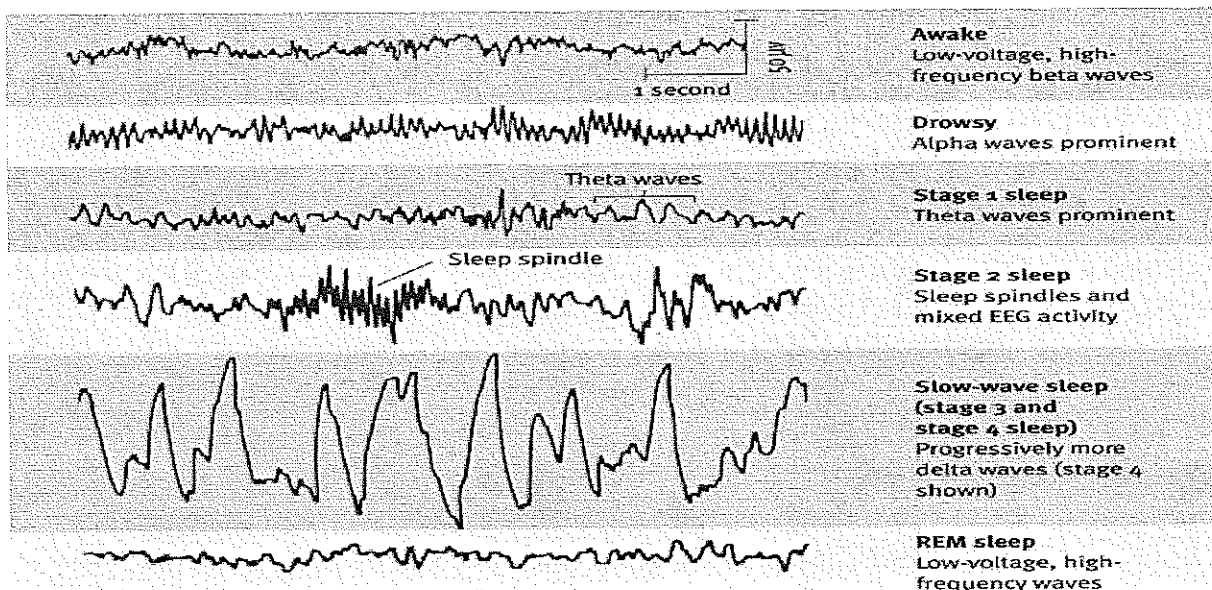


MODULE 23 SLEEP PATTERNS AND SLEEP THEORIES

BIOLOGICAL RHYTHMS AND SLEEP

- “death’s counterfeit”
- Our body’s on a 24-hour cycle of day and night by an internal biological clock called the **CIRCADIAN RHYTHM**. Morning people have their alertness peak in the morning while Night people have their alertness peak in the afternoon. Females are usually more prone to being morning people. Morning types tend to do better in school, to take more initiative, and to be less vulnerable to depression.
- Brain remains active during sleep. While asleep, every 90 minutes you encounter a stage of sleep. **REM SLEEP** is where individuals asleep experience rapid eye movement. During REM sleep, dreaming occurs. During REM sleep, your heart rate rises, your breathing becomes rapid and irregular, and every half-minute or so your eyes dart around in momentary bursts of activity behind closed lids.
- **ALPHA WAVES** are relatively slow brain waves of a relaxed, awake state. **SLEEP** is a natural loss of consciousness as distinct from unconsciousness resulting from a coma, general anesthesia, or hibernation.



- During NREM-1, the transition of slowed breathing and the irregular brain waves of non-REM stage 1 sleep (Theta Waves), you may experience fantastic images resembling **HALLUCINATIONS** or sensory experiences that occur without a sensory stimulus.
- You then relax more deeply and begin about 20 minutes of NREM-2 sleep, with its periodic sleep spindles or bursts of rapid, rhythmic brain-wave activity.
- Deep sleep of NREM-3 is slow-wave sleep, which lasts for about 30 minutes, your brain emits large, slow **DELTA WAVES** and you are hard to awaken.

- Immobility during sleep that will linger as you awake from REM sleep produces the terrifying sleep paralysis. This is sometimes traumatizing for individuals.

WHAT AFFECTS OUR SLEEP PATTERNS?

- Genetically influenced
- Culturally influenced (for instance, social media has deviated us from the natural occurring sleep studies show before the existence of social media)
- Light changes our biological clock. Light-sensitive retinal proteins control the circadian clock by triggering signals to the brain's SUPRACHIASMATIC NUCLEUS. SCN is a pair of grain-of-rice-sized, 10,000 cell clusters in the hypothalamus.

SLEEP THEORIES

- Sleep protects us during the night hours
- Sleep helps us recuperate. Restoring and repairing of brain tissue during the time we sleep.
- Sleep helps restore and rebuild our fading memories of the day's experiences. People who are trained in tasks are better able to recall them after a night's sleep.
**Maybe waiting to study the night before isn't so bad?
- Sleep feeds creative thinking
- Sleep supports growth. Pituitary gland releases a hormone that is essential for growth/muscle development.

BE ABLE TO ANSWER: What five theories explain our need for sleep?

PRACTICE FRQ: Sleep serves many functions for us. Briefly explain how sleep can provide protection and promote physical growth.