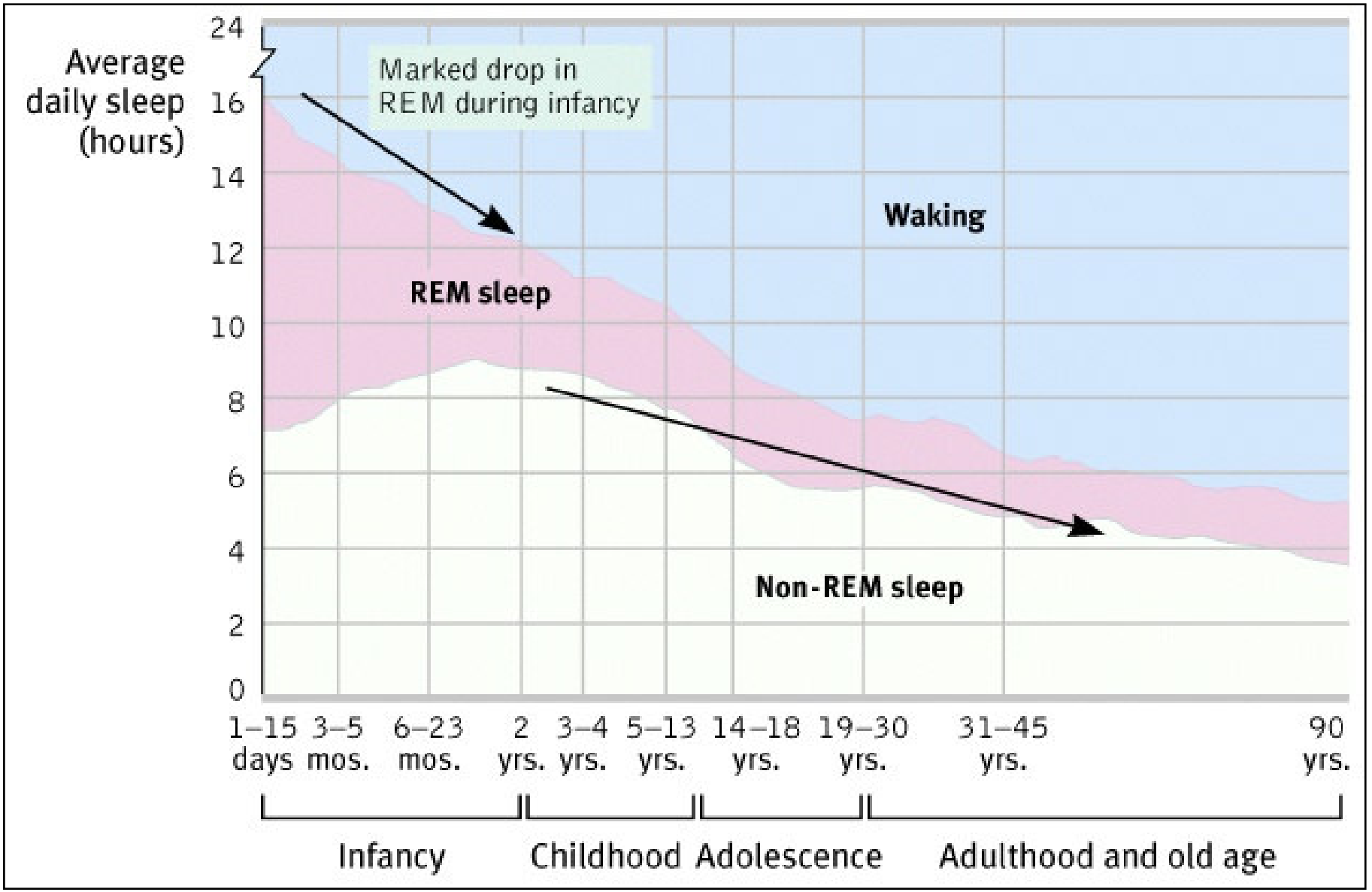
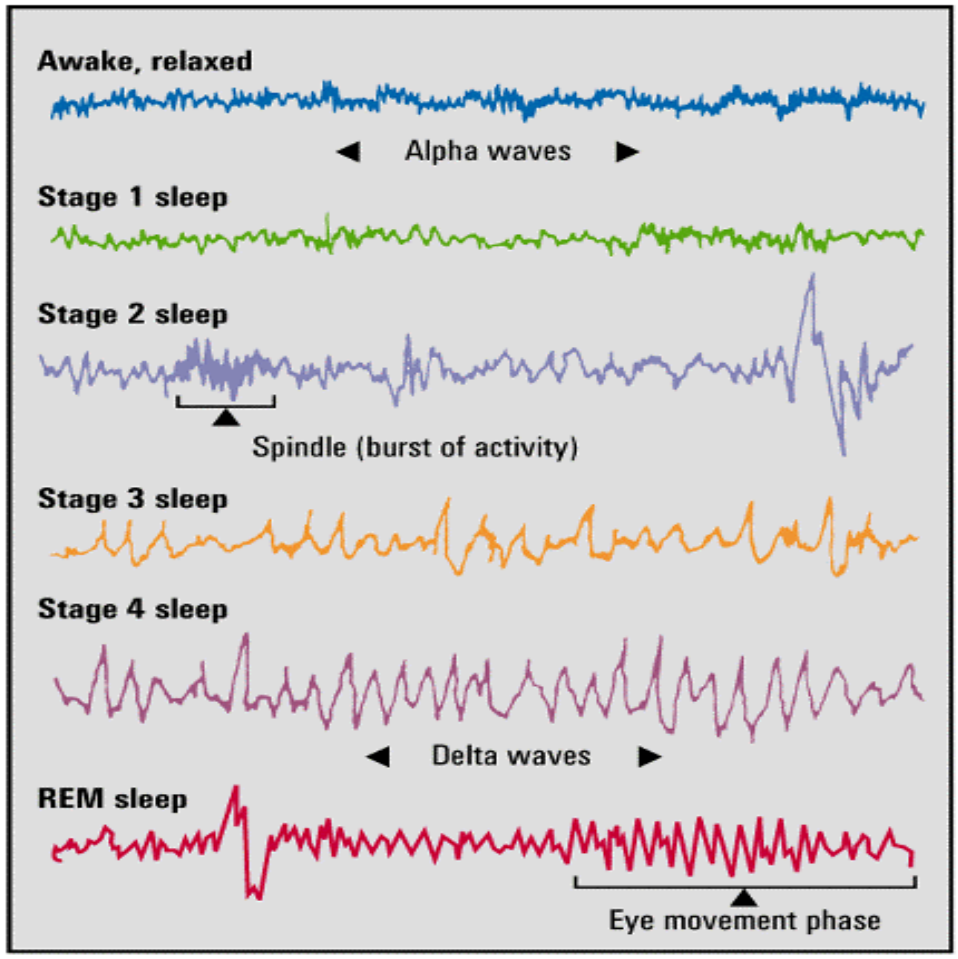
Chapter 7 Test Review


Average daily sleep (hours)
24
16
14
12
10
8
6
4
2
0
Marked drop in REM during infancy
Waking
REM sleep
Non-REM sleep
1–15 days
3–5 mos.
6–23 mos.
2 yrs.
3–4 yrs.
5–13 yrs.
14–18 yrs.
19–30 yrs.
31–45 yrs.
90 yrs.
Infancy
Childhood
Adolescence
Adulthood and old age

Circadian rhythm

- Biological functions that operate on an approximately 24 hour cycle
- Connected to the light and dark cycle of time (the sun)
- Changes to a 25 hour cycle when light and dark cues are deprived

Brain Waves and Sleep Stages



- Alpha Waves
  - slow waves of a relaxed, awake brain
- Delta Waves
  - large, slow waves of deep sleep
- Hallucinations
  - false sensory experiences

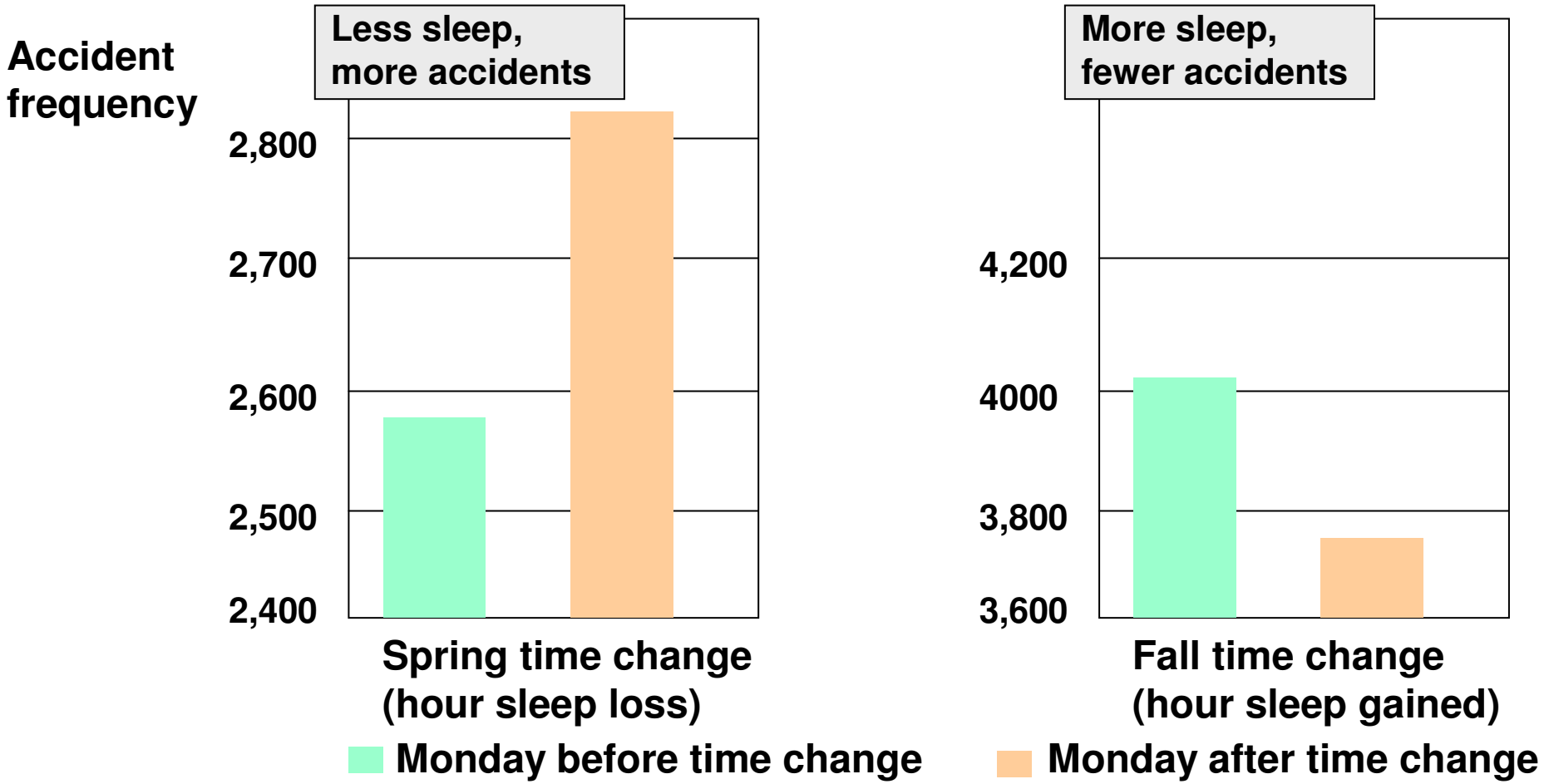
Paradoxical sleep

- REM sleep is called this because the nervous system is active, but the voluntary muscle systems barely move

Sleep Deprivation

- Effects of Sleep Loss
  - fatigue
  - impaired concentration
  - immune suppression
  - irritability
  - slowed performance
    - **accidents**
      - **planes**
      - **autos and trucks**

Sleep Deprivation



Why do we sleep?

- Benefits

1. Tissue restored
2. Energy conserved
3. Growth hormone released by *pituitary gland*, a pea sized structured at the base of the brain

Sleep Disorders: pp. 255-257

- Insomnia
  - persistent problems in falling or staying asleep
- Narcolepsy
  - uncontrollable sleep attacks
- Sleep Apnea
  - cessation of breathing
  - often associated with snoring
  - repeatedly awakes sufferer

Sleep Disorders:

1. Somnambulism: Sleepwalking. Occurs during stage 4 sleep.

2. Nightmares: Frightening dreams that wake a sleeper from REM.

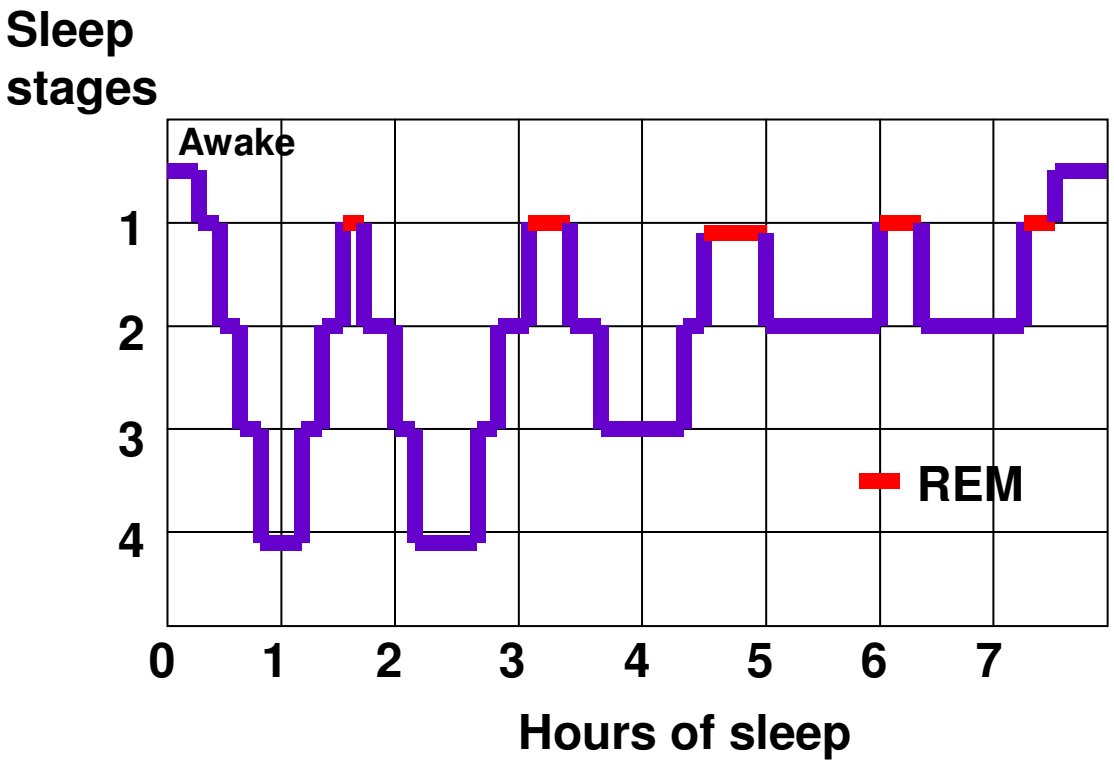
3. Night terrors: Sudden arousal from sleep with intense fear accompanied by physiological reactions (e.g., rapid heart rate, perspiration) that occur during SWS.

Responding to insomnia

- Relax
- Drink glass of milk before bedtime

- DO NOT
- Sleep later than usual
- Exercise before bedtime

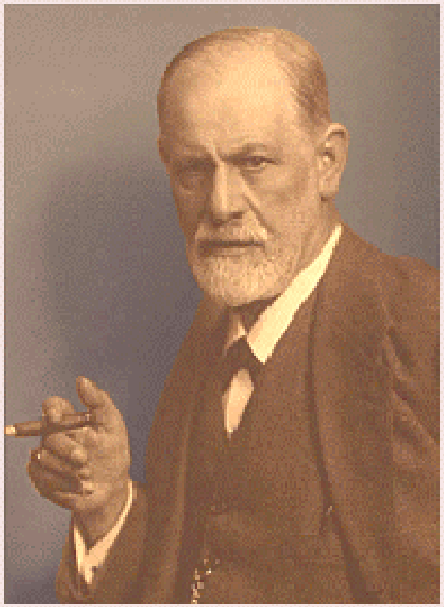
Night Terrors and Nightmares



- Night Terrors
  - occur within 2 or 3 hours of falling asleep, usually during Stage 4
  - high arousal-appearance of being terrified
- Nightmares
  - occur towards morning
  - during REM sleep

Dream Theory- Sigmund Freud

- Sigmund Freud- The Interpretation of Dreams (1900)
  - symbolic wish fulfillment of eroticism
  - discharge otherwise unacceptable feelings



Sigmund Freud

http://biographies.gerardkeegan.co.uk/freud/sigmund_sm.GIF

Freud's theory

- **Manifest Content**
  - **remembered story line**
- **Latent Content**
  - **underlying, uncensored meaning that is symbolic**
  - **Dreams are the royal road to the unconscious mind**

Dream Theories

Summary

DREAM THEORIES

Theory	Explanation	Critical Considerations
Freud's wish-fulfillment	Dreams provide a "psychic safety valve"—expressing otherwise unacceptable feelings; contain manifest (remembered) content and a deeper layer of latent content—a hidden meaning.	Lacks any scientific support; dreams may be interpreted in many different ways.
Information-processing	Dreams help us sort out the day's events and consolidate our memories.	But why do we sometimes dream about things we have not experienced?
Physiological function	Regular brain stimulation from REM sleep may help develop and preserve neural pathways.	This may be true, but it does not explain why we experience *meaningful* dreams.
Activation-synthesis	REM sleep triggers impulses that evoke random visual memories, which our sleeping brain weaves into stories.	The individual's brain is weaving the stories, which still tells us something about the dreamer.
Cognitive theory	Dream content reflects dreamers' cognitive development—their knowledge and understanding.	Does not address the neuroscience of dreams.

Does everyone dream?

- Those who have sleep disorders may not experience dreaming
- Those who claim not to dream would report them if they were awoken during REM sleep

Hypnosis

- Posthypnotic Amnesia
  - supposed inability to recall what one experienced during hypnosis
  - induced by the hypnotist's suggestion
- Hypnotic Suggestibility
  - related to subject's openness to suggestion
  - ability to focus attention inwardly
  - ability to become imaginatively absorbed

Hypnosis

Posthypnotic Suggestion

- suggestion to be carried out after the subject is no longer hypnotized
- used by some clinicians to control undesired symptoms and behaviors

Age regression

- A therapist hypnotizes a subject and brings him or her back to an earlier experience in their life.

Age regression example

- In 1949, Robert True regressed patients to previous birthday experiences, using hypnosis.
- 82 percent correctly remembered the day of the week their birthday fell on…
- He asked them in ways that gave the subject clues about what the correct answer was.

Ernest Hilgard's Divided consciousness hypnosis theory

- Hidden Observer
  - Hilgard's term describing a hypnotized subject's awareness of experiences, such as pain, that go unreported during hypnosis

http://www.coe.uga.edu/chds/counselingpsych/echd9600projects/eminentpsychologists/hilgardmug_160.jpg

Hypnosis and Pain

- Dissociation
  - a split in consciousness
  - allows some thoughts and behaviors to occur simultaneously with others
  - This explains why some achieve relief from pain: the body senses the pain, but the pain is not perceived

HYPNOSIS THEORIES

Attention is diverted from an aversive odor. How?

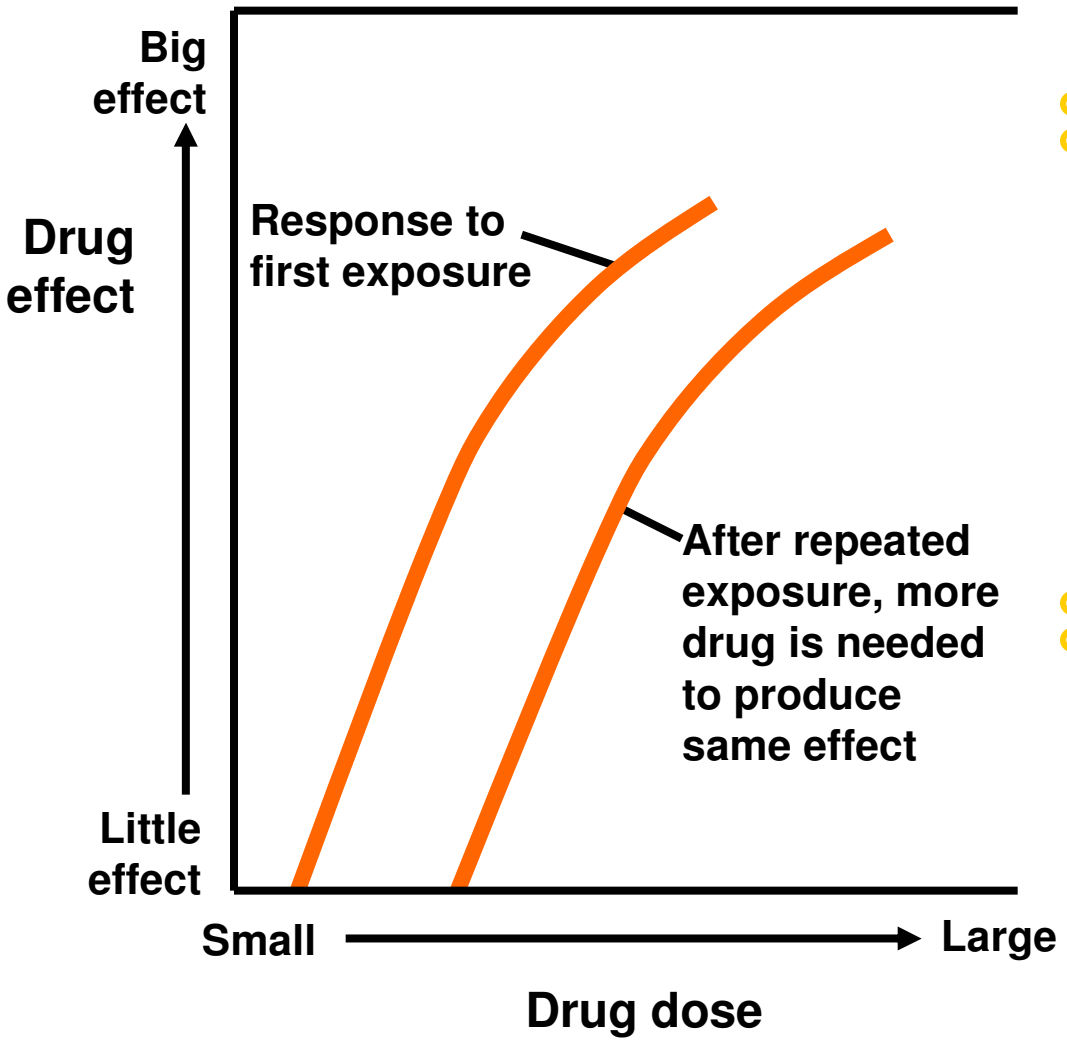
Divided-consciousness theory:

hypnosis has caused a split in awareness

Social influence theory:

the subject is so caught up in the hypnotized role that she ignores the odor

Physical Dependence concepts



- Tolerance
  - need for progressively larger doses to achieve same effect
- Withdrawal
  - discomfort and distress with discontinued use

Drugs and Consciousness

- Psychoactive Drug
  - a chemical substance that alters perceptions and alters mood
- Physical Dependence
  - physiological need for a drug
  - marked by unpleasant withdrawal symptoms
- Psychological Dependence
  - a psychological need to use a drug
  - for example, to relieve negative emotions

Addiction=disease?

- Addictions can be overcome; you don't always need therapy
- There are many more controlled users of drugs than addicts; about 10 percent become addicted
- Viewing addiction as a disease can undermine confidence needed to fight it.

Psychoactive Drugs: Depressants

- Opiates
  - opium and its derivatives (morphine and heroin)
  - opiates depress neural activity, temporarily lessening pain and anxiety

Stimulants

Stimulants are drugs that excite neural activity and speed up body functions.

1. Caffeine
2. Nicotine
3. Cocaine
4. Ecstasy
5. Amphetamines
6. Methamphetamines

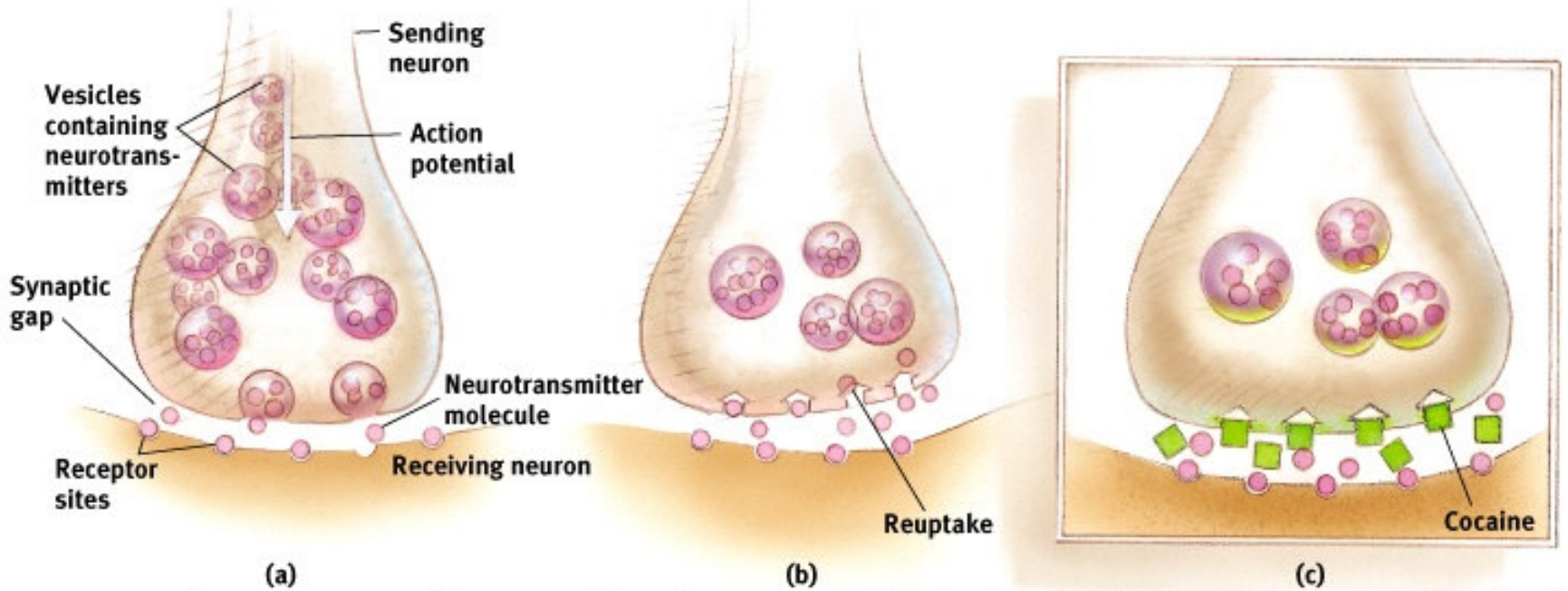
Depressants

Depressants are drugs that reduce neural activity and slow body functions. They include:

1. Alcohol
2. Barbiturates
3. Opiates

Alcohol

- Slows the brain activity
- Increases harmful tendencies
- Low amounts relax the drinker lowering inhibitions
- Large amounts slow reaction time and reduce skill level
- Impairs memory



Neurotransmitters carry a message from a sending neuron across a synapse to receptor sites on a receiving neuron.

The sending neuron normally reabsorbs excess neurotransmitter molecules, a process called reuptake.

By binding to the sites that normally reabsorb neurotransmitter molecules, cocaine blocks reuptake of dopamine, norepinephrine, and serotonin (Ray & Ksir, 1990). The extra neurotransmitter molecules therefore remain in the synapse, intensifying their normal mood-altering effects and producing a euphoric rush. When the cocaine level drops, the absence of these neurotransmitters produces a crash.

http://www.pbs.org/wnet/closetohome/science/html/animations.html

Psychoactive Drugs: Hallucinogens

- LSD
  - lysergic acid diethylamide
  - a powerful PSYCHEDELIC drug
  - also known as acid
- THC
  - the major active ingredient in marijuana
  - triggers a variety of effects, including mild hallucinations

Drug Use: social causes

- 1. Feelings of meaninglessness
- 2. Stress
- 3. Failure in life
- 4. Culture: lower rates among Amish and African Americans than whites
- 5. Peer culture (most powerful for teens)
- 6. Beliefs about what others are thought to be doing

Stopping/preventing drug usage

- 1. More likely to quit if peers stop or you leave the group (modify peer associations)
- 2. Education about long term effects
- 3. Inoculate from peer pressure teaching refusal strategies
- 4. Improving the self esteem of those more likely to try drugs
- 5. It is nearly impossible to predict whether a specific teen will experiment with drugs

Near Death Experiences

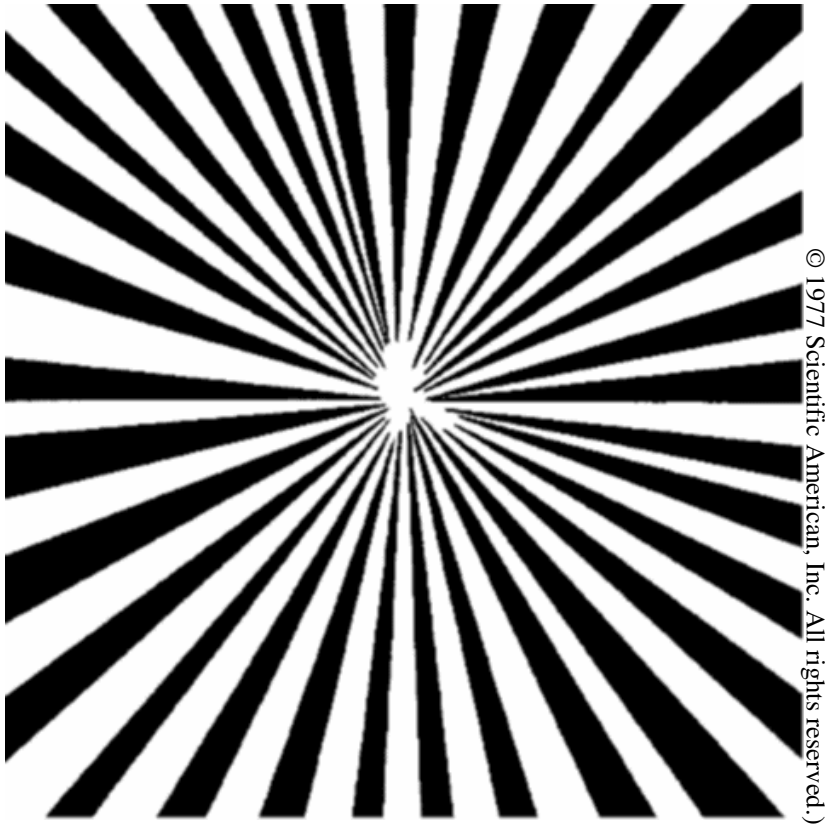
- Dualism
  - the presumption that mind and body are two distinct entities that interact
- Monism
  - the presumption that mind and body are different aspects of the same thing

Near-Death Experiences

After a close brush with death, many people report an experience of moving through a dark tunnel with a light at the end.

12-40 % experience

Fantastic, mystical imagery



(From "Hallucinations" by R.K. Siegel. Copyright © 1977 Scientific American, Inc. All rights reserved.)

Essay

- Explain how each concept would relate to the development or continuation of a smoking habit.
- 1. conformity
- 2. cognitive dissonance
- 3. incentive motivation
- 4. physiological addiction