

CIRCADIAN RHYTHM SLEEP DISORDERS

Circadian rhythm sleep disorders all involve a problem in the timing of when a person sleeps and is awake. The human body has a master circadian clock in a control center of the brain known as the suprachiasmatic nucleus (SCN). This internal clock regulates the timing of such body rhythms as temperature and hormone levels. The primary circadian rhythm that this body clock controls is the sleep-wake cycle. The circadian clock functions in a cycle that lasts a little longer than 24 hours.

The circadian clock is “set” primarily by visual cues of light and darkness that are communicated along a pathway from the eyes to the SCN. This keeps the clock synchronized to the 24-hour day. Other time cues, known as zeitgebers, also can influence the clock’s timing. These cues include meal and exercise schedules. Circadian rhythms and their sensitivity to time cues may change as a person ages.

Each circadian rhythm sleep disorder involves one of these two problems:

- You have a hard time initiating sleep.
- You struggle to maintain sleep, waking up frequently during the night.
- You tend to wake up too early and are unable to go back to sleep.
- Your sleep is nonrestorative or of poor quality.

Types of Circadian Rhythm Sleep Disorders

- Delayed sleep phase disorder (DSP)
- Advanced sleep phase disorder (ASP)
- Jet lag disorder
- Shift work disorder
- Irregular sleep-wake rhythm
- Free-running (nonentrained) type

Risk Groups

- DSP is more common in teens and young adults, occurring at a rate of 16 percent
- ASP is more common as people age, occurring in about one percent of middle-aged and older adults.
- Irregular sleep-wake rhythm may occur in nursing home residents and other people who have little exposure to time cues such as light, activity and social schedules.
- Free-running (nonentrained) type occurs in more than half of all people who are totally blind.
- Jet lag can affect anyone who travels by air, but symptoms may be more severe and may last longer in older people and when anyone travels in an eastward direction.
- Shift work disorder is most common in people who work night shifts and early-morning shifts

Effects

These are some of the effects that can occur because of a circadian rhythm sleep disorder:

- Sleep loss
- Excessive sleepiness
- Insomnia
- Depression
- Impaired work performance
- Disrupted social schedules
- Stressed relationships