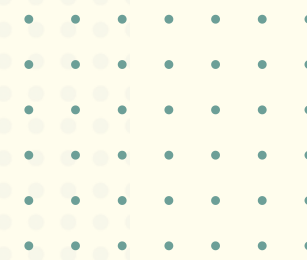






# IS THERE A POINT FOR US TO BE DREAMING?

MY CURIOSITY PROJECT



# DEFINE DREAM:

a physiologically and psychologically conscious state that occurs during sleep and is often characterized by a rich array of endogenous sensory, motor, emotional, and other experiences.







# WHEN AND WHERE DO DREAMS OCCUR?

Dreams occur in the temporal lobe, more specifically the hippocampus. The hippocampus is associated with memory and learning. Dreaming typically happens in the REM stage of sleep.

**NREM: STAGE 1**

**NREM: STAGE 2**

**NREM: STAGE 3**

**REM**



# DO DREAMS HAVE SPECIFIC MEANING?

- Dreams can be meaningful but not every dream you hold meaning. Dreams and their meanings can similarly be thought like consciously thinking, not even conscious thought you have is meaningful.
- While dreams can hold meaning, they can not be symbolic. This is due to the fact that people can't access the portion of the brain that understands complex metaphors while sleeping.

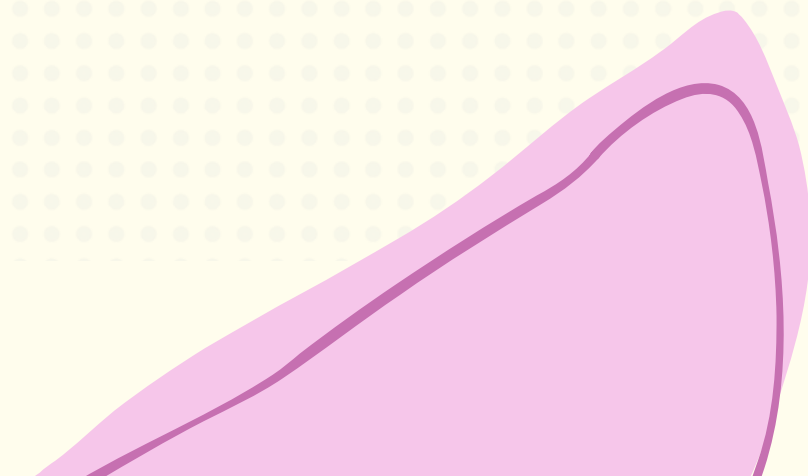
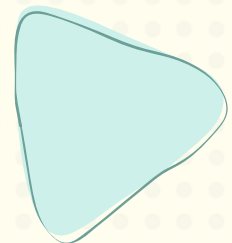







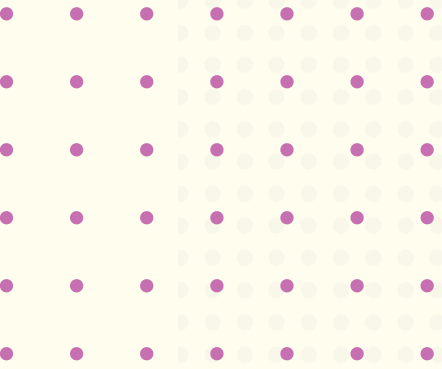
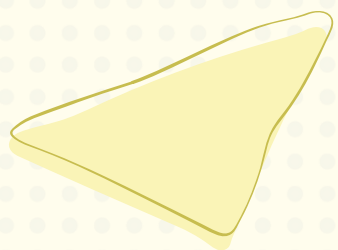
# WHY DREAM IF WE FORGET?

- It is typical to forget most, if not all, dreams when you wake up. This is due to the neurochemical condition in the brain during the REM stage of sleeping.
- The cerebral cortex, which is involved with dreaming, is divided into two sides. One side is for concentrated and focused thinking while the other side is for dreaming. Dreaming is considered to be a less consciously directed form of thinking therefore, causing it harder for us to dream.
- The dreams we remember are the ones that have caught our attention the most leading to the increased activity in the dorsolateral prefrontal cortex.





# WHAT DETERMINES WHAT OUR DREAMS ARE ABOUT?

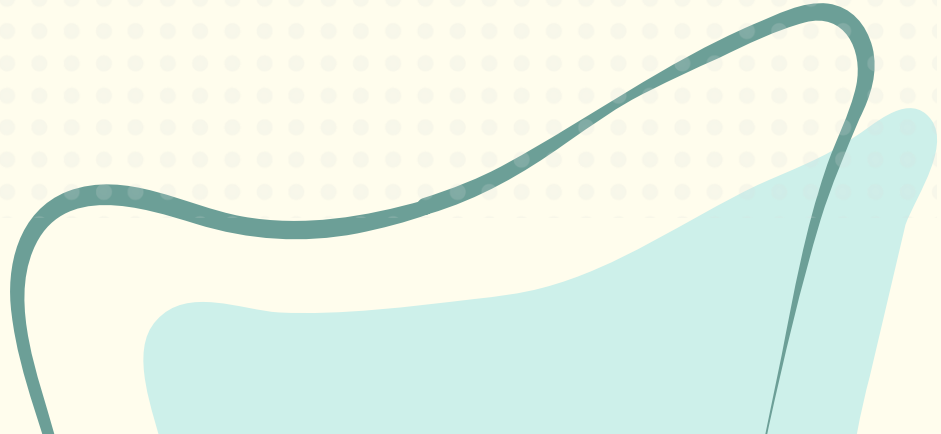


## • REPLICATIONS OF REAL LIFE

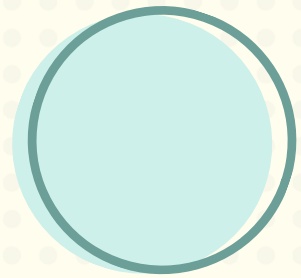
Dreams that we tend to remember the most are the ones that replicate real life events. The hippocampus is involved in dreaming and is linked to your memory therefore contributes to the fact that around half of our dreams originate from an experience that has happened when we are awake.

## • MIXED MEMORIES

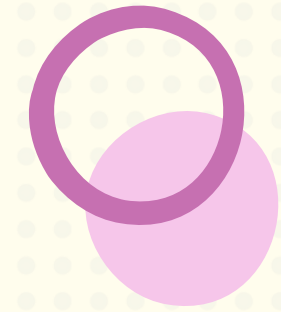
Dreams can also be composed of many different memories fused to create one dream. Although dreams heavily rely on memories, it is still possible to dream with a damaged hippocampus.







# CAN AN UNCONSCIOUS PERSON DREAM?



Sort answer, yes. While it is possible for someone in an unconscious coma to dream, it is mostly dependent on the type of coma. It is assumed that people in comas do not dream due to the brain activity patterns and how they are not actually asleep which is crucial to dream but that is false. Some people are able to dream while in a coma and are dependent on which part of the brain was damaged.



**CEREBRAL CORTEX:  
VISUAL ASPECT**

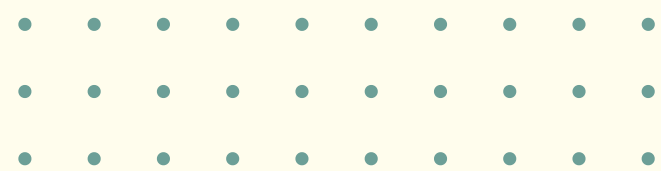
**AUDITORY CORTEX:  
AUDIO IN DREAMS**

**RETICULAR ACTIVATING  
SYSTEM: DREAM STATES OCCUR  
BUT NOT NORMAL DREAMS**



# WHY IS IT IMPORTANT TO DREAM?

It is said that dreams are like therapy while asleep. Dreams only occur in the REM stage of sleeping which is noticed to take painful traumatic emotions away from memories to discover a solution. Essentially, when in the REM stage of sleeping, negative, anxious emotions associated with a problem are disregarded so we can learn and move on.

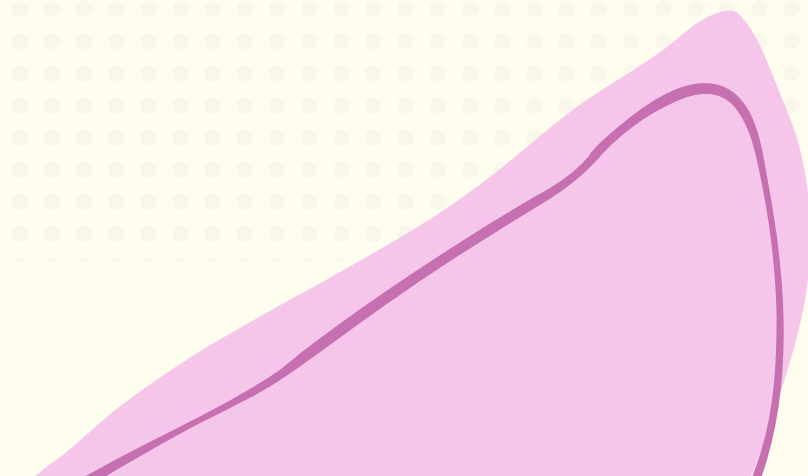
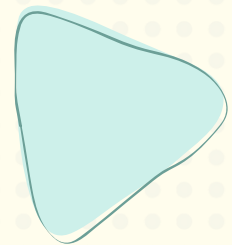






# DO NIGHTMARES AFFECT YOUR PHYSICAL HEALTH?

While nightmares can't break bones, it does not affect your physical but rather mental health. Nightmares can cause sleep deprivation which in turns alters the qualify of your life. Not only that, but it also leads to multiple medical conditions including heart disease, depression, and or obesity.



# SOURCES

BLACKMORE, S. (N.D.). DO PEOPLE IN A COMA DREAM?. BBC SCIENCE FOCUS.

[HTTPS://WWW.SCIENCEFOCUS.COM/THE-HUMAN-BODY/DO-PEOPLE-IN-A-COMA-DREAM/](https://www.sciencefocus.com/the-human-body/do-people-in-a-coma-dream/)

CHIU, A. (2021, DECEMBER 30). DO DREAMS MEAN ANYTHING? WHY DO I FEEL LIKE I'M FALLING? OR WAKE UP PARALYZED? WE ASKED EXPERTS. THE WASHINGTON POST.

[HTTPS://WWW.WASHINGTONPOST.COM/WELLNESS/2021/12/30/DO-DREAMS-HAVE-MEANING/](https://www.washingtonpost.com/wellness/2021/12/30/do-dreams-have-meaning/)

HARTMAN, E. (2011, MAY 1). WHY DO MEMORIES OF VIVID DREAMS DISAPPEAR SOON AFTER WAKING UP?.

SCIENTIFIC AMERICAN . [HTTPS://WWW.SCIENTIFICAMERICAN.COM/ARTICLE/WHY-DO-MEMORIES-OF-VIVID-](https://www.scientificamerican.com/article/why-do-memories-of-vivid-dreams/#:~:text=we%20forget%20almost%20all%20dreams,rapid%20eye%20movements%20and%20dr)

[DREAMS/#:~:TEXT=WE%20FORGET%20ALMOST%20ALL%20DREAMS,RAPID%20EYE%20MOVEMENTS%20AND%20DREAMING.](https://www.scientificamerican.com/article/why-do-memories-of-vivid-dreams/#:~:text=we%20forget%20almost%20all%20dreams,rapid%20eye%20movements%20and%20dreaming)

PARKER, H. (2023, MAY 30). NIGHTMARES IN ADULTS. WEBMD. [HTTPS://WWW.WEBMD.COM/SLEEP-](https://www.webmd.com/sleep-disorders/nightmares-in-adults#:~:text=because%20nightmares%20may%20have%20a,disease%2c%20depression%2c%20and%20obesity)

[DISORDERS/NIGHTMARES-IN-ADULTS#:~:TEXT=BECAUSE%20NIGHTMARES%20MAY%20HAVE%20A,DISEASE%2C%20DEPRESSION%2C%20AND%20OBESITY.](https://www.webmd.com/sleep-disorders/nightmares-in-adults#:~:text=because%20nightmares%20may%20have%20a,disease%2c%20depression%2c%20and%20obesity)

WALKER, M. (2017, OCTOBER 24). WHY YOUR BRAIN NEEDS TO DREAM. GREATER GOOD MAGAZINE.

[HTTPS://GREATERGOOD.BERKELEY.EDU/ARTICLE/ITEM/WHY YOUR BRAIN NEEDS TO DREAM#:~:TEXT=THE%20EVIDENCE%20POINTS%20TOWARD%20AN,CARRY%20ON%20WITH%20OUR%20LIVES.](https://greatergood.berkeley.edu/article/item/why_your_brain_needs_to_dream#:~:text=the%20evidence%20points%20toward%20an,carry%20on%20with%20our%20lives)

WAMSLEY, E. (2020, JUNE 8). HOW THE BRAIN CONSTRUCTS DREAMS. ELIFE.

[HTTPS://WWW.NCBI.NLM.NIH.GOV/PMC/ARTICLES/PMC7279884/#:~:TEXT=DEEP%20INSIDE%20THE%20TEMPORAL%20LOBE,TO%20REMEMBER%2C%20IMAGINE%20AND%20DREAM.&TEXT=OUR%20MOST%20VIVID%20DREAMS%20ARE,A%20RICHLY%20DETAILED%20HALLUCINATORY%20EXPERIENCE.](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7279884/#:~:text=deep%20inside%20the%20temporal%20lobe,to%20remember%2c%20imagine%20and%20dream.&text=our%20most%20vivid%20dreams%20are,a%20richly%20detailed%20hallucinatory%20experience)



THANK YOU!