#### The Dreaming Brain

By: Brian Austin & Morgan Gaters

- The brain is an amazing organ, and it is interesting to discover the correlation between dreams and the brain and also what goes on while we sleep.
- Replacing the mysterious view of dreams with an actual understanding of modern dream science gives us a better picture of the relationship between dreams and the brain.

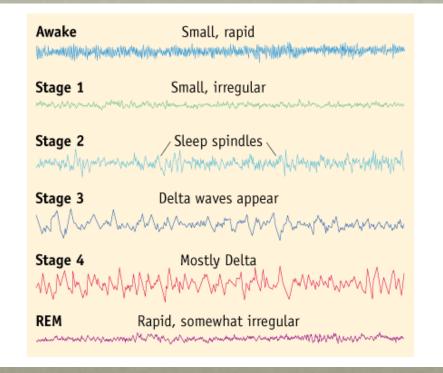
- We know that the brain becomes re-activated when we enter dream sleep. Dream sleep is also known as REM.
- As the brain goes to sleep it becomes less activated and like clockwork several times a night becomes reactivated.
- It re-activates in a way that allows it to deal with internal sensations as opposed to external sensations.

- The dorsal lateral pre-frontal cortex becomes deactivated when we are dreaming. That is the part of the brain responsible for decisions or volition.
- This is also the rational part of the brain. However, there are other areas of the brain that deal with rationality so we don't loose all rational thinking while we dream.

- The chemistry in the brain changes when some parts of the brain are reactivated during sleep and others are not.
- When we are awake certain neurotransmitters allow us to be able to have short-term memory. While we are dreaming, the chemistry changes in a way that we lose very quickly what we have just dreamt.

- when we are awake we can look around and know where we are, what we are doing, and what is going on. Basically, we can reality check. When we are dreaming we cannot do this. The reality check is the dream itself.
- So because of the changes in the brain our dreams just unfold for us without us controlling them. Unless you know how to lucid dream we cannot decide how the dream unfolds.

• Because of the areas that are active in the brain while we dream, anything can happen in our dreams and the brain becomes hyper-associative which means we are more able to think outside the box than while we are awake.



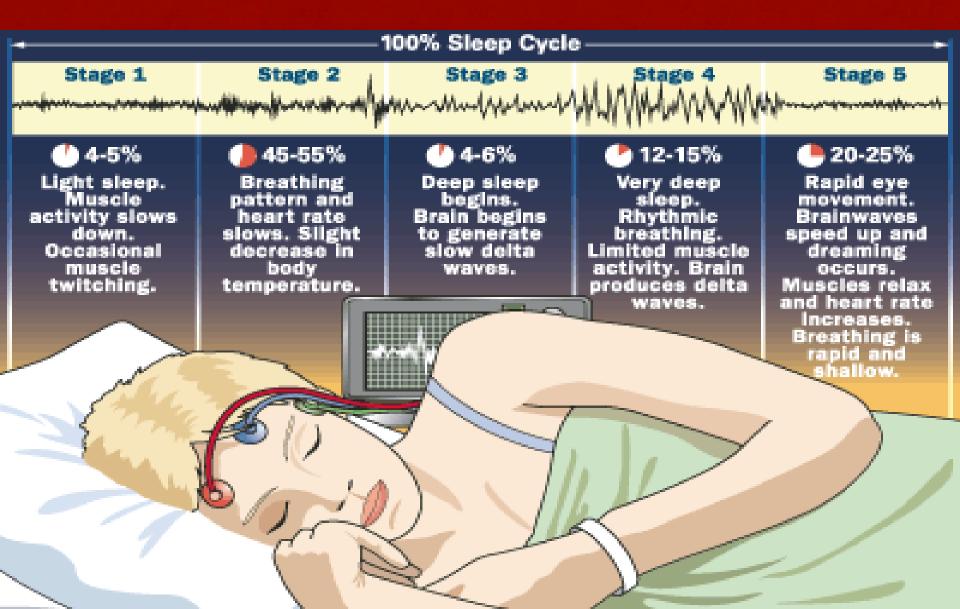
As technology became more advanced, different researchers have their own theories about what dreams are and what goes on in our brains while we are dreaming.

### EUGEN TARNOW

• A researcher named Eugen Tarnow believes that dreams are excitations of long term memory and that dreams take on the bizarre nature because of the format of long term memory.

# JOE GRIFFIN: THE DREAMING BRAIN

• A research psychologist Joe Griffin purposed the expectation fulfillment theory of dreaming. This theory states that there are three principles of dreaming, which are: dreams are metaphorical interpretations, dreams are expectations that produce emotional responses that are not acted upon during the day become dreams during sleep, and dreaming is a way of dealing with emotional arousal by completing the expectations in our dreams that we did not complete when awake.



#### REFERENCES

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- Joan, L. (2013). Real Meaning of Dreams. Retrieved from http://www.realmeaningofdreams.com/what-are-dreams.html