple sleep latency testing (MSLT) demonstrates a mean sleep latency of <8 minutes and two or more sleep-onset REM periods (SOREMP’s), or one or more SOREMP’s on MSLT and a SOREMP on the preceding overnight polysomnography (PSG). Nighttime sleep is often disturbed, and brief daytime naps are typically refreshing.

7A20.0 Narcolepsy, Type 1

Type 1 narcolepsy is a disorder of excessive sleepiness due to a deficiency of hypothalamic hypocretin (orexin) signaling. In addition to daily periods of irrepressible need to sleep or daytime lapses into sleep, type 1 narcolepsy is characterised by symptoms of REM sleep dissociation, most importantly cataplexy. Cataplexy is a sudden and uncontrollable loss of muscle tone arising during wakefulness that is typically triggered by a strong emotion, such as excitement or laughter. Although cataplexy is a pathognomonic symptom of type 1 narcolepsy, it may not manifest until years following onset of the sleepiness. In such cases, a diagnosis of Narcolepsy, Type 1 may be made based on CSF-hypocretin levels < 110 picograms per milliliter. Episodes of sleep paralysis and hypnagogic or hypnopompic hallucinations may also be present. The disorder is not attributable to a disease of the nervous system or other medical condition.

Note: A definitive diagnosis requires daily periods of irrepressible need to sleep or daytime lapses into sleep plus either: a) cataplexy and multiple sleep latency test/polysomnography (MSLT/PSG) findings characteristic of narcolepsy; or b) demonstrated CSF hypocretin deficiency.

7A20.1 Narcolepsy, Type 2

Type 2 narcolepsy is a disorder of excessive sleepiness characterised by daily periods of irrepressible need to sleep or daytime lapses into sleep and abnormal manifestations of REM sleep as demonstrated by multiple sleep latency test (MSLT/PSG) findings in the context of normal hypothalamic hypocretin (orexin) signaling. That is, CSF hypocretin determinations are > 110 picograms per milliliter. Cataplexy is not present. The disorder is not attributable to a disease of the nervous system or other medical condition.

Note: A definitive diagnosis requires daily periods of irrepressible need to sleep or daytime lapses into sleep and multiple sleep latency test/polysomnography (MSLT/PSG) findings characteristic of narcolepsy. There should be no evidence of cataplexy or CSF hypocretin deficiency (if testing is performed).

7A20.Z Narcolepsy, unspecified

7A21 Idiopathic hypersomnia

Idiopathic hypersomnia is characterised by daily periods of irrepressible need to sleep or daytime lapses into sleep occurring for at least several months in the absence of cataplexy or hypocretin deficiency (if determined). Polysomnography/multiple sleep latency test (MSLT) findings characteristic of narcolepsy (i.e., two or more sleep-onset REM periods (SOREMP’s), or one or more SOREMP’s on MSLT and a SOREMP on the preceding overnight polysomnography) should also be absent. The daytime sleepiness is not better explained by another disorder (e.g., insufficient sleep syndrome, obstructive sleep apnoea, circadian rhythm sleep-wake disorder), a substance or medication, or a medical condition). Objective evidence of hypersomnolence is indicated by an MSLT showing a mean sleep latency of ≤ 8 minutes or by polysomnography or wrist actigraphy showing a total 24-hour sleep time of 11 hours or more. Prolonged and severe sleep inertia is often observed and consists of sustained difficulty waking up with repeated returns to sleep, irritability, automatic behaviour, and confusion. In contrast to narcolepsy, naps are generally long, often more than 60 minutes, and unrefreshing.

Note: A definitive diagnosis requires daily periods of irrepressible need to sleep or daytime lapses into sleep objective demonstration of excessive sleepiness and absence of REM-related findings by multiple sleep latency test (MSLT/PSG).

7A22 Kleine-Levin syndrome

Kleine-Levin syndrome is characterised by recurrent episodes of severe sleepiness in association with cognitive, psychiatric, and behavioural disturbances. A typical episode lasts a median of 10 days (range 2.5–80 days), with rare episodes lasting several weeks to months. During episodes, patients may sleep as long as 16 to 20 hours per day, waking or getting up only to eat and void. When awake during episodes, most patients are exhausted, apathetic, confused, and slow in speaking and answering. Hyperphagia, hypersexuality, childish behaviour, depression, anxiety, hallucinations and delusions are often observed during the episodes. Patients are normal between episodes with regard to sleep, cognition, mood, and eating. Rarely, Kleine Levin syndrome may occur exclusively during menstrual periods.

Inclusions: recurrent hypersomnolence

7A23 Hypersomnia due to a medical condition

Hypersomnia due to a medical condition is characterised by excessive nocturnal sleep, daytime sleepiness, or excessive napping of at least several months duration that is attributable to a coexisting medical or neurological disorder (e.g. head trauma, Parkinson disease, certain genetic conditions, metabolic, neurologic or endocrine disorders) and is sufficiently severe to require an independent focus of clinical attention. Hypersomnia due to a medical condition is only diagnosed if the hypersomnia is a direct physiological consequence of the medical condition. Residual sleepiness in patients with adequately-treated obstructive sleep apnoea is classified here under the assumption that it is due to central nervous system damage from recurrent hypoxemia.

Note: A definitive diagnosis requires use of polysomnography and multiple sleep latency test (MSLT) to rule out other hypersomnolence disorders or other sleep disorders (e.g. obstructive sleep apnea) which might better explain the sleepiness.

7A24 Hypersomnia due to a medication or substance

Hypersomnia due to a medication or substance is characterised by excessive nocturnal sleep, daytime sleepiness, or excessive napping that is attributable to the sedating effects of medications, alcohol, or other psychoactive substances, including withdrawal syndromes (e.g., from stimulants) and is sufficiently severe to constitute an independent focus of clinical attention.

Note: A definitive diagnosis requires use of polysomnography and multiple sleep latency test (MSLT) to rule out other hypersomnolence disorders or other sleep disorders (e.g. obstructive sleep apnea) which might better explain the sleepiness.

Inclusions: Hypersomnia due to substances including medications

7A25 Hypersomnia associated with a mental disorder

Hypersomnia associated with a mental disorder is characterised by excessive nocturnal sleep, daytime sleepiness, or excessive napping that is sufficiently severe to constitute an independent focus of clinical attention. This is most typical of depressive disorders or the depressed phase of bipolar disorders. Patients often feel that their sleep is of poor quality and nonrestorative and may be intensely focused on their hypersomnolence. Objective evidence of excessive sleepiness on MSLT is often absent.

Note: A definitive diagnosis requires use of polysomnography and multiple sleep latency test (MSLT) to rule out other hypersomnolence disorders or other sleep disorders (e.g. obstructive sleep apnea) which might better explain the sleepiness.

7A26 Insufficient sleep syndrome

Insufficient sleep syndrome occurs when an individual persistently fails to obtain the amount of sleep required relative to their own physiological sleep requirements to maintain normal levels of alertness and wakefulness and is thus chronically sleep deprived. The curtailed sleep pattern is present most days for at least several months.

The person’s ability to initiate and maintain sleep is unimpaired. Sleep time is often markedly extended on weekend nights or during holidays compared to weekday. Extension of total sleep time results in resolution of the symptoms of sleepiness.

Inclusions: Behaviourally induced hypersomnia

Exclusions: Narcolepsy (7A20)

7A2Y Other specified hypersomnolence disorders

7A2Z Hypersomnolence disorders, unspecified

Sleep-related breathing disorders (BlockL1‑7A4)

Sleep related breathing disorders are characterised by abnormalities of respiration during sleep. In some of these disorders, respiration is also abnormal during wakefulness. The disorders are grouped into central sleep apnoeas, obstructive sleep apnoea, and sleep related hypoventilation or hypoxemia disorders.

Exclusions: Apnoea of newborn (KB2A)

Coded Elsewhere: Sleep related Cheyne-Stokes respiration (MD11.4)

7A40 Central sleep apnoeas

Central sleep apnoeas are characterised by reduction or cessation of airflow due to absent or reduced respiratory effort. Central apnoea (cessation of airflow) or hypopnea (reduction in airflow) may occur in a cyclical or intermittent fashion. Patients with central sleep apnoea of various etiologies may also exhibit obstructive events, in which case diagnoses of both central sleep apnoea and obstructive sleep apnoea may be given.

Note: A definitive diagnosis requires objective evidence based on polysomnography.

Exclusions: Central neonatal apnoea (KB2A.0)

7A40.0 Primary central sleep apnoea

Primary central sleep apnoea is of unknown etiology (idiopathic) and is characterised by recurrent, predominantly central apnoeas. Airflow and respiratory effort cease simultaneously in a repetitive fashion over the course of the night. The recurrent episodes of apnoea (more than five per hour) and associated arousals are sufficiently severe to cause symptoms such as daytime sleepiness, disturbed sleep, awakening with dyspnoea, or snoring.

Note: A definitive diagnosis requires objective evidence based on polysomnography.

Exclusions: Primary central sleep apnoea of infancy (7A40.1)

Primary central sleep apnoea of prematurity (7A40.2)

7A40.1 Primary central sleep apnoea of infancy

Primary central sleep apnoea of infancy is characterised by prolonged (> 20 seconds), predominantly central apnoeas or periodic breathing during more than 5% of total sleep time in an infant of at least 37 weeks conceptional age. These events are typically associated with physiological compromise (hypoxemia, bradycardia), or the need for intervention such as stimulation or resuscitation. This diagnosis should be assigned when central events are the predominant finding, even if obstructive or mixed apnoeas or hypopneas are also present.

Note: A definitive diagnosis requires objective evidence based on polysomnography or alternative monitoring such as hospital or home monitoring.

Exclusions: Primary central sleep apnoea of prematurity (7A40.2)

7A40.2 Primary central sleep apnoea of prematurity

Primary central sleep apnoea of prematurity is characterised by prolonged (> 20 seconds), predominantly central apnoeas or periodic breathing during more than 5% of total sleep time in an infant of less than 37 weeks conceptional age. These events are typically associated with physiological compromise (hypoxemia, bradycardia), or the need for intervention such as stimulation or resuscitation. This diagnosis should be assigned when central events are the predominant finding, even if obstructive or mixed apnoeas or hypopneas are also present.

Note: A definitive diagnosis requires objective evidence based on polysomnography or alternative monitoring such as hospital or home monitoring.

Exclusions: Primary central sleep apnoea of infancy (7A40.1)

7A40.3 Central sleep apnoea due to a medical condition with Cheyne-Stokes breathing

Central sleep apnoea due to a medical condition with Cheyne-Stokes breathing is characterised by recurrent, predominantly central apnoeas or central hypopneas (more than five per hour) alternating with a respiratory phase exhibiting a crescendo-decrescendo pattern of flow (or tidal volume) that are attributed to a medical condition. The longer cycle length (> 40 seconds) distinguishes Central sleep apnoea with Cheyne-Stokes breathing from other central sleep apnoea types. The vast majority of patients with Central sleep apnoea due to a medical condition with Cheyne-Stokes breathing have either systolic or diastolic heart failure. Patients with Central sleep apnoea due to a medical condition with Cheyne-Stokes breathing have normal or low daytime arterial partial pressure of carbon dioxide (PaCO2). The disturbance is typically associated with atrial fibrillation/flutter, congestive heart failure, or a neurological disorder and is sufficiently severe to cause symptoms such as daytime sleepiness, disturbed sleep, awakening with dyspnea, or snoring.

Note: A definitive diagnosis requires objective evidence based on polysomnography in the presence of a medical condition that is judged to be causing the symptoms.

7A40.4 Central sleep apnoea due to a medical condition without Cheyne-Stokes breathing

Central sleep apnoea due to a medical condition without Cheyne-Stokes breathing is characterised by recurrent, predominantly central apnoeas or central hypopneas (more than five per hour) that are attributed to a medical condition (and do not have the pattern of CSB). The majority of these patients have brainstem lesions of developmental, vascular, neoplastic, degenerative, demyelinating, or traumatic origin. The disturbance is sufficiently severe to cause symptoms such as daytime sleepiness, disturbed sleep, awakening with dyspnea, or snoring

Note: A definitive diagnosis requires objective evidence based on polysomnography in the presence of a medical condition that is judged to be causing the symptoms.

Exclusions: Central sleep apnoea due to a medication or substance (7A40.6)

7A40.5 Central sleep apnoea due to high-altitude periodic breathing

High-altitude periodic breathing is characterised by alternating periods of central apnoea and hyperpnea associated with recent ascent to high altitude (typically > 2500 meters). The pattern of periodic breathing is an expected response to ascent to elevation. The disturbance is sufficiently severe to cause symptoms such as daytime sleepiness, disturbed sleep, awakening with dyspnea, or snoring. The cycle length of this respiratory pattern is commonly less than 40 seconds and often as short as 12 to 20 seconds.

Note: This diagnosis can be made clinically based on symptoms and recent ascent to high altitude.

7A40.6 Central sleep apnoea due to a medication or substance

Central sleep apnoea due to a medication is characterised by a pattern of recurring, predominantly central sleep apnoea or hypopnea (more than five per hour) that is attributable to a medication or substance, most commonly long-acting opioids (e.g. methadone, long-acting morphine or oxycodone, fentanyl patches). The disturbance is sufficiently severe to cause symptoms such as daytime sleepiness, disturbed sleep, awakening with dyspnea, or snoring. Obstructive apnoeas and hypoventilation may be present, but central sleep apnoea is the predominant finding.

Note: A definitive diagnosis requires objective evidence based on polysomnography in the context of medication or substance use that is judged to be causing the symptoms.

7A40.7 Treatment-emergent central sleep apnoea

Treatment-emergent central sleep apnoea is characterised by persistence or emergence of recurrent, predominantly central sleep apnoea (more than five per hour) during effective treatment for obstructive apnoea (obstructive or mixed apnoea or hypopnea) with positive airway pressure. Central apnoeas must be the predominant finding (>50% of total respiratory events). The disturbance is sufficiently severe to cause symptoms such as daytime sleepiness, disturbed sleep, awakening with dyspnea, or snoring. If the reduction or cessation of airflow due to absent or reduced respiratory effort is better explained by another central sleep apnoea disorder (e.g., Central sleep apnoea due to a medication or substance), that diagnosis along with a diagnosis of Obstructive sleep apnoea should be given, rather than a diagnosis of treatment-emergent central sleep apnoea.

Note: A definitive diagnosis requires objective evidence based on polysomnography.

7A40.Y Other specified central sleep apnoeas

7A40.Z Central sleep apnoeas, unspecified

7A41 Obstructive sleep apnoea

Obstructive sleep apnoea is characterised by repetitive episodes of apnoea or hypopnea that are caused by upper airway obstruction occurring during sleep. These events often result in reductions in blood oxygen saturation and are usually terminated by brief arousals from sleep. Excessive sleepiness is a major presenting complaint in many but not all cases. Reports of insomnia, poor sleep quality, and fatigue are also common. Upper airway resistance syndrome shares the same pathophysiology and should be classified here. In adults (> 18 years), obstructive sleep apnoea is diagnosed when the frequency of obstructive events (apnoeas, hypopneas or respiratory-event related arousals) is greater than 15 per hour. The disorder may also be diagnosed when the frequency is greater than five per hour and: a) symptoms attributable to the disorder (e.g., sleepiness or sleep disruption) are present; or b) nocturnal respiratory distress or observed apnoea/habitual snoring are reported; or c) when hypertension, a mood disorder, cognitive dysfunction, coronary artery disease, stroke, congestive heart failure, atrial fibrillation, or type 2 diabetes mellitus are present. In children, the disorder is diagnosed when the frequency of obstructive events is great than one per hour, accompanied by signs or symptoms related to the breathing disorder.

Note: A definitive diagnosis requires objective evidence based on polysomnography.

Exclusions: Obstructive neonatal apnoea (KB2A.1)

7A42 Sleep-related hypoventilation or hypoxemia disorders

The primary feature of these disorders is insufficient sleep related ventilation, resulting in abnormally elevated arterial partial pressure of carbon dioxide (PaCO2) during sleep. Sleep-related hypoxemia is diagnosed when overnight monitoring reveals sustained (> 5 minutes) decline in oxygen saturation to ≤ 88% in adults (or ≤ 90% in children) for ≥ 5 minutes.

Note: A definitive diagnosis requires objective evidence based on polysomnography as well as carbon dioxide (CO2) monitoring during sleep (by arterial, end-tidal or transcutaneous measures).

7A42.0 Obesity hypoventilation syndrome

Obesity hypoventilation syndrome is characterised by obesity (in adults, > 30 kg/m2) and daytime hypercapnia indicated by arterial partial pressure of carbon dioxide (PaCO2) > 45 mm Hg that cannot be fully attributed to an underlying cardiopulmonary or neurologic disease. Hypercapnia worsens during sleep and is often associated with severe arterial oxygen desaturation. Obstructive sleep apnoea is also present in the majority of cases and should be diagnosed in addition to obesity hypoventilation.

Note: A definitive diagnosis requires demonstration of daytime hypercapnia and objective evidence based on polysomnography, with carbon dioxide (CO2) monitoring (by arterial, end-tidal or transcutaneous measures.

Inclusions: Pickwickian syndrome

7A42.1 Congenital central alveolar sleep-related hypoventilation

Congenital central alveolar hypoventilation syndrome (CCHS) is a disorder of autonomic dysfunction, primarily the failure of automatic central control of breathing, caused by a mutation of the PHOX2B gene. CCHS is characterised by hypoventilation, which is worse during sleep than wakefulness. Onset is usually at birth, and CCHS most commonly presents in an otherwise normal-appearing infant who is noted to have cyanosis, feeding difficulties, hypotonia or, less commonly, central apnoea. Severity is related to the specific mutation present. Individuals with milder variants of the disorder may not present for clinical attention until adulthood.

Note: A definitive diagnosis requires demonstration of PHOX2B mutation and objective evidence based on polysomnography with carbon dioxide (CO2) monitoring (by arterial, end-tidal or transcutaneous measures).

7A42.2 Non-congenital central hypoventilation with hypothalamic abnormalities

Non-congenital central hypoventilation with hypothalamic dysfunction is a disorder of central control of ventilation. Patients are usually healthy until early childhood (often 2-3 years of age) when they develop hyperphagia and severe obesity, followed by central hypoventilation, which often presents as respiratory failure. Hypothalamic endocrine dysfunction may be characterised by increased or decreased hormone levels and may include one or more of the following: diabetes insipidus, inappropriate antidiuretic hormone hypersecretion, precocious puberty, hypogonadism, hyperprolactinemia, hypothyroidism, and decreased growth hormone secretion, or tumours of neural origin. Mood and behaviour abnormalities, sometimes severe, are often present. Developmental delay or autistic features may be present, but many patients are cognitively normal.

Note: A definitive diagnosis requires objective evidence based on polysomnography with carbon dioxide (CO2) monitoring (by arterial, end-tidal or transcutaneous measures.

7A42.3 Idiopathic central alveolar hypoventilation

Idiopathic central alveolar hypoventilation is defined as the presence of decreased alveolar ventilation resulting in sleep related hypercapnia and hypoxemia in individuals with presumed normal mechanical properties of the lung and respiratory pump. Chronic hypoventilation during sleep exists without any readily identifiable impairments of respiration, such as pulmonary airway or parenchymal conditions, neurologic, neuromuscular or chest wall abnormalities, severe obesity, other sleep related breathing disorder, or use of respiratory depressant medications or substances. Diurnal as well as nocturnal hypoventilation is believed to be due primarily to blunted chemoresponsiveness to carbon dioxide (CO2) and oxygen (O2). Patients may complain of morning headaches, fatigue, neurocognitive decline and sleep disturbance, or may be entirely asymptomatic.

Note: A definitive diagnosis requires objective evidence based on polysomnography with carbon dioxide (CO2) monitoring (by arterial, end-tidal or transcutaneous measures).

7A42.4 Sleep-related hypoventilation due to a medication or substance

Sleep-related hypoventilation due to a medication or substance is characterised primarily by chronic hypoventilation and hypercapnia due to prolonged use of medications or substances known to depress ventilatory drive and/or impair respiratory muscle mechanics (e.g. long-acting narcotics, anesthetics, sedative compounds, and muscle relaxants). Hypoxemia is commonly present as well. Hypercapnia may also be present during wakefulness in some patients. Patients can either be asymptomatic or present with complaints of dyspnea, chest tightness, or fatigue.

Note: A definitive diagnosis requires objective evidence based on polysomnography with carbon dioxide (CO2) monitoring (by arterial, end-tidal or transcutaneous measures) in the context of medication or substance use that is judged to be causing the symptoms.

7A42.5 Sleep-related hypoventilation due to medical condition

Sleep-related hypoventilation due to medical condition is characterised by sleep-related hypoventilation due to lung airway or parenchymal disease, chest wall disorders, pulmonary hypertension, neurologic and neuromuscular disorders. Daytime hypercapnia may also be present. Sleep related hypoxemia may be severe. Patients can either be asymptomatic or present with complaints of dyspnea, chest tightness, or fatigue.

Note: A definitive diagnosis requires objective evidence based on polysomnography with carbon dioxide (CO2) monitoring (by arterial, end-tidal or transcutaneous measures) in the presence of a medical condition that is judged to be causing the symptoms.

Exclusions: Obesity hypoventilation syndrome (7A42.0)

Congenital central alveolar sleep-related hypoventilation (7A42.1)

7A42.6 Sleep-related hypoxemia due to a medical condition

Sleep related hypoxemia due to a medical condition is characterised by sustained declines in SpO2 (≤ 88% in adults or ≤ 90% in children) for ≥ 5 minutes) during sleep. The condition is attributable to a medical or neurological disorder. The presence of hypoxemia is not better explained by another sleep related breathing disorder (e.g., obstructive sleep apnoea). Although some amount of obstructive or central apnoea may be present, these disorders are not thought to be primarily responsible for the hypoxemia during sleep. Some patients with sleep related hypoxemia also exhibit hypoxemia during wakefulness. If the presence of hypercapnia has been established, a diagnosis of sleep-related hypoventilation should be made, rather than sleep-related hypoxemia.

Note: A definitive diagnosis requires objective evidence based on polysomnographic monitoring of oxygen saturation (SaO2) in the presence of a medical condition that is judged to be causing the declines in SAO2.

7A42.Y Other specified sleep-related hypoventilation or hypoxemia disorders

7A42.Z Sleep-related hypoventilation or hypoxemia disorders, unspecified

7A4Y Other specified sleep-related breathing disorders

7A4Z Sleep-related breathing disorders, unspecified

Circadian rhythm sleep-wake disorders (BlockL1‑7A6)

Circadian rhythm sleep-wake disorders are disturbances of the sleep-wake cycle (typically manifest as insomnia, excessive sleepiness, or both) due to alterations of the circadian time-keeping system, its entrainment mechanisms, or a misalignment of the endogenous circadian rhythm and the external environment. Sleep logs and, if possible, actigraphy for a minimum of one week should be utilized to define the specific sleep-wake schedule disturbance.

Inclusions: Delayed sleep phase syndrome

Irregular sleep-wake pattern

7A60 Delayed sleep-wake phase disorder

Delayed sleep-wake phase disorder is a recurrent pattern of disturbance of the sleep-wake schedule characterised by persistent delay in the major sleep period compared to conventional or desired sleep times. The disorder results in difficulty falling asleep and difficulty awakening at desired or required times. When sleep is allowed to occur on the delayed schedule, it is essentially normal in quality and duration. The symptoms should have persisted for at least several months and result in significant distress or mental, physical, social, occupational or academic impairment.

7A61 Advanced sleep-wake phase disorder

Advanced sleep-wake phase disorder is a recurrent pattern of disturbance of the sleep-wake schedule characterised by persistent advance (to an earlier time) of the major sleep period compared to conventional or desired sleep times. The disorder results in evening sleepiness (prior to the desired bedtime) and awakening earlier than the desired or required times. When sleep is allowed to occur on the advanced schedule, it is essentially normal in quality and duration. The symptoms should have persisted for at least several months and result in significant distress or mental, physical, social, occupational or academic impairment.

7A62 Irregular sleep-wake rhythm disorder

Irregular sleep-wake rhythm disorder is characterised by absence of a clearly-defined cycle of sleep and wake. Sleep becomes distributed in multiple episodes of variable duration throughout the 24-hour period. Patients typically complain of insomnia and/or excessive daytime sleepiness as a result of the condition. The symptoms should have persisted for at least several months and result in significant distress or mental, physical, social, occupational or academic impairment.

7A63 Non-24 hour sleep-wake rhythm disorder

Non-24 hour sleep-wake rhythm disorder is characterised by periods of insomnia and/or daytime sleepiness, alternating with periods of relatively normal sleep, due to a lack of entrainment of the circadian clock to the 24-hour environmental cycle. The period length of the circadian/sleep-wake cycle is typically longer than 24 hours. Symptoms occur as the circadian-controlled sleep-wake propensity cycles in and out of phase with the environmental day-night cycle. The disorder is seen most commonly in individuals with complete blindness. The symptoms should have persisted for at least several months and result in significant distress or mental, physical, social, occupational or academic impairment.

7A64 Circadian rhythm sleep-wake disorder, shift work type

Circadian rhythm sleep-wake disorder, shift work type is characterised by complaints of insomnia and/or excessive sleepiness that occur as a result of work shifts that overlap with all or a portion of conventional nighttime sleep periods. The disorder is also associated with a reduction in total sleep time. The symptoms should have persisted for at least several months and result in significant distress or mental, physical, social, occupational or academic impairment.

7A65 Circadian rhythm sleep-wake disorder, jet lag type

Circadian rhythm sleep-wake disorder, jet lag type is characterised by a temporary mismatch between the timing of the sleep and wake cycle generated by the endogenous circadian clock and that of the sleep and wake pattern required by transmeridian travel across at least two time zones. Individuals complain of disturbed sleep, sleepiness and fatigue, somatic symptoms (e.g. gastrointestinal distress) or impaired daytime function. The severity and duration of symptoms is dependent on the number of time zones traveled, the ability to sleep while traveling, exposure to appropriate circadian times cues in the new environment, tolerance to circadian misalignment when awake during the biological night, and the direction of the travel. The symptoms result in significant distress or mental, physical, social, occupational or academic impairment.

7A6Z Circadian rhythm sleep-wake disorders, unspecified

Sleep-related movement disorders (BlockL1‑7A8)

Sleep related movement disorders are primarily characterised by relatively simple, usually stereotyped, movements that disturb sleep or its onset. An exception is Restless legs syndrome, which is primarily a waking, sensorimotor experience but is included in Sleep-related movement disorders because it almost always also involves periodic limb movements during sleep.

Coded Elsewhere: REM sleep behaviour disorder (7B01.0)

7A80 Restless legs syndrome

Restless legs syndrome is a waking sensorimotor disorder characterised by a complaint of a strong, nearly irresistible urge to move the limbs. This urge to move is often but not always accompanied by other uncomfortable sensations felt deep inside the limbs. Although the legs are most prominently affected, a significant percentage of individuals with Restless legs syndrome describe some arm sensations. The symptoms of Restless legs syndrome are worse at rest, alleviated with movement, and predominant in the evening or night. The symptoms are sufficiently severe to result in significant distress or impairment in personal, family, social, educational, occupational or other important areas of functioning (e.g., due to frequent disruptions in sleep). The vast majority of individuals with Restless legs syndrome also exhibit periodic limb movements during sleep. A separate diagnosis of Periodic limb movement disorder is not warranted in such cases because the limb movements during sleep are considered to be an expected part of Restless legs syndrome.

7A81 Periodic limb movement disorder

Periodic limb movement disorder is characterised by periodic episodes of repetitive (> 5/hour in children or > 15/hour in adults), highly stereotyped limb movements that occur during sleep, in conjunction with significant difficulties with sleep initiation or maintenance or fatigue that cannot be accounted for by another primary sleep disorder or other etiology. Specifically, when periodic limb movements are associated with Restless legs syndrome, narcolepsy or REM sleep behaviour disorder, a separate diagnosis of Periodic limb movement disorder is not warranted because the limb movements during sleep are considered an expected part of these disorders. Periodic limb movements occur most frequently in the lower extremities but may be seen in the arms as well. They may be associated with recurrent arousal from sleep, which gives rise to sleep disruption. The symptoms are sufficiently severe to result in significant distress or impairment in personal, family, social, educational, occupational or other important areas of functioning (e.g., due to frequent disruptions in sleep.

Note: A definitive diagnosis requires objective evidence based on polysomnography.

7A82 Sleep-related leg cramps

Sleep related leg cramps are painful sensations in the leg or foot associated with sudden, involuntary muscle hardness or tightness, indicating a strong muscle contraction. They typically last from a few seconds to several minutes. The symptoms are sufficiently severe to result in significant distress or impairment in personal, family, social, educational, occupational or other important areas of functioning (e.g., due to frequent disruptions in sleep).

7A83 Sleep-related bruxism

Sleep-related bruxism is characterised by repetitive, rhythmic jaw muscle contractions that occur during sleep These contractions can take the form of a repetitive phasic muscle contractions or isolated sustained jaw clenching (tonic contractions). These contractions during sleep produce tooth-grinding sounds. The symptoms are sufficiently severe to result in significant distress or impairment in personal, family, social, educational, occupational or other important areas of functioning (e.g., due to frequent disruptions in sleep) or significant damage to the teeth.

7A84 Sleep-related rhythmic movement disorder

Sleep related rhythmic movement disorder is characterised by repetitive, stereotyped, and rhythmic motor behaviours that involve large muscle groups (e.g., banging head against pillow or mattress, head rolling, body rocking, body rolling). The symptoms are sufficiently severe to result in significant distress or impairment in personal, family, social, educational, occupational or other important areas of functioning (e.g., due to frequent disruptions in sleep) or result in bodily injury (e.g., due to falling out of bed).

7A85 Benign sleep myoclonus of infancy

Benign sleep myoclonus of infancy is characterised by repetitive myoclonic jerks that occur during sleep in neonates and infants. Benign sleep myoclonus of infancy is commonly confused with epilepsy. However, unlike the jerks of myoclonic seizures and myoclonic encephalopathy, the jerks of Benign sleep myoclonus of infancy occur exclusively during sleep. The jerks are often bilateral and massive, typically involving large muscle groups.

7A86 Propriospinal myoclonus at sleep onset

Propriospinal myoclonus at sleep onset consists of sudden myoclonic jerks of the trunk, hips, and knees in a fixed pattern that occur during the transition from wakefulness to sleep and, more rarely, during nighttime awakenings or upon awakening in the morning. The jerks arise mainly in spinally innervated muscles and thereafter propagate to rostral and caudal muscles at a low speed, typical of propriospinal pathways. The movements result in clinically significant difficulty with sleep initiation or maintenance.

7A87 Sleep-related movement disorder due to a medical condition

Sleep-related movement disorder due to a medical condition is characterised by sleep-related movement abnormalities that are directly attrib¬utable to an underlying neurological or medical condition. Many medical conditions, particularly diseases of the nervous system, may be associated with movement abnormali¬ties that are evident in wake and sleep. In some cases, the nocturnal manifestations of the movement abnormalities may be apparent before establishment of a firm neurological diagnosis. Once the pres¬ence of a medical or neurological condition is clearly established, this diagnosis should only be assigned if the sleep-related aspects of the movement abnormality or its sequelae are the focus of independent clinical attention.

Coding Note: Code aslo the casusing condition

7A88 Sleep-related movement disorder due to a medication or substance

Sleep-related movement disorder due to a medication or substance is characterised by sleep-related movement abnormalities that are directly attributable to the effect of a medication or substance. Many substances may be associated with movement abnormalities that are evident in wake and sleep. To the extent that the movement abnormality is an expected complication of the substance(s) involved (e.g., tardive dyskinesia or akathisia associated with neuroleptic usage), this diagnosis should only be assigned if the sleep-related aspects of the movement abnormality or its sequelae are the focus of independent clinical attention.

7A8Y Other specified sleep-related movement disorders

7A8Z Sleep-related movement disorders, unspecified

Parasomnia disorders (BlockL1‑7B0)

Parasomnias are problematic behavioural or physiological events that occur while falling asleep, during sleep, or upon arousal from sleep. Parasomnias may occur during non-rapid eye movement sleep (NREM), rapid eye movement sleep (REM), or during transitions to and from sleep. They encompass abnormal sleep related complex movements, behaviours, emotions, perceptions, dreams, and autonomic nervous system activity.

7B00 Disorders of arousal from non-REM sleep

Disorders of arousal from non-REM sleep are characterised by experiences or behaviours such as confusion, ambulation, terror, or extreme autonomic arousal that typically arise as a result of incomplete arousals from deep non-REM (N3) sleep. An exception is sleep-related eating disorder, which has been observed to arise during all stages of non-REM sleep. This group of disorders is also characterised by partial or complete amnesia for the event, inappropriate or absent responsiveness to efforts by others to intervene or redirect the person during the episode, and limited (e.g., a single visual scene) or no associated cognition or dream imagery. The experiences or behaviours are sufficiently severe to result in significant distress or significant impairment in personal, family, social, educational, occupational or other important areas of functioning or significant risk of injury to the individual or to others (e.g., thrashing or striking out in response to efforts to restrain the individual).

7B00.0 Confusional arousals

Confusional arousals are characterised by mental confusion or confused behaviour (e.g., disorientation, being unresponsive, impaired or slow speech, poor memory) during a partial arousal from deep sleep. There is partial or complete amnesia for the events. The experiences or behaviours are sufficiently severe to result in significant distress or significant impairment in personal, family, social, educational, occupational or other important areas of functioning or significant risk of injury to the individual or to others.

7B00.1 Sleepwalking disorder

Sleepwalking disorder is characterised by ambulation and other complex behaviours during a partial arousal from deep sleep.

7B00.2 Sleep terrors

Sleep terrors are characterised by episodes of abrupt terror during a partial arousal from deep sleep, typically beginning with a vocalization such as a frightening scream. The individual experiences intense fear accompanied by signs of autonomic arousal, such as mydriasis, tachycardia, tachypnea, and diaphoresis.

7B00.3 Sleep-related eating disorder

Sleep-related eating disorder is characterised by recurrent episodes of involuntary excessive or dangerous eating or drinking that occur during the main sleep period that are not attributable to the effects of a medication or substance. Episodes may involve consumption of peculiar forms or combinations of food or inedible or toxic substances or injurious or potentially injurious behaviours performed while in pursuit of food or while cooking food. There may be adverse health consequences from recurrent nocturnal binge eating of high calorie foods. There is partial or complete amnesia for the events.

7B00.Y Other specified disorders of arousal from non-REM sleep

7B00.Z Disorders of arousal from non-REM sleep, unspecified

7B01 Parasomnias related to REM sleep

Parasomnias related to REM sleep are characterised by experiences or behaviours such as vocalization or complex motor behaviours, sleep paralysis, or nightmares that are associated with REM sleep. The experiences are sufficiently severe to result in significant distress or significant impairment in personal, family, social, educational, occupational or other important areas of functioning or significant risk of injury to the individual or to others.

7B01.0 REM sleep behaviour disorder

REM sleep behaviour disorder is characterised by repeated episodes of sleep related vocalization or complex motor behaviours that are either documented by polysomnography to occur during REM sleep or are presumed to occur during REM sleep due to a clinical history of dream enactment. Polysomnographic recording (when performed) demonstrates REM sleep without atonia. The disorder may occur as an isolated, idiopathic form but is frequently associated with latent or manifest disease of the nervous system, especially alpha-synucleinopathies.

Note: A provisional diagnosis may be established on clinical grounds but definitive diagnosis requires polysomnographic demonstration of REM sleep without atonia.

7B01.1 Recurrent isolated sleep paralysis

Recurrent isolated sleep paralysis consists of recurrent inability to move the trunk and all of the limbs at sleep onset (hypnagogic) or upon awakening (hypnopompic) from sleep. Episodes typically last from a few seconds to a few minutes and cause clinically significant distress including bedtime anxiety or fear of sleep.

7B01.2 Nightmare disorder

Nightmare disorder is characterised by recurrent, vivid and highly dysphoric dreams, often involving threat to the individual, that generally occur during REM sleep and that often result in awakening with anxiety. The person is rapidly oriented and alert upon awakening.

Inclusions: Dream anxiety disorder

7B01.Y Other specified parasomnias related to REM sleep

7B01.Z Parasomnias related to REM sleep, unspecified

7B02 Other parasomnias

Other parasomnias include Hypnogogic exploding head syndrome, Sleep-related hallucinations, and abnormal sleep related complex movements, behaviours, emotions, perceptions, dreams, or autonomic nervous system activity related to a medical condition or due to a medication or substance. The experiences are sufficiently severe to result in significant distress or significant impairment in personal, family, social, educational, occupational or other important areas of functioning or significant risk of injury to the individual or to others.

Coded Elsewhere: Nocturnal enuresis (6C00.0)

7B02.0 Hypnagogic exploding head syndrome

Hypnagogic exploding head syndrome is characterised by the perception of a sudden, loud noise or sense of a violent explosion in the head that typically occurs as the individual is falling asleep. On occasion, these episodes may occur with awakening during the night. They are associated with abrupt arousal following the event, often with a sense of fright.

Inclusions: Hypnagogic sensory disturbance

7B02.1 Sleep-related hallucinations

Sleep related hallucinations are hallucinatory experiences that occur at sleep onset (hypnagogic hallucinations) or on awakening from sleep (hypnopompic hallucinations). Sleep related hallucinations are predominantly visual but may include auditory, tactile, or kinetic phenomena.

7B02.2 Parasomnia disorder due to a medical condition

Parasomnia disorder due to a medical condition is characterised by abnormal sleep related complex movements, behaviours, emotions, perceptions, dreams, or autonomic nervous system activity that are directly attributable to an underlying neurological or medical condition.

7B02.3 Parasomnia disorder due to a medication or substance

Parasomnia disorder due to a medication or substance is characterised by abnormal sleep related complex movements, behaviours, emotions, perceptions, dreams, and autonomic nervous system activity that are directly attrib¬utable to the effect of a medication or substance.

7B0Y Other specified parasomnia disorders

7B0Z Parasomnia disorders, unspecified

7B2Y Other specified sleep-wake disorders

7B2Z Sleep-wake disorders, unspecified