

	Clinical Protocol: Polysomnography – Sleep Center	
	ORIGINAL EFFECTIVE DATE: 01/10/2011	REVIEWED/REVISED DATE(S): 06/18/2019 08/13/2021 09/08/2022 11/15/2023 12/10/2025
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PROTOCOL OVERVIEW

Certain sleep related disorders are diagnosed using polysomnography. PSG's document sleep architecture, including rapid eye movement (REM) related events, and quantify arousals, apneic episodes, oxygen desaturation, cardiac arrhythmias, limb movements and seizure activity. Prior to considering PSG, a thorough sleep history and physical examination that includes respiratory, cardiovascular and neurologic systems as well as a medication history are in order. The PSG may be used for diagnosis and for titration or evaluation of various treatment modalities.

INDICATIONS

Polysomnography is medically indicated in adults when one or more of the following clinical indications are present:

- Adult with obesity hypoventilation syndrome, suspected, as indicated by **ALL** of the following:
 - BMI greater than 30 BMI Calculator
 - Daytime hypercapnia with PaCO₂ greater than 45 mm Hg (6.0 kPa) without other etiology (eg, kyphoscoliosis, lung parenchymal disease, myopathy, severe hypothyroidism)
 - TSH level does not demonstrate hypothyroidism.
- Adult with obstructive sleep apnea, suspected, as indicated by **1 or more** of the following:
 - Home PSG is not appropriate
 - Signs or symptoms suggestive of moderate-risk to high-risk obstructive sleep apnea, including **1 or more** of the following:
 - Epworth Sleepiness Scale score of 10 or greater
 - Excessive daytime sleepiness, fatigue, or awakening with gasping or choking, and high risk for injury (eg, falling asleep while driving)
 - Excessive daytime sleepiness, fatigue, or awakening with gasping or choking, and risk factor for sleep apnea, as indicated by **1 or more** of the following:
 - BMI greater than 30
 - Resistant hypertension as indicated by **ALL** of the following:
 - Medication regimen includes 3 or more antihypertensive drugs at therapeutic dosages, including one diuretic.
 - Office blood pressure above goal
 - Observed apnea or choking episodes
 - Significant oxygen desaturation^[1] (eg, less than 90%) on overnight pulse oximetry
 - Snoring
- Central sleep apnea or sleep-related hypoventilation, suspected, as indicated by **ALL** of the following:
 - Appropriate clinical condition, as indicated by **1 or more** of the following:
 - Brainstem lesion
 - Chiari malformation
 - Congenital central alveolar hypoventilation syndrome

Down syndrome
 Heart failure
 Neuromuscular or chest wall disorder (eg, amyotrophic lateral sclerosis, Duchenne muscular dystrophy, kyphoscoliosis, myotonic dystrophy, spinal cord injury)
 Prader-Willi syndrome
 Skeletal dysplasia (eg, achondroplasia)

Signs or symptoms suggestive of central sleep apnea or sleep-related hypoventilation, as indicated by **1 or more** of the following:

- Difficulty falling asleep or remaining asleep
- Dyspnea on awakening
- Excessive daytime sleepiness
- Nonrestorative sleep
- Unexplained clinical findings suggestive of hypoventilation (eg, cor pulmonale, cyanosis, low oxygen saturation when breathing room air, shallow respirations)
- Unexplained laboratory abnormalities suggestive of hypoventilation (eg, elevated arterial carbon dioxide during spontaneous breathing, erythrocytosis)

4. Child, infant, or adolescent with obstructive sleep apnea, suspected

5. Insomnia and **1 or more** of the following:

Inadequate response to treatment of insomnia by neurologist or sleep specialist

Periodic limb movement disorder, suspected

Precipitous arousals with injurious behavior, suspected

Sleep-related breathing disorder, suspected, as indicated by **1 or more** of the following:

Excessive daytime sleepiness

Observed apnea or choking episodes

Snoring

6. Narcolepsy, suspected, as indicated by **ALL** of the following:

Signs or symptoms suggestive of narcolepsy, as indicated by **1 or more** of the following:

- Cataplexy (ie, episode of sudden bilateral loss of postural tone associated with intense emotion)
- Excessive daytime sleepiness
- Hallucinations with sleep onset (hypnagogic) or upon awakening (hypnopompic)
- Ongoing suspicion of narcolepsy after negative initial study, or appearance of new symptoms contributing to sleepiness
- Recurrent daytime naps or lapses into sleep for over 3-month period
- Sleep paralysis (ie, brief episodic loss of voluntary movement that occurs during period of falling asleep or when awakening)

7. Parasomnia,^[Q] as indicated by **1 or more** of the following:

- Confusional arousal
- Inadequate response to treatment
- New onset in adult
- Rapid eye movement sleep behavior disorder, suspected
- Sleep-related eating disorder
- Sleep terrors, and need to rule out other diagnosis (eg, comorbid sleep-disordered breathing, nocturnal seizure, rapid eye movement sleep behavior disorder)

8. Periodic limb movement disorder and **1 or more** of the following:

Excessive daytime sleepiness

Observed apnea or choking episodes

Patient or bed partner notes limb movements during sleep.

Snoring

9. Restless leg syndrome^[S] and **1 or more** of the following:

- Excessive daytime sleepiness
- Inadequate response to treatment
- Observed apnea or choking episodes

- Snoring

REPEAT POLYSOMNOGRAPHY VS. MEDICAL NECESSITY

Repeat polysomnography is considered medically necessary for adults under the following circumstances:

1. To reevaluate the diagnosis of obstructive sleep apnea and need for continued CPAP, if a significant weight loss (>10% of body weight) has occurred since the initial study; or
2. To reevaluate an individual with failure of resolution of symptoms or recurrence of symptoms during treatment, or
3. To evaluate the impact of corrective surgeries for obstructive sleep apnea after appropriate recovery time from surgery, or
4. To titrate CPAP following an initial PSG where obstructive sleep apnea was demonstrated but a split night study was not feasible

Repeat polysomnography is considered not medically necessary in the follow-up of patients with obstructive sleep apnea treated with CPAP when symptoms of sleep apnea have resolved. PSG is also considered not medically necessary for evaluation of the following symptoms or conditions alone in the absence of other features suggestive of obstructive sleep apnea:

1. Snoring
2. Obesity
3. Hypertension
4. Headaches
5. Frequent awakenings
6. Common sleep disturbances, such as insomnia, night terrors, sleep walking, or epilepsy where nocturnal seizures are not suspected
7. Decrease in intellectual function; or
8. Memory loss

Nocturnal hypoxemia in patients with chronic obstructive, restrictive, or reactive lung disease is usually adequately evaluated by oximetry and does not require PSG. However, if a patient's symptoms suggest a diagnosis of OSA, indications for PSG are the same as for those without chronic lung disease. PSG is not routinely indicated to diagnose or treat restless leg syndrome.

Suspicion of the presence of obstructive sleep apnea is the case in the majority of children referred for polysomnography. OSA is believed to occur in approximately 2% of children peaking at 2 to 6 years of age, while habitual snoring occurs in 12-15% of school age children. Although OSA in children is commonly related to the presence of Aden tonsillar hypertrophy, other factors related to dynamic airway collapse appear to be involved. Routine PSG in children with Aden tonsillar hypertrophy, in the absence of other suggestive signs or symptoms of OSA, is not recommended. Also, routine PSG post-operatively following adenotonsillectomy in a child whose symptoms have resolved is not recommended.

Polysomnography for children is considered medically necessary for the diagnosis of sleep disorders when one or more of the following are present:

d, infant, or adolescent with obstructive sleep apnea, suspected, and **1 or more** of the following:

- Initial PSG test, as indicated by **ALL** of the following:
 - Appropriate clinical situation, as indicated by **1 or more** of the following:
 - Adenoid or tonsillar enlargement, and adenotonsillectomy being considered for treatment
 - Chiari malformation
 - Craniofacial malformation (eg, Apert syndrome, Crouzon syndrome, Pierre Robin sequence)
 - Down syndrome
 - Neuromuscular disorder (eg, Duchenne muscular dystrophy, myotonic muscular dystrophy)
 - Signs and symptoms consistent with obstructive sleep apnea, including **1 or more** of the following:
- Daytime sleepiness
- Enuresis
- Failure to thrive (weight less than fifth percentile for age)
- Hyponasal speech
- Mouth breathing
- Nocturnal pauses in breathing
- Nonspecific behavioral problems (eg, hyperactivity, developmental delay, aggression, poor school performance)
- Pulmonary hypertension
- Signs of increased respiratory effort (ie, nasal flaring)
- Snoring
- Skeletal dysplasia (eg, achondroplasia)

Routine PSG is considered not medically necessary for the following:

1. Sleep walking or night terrors
2. Routine evaluation of Aden tonsillar hypertrophy in the absence of symptoms suggestive of OSA; or
3. Routine follow-up for children whose symptoms have resolved post-adenotonsillectomy

Repeat polysomnography for children is considered medically necessary in the following circumstances:

Repeat PSG test, as indicated by **ALL** of the following:

- Appropriate clinical situation, as indicated by **1 or more** of the following:
 - Assessment of treatment adequacy independent of symptoms (eg, CPAP device-generated data of concern, new systemic hypertension, unexpected slowing of growth rate)
 - Clinical assessment suggests obstructive sleep apnea in patient with prior negative PSG testing.
 - Growing child, and assessment of ongoing need for pressure therapy
 - Need to perform postoperative assessment in patient at risk of inadequate response to intervention (eg, post adenotonsillectomy), as indicated by **1 or more** of the following:
 - Apnea-hypopnea index or respiratory disturbance index 20 or greater on preoperative PSG
 - BMI greater than 95th percentile for age
 - Craniofacial anomalies that obstruct upper airway
 - Neurologic disorder (eg, Down syndrome, Prader-Willi syndrome, myelomeningocele)
 - Ongoing signs and symptoms suggestive of persistent obstructive sleep apnea
 - Oral appliance treatment of obstructive sleep apnea, and need to document efficacy of therapy
 - Rapid maxillary expansion, and need to document efficacy of therapy

RECOMMENDED RECORDS

Medical records, labs, imaging

CITATION

MCG Care Guidelines 29th Edition, 12/10/2025

CLINICAL PROTOCOL REVISION HISTORY

Revised By:	Ashley Gonzalez, UM Project Coordinator; Konstantin Yengoyan, Supervisor, Clinical Operation	Date: 12/10/25	
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