

Biological Rhythms: Their Functions, Effects, and Complements

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Short Communication

The terms biological rhythm and circadian rhythm are frequently used interchangeably. Your internal clock regulates a set of biological functions called rhythms. They regulate sleep and wakefulness, body temperature, hormone secretion, and other functions. In response to your environment, your body maintains its biological cycles by releasing a range of substances at the molecular level. Your biological cycles can be maintained or disrupted by your light exposure, eating habits, and other environmental stimuli. Biological cycles can be disrupted, resulting in major health issues [1].

Biological Rhythms in Action

The suprachiasmatic nucleus, an internal clock in your brain, regulates your biological rhythms (SCN). It's found in the hypothalamus. The autonomic nervous system and the pituitary gland are managed by this part of the brain. Throughout the day, your SCN transmits messages to regulate your body's activity. It happens in cycles. The majority of biological rhythms follow a 24-hour period. Others, like menstrual cycles, operate over longer periods of time. To indicate how long each sort of biological rhythm lasts, it is given a name:

- Day-to-day (night and day)
- Circadian rhythms (24 hours)
- Ultradian is a term used to describe a (less than 24 hours)
- Circalunar/Infradian (1 month)
- Once a year (1 year)
- Light has the greatest impact on circadian and diurnal rhythms, which control functions such as sleep, body temperature, and hormone changes

What Are the Effects of Biological Rhythms?

The diurnal sleep-wake cycle is the main biological rhythm that most people are concerned with. It's the most obvious cycle you're likely to encounter on a frequent basis. It has a significant effect on your health. Your SCN transmits alertness messages to your body during the day as you receive light cues, telling it it's time to wake up. Your SCN activates the manufacture of melatonin, a sleep hormone, as the sun sets. Aside from sleep, biological rhythms have an impact on vital functions such as Metabolism, heartbeats per minute, Blood pressure is a measurement of how high or low, Temperature of the body, Hormone concentrations, production of urine [2].

Complications to Expect

Short-term and long-term factors can alter your biological rhythms. Natural changes in your biological cycles as you get older might sometimes produce these disturbances. It could also be attributed to changes in your environment or hobbies

Jet lag disorder and Shift work disorder

Jet lag is a condition that affects those who travel frequently. The most common interruption of your biological cycles is jet lag. Shift work disorder is a condition that occurs when people work in shifts. Work is yet another huge stumbling block [3].

References

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