### Consciousness

- Sleep/Dreams
- Hypnosis
- Meditation
- Drugs

### Biological Rhythms

- **Ultradian:** periods of time within which we become hungry
- **Infradian:** menstrual cycles
- **Circadian:** sleep/wake cycle lasting about a day (24.18 - 25 hr.)

### Biological Regulation of Sleep

1. **Melatonin**
   - hormone
   - its secretion is regulated by light
2. **Suprachiasmatic nucleus**
   - internal biological clock

### Individual Differences in Circadian Rhythms

- **Larks** - morning People
- **Owls** - evening People

### Disruptions to Normal Circadian Rhythms

- Jet lag
- Seasonal Affective Disorder (SAD)

### Seasonal Affective Disorder (SAD)

- Winter depression
- Oversleeping
- Overeating/crave carbohydrates
- Runs in families
Stages of Sleep

1. Non-REM (1, 2, 3, & 4)
2. REM (Rapid-Eye Movement)

Sleep stages

Stage 3 and 4
- Slow
  - pulse
  - breathing
  - brain activity (synchronized)
  - eyes are inactive
Sleep walking and talking

REM: Paradoxical sleep

- Short high-frequency beta waves (like when we are awake; unsynchronized neural activity)
- Large muscles are very relaxed (deep sleep)

REM Functions

- If deprived:
  - anxiety
  - irritability
  - impaired concentration
  - REM rebound
- Improves memory storage

Sleep Deprivation

Peter Tripp (1959) - awake for 200 hr. or 8 days

Theories on Dreams:

The Psychoanalytic view:
- expression of our impulses & desires
Mental housekeeping: sort information
Activation-synthesis theory:
- dreams are a product of brain activity
Dreams are influenced by:

• Concerns of daily life
• External stimuli
• Ourselves: lucid dreaming

Lucid dreaming:  
work by Stephan LaBerge

1. Living out fantasies unavailable in real life
2. Overcome nightmares  
   - nothing can harm you in a dream  
   - relax & go with experience, “let it happen”
3. Psychological wellbeing

Hypnosis  

involves willing participant

Theories explaining hypnosis

1. Role-playing theory (Barber, 1979)
   - hypnosis is normal mental state
   - person knows/believes in what is expected & plays that role

2. Neodissociation theory  
   (Hilgard, 1977)
   - split in consciousness (altered state)
   - hidden observer: part of self which is aware of what is happening during hypnosis

Hypnosis: Effects

1. Perceptual effects
   - Effective in pain relief
   - Cannot promote healing
2. Cognitive Effects
- improve memory (controversial)
- fabrication of memory

3. Behavioral effects
- helped people to overcome phobias
- performance anxiety reduction
- weight loss
- sexual responsiveness
- night terrors
- change bad habits (tobacco use, nail-biting)

Drugs and Their Effects
- History of drug use
- Effects on brain
- Social factors (war)