

A leopard with a distinctive spotted coat is resting on a thick, dark tree branch. The leopard's head is resting on the branch, and its eyes are closed. The background shows a clear blue sky and some green foliage. The overall scene is peaceful and natural.

# SLEEP FOR DUMMIES

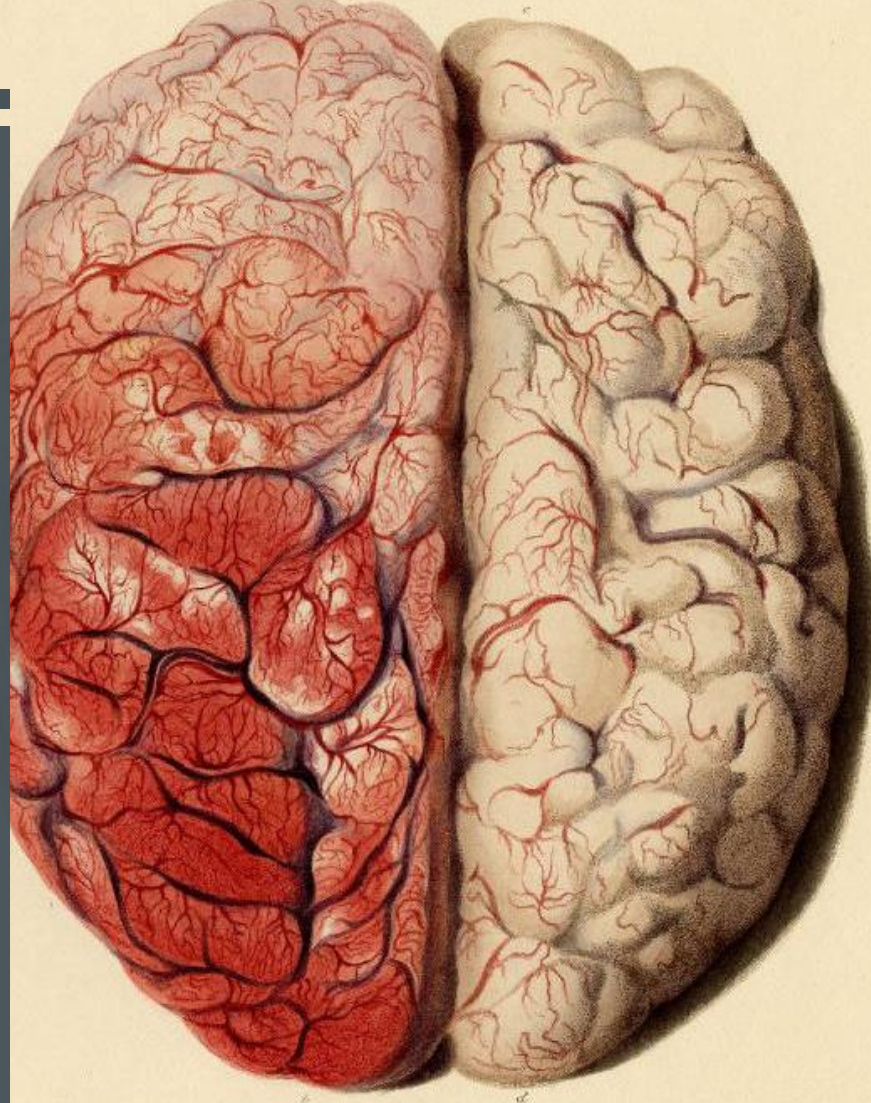
BY AAGAM PRAKASH

AN IN-DEPTH ANALYSIS ON THAT  
THING WE DO EVERY NIGHT AND  
HOW TO GET MORE OF IT.

- We are always hearing people talk about 'loss of sleep' as a calamity. They better call it loss of time, vitality and opportunities.

## CIRCADIAN RHYTHM

- Your circadian rhythm is basically a 24-hour internal clock that is running in the background of your brain and cycles between sleepiness and alertness at regular intervals. It's also known as your sleep/wake cycle. – National Sleep Foundation



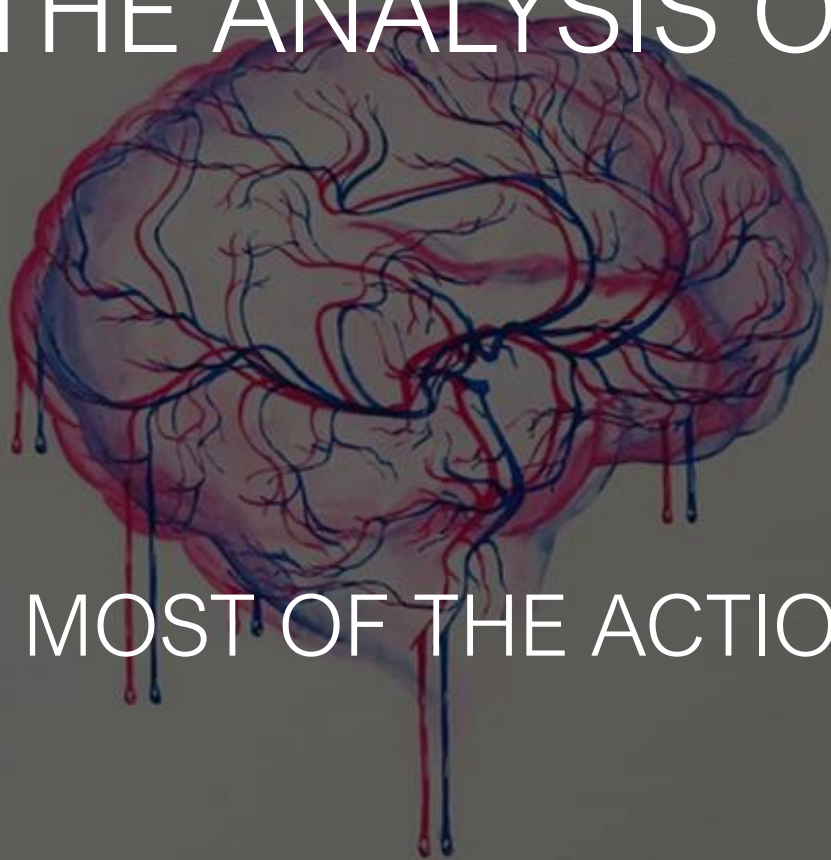
*Engraved by W. Say,  
20, Bloxham Street.*

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# WHAT IS SLEEP



# THE ANALYSIS OF HOW SLEEP WORKS

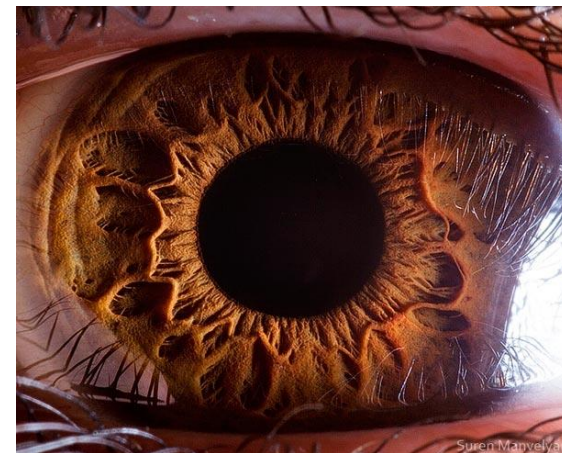
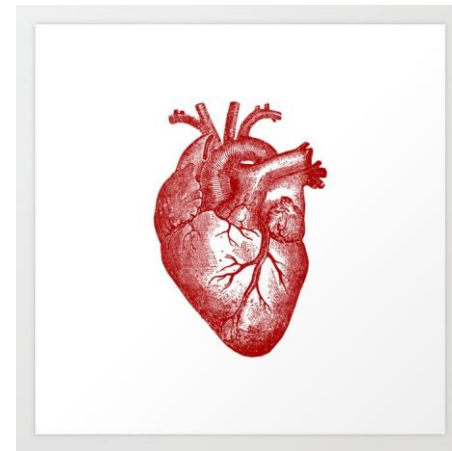


MOST OF THE ACTION TAKES PLACE IN THE BRAIN.

# WHAT IS THE PURPOSE OF SLEEP?

- In all honesty, scientists don't have a definitive answer to that question. But by studying what happens to our bodies during sleep, we can produce an explicit answer.

# THE FOUR STAGES OF SLEEP



## Stage 1 Non-REM Sleep

- The first few minutes that bridge waking hours to sleep
- Slowing heart rate, eye movement, and breathing
- Muscles relax aside from an occasional twitch
- Like a raft at sea, any small stimuli could overturn you from sleep back to being awake.

Only lasts several minutes. The stage of sleep with the smallest duration.





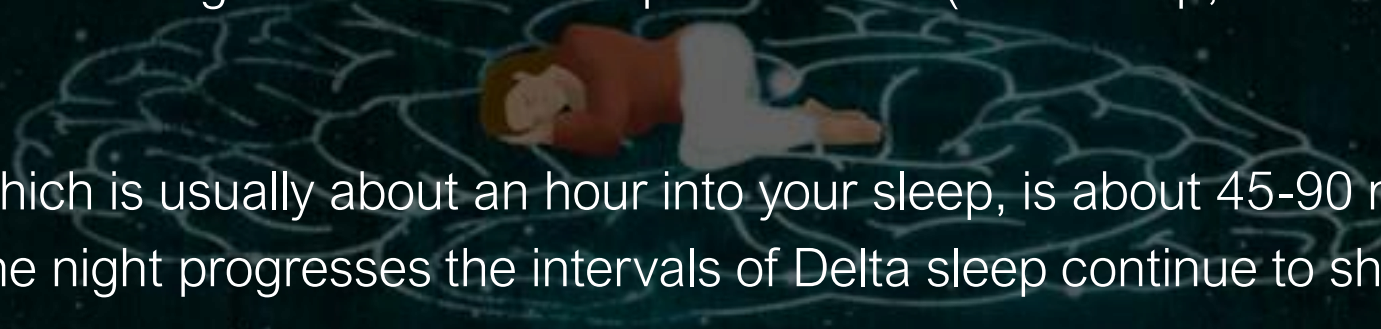
# STAGE 2 NON-REM SLEEP

Your heart rate slows even more, as does your breathing. In addition your eye movement comes to a near complete stop. Your muscles relax, and body temperature drops.

As you cycle through the stages of sleep, you spend the most time in stage 2 non-REM sleep, nearly half of the night is spent in this state.

## Stage 3 Non-REM Sleep (Delta Sleep)

- The deepest stage of sleep.
- Is vital to waking up feeling refreshed and ready for the day.
- While in this stage many slow delta waves can be observed in your brain. This is where the two nicknames for Stage 3 Non-REM sleep come from (delta sleep, and slow wave sleep).
- First period which is usually about an hour into your sleep, is about 45-90 minutes long, however as the night progresses the intervals of Delta sleep continue to shorten.

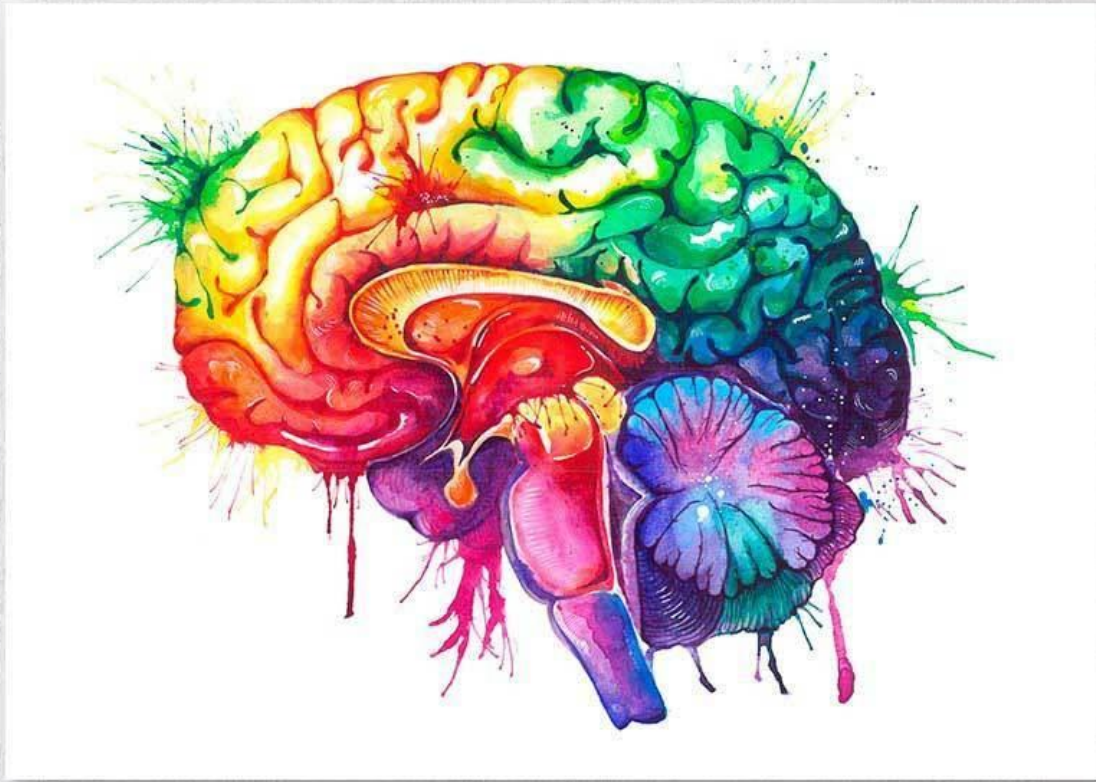


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## REM SLEEP

- REM = Rapid Eye Movement
- First period is about 90 minutes after stage 1 begins.
- Brain wave and body activity is most like waking hours.
- Also when most dreaming, memory storage, and increase in heartrate and breathing occur.

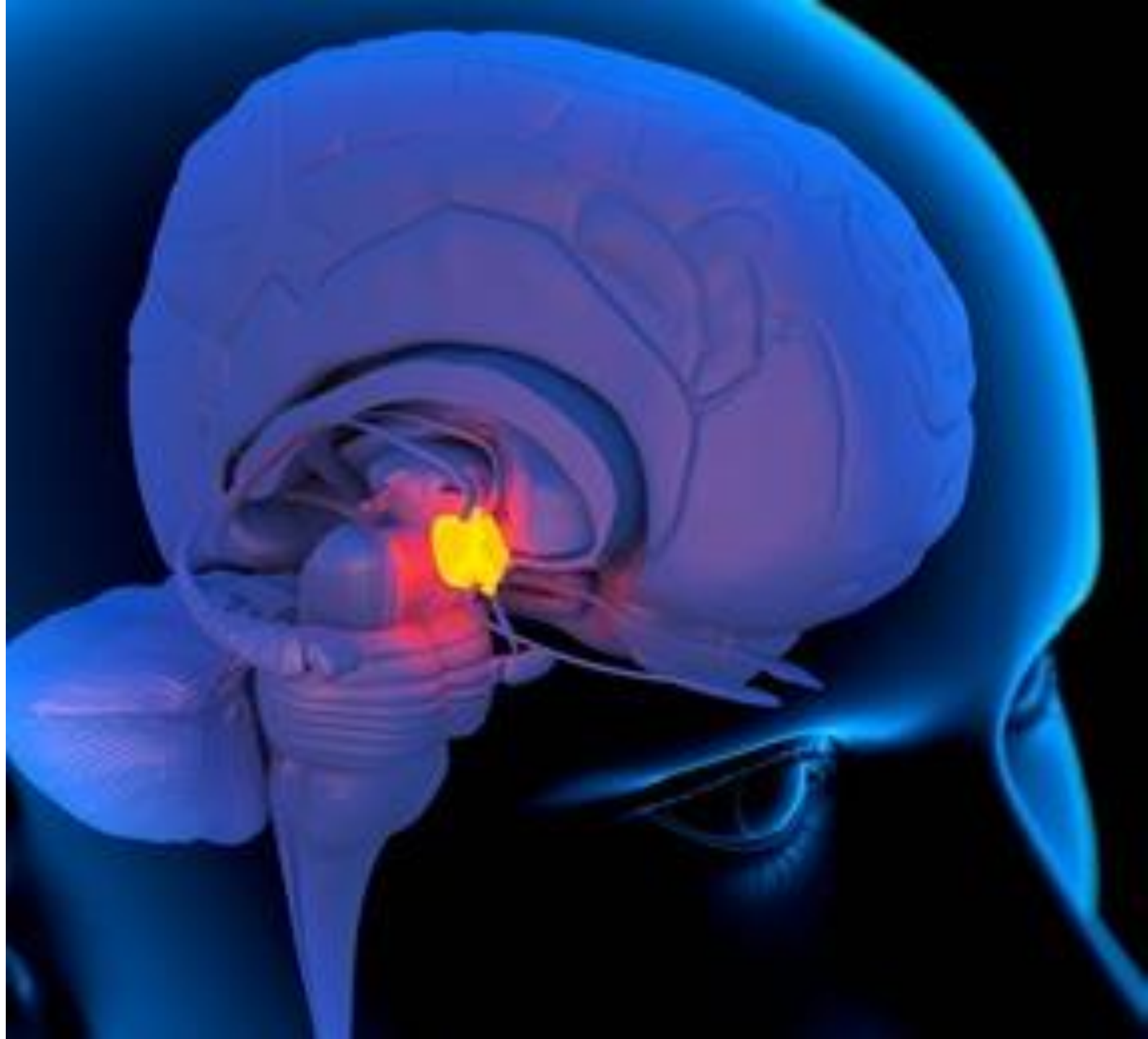




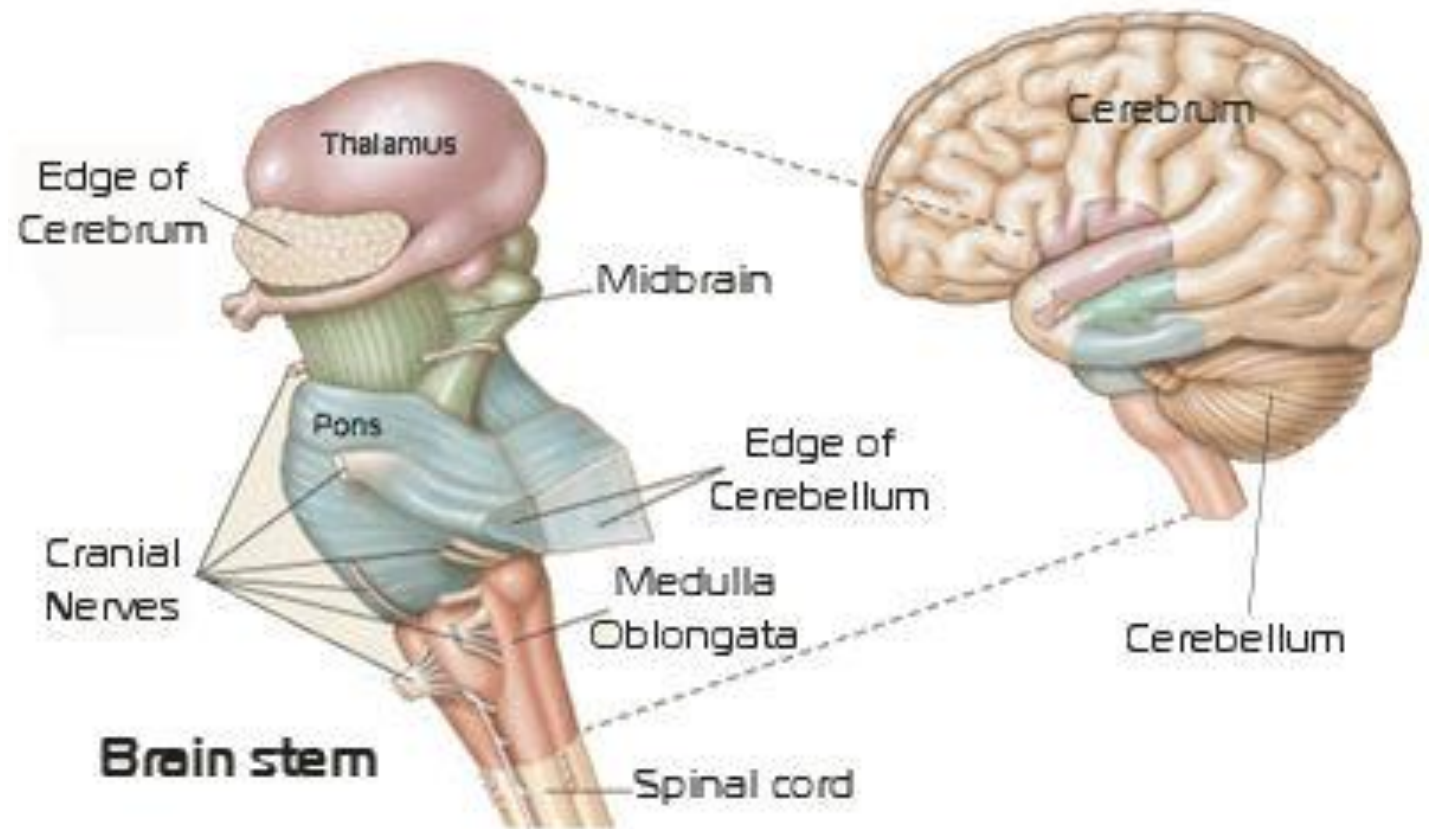
THE SUCCESS OF SLEEP IS  
ESSENTIAL FOR OUR BRAIN  
TO FUNCTION

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# THE HYPOTHALAMUS



# THE BRAIN STEM



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# THE THALAMUS



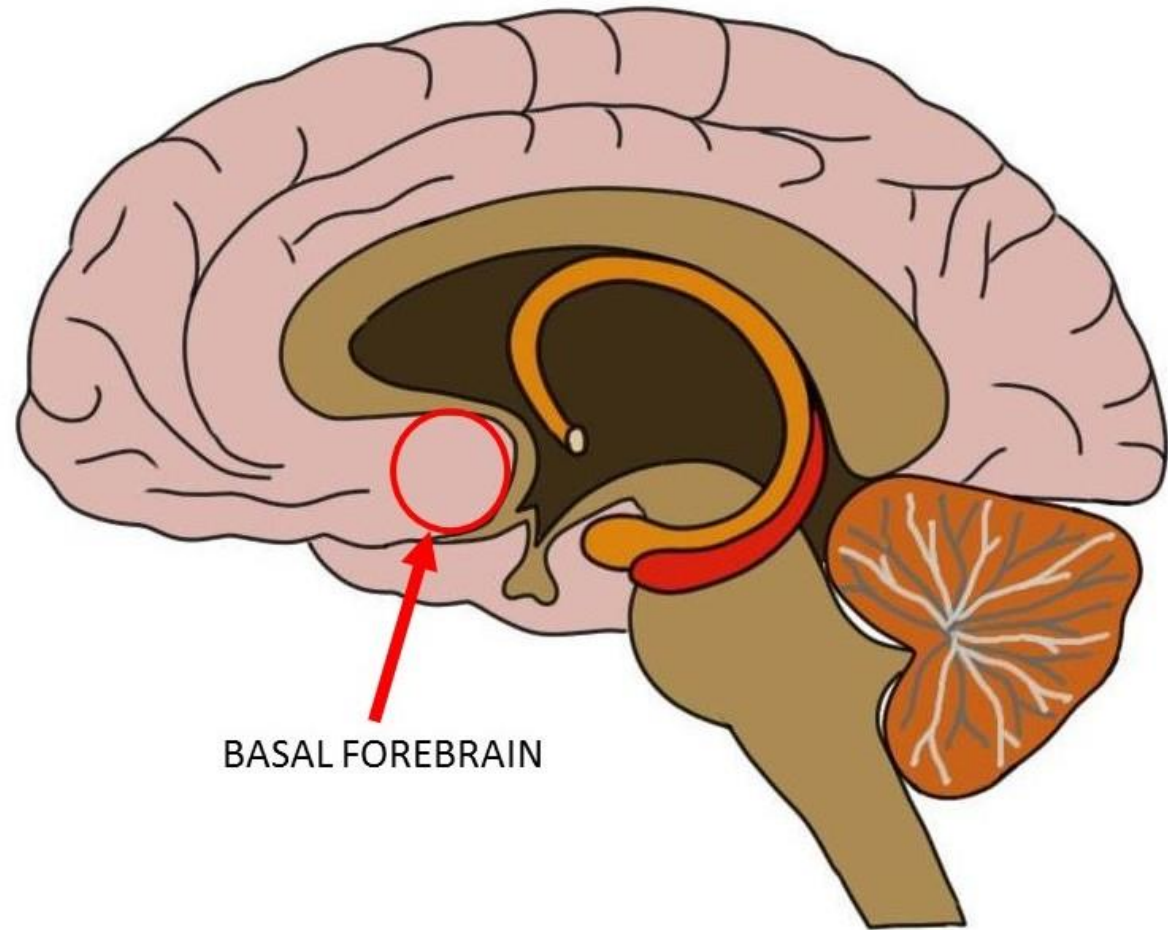
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# THE PINEAL GLAND



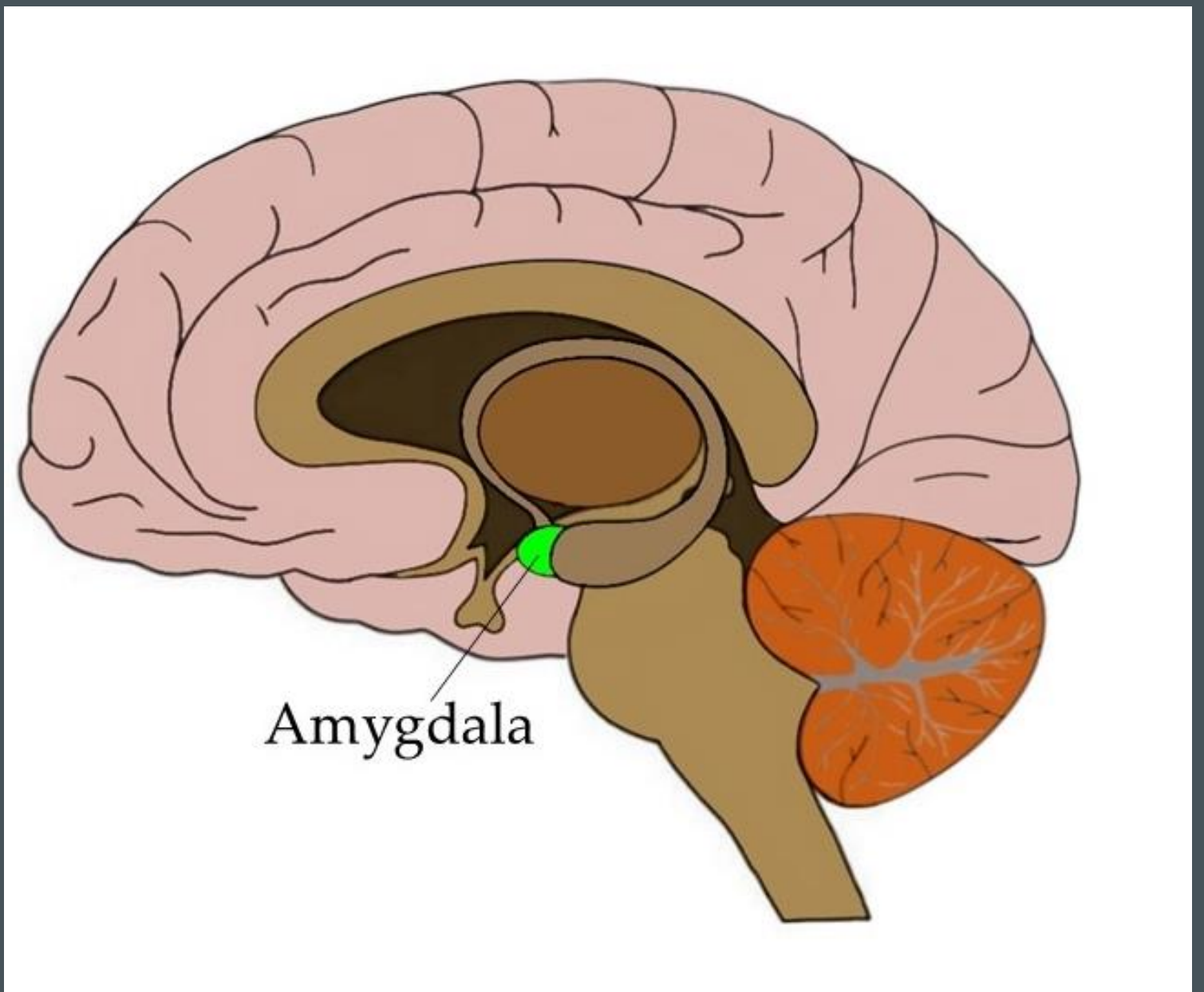


# THE BASAL FOREBRAIN



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# THE AMYGDALA



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# SLEEP DEPRIVATION





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## LACK OF SLEEP

- Harms your memory, by not allowing memories to reach the hippocampus.
- This can take a significant toll on learning.
- Also does not allow the brain to clear itself of harmful toxins and proteins.

# LACK OF SLEEP



Can harm your bodily well being as well.



Specifically stops the production of cancer fighting cells.



Also linked to cardiovascular disease, depression, weight gain, mood swings, and poor balance or coordination.

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## CAUSES OF SLEEP DEPRIVATION



## THE CAUSES OF SLEEP DEPRIVATION: WORK OVER SLEEP

- For most losing a couple hours of sleep seems a small price to pay if they can get their work done on time.



## OTHER FACTORS OF SLEEP DEPRIVATION



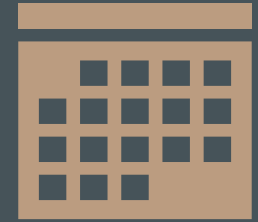
Illness: This can play a major role in how much sleep one needs and how much they get as well.



Age: As we age it is often more difficult to stay asleep for longer periods of time.



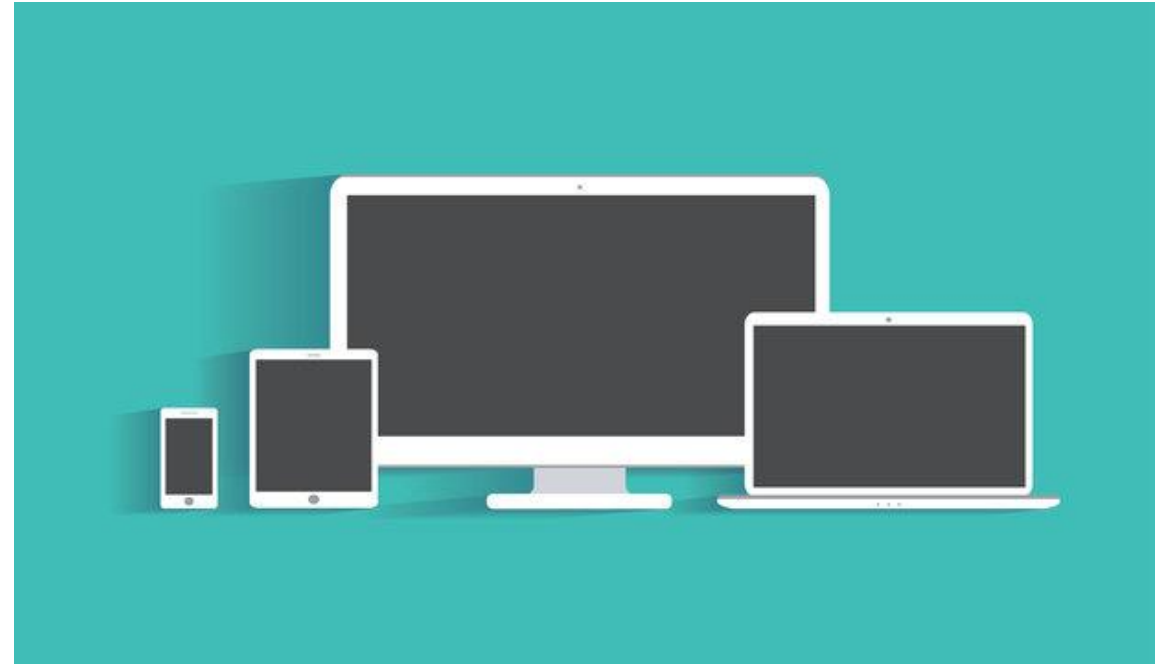
Disruptions in the household



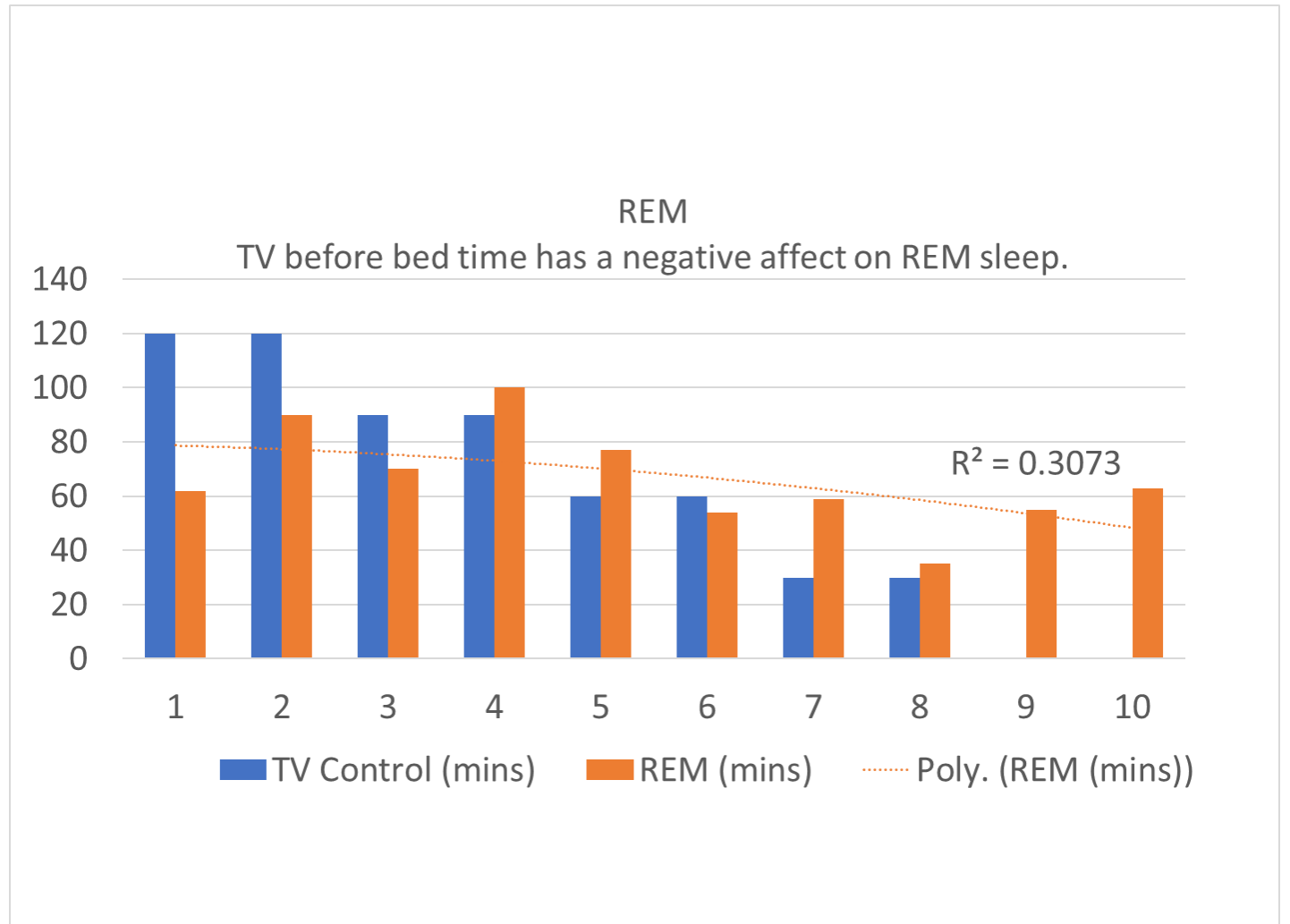
Change in schedules or patterns.



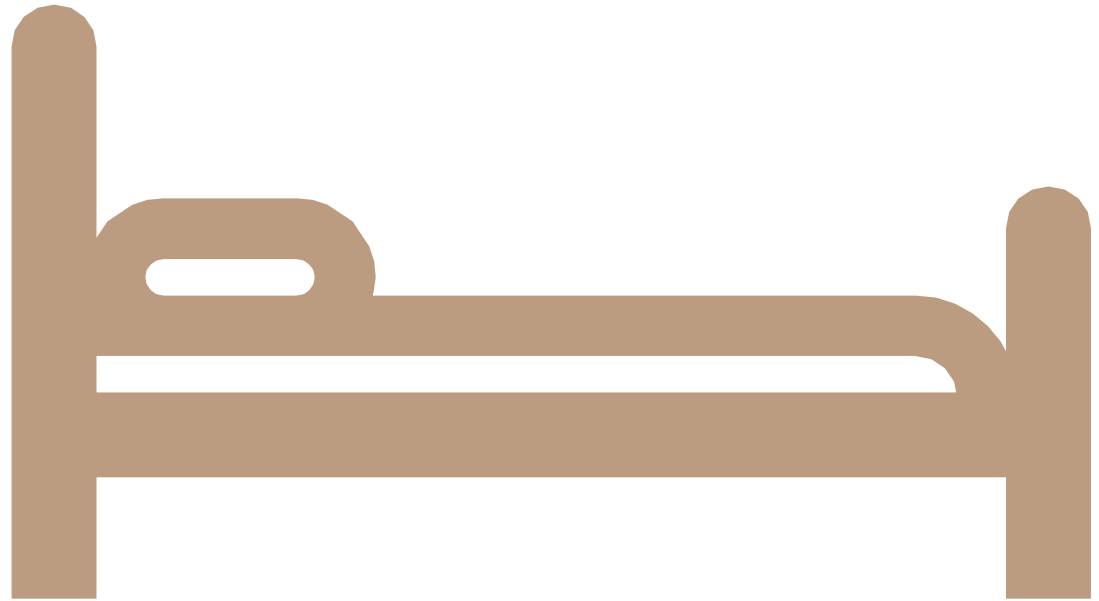
TV BEFORE  
BEDTIME HAS  
NEGATIVE  
EFFECTS ON  
SLEEP



HOW REM  
SLEEP IS  
AFFECTED BY  
TV BEFORE  
BEDTIME.



HOW DOES  
ONE GO  
ABOUT  
GETTING  
BETTER  
SLEEP?



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INCREASE  
LIGHT  
EXPOSURE  
DURING THE  
DAY (AND  
REDUCE IT AT  
NIGHT)



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REDUCE OR  
ELIMINATE TV  
WATCHED  
DIRECTLY  
BEFORE BED



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STICK TO A  
SCHEDULE





REDUCE CAFFEINE AND ALCOHOL CONSUMPTION

# CONTROL YOUR SLEEPING ENVIRONMENT

A dimly lit bedroom with a large bed, a window with curtains, and a chair. The room is dark, with light coming from a window on the left. The bed is in the center-right, with a white blanket and several pillows. A window with dark curtains is on the left, and a chair is visible in front of it. The overall atmosphere is calm and quiet.

- Keep the room cool
- Keep the room dark
- Put away anything that may distract you



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DON'T WORK  
OUT OR  
EXERCISE  
DIRECTLY  
BEFORE BED





SO DON'T FORGET TO GET  
SOME SHUT EYE TONIGHT

“YOU KNOW YOU'RE IN LOVE WHEN YOU CAN'T FALL ASLEEP BECAUSE REALITY IS FINALLY BETTER THAN YOUR DREAMS.” — DR SEUSS

