

Psychology: Sleep Cycles

Grade: 11/12
 Subject: Psychology
 Date: 11/2/09

Nov 2-8:44 AM

Altered States of Consciousness

Oct 30-8:41 AM

A Physiological and Behavioral Description

Stages of Sleep Measured by EEG

Alpha activity:

A smooth electrical activity of 8 – 12 Hz recorded from the brain; generally associated with a state of relaxation or meditation.

Beta activity:

Irregular electrical activity of 13 – 30 Hz recorded from the brain; generally associated with a state of arousal.

1 Which two brain wave patterns indicates that an individual is awake?

- A Beta
- B Theta
- C Delta
- D Alpha

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A Physiological and Behavioral Description

Stages of Sleep

Theta activity:

EEG activity of 3.5 – 7.5 Hz that occurs intermittently during early stages of slow wave sleep and REM sleep.

Delta activity:

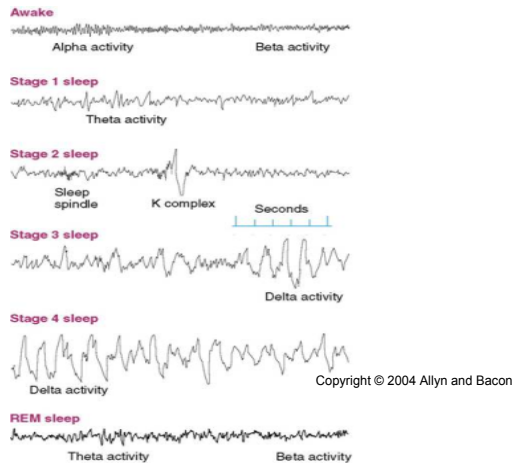
Regular, synchronous electrical activity of less than 4 Hz recorded from the brain; occurs during the deepest stages of slow-wave sleep.

2 During which stage of sleep would an EEG display Delta waves?

- A Stage 1
- B Stage 2
- C Stage 4
- D REM

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3 What activity on an EEG will be the indicator that a person has advanced from Stage 1 to Stage 2 of their sleep cycles?

- A Sleep Apnea
- B Narolapsy
- C Sleep Spindles
- D Insomnia

A Physiological and Behavioral Description Stages of Sleep

REM sleep:

A period of desynchronized EEG activity during sleep, at which time dreaming, rapid eye movements, and muscular paralysis occur. Decreased blood flow to inferior frontal lobe associated with distortions of time.

Non-REM sleep:

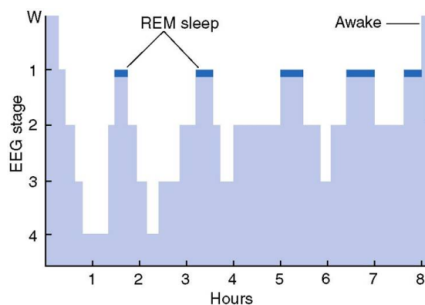
All stages of sleep except REM sleep.

4 Which of the following are all a part of NREM sleep?

- A Delta Waves
- B Stage 3
- C Stage 4
- D Stage 3
- E Theta Waves

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Small Group Reading: Sleep Disorders

Disorders of Sleep
Insomnia

Reported to affect approximately 25% of the population occasionally, and 9% regularly.

One of the most important causes of insomnia seems to be sleeping medication.

Insomnia is not a disease, but rather a symptom of another physical ailment or stress.

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Disorders of Sleep continued...

Sleep apnea:
 Cessation of breathing while sleeping.
 Increases in CO2 result in waking
 SIDS caused by apnea

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Disorders of Sleep continued...

Narcolepsy:
 A sleep disorder characterized by periods of irresistible sleep, attacks of cataplexy, sleep paralysis, and hypnagogic hallucinations

Sleep attack:
 A symptom of narcolepsy; an irresistible urge to sleep during the day, after which the person awakes feeling refreshed.

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Disorders of Sleep continued...

Cataplexy:
 A symptom of narcolepsy; complete paralysis that occurs during waking.

Sleep paralysis:
 A symptom of narcolepsy; paralysis occurring just before a person falls asleep.

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Disorders of Sleep continued...

Sleep Terrors
 Emerge from Stage 3-4 sleep
 Autonomic arousal is interpreted as fear
 Arousal is abrupt

Nightmares
 Occurs in REM sleep
 Easy to arouse
 Less intense than sleep terrors

Sleep Walking (somnambulism)
 Emerge out of Stage 3 and 4 sleep

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Disorders of Sleep continued...

REM Behavior Disorder
 A rare neurological disorder in which a person does not become paralyzed during REM sleep, and thus acts out dreams.

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Biological Clocks

Circadian rhythm:
A daily rhythmical change in behavior or physiological process.

Zeitgeber:
A stimulus (usually the light of dawn) that resets the biological clock responsible for circadian rhythms. Artificial light will also work

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Biological Clocks

12 light/dark cycle
With 12 hour l/d cycles circadian rhythms synchronize with light.

- activity
- hormonal secretion
- feeding/drinking

Constant light
Free running
25 hour day

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Biological Clocks

Control of Seasonal Rhythms

Melatonin:
A hormone secreted during the night by the pineal body; plays a role in circadian and seasonal rhythms. Highest levels in humans at bedtime
Jet-Lag, or disruptions in sleep/wake cycle, can be restored with melatonin.

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- 5 During which stage of sleep does dreaming take place?
- A Stage 2
 - B Stage 3
 - C Stage 4
 - D REM

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- 6 The chemical in the brain that brings a sense of 'drowsiness' is called melatonin.
- True
 - False

Nov 2-8:33 AM

- 7 Which of the following sleep disorders is marked by a sudden overwhelming need to sleep.
- A Insomnia
 - B Narcolepsy
 - C Apnea
 - D Paraplexsy

Nov 2-8:35 AM

8 Which of the following is a sleep disorder that is often a symptom of a different disorder and is marked by an inability to either fall asleep or stay asleep?

- A Insomnia
- B Narcolepsy
- C Paraplexsy
- D Sleep Apnea

Nov 2-8:36 AM

9 What is the term for an individual's internal biological clock?

- A Tamboric Rhythm
- B Circadian Rhythm
- C Pituitary Rhythm
- D Adrenal Rhythm

Nov 2-8:38 AM

10 Approximately how long is an average sleep cycle?

- A 15 minutes
- B 20 minutes
- C 45 minutes
- D 90 minutes

Nov 2-8:39 AM

11 As the night goes on, the amount of time you spend in NREM sleep increases and the amount of time spent in REM sleep decreases.

- True
- False

Nov 2-8:40 AM

12 Sleep Hygiene refers to taking a shower before heading off to bed at night.

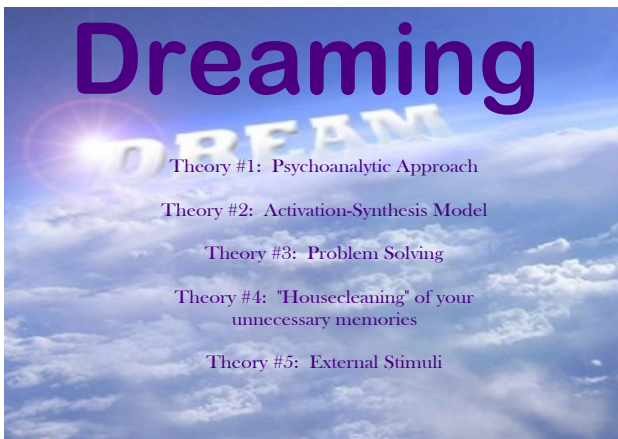
- True
- False

Nov 2-8:41 AM

13 Which of the following would help an individual fall asleep and stay asleep more comfortably?

- A increase the thermostat
- B exercise 1 hour before going to bed
- C drink a glass a wine before bed
- D reserve the bed only for sleep

Nov 2-8:43 AM



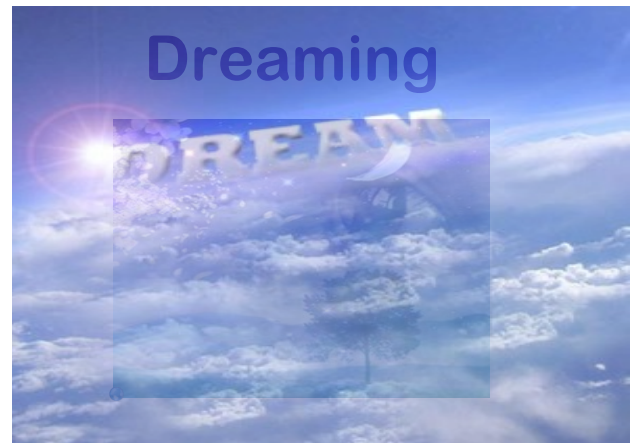
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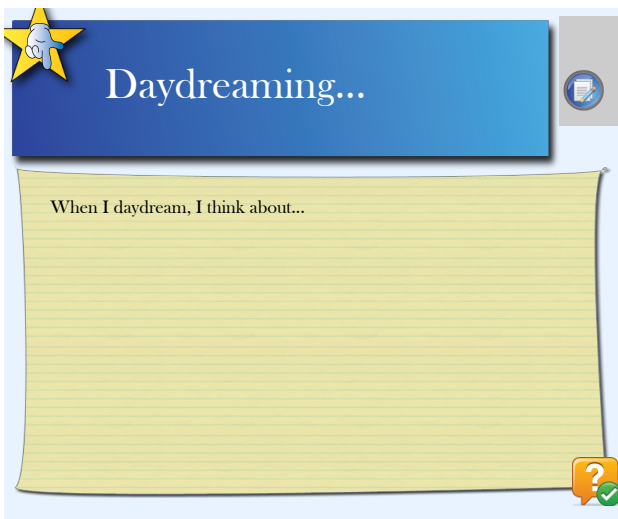
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Nov 7-12:53 PM



Nov 7-12:53 PM



Mar 19-7:45 AM



Dec 13-3:02 AM

Hypnosis: a state of consciousness resulting from a narrowed focus of attention and characterized by heightened suggestibility

Nov 4-8:13 AM

History of Hypnosis:
Franz Mesmer and "animal magnetism"

Nov 4-8:34 AM

Hypnosis Myth #1
Only weak-minded people can be hypnotized

Hypnosis Myth #2
Hypnotist has complete power over you when you are hypnotized

Hypnosis Myth #3
If you can hear the hypnotist, you were not hypnotized

Hypnosis Myth #4
You can remain permanently stuck in hypnosis

Nov 4-8:14 AM

Myth #5 – People who are in a hypnotic trance will reveal secrets or say things they will regret.

Hypnosis Myth #6 – Hypnotists have special powers

Hypnosis Myth #7 – You're asleep or unconscious when in hypnosis.

Nov 4-8:17 AM

The Facts about Hypnosis

- Going into a state of hypnosis is a very normal natural activity.
- Most people describe hypnosis as a restful state where they are still aware, in control, but very relaxed, much like the twilight time before sleep.
 - A person hypnotized is aware of everything the hypnotist says at all times.
 - The hypnotic subject will never forget anything, unless they agree to forget.
 - Persons under hypnosis will always awaken from hypnosis easily.
- You cannot remain in hypnosis for more than several minutes unless you want to.
 - Persons in hypnosis will remain in control of themselves at all times.
- No person can be hypnotized without their consent, cooperation and willingness.
- No one can be made to do anything they are morally opposed to during hypnosis
 - (in fact most people appear more ethical during hypnosis)
 - Hypnosis is not a miraculous power.
- Hypnosis merely enables your mind to access and use your own natural healing and
 - physical abilities, to assist in healing or physical accomplishment.
 - Hypnosis allows your subconscious mind to accept positive suggestions
 - Hypnotic suggestions can change or release unwanted behavior patterns.
 - Hypnosis can strengthen any part of your personality or ability that you desire.
 - Hypnosis actually strengthens the will and improves the powers of the mind.

Nov 4-8:24 AM

Indications for Medical Hypnosis

Nausea and other Conditions in Pregnancy/Cancer Treatment

Psychotherapy

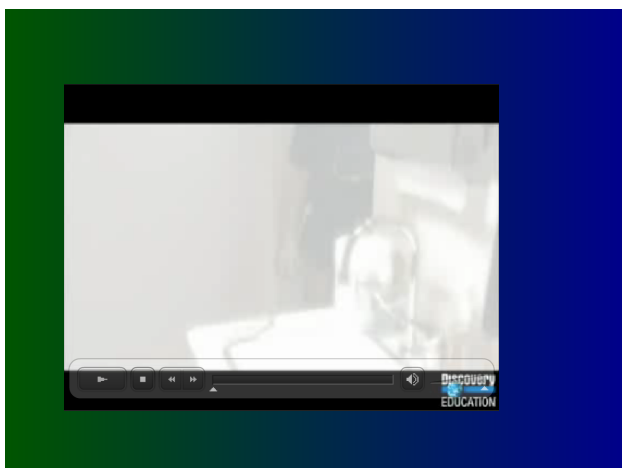
Relaxation

Habit Disorders

Anxiety

Pain

Nov 4-8:27 AM



Nov 4-8:33 AM

Posthypnotic Suggestion: a suggestion made during hypnosis that influences the participant's behavior afterward.

Nov 4-8:37 AM

The Power of Self Hypnosis:

1. Relax
2. Set goals
3. Concentrate
4. Visualize Performance

Nov 4-8:38 AM

14 If you are hypnotized, you can be made to do ANYTHING that they hypnotist wants you to do.

True
False

Nov 4-8:40 AM

15 Only weak minded people can become hypnotized.

True
False

16 Hypnotism can be used as a means of pain control.

True
False

Nov 4-8:42 AM

Nov 4-8:43 AM

17 A suggestion made during hypnosis that influences the participant's behavior afterward is called a posthypnotic suggestion.

- True
- False

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18 The first person to use techniques of hypnotism to 'heal' patients was Franz Mesmer.

- True
- False

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19 When you are hypnotized, you are essentially asleep.

- True
- False

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20 It is impossible to hypnotize yourself.

- True
- False

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Biofeedback: Learning to control bodily states with the help of specialized machines.



Nov 9-2:49 PM

After reading the article, answer the following questions with your seat partner:

- Describe the research method used.
- How many participants were there?
- How were they selected and divided?
- Who were the control subjects?
- Who were the experimental subjects?
- What was the researcher's hypothesis?
- What was their finding?
- How can this information be used to help?

Mar 19-7:45 AM

