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## Time, rhythm, and health: A review of Unani's natural cycles and modern chronobiology

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### Abstract

Time has always been an integral component of health and disease. In Unani medicine, ancient physicians emphasized the influence of natural cycles—seasonal changes (Mausam), age-related temperament shifts, and diurnal variations (Mizaj-e-Zamani)—on human physiology and pathology. Modern physiology, particularly chronobiology, similarly investigates biological rhythms such as circadian, ultradian, and infradian cycles and their implications in health and disease. This paper explores the intersections and complementary understandings between Unani time-bound health frameworks and modern chronobiology, emphasizing how both recognize temporal rhythms as foundational to diagnosis, prevention, and therapy. Integrating these perspectives can provide a comprehensive, personalized approach to healthcare, merging tradition with cutting-edge science. <sup>[1, 2, 3]</sup>

**Keywords:** Time, rhythm, health, modern chronobiology, Unani's natural cycle, Mizaj-e-Zamani), seasonal changes, temperament

### 1. Introduction

Chronobiology is the science of biological rhythms and how they regulate physiological and behavioral processes in synchrony with environmental cues. Similarly, Unani medicine, one of the ancient Greco-Arabic systems, incorporates the dimension of time through principles like Mizaj-e-Zamani and seasonal regimens. The philosophy of Unani emphasizes that human beings are microcosms influenced by macrocosmic cycles such as time, weather, and planetary motion. Understanding how time shapes biological functioning can help align treatments more effectively.

This review aims to draw comparative parallels between Unani concepts of time and health and modern chronobiology. It outlines seasonal and age-related variations in Mizaj, daily rhythms of function, and their counterparts in molecular biology, neuroendocrine regulation, and chronotherapeutics <sup>[4, 5, 6]</sup>.

### 2. Unani Medicine and the Time Factor

#### 2.1. Mausam (Seasonal Variations)

Unani physicians categorized the year into four seasons—spring, summer, autumn, and winter—each with unique temperamental qualities (hot, cold, moist, dry). These temperaments influence the body's internal balance. For example, spring is hot and moist and considered ideal for detoxification procedures like Fasd (bloodletting). Summer is hot and dry, often aggravating Safra (yellow bile), requiring cooling and moistening regimens. Autumn is dry and moderately cold, predisposing individuals to melancholic disorders, while winter is cold and moist, affecting phlegmatic individuals more intensely.

Each season necessitates a distinct diet, clothing, and activity regimen. Unani scholars like Ibn Sina recommended seasonal adjustments to prevent seasonal illnesses. This is similar to seasonal affective disorders and immune variability observed in modern biology. <sup>[1, 7, 8]</sup>

#### 2.2. Age and Mizaj

Unani medicine identifies four major life stages

- **Childhood (Warm and Moist):** Dominated by phlegmatic humor (Balgham), growth, and tissue development.
- **Youth (Warm and Dry):** Dominated by blood (Dam) and bile (Safra), characterized by strength, ambition, and reproductive vigor.

- **Middle Age (Balanced):** Decline in heat and moisture, requiring more balanced lifestyle interventions.
- **Old Age (Cold and Dry):** Dominated by melancholic humor (Sauda), associated with dryness, rigidity, and decline in metabolic functions.

This corresponds well with the developmental trajectory of hormonal cycles, melatonin decline with age, reduced immunity, and metabolic slowdown in modern physiology [1, 6].

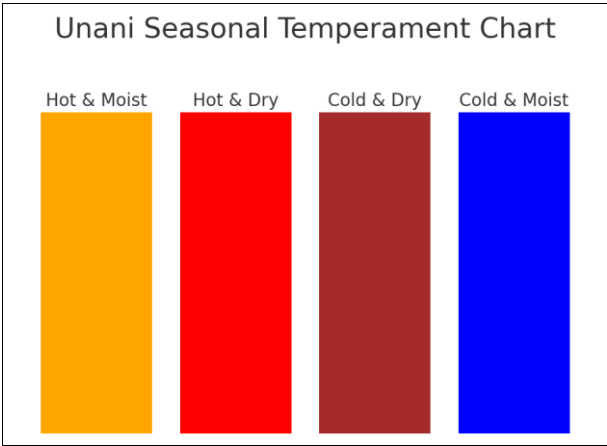
**2.3. Mizaj-e-Zamani (Time-Specific Temperament)**

According to Unani scholars, different times of the day have unique qualities. For instance:

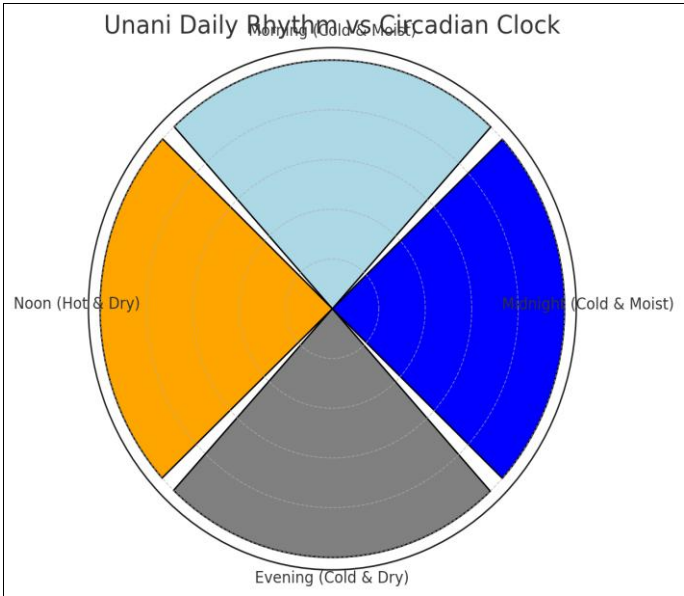
- Early morning: Cold and moist
- Noon: Hot and dry
- Evening: Cold and dry
- Midnight: Cold and moist

Therefore, eating, sleeping, and physical exertion should be synchronized with these temperaments to maintain health. Food digestion, drug metabolism, and even mental alertness are considered time-sensitive in Unani.

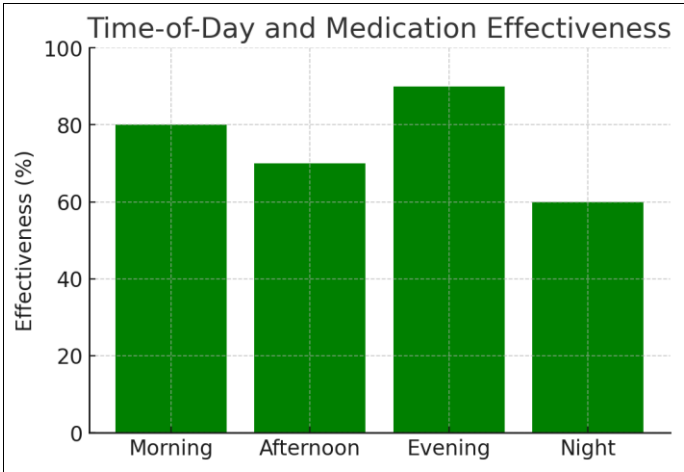
This aligns with the circadian regulation of core body temperature, enzyme activity, and hormonal levels in modern physiology. Recent chronopharmacology supports this by recommending drug administration at times when absorption or action is optimal [1, 3, 5].



**Fig 1:** Seasonal temperament qualities in Unani Medicine.



**Fig 2:** Unani Daily Rhythm vs Circadian Clock.



**Fig 3:** Time-of-Day and Medication Effectiveness.

#### 4. Comparative Analysis

Principle	Unani Concept	Modern Chronobiology
Daily Rhythms	Mizaj-e-Zamani	Circadian Rhythms
Seasonal Influence	Mausam and Akhlat	Seasonal variations in immunity, mood, metabolism
Ageing	Age-based temperament (Hot/Moist to Cold/Dry)	Hormonal decline, circadian degradation
Personalized Therapy	Based on Mizaj and time	Chronotype-based pharmacology
Preventive Health	Seasonal regimens (Tadbeer)	Light therapy, sleep hygiene, timed nutrition

#### 5. Clinical Integration and Implications

Integrating Unani rhythms with chronobiological findings can optimize treatment timing, reduce side effects, and improve health outcomes. For instance:

- Synchronizing meal times with insulin sensitivity curves
- Administering Unani decoctions during high absorption periods
- Performing Hijama or Fasd at optimal seasonal phases

Furthermore, personalized schedules based on Mizaj and chronotype can revolutionize preventive medicine. Lifestyle diseases like diabetes, hypertension, and obesity have strong circadian links and can benefit from such integrative protocols [3, 7].

#### 6. Conclusion

Unani medicine and modern chronobiology converge on a fundamental principle: health is deeply rooted in harmony with time. While Unani applies this through the wisdom of humoral balance, seasonal regimens, and age-specific care, modern physiology validates these notions through molecular and systemic chronoregulation. An integrated model that respects both the philosophical depth of Unani and the empirical precision of chronobiology can usher in a new era of personalized and time-conscious medicine. [1, 3, 5]

#### Conflict of Interest

Not available

#### Financial Support

Not available

#### 7. References

1. Ibn Sina. *Al-Qanoon fit Tibb*. New Delhi: Jamia Hamdard Publications; 2007.
2. Halberg F. Chronobiology. *Annu Rev Physiol*. 1969;31:675-726.
3. Czeisler CA, Klerman EB. Circadian and sleep-dependent regulation of hormone release in humans. *Recent Prog Horm Res*. 1999;54:97-132.
4. Panda S. Circadian physiology of metabolism. *Science*. 2016;354(6315):1008-1015.
5. Smolensky MH, Lamberg L. *The Body Clock Guide to Better Health*. Henry Holt; 2000.
6. Reinberg A, Smolensky MH. *Biological Rhythms and Medicine*. Springer; 1983.
7. Levi F. Circadian chronotherapy for human cancers. *Lancet Oncol*. 2001;2(5):307-315.
8. Reiter RJ. The pineal gland and melatonin in health and disease. *J Clin Endocrinol Metab*. 1991;73(1):1-9.
9. Archer SN, Robilliard DL, Skene DJ, *et al*. A length polymorphism in the circadian clock gene *Per3* is linked to delayed sleep phase syndrome. *Sleep*. 2003;26(4):413-415.
10. Berson DM, Dunn FA, Takao M. Phototransduction by retinal ganglion cells that set the circadian clock. *Science*. 2002;295(5557):1070-1073.
11. Sharma A. Unani concepts of age and temperament. *J Res Unani Med*. 2022;15(2):112-119.
12. Soni R. Seasonal regimens in Unani and modern evidence. *Int J Trad Integr Med*. 2021;8(1):67-73.
13. Gachon F, Nagoshi E, Brown SA, *et al*. The mammalian circadian timing system: from gene expression to physiology. *Chromosoma*. 2004;113(3):103-112.
14. Hastings MH, Maywood ES, Brancaccio M. Generation of circadian rhythms in the suprachiasmatic nucleus. *Nat Rev Neurosci*. 2018;19(8):453-469.
15. Takahashi JS. Transcriptional architecture of the mammalian circadian clock. *Nat Rev Genet*. 2017;18(3):164-179.
16. Dijk DJ, von Schantz M. Timing and consolidation of human sleep, wakefulness, and performance by a symphony of oscillators. *J Biol Rhythms*. 2005;20(4):279-290.
17. Partch CL, Green CB, Takahashi JS. Molecular architecture of the mammalian circadian clock. *Trends Cell Biol*. 2014;24(2):90-99.
18. Haus E, Smolensky MH. Biological clocks and shift work: circadian dysregulation and potential long-term effects. *Cancer Causes Control*. 2006;17(4):489-500.
19. Sack RL, Auckley D, Auger RR, *et al*. Circadian rhythm sleep disorders. *Sleep*. 2007;30(11):1460-1483.
20. Salgado-Delgado R, Angeles-Castellanos M, Saderi N, Escobar C. Food intake during the normal activity phase prevents obesity and circadian desynchrony in a rat model of night work. *Endocrinology*. 2010;151(3):1019-1029.
21. Al-Razi. *Kitab Al-Hawi*. Leclerc L, translator. Paris: Imprimerie Nationale; 1950.
22. Nasr SH. *Science and Civilization in Islam*. Cambridge: Harvard University Press; 1968.
23. Mohibul Haq Z. *Unani Medicine: The Science of Greco-Arab Healing*. New Delhi: CCIM; 2005.
24. Tofler GH, Brezinski D, Schafer AI, *et al*. Concurrent morning increase in platelet aggregability and the risk of myocardial infarction and sudden cardiac death. *N Engl J Med*. 1987;316(24):1514-1518.
25. Smolensky MH, Hermida RC, Reinberg A. Chronotherapy: applications to cardiovascular medicine. *Am J Hypertens*. 2007;20(9):843-852.
26. Sothorn RB, Gruber W, Kanabrocki EL. Circadian characteristics of blood pressure in healthy human subjects. *Chronobiol Int*. 1993;10(2):101-112.
27. Zaid H, Silbermann M, Ben-Arye E, Saad B. Greco-Arab and Islamic herbal-derived anticancer modalities: from tradition to molecular mechanisms. *Evid Based Complement Alternat Med*. 2012;2012:349040.
28. Beersma DGM, Gordijn MCM. Circadian control of the

- sleep-wake cycle. *Physiol Behav.* 2007;90(2-3):190-195.
29. Scheer FA, Hilton MF, Mantzoros CS, Shea SA. Adverse metabolic and cardiovascular consequences of circadian misalignment. *Proc Natl Acad Sci U S A.* 2009;106(11):4453-4458.
  30. Wright KP Jr, McHill AW, Birks BR, *et al.* Entrainment of the human circadian clock to the natural light-dark cycle. *Curr Biol.* 2013;23(16):1554-1558.
  31. Turek FW, Gillette MU. Melatonin, sleep, and circadian rhythms: rationale for development of specific melatonin agonists. *Sleep Med.* 2004;5(6):523-532.
  32. Van Cauter E, Polonsky KS, Scheen AJ. Roles of circadian rhythmicity and sleep in human glucose regulation. *Endocr Rev.* 1997;18(5):716-738.
  33. Hall JE. Guyton and Hall Textbook of Medical Physiology. 14th ed. Philadelphia: Elsevier; 2020.
  34. Tripathi KD. Essentials of Medical Pharmacology. 8th ed. New Delhi: Jaypee Brothers; 2018.
  35. Ernst E. The role of complementary and alternative medicine. *BMJ.* 2000;321(7269):1133-1135.
  36. Yusuf S, Hawken S, Ounpuu S, *et al.* Effect of potentially modifiable risk factors associated with myocardial infarction in 52 countries (the INTERHEART study). *Lancet.* 2004;364(9438):937-952.
  37. Saberi F, Faghihzadeh S, Emami A. Efficacy of aromatherapy in reducing stress during first stage of labor. *Iran Red Crescent Med J.* 2011;13(11):787-791.
  38. El-Zein H, Mobarak FA, Sabry NA. Circadian rhythm and antihypertensive treatment. *Clin Exp Hypertens.* 2003;25(8):477-485.
  39. Suen LK, Wong TK, Leung AW. Effectiveness of auriculotherapy for sleep promotion and disturbance in the elderly: a systematic review. *Complement Ther Med.* 2002;10(4):234-242.
  40. Saper CB, Scammell TE, Lu J. Hypothalamic regulation of sleep and circadian rhythms. *Nature.* 2005;437(7063):1257-1263.

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