

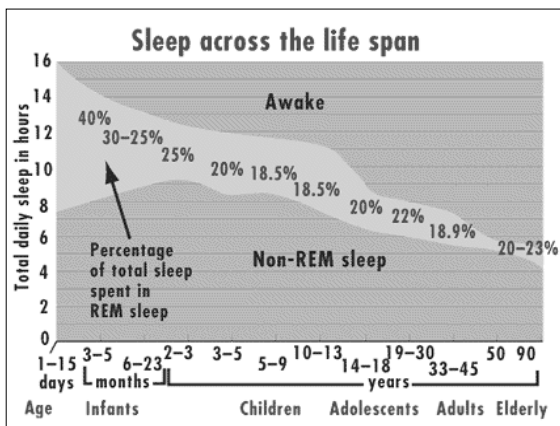
Chapter 8b

Sleep Disorders

The Nature of Sleep

What is Normal Sleeping Behavior?

- Amount varies
 - By persons
 - By age
- Sequelae of problems sleeping



- Two major states which occur in an alternating pattern
 - D-Sleep
 - Desynchronized (low-voltage fast-activity), or waking-like, EEG with REM
 - S-Sleep
 - Slow-wave (large-amplitude slow-activity) EEG of various degrees
- Sleep begins with S-sleep, giving way to D-sleep

Evaluating Sleep

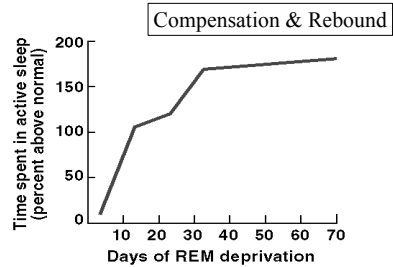
Polysomnographic (PSG) evaluation – Patient sleeps in a sleep laboratory, being monitored on:

- Electrooculograph (EOG) (eye movements)
- Electroencephalograph (EEG) (brain wave activity)
- Electrocardiogram (heart activity)
- Electromyograph (EMG) (muscle movements)
- Leg movements
- Respiration & oxygen desaturation (airflow)

Sleep Assessment

- Sleep Efficiency
- Observe daytime sequelae

Depriving Someone of REM Sleep



An Overview of Sleep Disorders

Two major categories

- Dyssomnias
 - Difficulties getting enough sleep
 - Complaints about amount, quality, timing
- Parasomnias
 - Abnormal behavior or physiological events that occur during sleep
 - e.g., nightmares, sleepwalking

The Nature of Dyssomnias

Primary Insomnia

- Most common sleep disorder
 - Trouble initiating sleep
 - Trouble maintaining sleep
 - Have nonrestorative sleep
- Resulting concentrational problems can result in accidents, school failure

- Facts and Statistics
- Causes

Primary Hypersomnia

- Problem of sleeping too much
 - Excessive sleepiness during the day
 - Person experiences it as a problem
 - Appear to get adequate amounts of sleep & appear rested upon awakening
 - Little is known about causes
 - Appears to run in families

Narcolepsy

- The “Sleep Attack”
 - Excessive daytime sleepiness
 - Cataplexy (sudden loss of muscle tone)
 - Sleep paralysis
 - Hypnagogic hallucinations
- Facts and Statistics

Breathing-Related Sleep Disorders

- Sleep Apnea
 - Short periods (10-30 sec) where breathing stops
 - Three types
 - Obstructive (OSA)
 - Central (CSA)
 - Mixed Sleep Apnea

Circadian Rhythm Sleep Disorders

- The Biological Clock
 - Located in the Suprachiasmatic Nucleus in the Hypothalamus
- Melatonin
 - Produced by the pineal gland
- Circadian Clock Problems
 - Jet Lag & Shift Work Types
 - Delayed & Advanced Sleep Phase Types

The Treatment of Dyssomnias

Medical Treatments

- Prescription and Over-the-Counter
- For insomnia, benzodiazepines are prescribed:
 - Halcion (short-acting)
 - Dalmane (long-acting)
- For hypersomnia & narcolepsy, stimulants are prescribed:
 - Ritalin
 - Amphetamines
- For cataplexy, antidepressants are prescribed
- For Breathing-Related Disorders, medications to stimulate respiration

Environmental Treatments

- For Circadian rhythm disorders

Cognitive-Behavioral Treatments

Improving Sleep

Sleep Hygiene

Changing daily habits that may interfere with sleep

- Exercise, but not close to bedtime
- Avoid naps
- Limit alcohol & tobacco
 - Avoid caffeine 6 hours before bedtime
- Relax before bed
- Don't force sleep
 - 15 minute limit getting to sleep

Sleep Hygiene

- Set Regular Bedtime & Wake-up Time
- Sleep Restriction
 - Limit time in bed to the amount of time one actually sleeps each night

Stimulus Control

Use the bedroom only for sleeping & sex & not for work or other anxiety-provoking activities (e.g., watching TV news)

- Bed = Sleep

The Nature of Parasomnias

Two Main Types

- During REM
 - Nightmares
- During NREM
 - Sleep Terrors
 - Scheduled awakenings (Durand & Mindell, 1999)
 - Sleep Walking (somnambulism)
 - Nocturnal eating syndrome