Sleep and Dreams

- **Circadian Rhythm**
  - the biological clock
  - regular bodily rhythms that occur on a 24-hour cycle, such as of wakefulness and body temperature
Sleep and Dreams

- REM (Rapid Eye Movement) Sleep
  - recurring sleep stage
  - vivid dreams
  - “paradoxical sleep”
    - muscles are generally relaxed, but other body systems are active

- Sleep
  - periodic, natural, reversible loss of consciousness
Brain Waves and Sleep Stages

- **Beta Waves**
  - While you are awake and conscious

- **Alpha Waves**
  - slow waves of a relaxed, awake brain (Stage 1)

- **Theta Waves**
  - Stage 2
  - Sleep Spinals also

- **Delta Waves**
  - large, slow waves of deep sleep
  - Stage 3 (only some)
  - Stage 4 (A lot, deep waves)

- **Hallucinations**
  - false sensory experiences
Stage 1

- Kind of awake and kind of asleep.
- Only lasts a few minutes, and you usually only experience it once a night.
- You experience hallucinations, such as floating, weightlessness, knee jerks, etc.
Stage 2

- You are now actually asleep.
- Breathing and heart rate begin to decrease.
Stages 3 and 4

- Slow wave sleep.
- You produce Delta waves.
- If awoken you will be very groggy.
- Vital for restoring body’s growth hormones and good overall health.

From stage 4, your brain begins to speed up and you go to stage 3, then 2...then ......
REM Sleep

- Rapid Eye Movement
- Often called paradoxical sleep.
- Brain is very active.
- Dreams usually occur in REM.
- Body is essentially paralyzed.
- REM Rebound
Stages in a Typical Night’s Sleep

![Graph showing sleep stages over hours of sleep]

- **Awake** stages labeled 0 to 4
- **REM** stages highlighted in red

Hours of sleep: 0 to 7
Sleep stages: 0 to 4