



# Lunar Rhythms and the Human

## Experience

EXPLORING MOON PHASES AND  
THEIR  
BIOLOGICAL AND PSYCHOLOGICAL  
INFLUENCE



# Learning Objectives

BY THE END OF THIS SESSION, YOU WILL BE ABLE TO IDENTIFY THE EIGHT DISTINCT MOON PHASES AND ANALYZE THE SCIENTIFIC AND CULTURAL THEORIES REGARDING THEIR IMPACT ON HUMAN SLEEP, BEHAVIOR, AND PHYSICAL HEALTH.



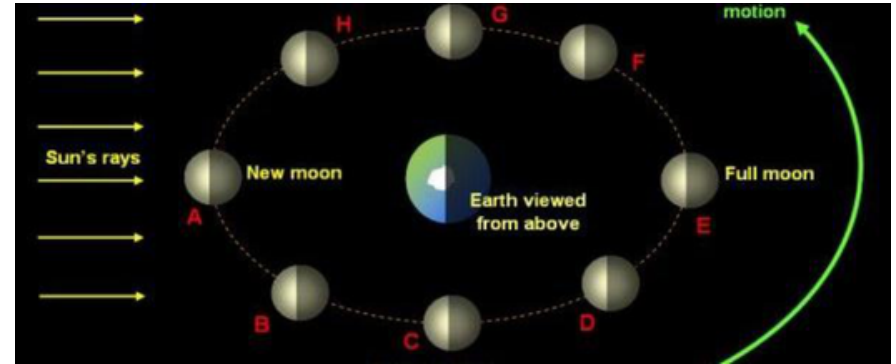
# Key Terminology

VOCABULARY



## WAXING

THE PERIOD WHERE THE MOON'S ILLUMINATION IS INCREASING (GROWING).



## CIRCULAR LUNAR RHYTHM

BIOLOGICAL CYCLES THAT CORRESPOND TO THE LUNAR MONTH (APPROX. 29.5 DAYS).





# The 'Transylvania Effect'

## DOES THE MOON CHANGE US?

HAVE YOU EVER NOTICED A CHANGE IN YOUR MOOD OR THE BEHAVIOR OF THOSE AROUND YOU DURING A FULL MOON? FOR CENTURIES, HUMANS HAVE LINKED LUNAR CYCLES TO 'MADNESS' (THE ROOT OF THE WORD LUNACY). TODAY, WE LOOK AT WHERE FOLKLORE MEETS MODERN CHRONOBIOLOGY.

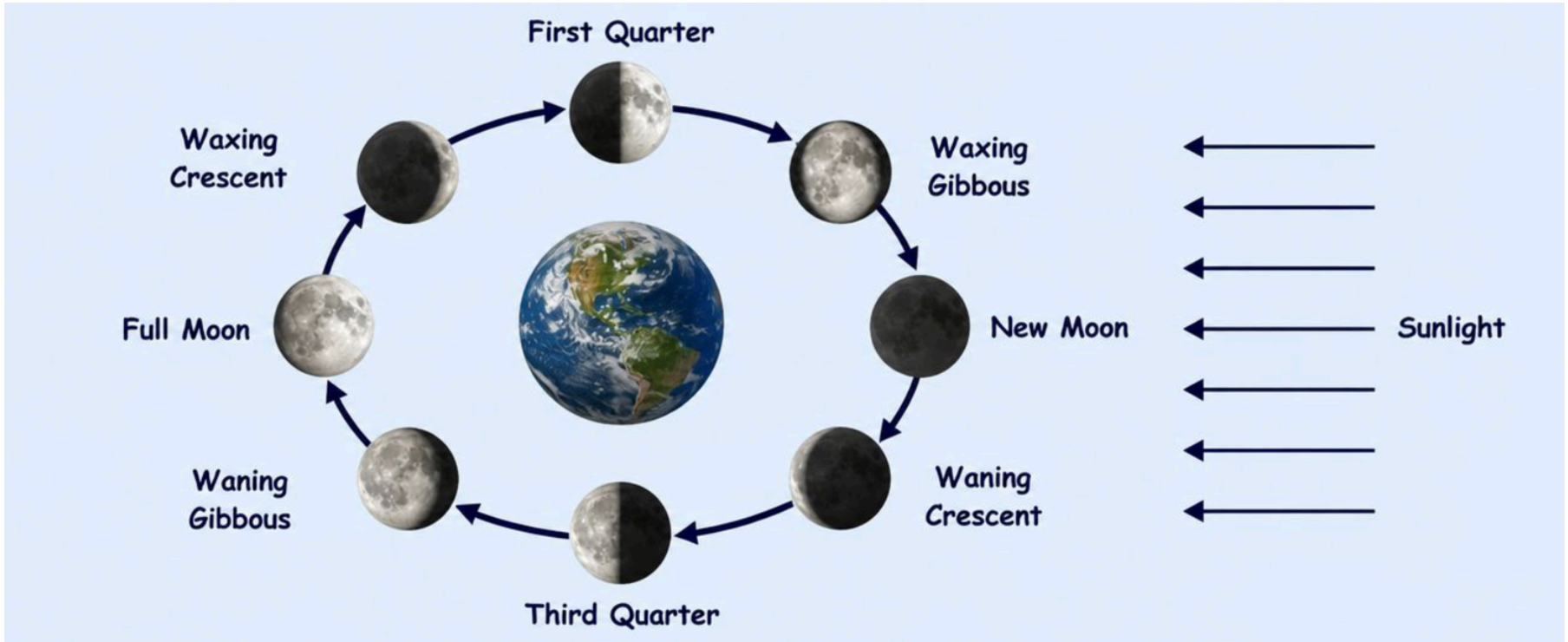
### ◆◆ KEYPOINT

WHILE LARGE-SCALE CRIME STATISTICS OFTEN SHOW NO LINK, RECENT SLEEP STUDIES SUGGEST THE MOON MIGHT AFFECT US MORE THAN WE THINK.



# The Eight Lunar Phases

UNDERSTANDING THE CYCLE IS THE FIRST STEP TO TRACKING ITS POTENTIAL EFFECTS.



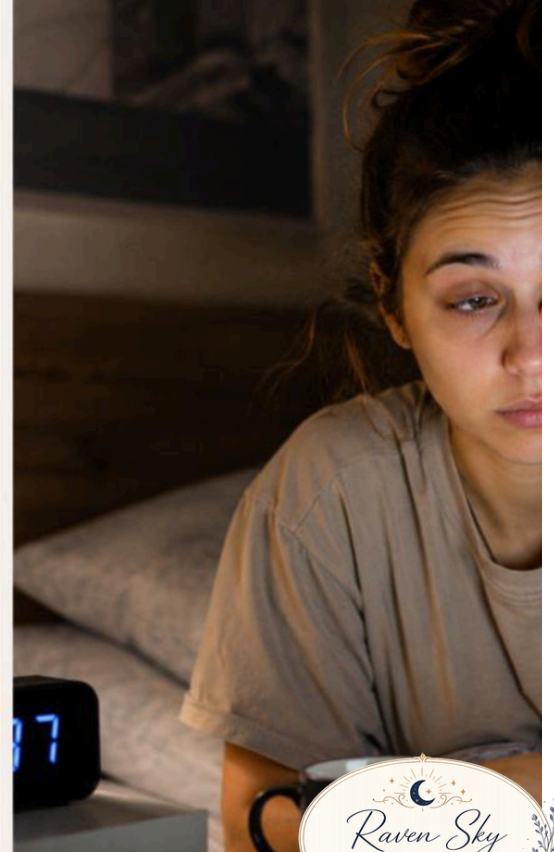
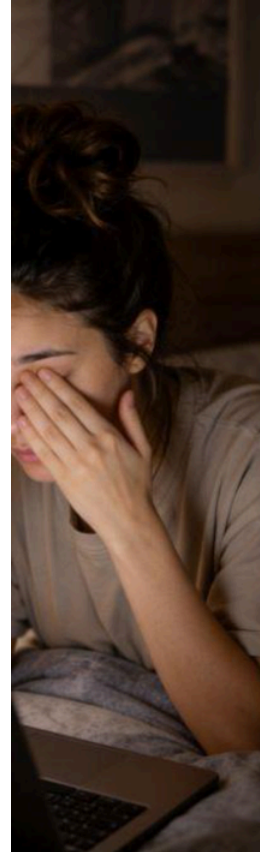
# The Full Moon & Sleep

RESEARCH SUGGESTS THAT DURING THE FULL MOON:

- LOWER SLEEP EFFICIENCY: LONGER TIME TO FALL ASLEEP.
- REDUCED DEEP SLEEP: 30% DROP IN DELTA WAVE ACTIVITY.
- MELATONIN SUPPRESSION: LOWER LEVELS OF THE 'SLEEP HORMONE'.

## ◆◆EXAMPLE

A 2013 SWISS STUDY FOUND PARTICIPANTS SLEPT 20 MINUTES LESS DURING A FULL MOON, EVEN IN A CONTROLLED LABORATORY ENVIRONMENT.



# Internal Rhythms

## THE NEW MOON

OFTEN ASSOCIATED WITH LOWER ENERGY AND INTROSPECTION. BIOLOGICALLY, SOME STUDIES LINK THIS PHASE TO SHIFTS IN THE CARDIOVASCULAR SYSTEM AND KIDNEY FUNCTION.



## THE FULL MOON

ASSOCIATED WITH PEAK ENERGY AND HEIGHTENED EMOTIONS. THERE IS A DOCUMENTED INCREASE IN HOSPITAL ADMISSIONS FOR GASTROINTESTINAL ISSUES AND CERTAIN CARDIOVASCULAR EVENTS DURING THIS PHASE.

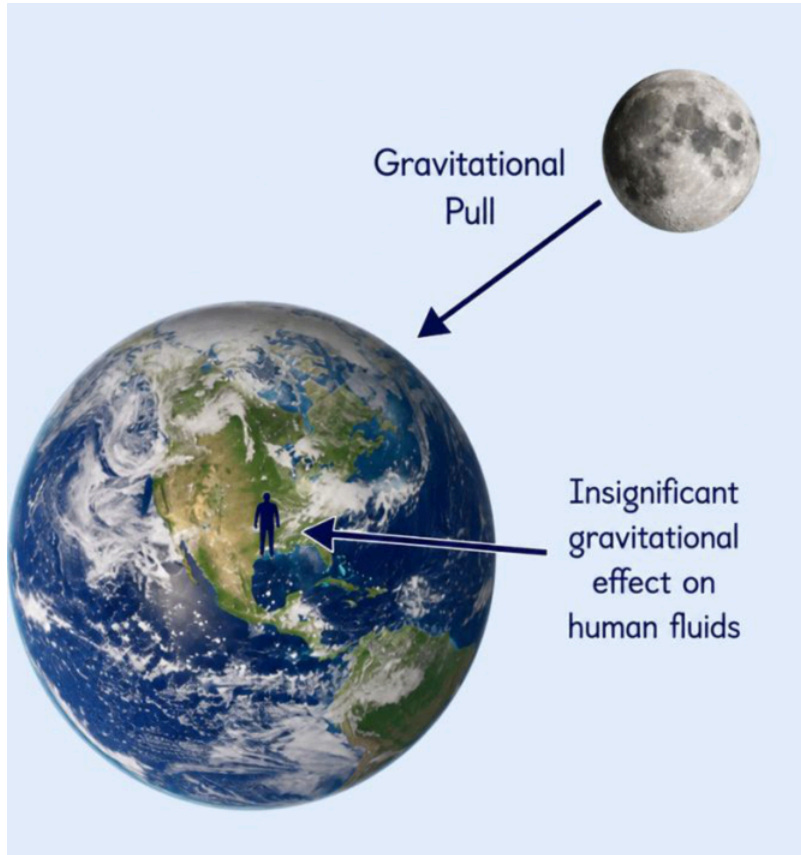


### WATCH OUT

INCREASED 'LUNAR LIGHT' CAN DISRUPT OUR CIRCADIAN RHYTHMS, LEADING TO IRRITABILITY.



# Psychological Perception



**ILLUMINATION VS. GRAVITATION**  
IS IT THE GRAVITY OR THE LIGHT?  
WHILE THE MOON'S GRAVITY PULLS THE OCEANS (TIDES), IT IS TOO WEAK TO PULL THE WATER IN THE HUMAN BODY. MOST PSYCHOLOGICAL EFFECTS ARE NOW ATTRIBUTED TO THE INTENSITY OF MOONLIGHT AFFECTING OUR INTERNAL BIOLOGICAL CLOCKS.

**THE MOON IS A LOYAL COMPANION. IT NEVER LEAVES. IT'S ALWAYS THERE, WATCHING, STEADFAST, KNOWING US IN OUR LIGHT AND DARK MOMENTS. – TAHEREH MAFI**



# Phase Check

THE TERM 'LUNACY' EXISTS BECAUSE THE FULL MOON HAS A PROVEN, DIRECT GRAVITATIONAL PULL ON THE HUMAN BRAIN.



TRUE



FALSE

NOW IT'S TIME TO EXPLAIN



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## WHY IS THAT?

A) THE MOON'S GRAVITY IS FAR TOO WEAK TO AFFECT HUMAN-SIZED BODIES OF WATER; THE LINK IS LIKELY BASED ON LIGHT-DISRUPTED SLEEP PATTERNS.

B) GRAVITY ONLY AFFECTS THE BRAIN DURING THE WAXING GIBBOUS PHASE, NOT THE FULL MOON.



ANSWERS ON THE NEXT SLIDE...

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# Final Reflection



GIVEN THE EVIDENCE THAT MOONLIGHT CAN SUPPRESS MELATONIN AND REDUCE DEEP SLEEP, HOW MIGHT MODERN ARTIFICIAL LIGHTING (BLUE LIGHT FROM PHONES) BE SEEN AS A 'PERMANENT FULL MOON' IN OUR LIVES?

# Final Reflection



YOU MIGHT HAVE SAID...  
ARTIFICIAL LIGHT MIMICS THE SLEEP-DISRUPTING  
EFFECTS OF THE FULL MOON.  
IT CREATES A DISCONNECT FROM NATURAL CIRCALUNAR  
AND CIRCADIAN RHYTHMS.

IT MAY EXPLAIN WHY MODERN 'LUNACY' OR IRRITABILITY IS A  
CONSTANT STATE FOR SOME RATHER THAN A MONTHLY EVENT.

