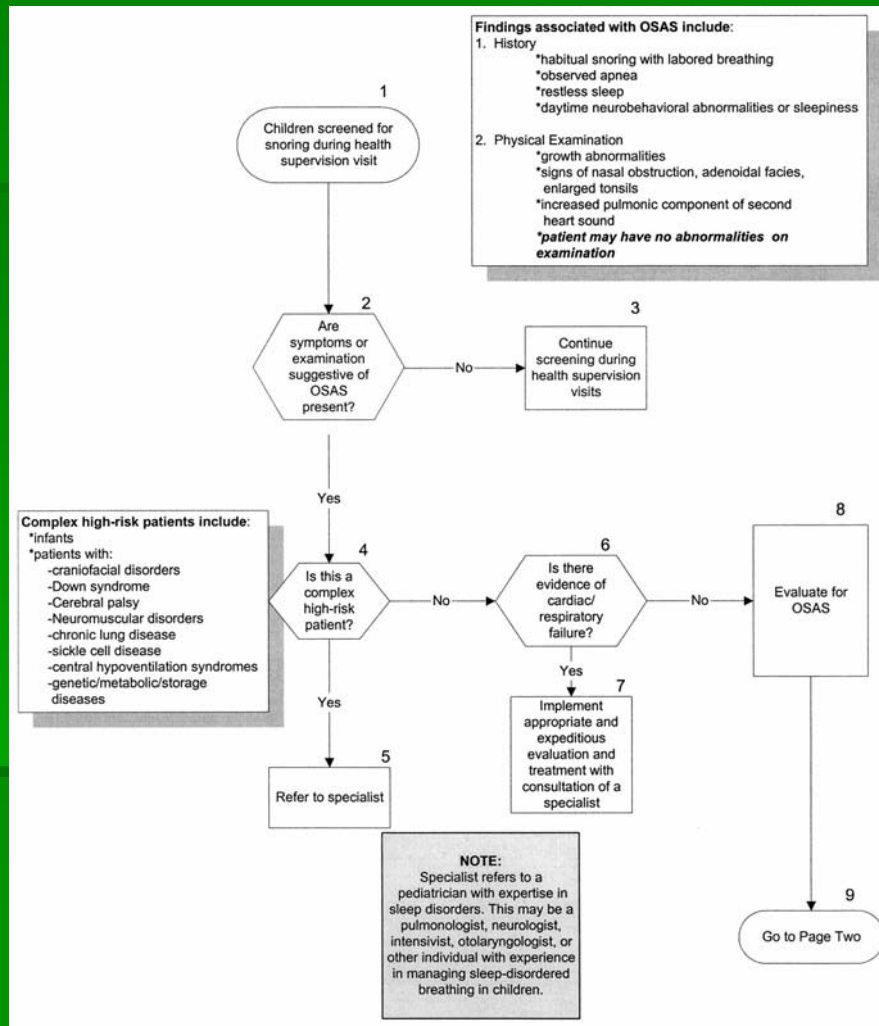
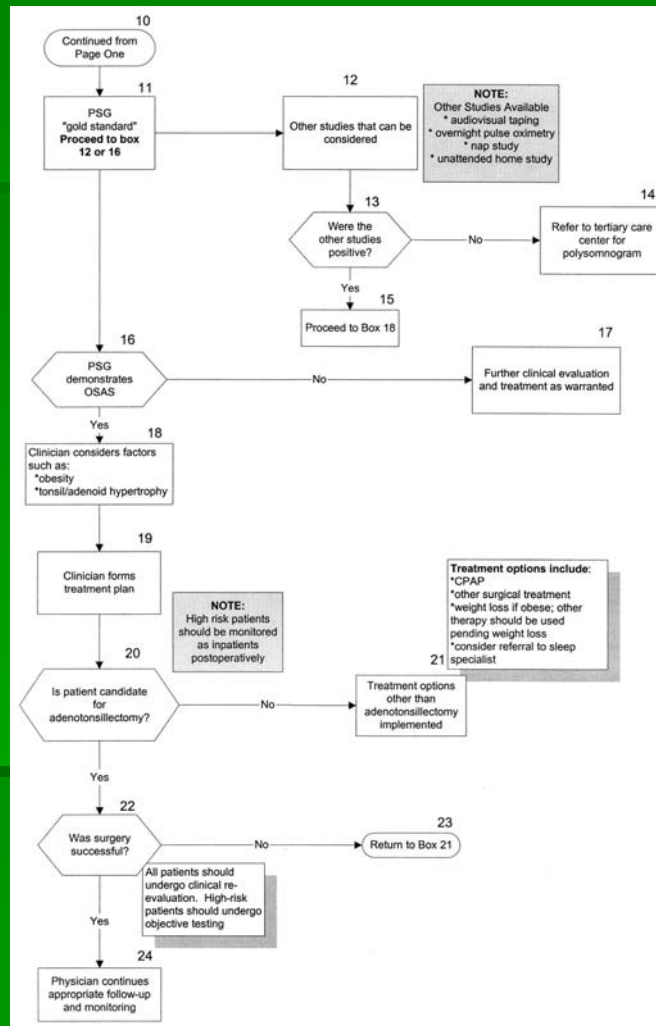


Obesity and Obstructive Sleep Apnea

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Consequences of OSA

- Cardiovascular
 - Pulmonary hypertension
 - Systemic hypertension
- Neurobehavior
 - Attention
 - Emotional regulation
 - Cognition
- Endocrine/Metabolic
 - IGF-1
 - Failure to Thrive

Gozal D, Kheirandish-Gozal L. Neurocognitive and behavioral morbidity in children with sleep disorders. *Curr Opin Pulm Med* 2007;13: 505-509

Lipton AJ, Gozal D: Treatment of obstructive sleep apnea in children: do we really know how? *Sleep Med Rev* 2003;7(1):61-80.

Treatments for OSA

- Oral devices
- Assisted ventilation
- Adenotonsillectomy
- Uvulopalatopharyngoplasty
- Tracheotomy

Risk Factors for Postoperative T&A Complications in Children with OSAS

- Age < 3 years
- Severe OSAS
- FTT/cor pulmonale
- **Obesity**
- Prematurity
- Craniofacial
- Neuromuscular
- Recent respiratory infection

American Academy of Pediatrics, Section on Pediatric Pulmonology, Subcommittee on Obstructive Sleep Apnea: Clinical practice guideline: Diagnosis and management of childhood obstructive sleep apnea syndrome. Pediatrics 2002;109:704-712

Postoperative Complications

- Hemorrhage 3%
- Respiratory complications 16-27%
 - Postobstructive pulmonary edema
 - Blunted hypoxic ventilatory drive
 - Hypoventilation
- Death 1 in 4000 to 1 in 27000

McColley SA, April MM, Carroll JL, Loughlin GM. Respiratory compromise after adenotonsillectomy in children with obstructive sleep apnea. Arch Otolaryngol Head Neck Surg 1992;118:940-943

Longterm T&A Complications

- Nasopharyngeal stenosis
- Velopharyngeal incompetence

T&A Outcomes in the Obese

- 25% AHI<1/hr
- 46% 1<AHI<5/hr
- 29% AHI>5/hr

Tauman R, Gulliver TE, Krishna J, et al: Persistence of obstructive sleep apnea syndrome in children after adenotonsillectomy. J Pediatr 2006;149: 803-808.

Risk Factors for T&A Failure

- Race
- OSAS severity
- **Obesity**
- Family history of OSAS

Recommendations for Obese Children Suspected of OSAS

- Preoperative PSG for BMI>30
- Avoid preop sedation
- Overnight postop hospitalization with monitoring
- Postoperative outpatient screening
- Consider postoperative PSG