

The Body Has More Than One Clock

Absurd Health Institute · Hypothesis and mechanistic perspective

Central hypothesis

Circadian time is distributed across central and peripheral tissues rather than dictated by one master signal alone. The hypothesis is that phase mismatches between immune, hepatic, gut and neural rhythms can contribute to disease even when each rhythm retains a normal average amplitude.

The biological route

The suprachiasmatic nucleus responds to light while feeding, hormones, temperature and activity influence peripheral clock phases. Liver metabolic enzymes, immune-cell trafficking, bile-acid cycles and microbial oscillations are time-sensitive. A common clock time does not necessarily correspond to the same internal biological phase across individuals or organs.

An illustrative scenario

A night-shift worker's sleep duration, feeding schedule and central circadian phase may disagree with the timing of liver metabolism. To isolate clock mismatch from ordinary sleep loss, investigators need more than a questionnaire asking when someone goes to bed. Repeated phase markers and functional outcomes would be necessary. The difficulty is precisely why circadian explanations must not be applied indiscriminately to chronic disease.

Alternative explanations and limits

Sleep deprivation, shift work, diet quality and stress can themselves affect outcomes; circadian mismatch is often difficult to disentangle. Mouse clock experiments cannot show that an individual human symptom arises from phase discordance. A single melatonin measurement is rarely enough to characterize the entire system.

What would change the conclusion?

An informative analysis would repeatedly measure phase markers across tissues or validated proxies and determine whether phase relationships predict function better than sleep duration or exposure alone. If alignment has no independent relationship to outcomes, the broad disease model loses force.

The distinctive prediction

A clock-mismatch disorder should be defined by disagreement among measured biological phases, not by being awake at an unusual hour. The degree of mismatch should also forecast outcomes better than total sleep duration alone.

Clinical interpretation

The proposal may sharpen questions about medication timing and shift work but should not be turned into universal sleep schedules or claims that synchronization cures autoimmune disease.

Selected scientific reading

Contextual background, not direct validation of the proposed hypothesis.

Thaiss CA et al. Transkingdom control of microbiota diurnal oscillations promotes metabolic homeostasis. Cell. 2014.
<https://pubmed.ncbi.nlm.nih.gov/25417104/>

Chrono-tailored drug delivery systems: recent advances and future directions. Drug Deliv Transl Res. 2024.
<https://link.springer.com/article/10.1007/s13346-024-01539-4>

Editorial note: Original theoretical perspective, not an original clinical study, validated diagnosis, or treatment protocol.