



CHINESE & ASIAN MEDICINE

Minding the Gap: The *Tan* Cycle 24-Hour Clock

PT. 1: THE NIGHTTIME HOURS

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WHAT YOU NEED TO KNOW

- In my clinical practice, I have noticed some discrepancy between client descriptions of symptoms, and how the traditional 24-hour clock is arranged.
- I have done my best here to reconsider the hourly order based on observation, functional biology and physiology.
- The reorganization I am presenting with this two-part article I call the *Tan* Cycle 24-Hour Clock.

The current 24-hour cycle that has been regarded as fact in the teaching of traditional Chinese medical (TCM) theory is due a reconsideration. With the advancements of modern science, we are able to start a discussion regarding a different approach to a chronological time wheel from a number of different angles.

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This article series, "Minding the Gap," is meant to stimulate a discussion about creating a bridge between the insight and artistry of the ancient healing practices attributed to Asian medical theories, and the awareness that has been gained over the past two centuries of modern medical and environmental science. The thesis is that a paradigm shift is affecting our world culture; modern life requires an evolution and advancement of the ancient ways to meet the needs and demands of the human nervous system, and life on Earth, today and into the future. A shift away from the power over paradigm toward a rise of intrinsically supportive and transformational healing energies is here.

I'd like this article to open up a stage for discussion, and I welcome anyone to test the efficacy of these assertions through observation and clinical practice, especially with regard to diagnostic application through reference to the *tan* cycle and the *yu* angles, and the framework of lifting and supportive transformational energy.¹

These treatment theories are informed by: research of the autonomic nervous system (ANS) from a functional perspective; observations and research within my clinical practice in visceral and neural manual therapy; and the groundbreaking work of neurobiologist Dr. Stephen Porges and clinician Deb Dana relative to application of the polyvagal theory.²

The reorganization I am presenting with this two-part article I call the *Tan* Cycle 24-Hour Clock, in order to distinguish it from the traditional organ-affiliation clock that has been widely regarded as standard since the details of TCM theory were given to the Western world in the 1940s and '50s by the Chinese government.

In my clinical practice, I have noticed the time frame associated with the liver has almost always held true, and that clients who routinely wake up with agitation or discomfort around the 3:00 a.m. hour have liver restrictions that possibly are referring into their ANS through vagal afferent connections, relaying information from the viscera into the vagal nuclei in the brainstem.

This could potentially be causing a surge of norepinephrine from the locus coeruleus, which has projections to the neocortex and is thought to be responsible for wakefulness.³

Another potential physiological explanation could be that of sympathetic activation from anastomoses with the phrenic nerve, as the phrenic nerve is the sensory nerve of the gallbladder, as well as the motor nerve for the diaphragm, from which the liver is suspended by the coronal ligament. The liver is attached to the diaphragm through a dense ligament called the coronal ligament. This ligament is a double fold of peritoneum, running nearly the entire length of the diaphragm, circling around the top of the liver.

Moreover, physical restrictions in the biliary area could be causing restlessness during this period while one is usually asleep, as the liver is physiologically active during these hours. During the night, as we rest, the liver must create glucose for our cells, as our blood sugar drops while fasting; this is the process of gluconeogenesis. The liver is also involved in lipolysis and fatty acid oxidation during the evening hours.⁴

The energetic quality of the sleeping hours are characteristic of blurred lines and energy weaving into and out of shape and form. Because the liver and the gallbladder are so intricately linked, both neurologically and physiologically, through the autonomic process of creating and storing bile, respectively, I propose merging the time between midnight and 4:00 a.m. to include both the gallbladder and liver.

Thus it seems fitting, from an aesthetic point of view as well, to combine these two organs into a relative space where one merges with the other, without boundary.

Merging the hours of the pericardium and the heart into one time block also seems reasonable, as the main function of the pericardium is to suspend and protect the heart. The previous article I wrote in favor of reorganizing the fire element is supportive of the *yin/yang* pairing of the heart and pericardium, respectively, by reason of theoretical physiology, based on science and anatomical reference.

Working backward from the midnight hour, I propose the heart and pericardium time to be between the hours of 8:00 p.m. and midnight. This is the time of day when the energy of the organism draws inward, after daylight fades, into rest.

This is also the time of day when the energy of the heart is of paramount importance, and in cases of chronic heart disease, this is the time when a person may wake up with shortness of breath. As the heart is unable to fulfill its functions, a cry for help is heard by the ANS, and the body shifts into a stress response.

In cases in which one has something that is “heavy on the heart” (for example: some stress of daily life, or an emotional experience that is occupying the mind), a person may not be able to settle into a restful state of being. This can lead to late nights and an inability to fall asleep. Falling asleep at a decent hour is a sign of a heart in balance, and is also good for your heart.

Research has shown that people who go to sleep before the 11:00 p.m. hour, and wake before the 8:00 a.m. hour, have a statistically significant decreased risk of congestive heart failure.⁵

These findings regarding decreased risk of congestive heart failure suggest drawing inward, nurturing the heart, and falling asleep before 11:00 p.m., as well as waking before 8:00 a.m., to be greatly beneficial to the heart’s function and resilience. Theoretically, autonomic waking before 8:00 a.m. could be a result of a functioning and balanced kidney and adrenal energy, with a functioning and balanced hypothalamus, pituitary, and adrenal (HPA) axis. This relay of the neuroendocrine system, stimulates the rise of serum cortisol levels in the morning hours, initiating the process of waking through activation and elevation of the heart rate and blood pressure.⁶ Through this process the kidneys and adrenal glands function as supportive energy for the heart. This interaction can be seen through associations illustrated within the *yu* angles treatment theory.¹

Let’s now move our attention back to the morning, and propose the time between 4:00 a.m. and 6:00 a.m. as being relative to the bladder, with the time of 6:00 a.m. to 8:00 a.m. as being relative to the kidneys and adrenals.⁷

Physiologically, the energy of the bladder starts to rise as urine fills overnight, and often people wake to empty between the hours of 4:00 a.m. and 6:00 a.m. if they have had too much to drink before bed, or potentially have visceral restrictions related to the bladder that limit the storage capacity in some way.

And as discussed, when in balance the natural circadian rhythm elevates serum cortisol levels in the morning, to initiate a wake with the rising of the sun, between the hours of 6:00 a.m. and 8:00 a.m.

Editor’s Note: Pt. 2 of this article, scheduled to run in the March issue, explores the daytime 12-hour segment of the *Tan Cycle 24-Hour Clock*.

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JANUARY 2024