

WE NOW OFFER HOME SLEEP STUDIES FOR CHILDREN !!

(AND THEIR PARENTS/ADULTS)

Traditional In Sleep Lab Sleep Study	vs.	Portable At Home Sleep Study
Traditional, gold standard	>	Standard in adults, not in children
Covered by insurance	>	Considered investigational often
Includes EEG (brain waves) necessary to score hypopneas (episodes of shallow breathing)	>	Hypopneas can be scored by oxygen desaturations
Includes video monitoring	>	No video monitoring
Sensitive for apnea (cessation of breathing) events	=	Sensitive for apneas
Includes carbon dioxide monitoring for detection of mild cases of sleep apnea without breath holding (<13 years of age)	=	Includes carbon dioxide monitoring for detection of mild cases of sleep apnea without breath holding (<13 years of age)
Includes monitoring of periodic leg movements	=	Includes monitoring of periodic leg movements
Includes microphone to detect snoring	=	Includes microphone to detect snoring
Despite insurance, the cost can be prohibitive, and the deductible may be high	<	Can oftentimes be more affordable
Done in a hospital with COVID-19 precautions	<	Done at home with greater comfort
Has to start and end at times set by hospital's policy	<	Start and end times at your discretion (but needs to be at least 6 hours)
Parent(s) and child may need to take off from work and/or school	<	No need to miss work or school

Blue color = advantage

At home sleep studies are considered standard in adults but not yet in children. Advantages to the sleep study being done in a hospital's sleep lab versus at home are listed above.

Medical insurance generally considers portable at home sleep studies to be investigational and not proven. The American Academy of Pediatrics issued a practice guideline in 2012 that stated the following: "if polysomnography is not available, then alternative diagnostic tests or referral to a specialist for more extensive evaluation may be considered." Reference is made to ambulatory polysomnography. The American Academy of Sleep Medicine stated in a 2017 position statement that "Use of a home sleep apnea test is not recommended for the diagnosis of obstructive sleep apnea in children. The ultimate judgment regarding propriety of any specific care must be made by the clinician, in light of the individual circumstances presented by the patient, available diagnostic tools, accessible treatment options, and resources."

One of the criticisms of home sleep apnea tests is that it generally does not include carbon dioxide monitoring, but we chose the Nox T3 system intentionally to give us this capability. It should be noted that the American Academy of Sleep Medicine scoring rules permit discretion in applying adult or pediatric norms at age 13 and older. Therefore, children who possess "adult" height and weight are often scored on the sleep study by adult norms which do not require carbon dioxide monitoring. By the way, the Nox T3 system is also the only home sleep apnea test approved by the FDA for children two years of age and older.

It is our practice philosophy to order an in-lab hospital sleep study if at all possible. However, if there are factors (as noted in the AASM policy statement) such as “(1) economics (e.g., insurance deductible, parent time off work), (2) access to care(eg, long wait, distance to facility, higher altitudes), and social situations (eg, inconvenience, single parent)”, then surely a home sleep apnea test is preferable to proceeding to adenotonsillectomy based solely on subjective judgment without a supporting objective test. The clinical history alone is not considered sensitive enough to decide which children snore and have sleep apnea versus snore and do not have sleep apnea.

Review of online physician sites reveals that Shai Shinhar, MD, Chief of Pediatric Otolaryngology at Lenox Hill Hospital and Manhattan, Eye, Ear, and Throat Hospital, offers at home sleep studies using the Nox-T3 system.