

CONNECTING FOR KIDS, 1/16/2018, WESTLAKE PORTER PUBLIC LIBRARY

John Hertzler, MD. Child & Adolescent Psychiatry Division Director, University Hospitals Cleveland Medical Center.

-American Academy of Pediatrics Sleep Guidelines:

4-12 months: 12-16 hours

1-2 years: 11-14 hours

3-5 years: 10-13 hours

6-12 years: 9-12 hours

13-18 years: 8-10 hours

-Why?: “Adequate sleep leads to improved attention, behavior, learning, memory, emotional regulation, quality of life, and mental and physical health”

-2007 CDC Youth Risk Behavior Survey: 70% of high school students averaged fewer than 8 hours of sleep on school nights, and 40% averaged under 6 hours.

-Not many studies on association between sleep and mental health but some findings from those that exist:

-32% of 3-7 year-olds had significant sleep problem, increased intensity of psychiatric symptoms.

-3 year-old children with regular bedtimes, mealtimes, and limits on television/video time had better emotional self-regulation. Lack of regular bedtime and poorer emotional self-regulation age 3 predicted obesity at age 11.

-Preschool children with TV in bedroom had more sleep terrors, nightmares, sleep talking, and morning fatigue.

-Preschool age (3-6 years) delay in sleep onset and refusal to sleep alone predicted depression and anxiety severity over next 6 years.

-Bedtime use of media device associated with poor sleep quality and excessive daytime sleepiness.

-Less sleep age 11 associated with earlier and repeated use of alcohol and cannabis throughout adolescence.

-Teenagers in schools that have moved start times to 8:30 or later showed fewer depressive symptoms, fewer motor vehicle accidents, and better academic performance than sleep-deprived peers.

-Middle school students with school start times before 7:45 had deficient sleep in 45% of cases and lower academic performance.

-American Academy of Pediatrics Media Use Recommendations:

- 1) Children younger than 18 months, no screen time apart from video-chatting
- 2) 18-24 months, choose high-quality content and watch with kids
- 3) 2-5 years, limit to 1 hour/day.
- 4) Older children “consistent limits”, get adequate physical activity and sleep

Related #1:

Regular physical activity associated with improved health outcomes, but National Health and Nutritional Examination Surveys (NHANES) study showed that higher TV viewing (but not computer use/video gaming) in ages 6-15 was associated with lower physical strength irrespective of physical activity.

Related #2:

World Health Organization Childhood Obesity Surveillance Initiative: Ages 6-9 each additional hour of TV or computer time (outside of homework) associated with increased consumption of high fat/high sugar foods. Passive over-consumption as food choices did not correlate with taste preference.

-Sleep Hygiene Guidelines:

Same bedtime and wake time daily, use bed only for sleeping, turn alarm clock away from bed, predictable/relaxing bedtime routine, avoid screens/caffeine, morning rather than evening exercise, security object, boring book.

-Adolescent Cognitive-Behavioral Sleep Interventions

Modify patterns of thinking and behavior underlying sleep disturbance. Associated with improved sleep quality and functional outcomes (daytime sleepiness, depression, anxiety)

CBT-I (Sleep Hygiene, Stimulus Control, Sleep Restriction, Relaxation, Cognitive Therapy) Mindfulness, Bright Light Therapy, Chronotherapy (changing sleeping and waking times).

-Melatonin:

Hormone synthesized in pineal gland from amino acid tryptophan, secretion controlled by hypothalamus (biological clock), "hormone of darkness". Natural rise of melatonin levels in body 1-3 hours before sleep termed dim light melatonin onset (DLMO). Light exposure (ie screens) shifts DLMO to later, as does delayed sleep phase syndrome which is common in teens.

Considered a dietary supplement and not a medication by FDA, therefore not regulated.

Doses used are 0.5-10 mg exceed natural amount excreted in body. Best time to give is a few hours before bedtime. Most common side effects are morning drowsiness, bedwetting, headache, dizziness, nausea, diarrhea. Using a USP verified preparation most reliable.

-Sleep Study Indications (American Academy of Sleep Medicine):

1) Obstructive Sleep Apnea (OSA)

Can occur at any age but between 2-6 years most common. Risk factors are enlarged tonsils and obesity. Also family history of OSA.

Difficulty initiating or maintaining sleep, excessive daytime sleepiness, snoring or other breathing problems during sleep, abnormal movements or behaviors during or before sleep ie sleeping in seated position or with neck hyperextended, inward rib cage motions during inspiration, movement arousals.

Single overnight study (Polysomnography) usually sufficient, with final PSG interpretation by sleep medicine physician. Respiratory disturbance typically more than one hour.

2) Narcolepsy

Excessive sleepiness, cataplexy (loss of muscle tone), sleep paralysis (unable to move upon awakening), hypnagogic hallucinations (near onset of sleep). Peak onset late teens, twenties.

3) Parasomnias

Undesirable physiologic phenomena occurring during sleep. Disrupts sleep-wake cycle, can cause injury.

4) Restless Leg Syndrome

Disagreeable leg sensations occurring at rest or before sleep and temporarily relieved by movement

5) Periodic Limb Movement Disorder

Involuntary, stereotypic, repetitive limb movements that may occur during sleep and usually involve legs and sometimes arms.

6) Depression with Insomnia

PSG not routinely used, but indicated if can predict treatment response/recovery from depression.

7) Circadian Rhythm Sleep Disorders

Mismatch between sleep pattern and timing/amount of sleep desired or required, such as with time zone changes, shift work.

Talk to Primary Care Provider for Referrals

-