

Pediatric Sleep Disorders

Hilary Pearson MD, DABSM

Differentiate by symptom

Too sleepy?

- Not enough sleep
- Sleep is not effective
- Sleep disturbance

Not sleepy enough?

- Can't fall asleep
- Can't stay asleep

Too sleepy

- Medication side effect?
- Idiopathic hypersomnia
- Narcolepsy
 - Disorder of sleep organization, stability and quality
- Parasomnia
 - Sleepwalking
 - Sleep terror
- Sleep-disordered breathing
 - Obstructive sleep apnea
 - Central sleep apnea

Too sleepy

- Movement disorder
 - Periodic limb movements of sleep
- Inadequate sleep
 - Teenagers need 9.2 hours of sleep nightly
 - Adults need 8 hours of sleep nightly (!)
- Intrinsic dyssomnia
 - Anxiety or depression intruding into sleep, causing abnormal arousals

Narcolepsy

- Absence of “orexin” or “hypocretin” molecule, which seems to stabilize the differentiation between wake and sleep
- Ancillary symptoms of narcolepsy hint at this-
 - Sleep paralysis
 - Hypnopompic/hypnagogic hallucinations
 - Cataplexy

Narcolepsy

- Characteristics include
 - Poor overnight sleep (discontinuous)
 - Daytime sleepiness
 - Ancillary symptoms
 - Must perform overnight polysomnogram plus “multiple sleep latency test” during daytime
 - Looking for early onset of REM sleep during naps, with essentially normal sleep overnight

Parasomnia

- Sleepwalking
- Sleep terror
- Nocturnal enuresis
- Bruxism
- Catathrenia
- Excessive scratching

Parasomnia

- Genetic component
- Related to sleep deprivation
- Must rule out other sleep disorders causing general sleep deprivation
- Must think of this as a symptom, not a diagnosis

Sleep-Disordered Breathing

- Sleep-related hypoxia/hypoventilation
 - Lung disease
 - Prematurity
- Central sleep apnea syndrome
 - Frequently secondary to brain mass
- Obstructive sleep apnea syndrome
 - Occurs in 1-3% children
 - Peak age 2-6 years
 - 80% cured with adenotonsillectomy

Craniofacial abnormalities

- Midface hypoplasia
- Mandibular/maxillary hypoplasia
- Pierre-Robin sequence
- Pfeiffer's syndrome, Crouzon's syndrome
- Especially here at Medical City!



Figure 10-10. Severe allergic reaction (anaphylaxis) to a bee sting. The swelling is most pronounced on the face and neck.





Movement disorders

- Rhythmic movement disorder
 - Head banging/body rocking
 - Common in kids <5 yrs or with developmental delay
- Restless Leg Syndrome
 - Must have 1 family member with diagnosis
- Periodic limb movement disorder
 - Different than periodic limb movements of sleep!

Inadequate sleep

- VERY common in our society
- Teenagers perhaps the worst
- For young children, key is to add sleep within 24 hour period, so as to account for naps

Age (years)	Average sleep duration (hours)	2% of kids got more than	98% of kids got less than
0.5 (6 months)	14.2	10.4	18.1
0.75 (9 months)	13.9	10.5	17.4
1	13.9	11.4	16.5
1.5 (18 months)	13.6	11.1	16.0
2	13.2	10.8	15.6
3	12.5	10.3	14.8
4	11.8	9.7	14.0
5	11.4	9.5	13.3
6	11.0	9.3	12.6
7	10.6	9.2	12.1
8	10.4	9.0	11.7
9	10.1	8.8	11.4
10	9.9	8.6	11.1
11	9.6	8.3	10.9
12	9.3	8.0	10.7
13	9.0	7.7	10.4
14	8.7	7.3	10.1
15	8.4	7.0	9.9
16	8.1	6.6	9.6



Remember the days of getting eight hours of sleep? Neither do we. Most of us these days are getting a scant six hours of sleep. The equalizer? The all-new Scaly Blahblah. Designed to eliminate the pressure points that cause tossing and turning.....



Intrinsic dyssomnia

- Finding of “spontaneous arousals” on polysomnography
- Improve with psychological intervention or medication
- Go along with “nervous types” or depression and anxiety disorders

Not sleepy enough?

- Sleep onset insomnia
- Sleep maintenance insomnia
- Circadian rhythm disorder?

Features of chronic insomnia

- Sleep misperception
- No daytime sleepiness
- Genetic component
- Co-morbidities

Symptom overlap

- In children, ADHD/ADD has similar symptoms as sleep deprivation
- Primary enuresis/secondary enuresis versus sleep deprivation/disorder of arousal from sleep
- Insomnia versus delayed sleep phase syndrome

