



What is
Consciousness?

Module 5
Dual Processing, Sleep and
Dreams




Module Objectives

- What is consciousness?
- What are the stages of sleep?
- How does sleep deprivation effect us?

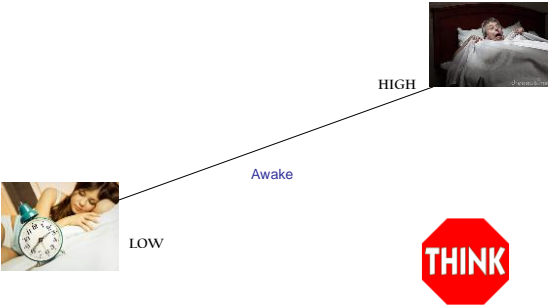


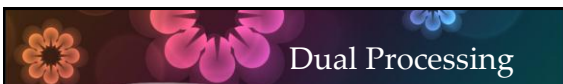
Stop and think!
How would YOU
define consciousness?



- Consciousness _____

- Consciousness is a spectrum that ranges from low to high levels of awareness.






Dual Processing

- Perception, memory, thinking, language, and attitudes all operate on two levels.


- Through *dual processing*, we are simultaneously processing information through both conscious and unconscious tracks.

- Through *selective attention*, your conscious awareness focuses on only _____
- Our five senses take in 11,000,000 bits of information per second...we consciously process about 40.
- *The Cocktail Party Effect* is your ability to attend to only one voice among many.



Inattentional Blindness

- *Inattentional blindness* refers to the _____
an object or a person in our midst.
- Simons & Chabris (1999) showed that half of the observers failed _____







Ahhh...Sleep

What do you know about sleep?
True or false?


Teens who fall asleep in class are just lazy.





True or False?

Health problems such as obesity, diabetes, hypertension, and depression are related to the amount and quality of a person's sleep.




True or false?

Older adults sleep more than young adults

True or false?

During sleep, your brain is very active.




Do we sleep more if we are physically active?

Biological Clock

- Humans and other animals have an internal biological clock called the *circadian rhythms*
- These patterns vary over approximately a

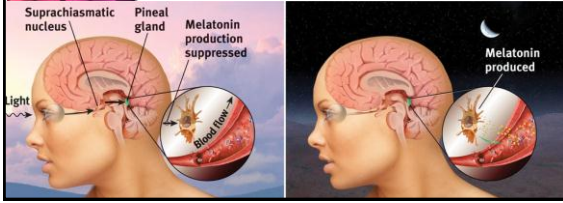
Responsible for body functions including:

- Sleep and wakefulness
- Blood pressure



The Brain's Control of Circadian Rhythms

Light triggers the suprachiasmatic nucleus to decrease (morning) melatonin from the pineal gland and increase (evening) it at nightfall.




Is All Sleep the Same?

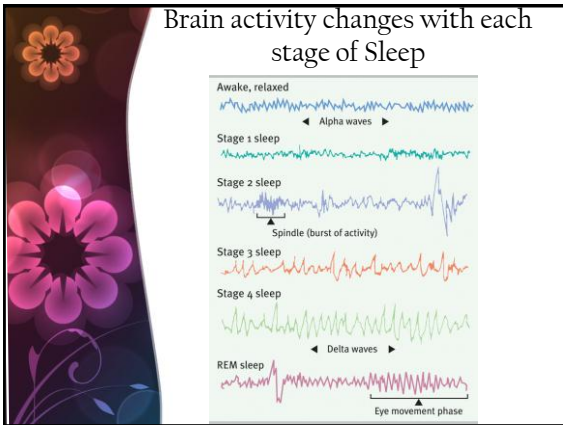
- No, the use of the EEG shows variations in brain waves which determine different stages of sleep.
- There are _____
 - (4) Non REM and (1) REM
- During an 8 hour period, people typically progress through all 5 full cycles,
 - Each cycle lasts _____

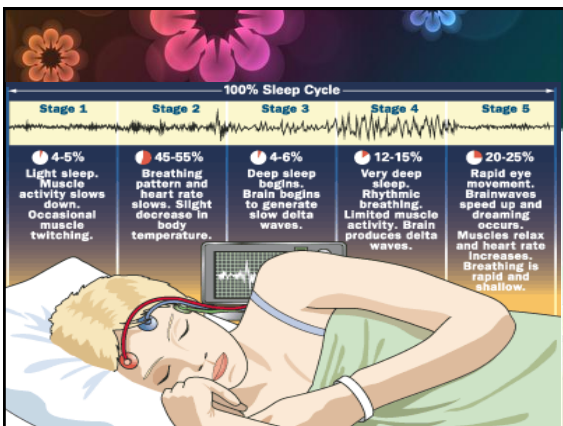
Non REM Sleep


- NREM (non-rapid eye movement)
 - _____
 - _____
 - Slower EEG activity occurs
 - The heart rate and respiration are slower during NREM
- People become more difficult to awaken as they progress through the four stages of NREM sleep.

- Rapid eye movement (REM) is also known as _____
- REM is difficult to distinguish from being awake on the basis of physiological measures
 - During REM sleep breathing and heart rate increase



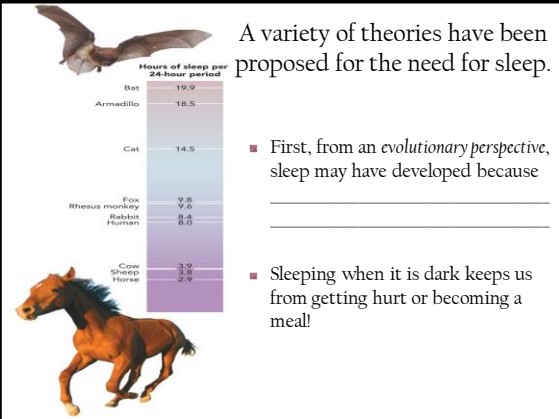







Researchers have established what happens during sleep, but not why we sleep.

One theory is that we sleep because we are tired.
In other words, _____



A variety of theories have been proposed for the need for sleep.

- First, from an *evolutionary perspective*, sleep may have developed because _____
- Sleeping when it is dark keeps us from getting hurt or becoming a meal!



Function of Sleep

- Memory storage- REM Helps consolidate memories
- Brain areas that are active during the learning of the task become active again during sleep.
- _____
- _____

- As long as they get at least 6 hours of sleep

What Happens When We Don't Get Enough Sleep?



Sleep Deprivation

Sleep Deprivation

- A fatigued, sleep deprived person may experience:
 - _____
 - _____
 - Irritability
 - A depressed immune system
 - Greater vulnerability to accidents
- _____ % of students are sleep deprived!

Are you sleep deprived?

Take the quiz to find out!

