



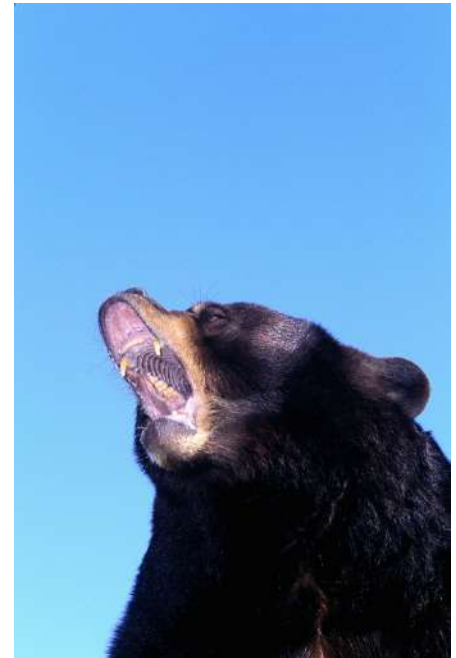
“To sleep, perchance to dream...”

--Hamlet [William Shakespeare]

States of consciousness

Why do we sleep?

- **Hypothalamus** regulates sleep
- **Melatonin:** hormone linked to sleep
- *Preservation:* dangerous to travel at night—protects you (adaptation)
- *Restoration:* rest & recuperate



Sleep stages: 90 min. rhythm

- Brain cycles (*alpha waves*) slow down...
- **Stage 1:** 5 min., light sleep, easy to wake
- **Stage 2:** slower brain waves; 20 min. each time—half sleep time in this stage
- **Stages 3 & 4:** large, slow delta waves; cycles back up to stage 3, 2, 1, then *REM (rapid eye movement)*—**dream stage**. Brain stem blocks muscle movement—brain is awake, but muscles are paralyzed. You dream every night.
- Continues to cycle...

Why do we dream?



- *Information processing*—helps with memory storage (sleep helps you retain information)
- *Physiological function*: stimulation for our brains (especially children—growth hormone)
- *Activation-synthesis*: mind's attempt to make sense of random neural activity in the brain
- Almost all animals have REM sleep (dream!)—except fish!

Sleep disorders

- **Insomnia:** recurring problems falling or staying asleep. Sleep meds can make it worse!
- **Sleep apnea:** repeated awakening during the night because of an inability to breathe—snoring
- **Narcolepsy:** uncontrollable sleep attacks from arousal of the nervous system (laughter, fear, anger, sadness). Runs in families. Dangerous.



Other sleep disorders

- *Somnambulism*: sleepwalking
- *Night terrors*: usually in children
- *Bruxism*: teeth grinding
- *Enuresis*: bed wetting
- *Myclonus*: sudden jerking of a limb during sleep



Hypnosis

- *Social influence theory*: peer pressure, “mob mentality” ...can these explain hypnosis?
- Divided consciousness: the idea that your brain can divide it's attention
- Hilgard's experiment (pg. 398)
- About 80% of people are hypnotizable
- Very relaxing



Hypnosis, continued...

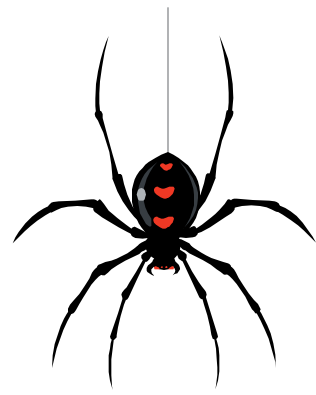
- *Posthypnotic suggestions:* lose weight, stop smoking, pain control; posthypnotic amnesia
- Danger in hypnotically enhanced memories
- Studies? Research can't prove definitively that hypnosis caused the changes—or that it didn't!



Psychological Disorders

- A maladaptive, unjustified, destructive, disturbing, or atypical behavior
- Causes: can be social or medical, or combination of the two
- **DSM-IV-TR:** Diagnostic & Statistical Manual of Mental Disorders, 4th edition (text revision)
- Rates: alcoholism (M: 24%, F: 5%; mood disorders: M: 5%, F: 10%; schizophrenia: M: 1%, F: 1%)

Anxiety disorders



- *Generalized anxiety disorder*: persistent, unexplained feelings of apprehension & tension
- *Panic disorder*: sudden intense, unexplained panic
- *Phobia*: irrational, disruptive fears of objects or situations (see pg. 537)
- *OCD*: obsessive-compulsive disorder: unwanted, repetitive thoughts or actions
- *PTSD*: post-traumatic stress disorder: memories/dreams of severely upsetting event



Causes?

- Heredity
- Brain function: chemical, injury
- Evolution: fear of things that are dangerous
- Conditioning
- Observation
- reinforcement



Mood Disorders

- **Major depressive disorder:** lasts at least 2 weeks, uninterested in activities, weight/appetite loss, sleeping, fatigue, guilt, inability to concentrate, thoughts of death or suicide
- **Dysthymic disorder:** similar to above, but less severe/shorter
- **Bipolar disorder:** alternating periods of mania & depression
- **Mania:** abnormally high emotional period (thoughts race, can't focus, bursts of energy)
- **Learned helplessness:** give up & stop trying
- **Attributions:** depressed tend to internalize, assume the worst, apply it to everything



Dissociative disorders

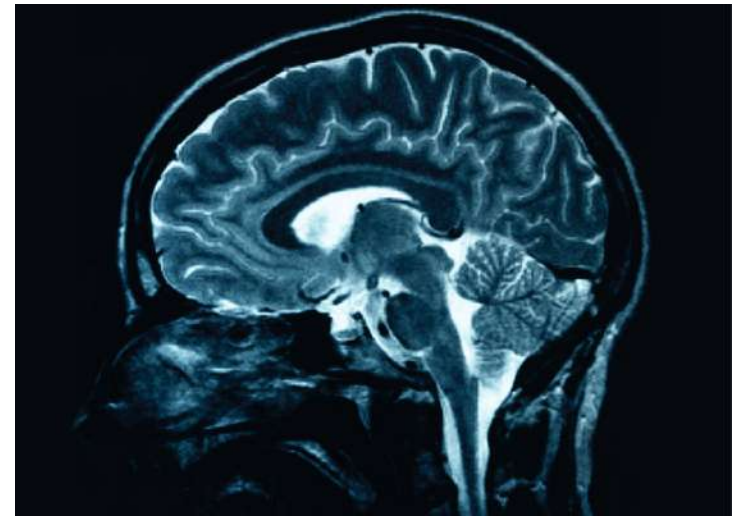
- *Amnesia*: head injuries, disease (Alzheimer's), fatigue, repression (blocking)
- *Fugue*: extended form of amnesia—loss of identity due to travel to another location. Caused by extreme stress.
- *Identity disorder*: multiple personalities (usually 3-12)



Schizophrenia disorders

- *Delusions* of grandeur, persecution, sin/guilt, influence
- *Hallucinations*: false perception (usually auditory, but can be visual or tactile)
- *Inappropriate emotions or behavior*: laughter or crying, no emotion, word salad, waxy inflexibility
- 4 types: *paranoid, catatonic, disorganized, undifferentiated* (other)

Causes:



- Genetics/heredity
- Brain structure (thalamus is smaller)
- Brain function: frontal lobes show less activity on a PET scan & 6 times as many dopamine receptors
- prenatal viruses: viral infections like the flu
- Psychological factors: stress & family can set it off in those who are predisposed to it

Personality disorders

- Related to anxiety: *avoidant & dependent* (avoid relationships or clingy & needy)
- Odd or eccentric behaviors: hermits, loners—avoid contact with others at all costs
- Dramatic or impulsive behaviors: unstable life
- ***Antisocial personality disorder:*** psychopathic/sociopathic—no concern for feelings of others, no remorse. Often criminals, often charming/clever. Extremely difficult to treat—usually end up in jail.
- ***Narcissism:*** self-absorbed, indifference to others' problems



Treatments



- **Psychoanalysis & therapy:** free association, dream interpretation, memories, childhood, unconscious drives/conflicts
- **Humanistic:** self-awareness & acceptance, conscious thoughts, future, feelings, positive
- **Behavioral:** classical & operant conditioning (*aversion & desensitization*)
- **Cognitive therapy:** changing thinking & behavior together
- **Group/family therapy:** discussion of issues
- **Alternative therapies:** touch/energy fields, light exposure, animal therapy