

• Shift Work Disorder

People who work during normal sleep hours may experience Shift Work Disorder. If you work through the night or frequently rotate shifts and have problems adjusting your sleep schedule, feel less energetic and struggle with focusing, you may have Shift Work Disorder. While this does not affect a particular group of people, it is more likely to occur in individuals who have unusual work schedules. As work related accidents and errors could increase with Shift Work Disorder, it is important to sleep as much as possible and keep a regular sleep schedule when not working.

• Free Running Type

Free Running Type, or Non-24-hour Sleep-Wake Disorder, refers to the condition in which a person's biological clock does not reset with daily clues such as light in the morning and therefore their sleep schedule shifts slightly everyday. This sleep disorder is particularly common to blind people (more than half of all blind people are affected), because their eyes cannot respond to light cues.



Potential Insomnia induced by a Circadian Rhythm Sleep Disorder

Treatments

Fortunately, there are many different methods of treatment for these sleep disorders.

- The best way to deal with DSP would be through chronotherapy (changing your sleeping habits gradually such that your body becomes accustomed to going to bed earlier and therefore waking up earlier). Other treatments such as Light Therapy (exposure to a bright light, natural or not, at the time of waking) or melatonin (a naturally occurring compound that induces sleep, to be taken an hour or so before bed).
- ASP can be treated with chronotherapy that shifts your sleep schedule later or Bright Light Therapy, where the light exposure occurs in the evening such that sleep can occur later.
- Jet Lag can be easily remedied by time spent in the new time zone and adequate sleep. Melatonin and light therapy can be used, though the extent and timing depends on the individual.
- As mentioned above, for Shift Work Disorder, it is important to sleep as much as possible, for about 7 to 8 hours a day, and to aim for a normal sleep schedule when not working. It would also be beneficial to reduce the number of late night and rotating shifts. If helpful to the individual, melatonin can be administered to help induce sleep.

Hopefully this brochure has been helpful and informative for you! If you think you may suffer from one of the above types of Circadian Rhythm Sleep Disorders, you should contact your doctor or learn even more through the American Academy of Sleep Medicine website, <http://www.aasmnet.org/ContactUs.aspx>

CIRCADIAN RHYTHM SLEEP DISORDERS

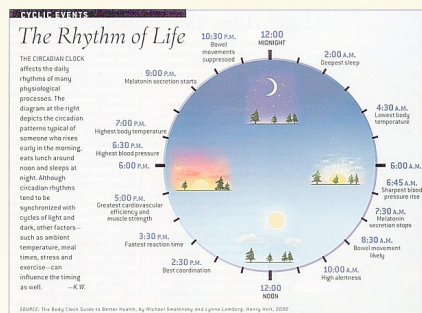


Have your sleeping patterns ever disturbed your social life? Do you stay up late at night and find it hard to wake up for your classes in the morning? Do you get tired early in the evening and wake up unusually early? Have you been experiencing difficulty getting your work done or unexplained depression?

If these questions apply to you, you may suffer from a Circadian Rhythm Sleep Disorder! Please keep reading to find out more about this often misdiagnosed sleep disorder.

Circadian Rhythm Sleep Disorder refers to a dyssomnia characterized simply by any problem with a person's circadian rhythm. The circadian rhythm, determined by the biological clock in the suprachiasmatic nuclei of the brain, describes the overall 24 hour cycle of physiological and behavioral processes in humans and other living things. Disturbances to the circadian rhythm, such as a mismatch between a person's sleep schedule and the environmental demands placed by society such as work or travel, can result in the development of Circadian Rhythm Sleep Disorders.

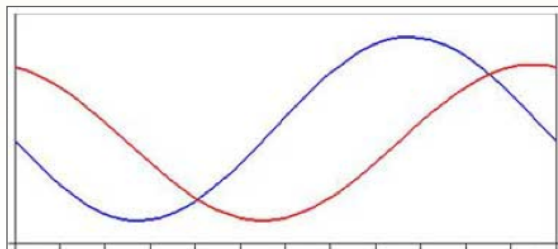
An example of the circadian rhythm:



If you have this sleep disorder, you will experience at least one of the following:

- Problems with falling asleep
- Sleep is not satisfying
- Difficulty staying asleep
- Waking up earlier than desired and can't fall back to sleep.

The graph below depicts an example of a Circadian Rhythm Sleep Disorder in which a person's circadian rhythm, in red, is mismatched with what is considered a normal sleep schedule, blue.



Details of Different Circadian Rhythm Sleep Disorders

The different symptoms can be explained by the specific type of sleep disorder you may have. There are five major categories for Circadian Sleep disorders which target various groups of people and describe the different shifts in the circadian rhythm. They are described as follows:

• Delayed Sleep Phase Disorder (DSP)

People who suffer from DSP display a tendency of going to bed unusually late, usually two or more hours later than what is considered normal, and they experience great difficulty waking up early in the morning. This is particularly common in adolescents and young adults (up to 16% of young adults have DSP!) whose schedules and social lives call for late nights and sleeping in. It is possible to have a stable sleep cycle as long as sleep needs are met regularly.

DSP was first described by a group including Dr. Elliot Weitzman at the Montefiore Medical Center. Even after the realization of DSP, this condition is still often misdiagnosed as insomnia. To be properly diagnosed, symptoms would have to be apparent for at least three months.

• Advanced Sleep Phase Disorder (ASP)

Opposite to DSP, this type of circadian rhythm sleep disorder describes sleep patterns for people who go to bed unusually early, such as around 6pm to 9pm and then wake up around 2am to 5 am. Like DSP, stable sleep can be achieved as long as this schedule is maintained. This condition most often affects middle age and older adults, though only about 1% of this group suffers from ASP. There is no difference in prevalence for men and women, but there is a strong genetic factor for many people with this sleep disorder.

• Jet Lag Disorder

This sleep disorder is only a temporary condition, usually lasting one or two days, and is caused by a long travel period and a change of time zones. For most, traveling from east to west has a larger disruptive effect on their circadian rhythm. People with jet lag experience sleepiness and alertness as unusual times in the day after travel because the body's biological clock is mismatched with the new time zone, but with proper sleep and circadian rhythm adjustments alleviate symptoms of jet lag (headaches, temporary insomnia, fatigue). There is no particular group associated with Jet Lag Disorder; anyone who travels across several time zones can experience this, though symptoms may last longer as age increases.



• Irregular Sleep-Wake Rhythm

This sleep disorder applies to people who do not have a regular sleep pattern and who often have changing sleep periods and irregular times of alertness and sleepiness. Irregular sleep-Wake Syndrome is found most often in people with neurological disorders such as dementia or in children with mental retardation.