

Unearth the Facts and Fiction of “The Influence of Moon Phases on Living Beings”

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Abstract:- The moon, Earth's most constant companion, it is a satellite of our planet. Being the closest cosmic body to Earth, the moon has given rise to numerous myths worldwide throughout the years. The lunar phases are a result of the moon orbiting Earth while Earth orbit the sun. Everything is in motion. Essentially, what we observe from Earth is different parts of the moon being illuminated by the sun as the moon follows its orbit. The relationship between Earth and the Moon is characterized by mutual gravitational attraction and interdependence. The moon significantly influences various aspects of Earth's environment and behavior.

While human biology has often been disregarded as a myth, recent studies have suggested a connection between lunar phases and human behavior. Some researchers propose that humans may be responding to subtle changes in Earth's magnetic field that concur with the moon's phases. Today, the moon continues to hold many fascinating mysteries for scientists to investigate. This article aims to uncover the facts and myths

surrounding the impact of Lunar phases on humans on Earth.

Keywords:- Lunar Phases, Earth and Moon Relation, Lunar Rhythms, Moon affect Earth, Phases of the Lunar Cycle and Human Health, Planet Interaction.

I. INTRODUCTION

The moon, which is the only natural satellite of the earth, completes an orbit around the earth in 29 days 12 h 44 min 3 s and this is called the synodic period of the moon or lunar month or lunation. "lunatic" comes from the Latin lunatics, for "of the moon" or "moonstruck. As the moon orbits around the earth once per month, the angle between the earth and the moon changes. Different phases of the lunar month are determined on the basis of the position of the sun, the earth, and the moon during the movements of the earth and the moon in their orbits. In the event of a lunar eclipse, the Earth positions itself between the Sun and the Moon, resulting in the obstruction of sunlight that would otherwise reach the Moon.

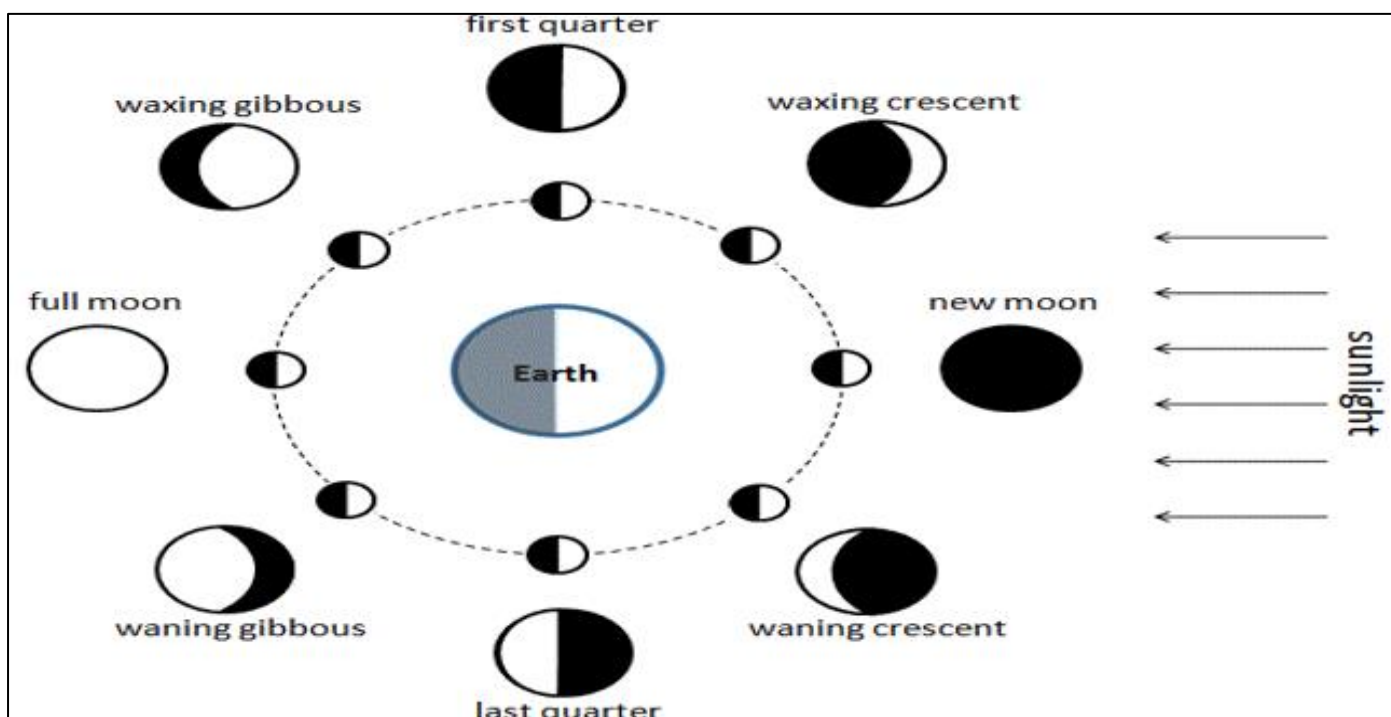


Fig 1 Phases of the Moon - Simple English Wikipedia, the free encyclopedia
<https://images.app.goo.gl/Dtgm413YRYpHmoy6>

➤ *Lunar Eclipses can be Two Types:*

- A total lunar eclipse occurs when the Moon and Sun are situated on opposite sides of the Earth.
- A partial lunar eclipse takes place when only a portion of the Earth's shadow covers the Moon. The prominent phases of the lunar month are new moon (NM), first quarter (FQ), full moon (FM), and third quarter (TQ).³

The orbital eccentricity also affects solar eclipses, in which the Moon passes between the Sun and Earth, casting a moving shadow across Earth's sunlit surface.

Throughout history, the moon's influence on human behavior has been a prominent theme in mythology and folklore globally. The term "lunacy" originated in the 15th century, attributing changes in aggression levels to the moon's phases within the lunar cycle. In various societies, the moon holds a sacred position and is worshipped for its spiritual significance.

Here are some theories that portray the interaction between the Moon and human beings. The social tension, disharmony, and strange outcomes are a result of the suppression of the moon's gravitational influence. A theory of biological tides can be developed by utilizing empirical observations, research, and a synthesis of findings in physics, astronomy, biology, and psychology. According to this theory, the force of gravity interacts with the forces of human evolution and behavior. The human nervous system is directly affected by gravity, which can lead to increased irritability or sluggishness, depending on individual receptivity. Individuals with unstable personalities, mood disorders, or those already under stress may experience social consequences due to excessive cosmic influence. If these individuals are prone to violence, they may be compelled to engage in uncontrollable behavior. There may be some scientific basis to the theories of astrology, particularly in relation to the full moon. Evidence suggests a "circa-monthly biological rhythm" of human aggression that aligns with the lunar-synodic cycle.

The concept of chronobiology provides a better explanation for the behavioral patterns of organisms, as it involves the interaction between their internal biological clocks and their responsiveness to external cues from the environment and society. Research in this area has explored the potential link between moon cycles and various psychological and physiological factors. However, studies relying on large population samples have yielded conflicting results, possibly due to the statistical methods employed. Conversely, systematic studies conducted on non-human animal species, using more robust methodologies, have provided compelling evidence of alterations in activity rhythms in relation to the moon phase.⁴

II. SCIENTIFIC VIEW

The Moon's gravitational force influences the tides in our oceans and seas, with the strongest impact occurring during the New Moon and Full Moon phases. This

phenomenon results in the highest and lowest tides experienced in these periods. Given that humans are predominantly composed of water, it is logical to assume that the Moon's gravitational pull affects us as well. During the New Moon and Full Moon phases, our emotions are believed to be heightened, similar to the way tides are affected. According to scientific studies, some researchers suggest that humans may be responding to subtle changes in the Earth's magnetic field that accord with the phases of the Moon.

The lunar month's phases vary the gravitational pull of the moon on Earth and the amplitude of ocean tides based on its relative position. The movement of the oceans during tides, particularly due to the electrically conducting salty water, can cause fluctuations in the Earth's magnetic field. These variations have been found to impact our alpha brain wave activity. (Alpha brain waves represent one pattern of electrical activity produced by the brain. Alpha brain waves, produced during activities like daydreaming, meditation, or mindfulness, may reduce depression symptoms and improve creativity, according to research suggesting they are a middle-range pattern of electrical activity).³

A. Research and Findings

➤ *Physiological Impact on Human Being-*

The phenomenon of the lunar cycle potentially affecting psychological and physiological disturbances in humans is commonly referred to as "the Transylvanian Effect" in academic literature (Mason 1997; Owens & McGowan 2006). Numerous studies suggest that the position of the moon in its orbit may impact the biological system. Both human and animal reproduction and behavior have been found to be influenced by the different phases of the lunar month. Research indicates that the activity of the human autonomic nervous system (Chakraborty & Ghosh 2013b), cardiovascular system, and physical efficiency (Chakraborty & Ghosh 2013a) may be altered based on the lunar phases.

- *Relation between Lunar Phase & Menstruation Cycle, Reproductive System-*

The Moon's gravitational pull affects the mind, emotions, and water retention in the human body, much like how it impacts the tides in the ocean. This influence is believed to extend to the release of hormones such as estrogen and progesterone, which are essential for regulating the menstrual cycle. The Lunar-Menstrual Hypothesis suggests that the average menstrual cycle of 29 days closely aligns with the Moon's cycle of around 29.5 days, leading to speculation about the Moon's role in menstrual health. Charles Darwin was one of the first to notice the connection between the length of the menstrual cycle and the lunar cycle.

Aligning your menstrual cycle with the lunar cycle is thought to improve overall health, fertility, and help manage period pain. Ayurveda, an ancient Indian system of medicine, also acknowledges the connection between the lunar phases and a woman's menstrual cycle. Each phase of

the Moon is associated with a different energy or dosha: Vata, Pitta, and Kapha. Although modern research may have different views on the Moon's impact on menstrual cycles.

In 1986, Sung Ping Law's study at Canton Traditional Chinese Medical College examined the link between menstrual cycles and lunar phases, involving 826 women aged 16 to 25 over four lunar months. Published in *Acta Obstetrica et Gynecologica Scandinavica*, the research suggested a correlation, with many menstrual cycles aligning with the new moon and potential ovulation during the full moon. However, later studies have questioned the consistency of this synchronization, highlighting the complexity of biological rhythms.⁶

A study in the journal *Endocrine Regulations* found no link between lunar phases and menstrual cycles. This research looked at 980 cycles from 74 women over a year, challenging old beliefs. In contrast to the claims made by certain researchers based on short-term studies, their long-term research did not reveal any correlation between lunar phases and the menstrual cycle.²² Additionally, a 2016 study by the makers of the period tracking app Clue also disproved the idea of synchronization between menstrual and lunar cycles. This analysis of over 7.5 million cycles indicated that periods are unlikely to align with the lunar cycle, based on data from 1.5 million Clue users analyzed by Dr. Marija Vlajic Wheeler.²¹

The beginning of menstruation was evaluated through a prospective analysis of menstrual cycles, totaling 311,064 cycles, over a span of three years (2019-2021). Researchers examined the relationship between the start of menstruation and the day of the week, as well as its connection to the lunar phase.²²

This extensive dataset revealed a seven-day (circaseptan- a cycle consisting of approximately 7 days in which many biological processes of life, such as cellular immune system activity, resolve) rhythm in menstruation, with the highest occurrence of menstrual onset on Thursdays and Fridays. This rhythmic pattern was consistent across all age groups, lunar phases, and seasons. It was most evident in cycles lasting between 27 and 29 days. During winter, the circaseptan rhythm was noted in cycles of 27-29 days, but not in other cycle lengths. A circalunar rhythm was also found to be statistically significant, though it was not as distinctly defined as the circaseptan rhythm. The peak of the circalunar rhythm for menstrual onset varied with the seasons. Additionally, there was a minor yet statistically significant interaction between the circaseptan rhythm and the lunar cycle.²²

In the 1970s, 1980s, and 1990s, some small studies suggested that women's menstrual cycles and ovulation might align with different phases of the moon. Some studies also linked moon phases with changes in melatonin levels and menstrual cycle phases. However, most menstrual cycles are not likely to sync with moon phases, except by chance. A recent study from 2005 in Nepal suggested that women ovulating during a full moon were more likely to

have male babies, while those conceiving before the full moon were more likely to have female babies. But a more recent study of 74 women found no connection between moon phases and menstrual cycles.³

A research study examined the long-term menstrual data of individual women using various biological rhythm analysis techniques. The findings indicated that menstrual cycles exceeding 27 days occasionally aligned with the cycles of the Moon's brightness and gravitational effects. However, as women aged and were exposed to artificial light at night, their menstrual cycles became shorter and this alignment diminished. The researchers propose that historically, human reproductive patterns were in sync with the Moon, but contemporary lifestyles have altered reproductive physiology and behavior.²¹

- *Relation between Lunar Phase & Insomnia-*

Biological processes on Earth are influenced by factors like lunar phases, tidal movements, and geographical cycles. A study from June 17, 2000, to December 2, 2003, investigated the lunar cycle's impact on human sleep patterns and hormonal levels, focusing on melatonin, cortisol, EEG activity, and non-Rapid Eye Movement (NREM) sleep.²⁵

The research accounted for confounding factors and analyzed both subjective and objective sleep measures in relation to lunar phases. It found that sleep episodes aligned with the midpoint of participants' typical sleep periods. Notably, during the full moon, EEG delta activity during NREM sleep decreased by 30%, indicating less deep sleep. Participants also took five minutes longer to fall asleep and experienced a 20-minute reduction in total sleep duration, correlating with lower subjective sleep quality and melatonin levels, underscoring the link between lunar phases and sleep physiology.²⁵

The study examines how lunar phases affect sleep patterns in 464 college students from 2015 to 2018, using Actiwatch Spectrum Plus devices to track locomotor activity. Results show that sleep timing aligns with the lunar cycle in both rural and urban areas, including indigenous communities in Argentina and postindustrial settings in the U.S.

Key findings indicate that sleep onset is later and duration shorter before a full moon, especially with moonlight after dusk, suggesting that moonlight may have historically increased nocturnal activity and disrupted sleep in preindustrial societies. The study also suggests that artificial light may mimic early-night moonlight, impacting modern sleep behaviors.⁶

- *Impact of Lunar Phase on Fasting Plasma Glucose, Heart Rate and Blood Pressure & MI-*

The 2020 study examined the impact of lunar phases on fasting plasma glucose, heart rate, and blood pressure in type 2 diabetes patients. The study involved 42 participants from Calcutta Medical College, and found that FPG levels were significantly higher during the NM and FM phases,

and heart rate was higher during static exercise. This suggests that lunar phases may affect cardiovascular functions in older patients with type 2 diabetes.

A previous study found a link between the phases of the moon and the occurrence of acute myocardial infarction (AMI), but the lunar cycle and the length of its phases differ. This research looked into how the moon's gravity affects AMI. It examined data from 1,369 patients who had their first AMI at five hospitals between October 1984 and December 1997. The study calculated the moon's gravitational force and compared it to when AMI occurred on Earth. The formula used was $G \cdot m/d^2$, where G is the gravitational constant, m is the moon's mass, and d is the distance from the moon to the Earth. The study evaluated the relationship between m/d^2 and AMI cases. It found that AMI cases increased when the distance from the Earth's center to the moon's center was over 399,864 km, marking a point of weaker gravitational effect. The results from this study show a notable increase in AMI cases during times of reduced gravitational pull. Overall, these findings suggest that the moon's gravity might influence the occurrence of AMI.²³

- *Lunar Phase & Neurological Disorders Epilepsy Myths /Facts –*

Polychronopoulos et al. (2006) found a significant increase in seizures on full moon (FM) days (34.2%) compared to lower rates during other lunar phases: new moon (NM) days (21.4%), first quarter (FQ) (22.5%), and third quarter (TQ) (21.9%). They suggested this clustering might be due to a direct lunar effect or changes in patient behavior.

Baxendale and Fisher (2008) supported this, showing a negative correlation between seizure frequency and moon illumination, with fewer seizures as illumination increased.

Terra-Bustamante et al. (2009) reported that 70% of Sudden Unexpected Death in Epilepsy (SUDEP) cases occurred on FM days, with 20% during the waxing moon and none during the waning cycle, indicating a link between FM and increased SUDEP risk.³

A retrospective review of neurologic records from an emergency unit between 1999 and 2003 examined the relationship between lunar phases and seizure occurrences in 859 patients. The study found a significant clustering of seizures during the full moon, supporting the belief in increased seizure frequency at this time³⁸. However, the relationship between the lunar cycle and seizures is complex and often contradictory. Previous research has shown mixed results, with some suggesting that night brightness may be more influential than lunar phases. A larger study of 1,710 patients found no significant differences in seizure onset across lunar quadrants, indicating that the lunar cycle does not affect first-ever unprovoked seizures. While folklore links the moon to various medical phenomena, current scientific evidence largely refutes a substantial impact of lunar cycles on seizures or aneurysm ruptures, prompting

researchers to focus on other factors like circadian rhythms for understanding seizure patterns in epilepsy.²⁴

- *Lunar Phase and Gout-*

Gout is mainly caused by sodium urate monohydrate, which originates from various internal and external factors. This substance circulates in body fluids and can deposit in joints, crystallizing and causing acute inflammation and pain. Understanding sodium urate monohydrate is essential for managing gout-related inflammation.

The study investigated the relationship between gout attacks and the synodic lunar cycle, documenting 126 attacks from 1972 to 1994. Using cosinor regression, the analysis revealed a significant cyclical pattern, with peak attacks occurring during new and full moons, coinciding with maximum lunisolar tidal effects. A similar correlation was found between lunar phases and bronchial asthma attacks in children, while paroxysmal tachyarrhythmia showed a contrasting relationship. These findings underscore the variability in how different conditions respond to changes in the cosmogeophysical environment.

Gout attacks show a notable correlation with the lunar cycle, featuring four peaks: two align with the full and new moons, while the other two occur near the first and last quarters. This suggests that lunar phases may influence gout frequency, warranting further investigation. The accumulation of gout attacks around syzygies (new and full moon) could indirectly testify to a gravitational mechanism of such hypothetical action.²⁷

- *Psychologically Impact and Research Findings*

During the 1970s, psychiatrist Arnold Lieber theorized that the moon influenced the body's "biological tides" and altered human behavior, leading to increased rates of violence and homicide.

The text explores the moon's mysteries and its perceived effects on human behavior and health. Historical beliefs link lunar phases to various ailments, with figures like Pliny the Elder and Plutarch noting its influence on sleep and consciousness. Modern studies have examined correlations between lunar phases and phenomena such as aggression, and mental health hospital admissions, but results are mixed, with some studies finding no significant links.

One study from 1978 to 1982 found a notable increase in crime rates on full moon days, while new moon days showed a minor, non-significant peak. The research suggested that the moon's gravitational pull might influence these crime fluctuations, with equinox and solstice days showing no significant effect.

Psychiatrist Arnold Lieber, MD, dug deeper into this belief with his books, "The Lunar Effect: Biological Tides and Human Emotions", written in 1978, and "How the Moon Affects You: A Compelling and Controversial Book on the Moon's Awesome Power to Affect Your Emotions and the Way You Live."

The study examined the link between psychiatric presentations in a hospital emergency department and the lunar cycle, involving 1,857 patients over 17 years old. It aimed to assess the number of presentations during different lunar phases and analyze five common mental disorder categories as per DSM-5. Data collected over 41 months showed psychiatric presentations as follows: 464 during the new moon, 483 during the first quarter, 449 during the full moon, and 461 during the third quarter. Statistical analysis revealed no significant differences across lunar phases or diagnostic categories, with p-values of .89 and .85. These findings challenge the belief that the full moon affects psychiatric conditions, suggesting any lunar effects are likely minimal and infrequent. Overall, the results help dispel misconceptions about the lunar cycle's impact on psychiatric illnesses. A study in Penza, Russia, investigated the link between moon phases and emergency admissions to a mental hospital for severe mental disorders in 2018-2019. It focused on patients with pronounced psychotic, affective, and behavioral symptoms. The results showed no significant variation in admission rates across different moon phases, with a p-value of 0.4382, aligning with similar international studies that indicate moon phases do not significantly affect mental health crisis admissions.²⁹

III. MOON AND THE DIET

The relationship between the moon and health, particularly during lunar eclipses and the lunar diet. It is believed that consuming food during a lunar eclipse can be detrimental to health due to the emission of strong ultraviolet rays, which may contaminate cooked food, leading to suggestions of fasting during this period.

The lunar diet, also referred to as the moon diet or werewolf diet, is structured around the four phases of the moon.

The new moon represents a time for rest and rejuvenation, encouraging gentle foods like warm broths, steamed vegetables, and oats, along with probiotic-rich fermented foods to support gut health. The body shifts from elimination to assimilation, leading to renewed cravings and the start of a new cycle. This fluid state highlights the need for mindful eating as dietary choices are made.^{28,30}

As the moon waxes into the first quarter, during this time, the body is thought to store energy and absorb nutrients more effectively, resulting in heightened cravings and a tendency to overeat. This phase emphasizes the body's increased receptivity to food intake, it symbolizes growth, making it ideal for nutrient-dense foods that aid muscle repair and energy, such as proteins, complex carbohydrates, and a variety of fruits and vegetables.

The full moon signifies abundance, promoting balanced meals with proteins, carbohydrates, healthy fats, and colorful fruits and vegetables. While appetite may increase, it's a chance to enjoy food mindfully, opting for natural sweeteners when indulging. It is an ideal time for a short detox fast of one to three days. Starting the fast on the

eve of the full moon or a few days earlier aligns with the extended moon diet.

During this period, it's best to avoid food after 6 PM, with a complete fast of only water and detox juices being the most effective.^{28,30}

During the waning moon, focus on lighter, easy-to-digest foods that support detoxification, such as hydrating foods, whole grains, and lean proteins, along with plenty of water and herbal teas, as you release stress and prepare for a new cycle. After a full moon fast, individuals should gradually reintroduce solid foods.^{28,30}

IV. MOON AND VEDIC, MYTHOLOGICAL VIEWS

The text discusses the basics of Vedic and Western astrology, focusing on the zodiac's structure and its role in astrological interpretation. Both systems feature twelve zodiac signs linked to twelve houses in a birth chart, with the first house indicating an individual's rising sign.

Vedic astrology adds 27 subdivisions called Nakshatras or Lunar Mansions, with the moon spending about 2.5 days in each during its monthly cycle. Each Nakshatra, viewed as the moon's "wives," is governed by a specific planet, similar to the ruling planets of zodiac signs. This layered influence is essential for understanding the Moon's and rising sign's roles in an astrological chart.

The lunar cycle consists of two main phases: the waxing phase (Shukla Paksh) and the waning phase (Krishna Paksh). The waxing phase lasts 14 days after the New Moon, culminating in the Full Moon, and is marked by growth and increased energy. In contrast, the waning phase also lasts 14 days, starting after the Full Moon and leading back to the New Moon, focusing on introspection and detoxification.

Both phases include 15 stages called Tithis, with specific days noted for fasting. The fourth day of each phase, Chaturthi, honors Lord Ganesh, while the 11th night, Ekadashi, is significant for fasting, particularly with rice restrictions. The fifteenth tithi, Purnima and Amavasya, are important fasting days that mark the end of each lunar phase.

V. CONCLUSION

After numerous studies and research work, it still concludes an assorted kind of significant association between lunar phases and human biological, and psychological aspects. The Moon has been mesmerizing and mysterious, especially when considering its effect on humans. It is vital to ensure that one is acquainted with the scientific evidence for and against such beliefs. Finally, in order to fully understand this phenomenon, more in-depth research investigations are required. These investigations should provide comprehensive evidence by covering all the

factors, including as biological, psychological, and environmental aspects in this domain.

REFERENCES

- [1]. Mohy Uddin¹, Aldilas Achmad Nursetyo², Usman Iqbal^{3,4,5}, Phung-Anh Nguyen^{6,7,8}, Wen-Shan Jian⁹, Yu-Chuan Li^{5,10,11} and Shabbir Syed-Abdul^{5,10}, *Assessment of effects of moon phases on hospital outpatient visits: An observational national study, *AIMS Public Health*, 10(2): 324–332. DOI:10.3934/publichealth.2023024 Received: 22 December 2022 Revised: 08 March 2023 Accepted: 12 March 2023 Published: 06 May 2023.
- [2]. By Maria Cohut, Can the moon really influence your health? Paula Field- Medical New Today August 9, 2019
- [3]. Ujjwal Chakraborty (2014) Effects of different phases of the lunar month on humans, *Biological Rhythm Research*, 45:3, 383-396, DOI: 10.1080/09291016.2013.830508
- [4]. Jairo Muñoz-Delgado* Ana María Santillán-Doherty* Ricardo Mondragón-Ceballos* Hans G. Erkert**Moon cycle effects on humans: myth or reality, *Salud Mental V. 23, No. 6, diciembre del 2000*.
- [5]. Christian Cajochen,¹ * Songül Altanay-Ekici,¹ Mirjam Münch,² Sylvia Frey,¹ Vera Knoblauch,³ and Anna Wirz-Justice¹, Evidence that the Lunar Cycle Influences Human Sleep, *Current Biology* 23, 1485–1488, August 5, 2013 ©2013 Elsevier Ltd All rights reserved <http://dx.doi.org/10.1016/j.cub.2013.06.029>.
- [6]. Leandro Casiraghi ¹, Ignacio Spiouzas², Gideon P. Dunster¹*, Kaitlyn McGlothlen¹, Eduardo Fernández-Duque³, Claudia Valeggia³, Horacio O. de la Iglesia^{1†}, Moonstruck sleep: Synchronization of human sleep with the moon cycle under field conditions, *Casiraghi et al., Sci. Adv.* 2021; 7 : eabe0465 27 January 2021.
- [7]. K. A. Maslov* Evgrafov Regional Mental Hospital, Penza, 440026 Russi. The Influence of Moon Phases on the Frequency of Admissions to a Psychiatric Hospital, Received August 18, 2021; revised February 4, 2022; accepted February 15, 2022, DOI: 10.1134/S0001433822070088.
- [8]. Emily Crasnick, Moon Phases: How do Moon phases affect humans behavior – body and mind, Published: December 22, 2021 23:05 Updated: December 26, 2021 11:35.
- [9]. Anannya Roy¹, Tonmoy Biswas² and Ajit Kumar Roy³*, A Structured Review of Relation between Full Moon and Different Aspects of Human Health, Received date: May 14, 2017 Accepted date: May 23, 2017 Published date: May 25, 2017.
- [10]. Helen J. Burgess^{1,3*}, David Kagan¹, Samuel Warshaw¹, Zoey Jopling¹, Muneer Rizvydeen¹, Peisong Han², Anastasia K. Yocum³ and Melvin G. McInnis³, Lunar cycling in sleep and mood in individuals with bipolar disorder, *International Journal of Bipolar Disorders* (2022) 10:32 <https://doi.org/10.1186/s40345-022-00282-4>.
- [11]. Menstrual Cycles Intermittently Sync with Moon Cycles: Study, *The Scientist Magazine*®2023
- [12]. Ismini Staboulidou¹, Philipp Soergel¹, Bernhard Vaske ² & Peter Hillemanns¹, The influence of lunar cycle on frequency of birth, birth complications, neonatal outcome and the gender: A retrospective analysis, *Acta Obstetrica et Gynecologica*. 2008; 87: 875879.
- [13]. Anil Kakunje, Lunar Effect or Transylvania Effect: The Moon and Mind Connection, *Indian Journal of Private Psychiatry* (2020): 10.5005/jp-journals-10067-0063.
- [14]. Victoria Jaggard and Nitinol Geographic Staff. Phases of the moon, explained, 9/1/23.
- [15]. Henrik Bjursten ¹, Daniel Oudin Åström ^{2 3}, Shahab Nozohoor ¹, Khalil Ahmad ⁴, Mariann Tang ⁴, Markus Bjurbom ⁵, Emma C Hansson ^{6 7}, Anders Jepssson ^{6 7}, Christian Joost Holdflod Møller ⁸, Miko Jormalainen ⁹, Tatu Juvonen ^{9 10}, Ari Mennander ¹¹, Peter S Olsen ¹², Christian Olsson ⁵, Anders Ahlsson ⁵, Anna Oudin ^{2 3}, Emily Pan ^{13 14}, Peter Raivio ⁹, Anders Wickbom ¹⁵, Johan Sjögren ¹, Arnar Geirsson ^{16 17}, Tomas Gudbjartsson ¹⁷, Igor Zindovic ¹, Once after a full moon: acute type A aortic dissection and lunar phases, PMID: 34999801 PMCID: PMC8743114 DOI: 10.1093/icvts/ivab220.
- [16]. Cleveland Clinic, Does the Moon Affect Humans? October 24, 2022 / Mental Health.
- [17]. Christian Cajochen ¹, Songül Altanay-Ekici, Mirjam Münch, Sylvia Frey, Vera Knoblauch, Anna Wirz-Justice, Evidence that the lunar cycle influences human sleep, PMID: 23891110 DOI: 10.1016/j.cub.2013.06.029.
- [18]. Why let 'moon phase' decide your diet? *The Times of India TNN* | Aug 1, 2015, 12.00 AM IST.
- [19]. Yoko Komada, Makoto Sato, Yuko Ikeda, Azusa Kami, Chika Masuda, and Shigenobu Shibata Damien Leger, Academic Editor and Damien Leger, Academic Editor, The Relationship between the Lunar Phase, Menstrual Cycle Onset and Subjective Sleep Quality among Women of Reproductive Age, *Int J Environ Res Public Health*. 2021 Mar; 18(6): 3245. Published online 2021 Mar 21. doi: 10.3390/ijerph18063245.
- [20]. Russell G. Foster¹ and Till Roenneberg², Human Responses to the Geophysical Daily, Review Annual and Lunar Cycles, *Current Biology* 18, R784–R794, September 9, 2008 ©2008 Elsevier Ltd All rights reserved DOI 10.1016/j.cub.2008.07.003.

- [21]. Helfrich-Förster¹ *, S. Monecke², I. Spiouzas³, T. Hovestadt⁴, O. Mitesser⁵, T. A. Wehr⁶, Women temporarily synchronize their menstrual cycles with the luminance and gravimetric cycles of the Moon, Helfrich-Förster et al., *Sci. Adv.* 2021; 7: eabe1358 27 January 2021.
- [22]. Rene Ecochard, M.D., Ph.D., a,b Rene Leiva, M.D.,c,d Thomas P. Bouchard, M.D.,e Agathe Van Lamsweerde, M.Sc.,f Jack T. Pearson, Ph.D.,g Joseph B. Stanford, M.D., M.S.P.H.,g and Claude Gronfier, Ph.D.h. The menstrual cycle is influenced by weekly and lunar rhythms, <https://doi.org/10.1016/j.fertnstert.2023.12.009>
- [23]. Ryotaro Wake¹, Junichi Yoshikawa², Kazuo Haze³, Shinichiro Otani⁴, Takayoshi Yoshimura⁵, Iku Toda⁶, Masaki Nishimoto⁷, Takahiko Kawarabayashi⁸, Atsushi Tanaka⁹, Kenei Shimada², Hidetaka Iida¹⁰, Kazuhide Takeuchi¹ and Minoru Yoshiyama¹, The Gravitation of the Moon Plays Pivotal Roles in the Occurrence of the Acute Myocardial Infarction, *Environmental Health Insights* 2008:1 63–66.
- [24]. Mihika V. Gokhale, Sunil Kumar¹, Moon and Health: Myth or Reality? Received 08/24/2023 Review began 10/28/2023 Review ended 11/05/2023 Published 11/08/2023, DOI: 10.7759/cureus.48491.
- [25]. Ilias, F. Spanoudi, E. Koukkou, D. A. Adamopoulos, S. C. Nikopoulou, Do lunar phases influence menstruation? A year-long retrospective study, *Endocrine Regulations* Vol.47, No.3, p.121-122, 2013.
- [26]. P. Polychronopoulos, MD, A. A. Argyriou, MD, V. Sirrou, MD, V. Huliara, MD, M. Aplada, MD, P. Gourzis, MD, A. Economou, MD, E. Terzis, MD, and E. Chroni, MD, PhD Authors Info & Affiliations, Lunar phases and seizure occurrence: Just an ancient legend? May 9, 2006 issue 66 (9) 1442-1443 <https://doi.org/10.1212/01.wnl.0000210482.75864.e8>
- [27]. M Mikulecký¹, J Rovenský, Gout attacks and lunar cycle, *Med Hypotheses* 2000 Jul;55(1):24-5. doi: 10.1054/mehy.1999.0973. Affiliations Expand PMID: 11021320 DOI: 10.1054/mehy.1999.0973
- [28]. Soul, Thriive Art &. “Full Moon Day: Do You Follow the Moon Diet Plan?” Medium, Medium, 18 Sept. 2019, medium.com/@thriiveartandsoul/full-moon-day-do-you-follow-the-moon-diet-plan-57f734b57aba.
- [29]. K. A. Maslov The Influence of Moon Phases on the Frequency of Admissions to a Psychiatric Hospital January 2023 *Izvestiya Atmospheric and Oceanic Physics* 58(7):708-712 DOI: 10.1134/S0001433822070088
- [30]. Lily Turner, Eating With The Moon Use mindfulness to align your diet with lunar cycles. July 28, 2023