Sleep problems

• Normal sleep (lots of variability at all ages)
  • Quantity
    • Newborns: 16-20 hrs/day
    • 1-yr olds: 12 hrs/day
    • 6-12 yr olds: 10-11 hrs/day
  • Quality
    • Newborns: distributed between day and night
    • 3-months: day-night pattern (often corresponds with switching to solid foods)
    • 18-months: stable day-night pattern

• 2 phases of sleep
  • REM
    • Infants: 8 hrs/night ➔ 4 hrs/night by age 1
  • Non-REM
    • 4 stages
      • Stages 3 & 4 – deepest part of sleep (EEG “slow wave” sleep)
  • Sequencing
    • Infants: stages/phases intermingles
    • As child develops: regular patterns of light NREM, deep NREM, and REM gradually established
Sleep problems

Secondary symptoms

✓ Poor academic performance
✓ Anxiety
✓ Depression
✓ Health difficulties
## Sleep problems

- **Common sleep problems**
  - \(\frac{1}{4}\) to \(\frac{1}{3}\) of infants/young children experience some form of sleep problem disturbing to family

<table>
<thead>
<tr>
<th>Age</th>
<th>Common problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1</td>
<td>Not sleeping through night</td>
</tr>
<tr>
<td>2</td>
<td>Reluctance to go to sleep; nightmares</td>
</tr>
<tr>
<td>3-5</td>
<td>Difficulty initiating sleep, nighttime awakenings, &amp; nightmares</td>
</tr>
<tr>
<td>School-age</td>
<td>Bedtime resistance, delayed sleep onset, &amp; night wakening</td>
</tr>
<tr>
<td>Adolescence</td>
<td>Need for more sleep, difficulty falling asleep</td>
</tr>
</tbody>
</table>
## Sleep problems versus sleep disorders

- **Frequency, persistence, and association with other problems**
- **Impairment in important areas of functioning**
- **Significant distress**
Sleep disorders

Dyssomnias
- Difficulties initiating and maintaining sleep, or excessive sleepiness
- Quantitative problems

Parasomnias
- Disorders of arousal, partial arousal, or sleep-stage transitions
- Qualitative problems
Dyssomnia Categories

- **Insomnia:** At least a month of difficulty initiating or maintaining sleep, which causes life impairment and which is not better explained by another disorder.

- **Hypersomnia:** At least a month of excessive sleepiness, which causes life impairment.
Dyssomnia Categories

- **Narcolepsy**: At least three months of daily and irresistible attacks of refreshing sleep that include loss of muscle tone or recurrent intrusions of REM sleep into the sleep-wakefulness transition.

- **Breathing-Related Sleep Disorder**: Evidence of a sleep-disrupting breathing condition (sleep apnea)
Dysomnia Categories

- **Circadian Rhythm Sleep Disorder**: Impairing and persistent or recurring excessive sleepiness or insomnia due to a mismatch of the sleep-wake cycle to the individual’s circadian rhythm and/or environmental requirements.
  - **Specifiers**: Delayed Sleep Phase, Jet Lag, Shift Work, Unspecified.

- **Dysomnia NOS**: Catch-all category.
Parasomnia Categories

- **Nightmare Disorder**: Impairing and repeated sleep awakenings, with recall of extended and very frightening dreams, with rapid reorientation upon awakening.

- **Sleep Terror Disorder**: Impairing sleep awakenings, usually with a panicky scream, intense fear with related autonomic signs, relative unresponsiveness to comforting, with little recall of the dream.
  - i.e., “night terrors”
  - Prevalence: 3% of children between age 4-12
  - Most children outgrow it before adolescence
## Parasomnia Categories

<table>
<thead>
<tr>
<th></th>
<th>Nightmares</th>
<th>Sleep Terrors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sleep stage</td>
<td>REM Sleep</td>
<td>NREM Sleep</td>
</tr>
<tr>
<td>When?</td>
<td>Middle/later portions of night</td>
<td>First 3\textsuperscript{rd} of night</td>
</tr>
<tr>
<td>Verbalizations?</td>
<td>Subdued, if any</td>
<td>Child wakes with cry or scream; verbalizations usually present</td>
</tr>
<tr>
<td>Physiological arousal</td>
<td>Mild to moderate</td>
<td>Intense (increased heart rate, profuse sweating, pupils dilated)</td>
</tr>
<tr>
<td>Motor activity</td>
<td>None to slight</td>
<td>Increased motor activity, agitation</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>Easy to arouse, responsive to environment</td>
<td>Difficult to arouse, unresponsive to environment</td>
</tr>
<tr>
<td>Memory of event</td>
<td>Frequently remembered</td>
<td>Very limited/no memory</td>
</tr>
<tr>
<td>Prevalence</td>
<td>Quite common</td>
<td>Somewhat rare (~3%)</td>
</tr>
</tbody>
</table>

Parasomnia Categories

- **Sleepwalking Disorder** (somnambulism): Impairing repeated sleepwalking episodes, with unresponsivity in the episode, relatively quick reorientation, and amnesia for the episode.
  - 15% of children age 5-12 have isolated experience
  - 1-6% prevalence rate of persistent sleepwalking (i.e., sleepwalking disorder)
  - Occurs during first 1-3 hours of sleep, during later stages of NREM (not “acting out a dream”)

- **Parasomnia NOS**: Catch-all category.
Treatment for dyssomnias in children

- Extinction
  - Set bed time; ignore child until set time in a.m.
  - Graduated extinction (b/c hard for parents to listen to crying child …)

- Establishing positive, consistent, scheduled bedtime routines
  - Calm activities the child enjoys

- Scheduled awakenings
  - Parent awakens and consoles child approx 15 min before typical spontaneous awakening
    - Gradually faded out

- Parent education
  - Information about sleep, routine, putting child to bed while partially awake to learn to go to sleep without adult
Treatments for dyssomnias in children

• Sleep Studies.

• Biological Treatments: Use of Benzodiazepines and Antihistamines as sleep aids.

• Cognitive-Behavioral Therapy, including relaxation training and the use of biofeedback.
Treatment for parasomnias in children

• No treatment indicated

• Education and support usually sufficient
  • Most disappear spontaneously, and are of minimal impact (e.g., sleep terrors scary for parent, but child doesn’t remember them)

• Treatments available: scheduled awakenings, contingency management, instructional procedures, and anxiety-reduction procedures
  • e.g., scheduled awakenings for sleep terror disorder
    • Awaken child ~30 min prior to typical sleep terror episode (lightly touch child until child opens eyes, then allow him/her to fall back asleep)
Other Tips for Sleep Problems

- Initiate a regular program of exercise.
- Avoid large or late meals, and avoid going to bed very hungry.
- Avoid napping.
- Go to bed only when sleepy
- Cut down on caffeine, heavy smoking, and alcohol use.
- Cease fretting over inconsistencies in the sleep pattern.
- Keep the bedroom quiet, dark, and comfortable.
- Relearn a more appropriate bedtime routine.
END