# Phase shifts: our advices

## Delayed sleep phase disorder

Are you unable to fall asleep before a late hour and naturally wake up late as well ?

Our advice :

1. Dim the lights in the evening and expose yourself to natural light as soon as possible after waking up
2. Avoid screens in the evening or use blue-blocker glasses (against blue light)
3. Don't skip breakfast and in the evening eat early and favour light and balanced meals
4. Avoid alcohol, coffee, tea, soft drinks and tobacco after 4pm
5. Do sports in the morning and avoid physical activity at the end of the day and in the evening
6. Keep your bedroom's temperature between 18 and 20°C

## Advanced phase sleep syndrome

You need to go to bed early, very early even. And in the morning, you naturally wake up very early and can't get back to sleep. Our advice :

1. Do some physical activity in the late afternoon or early evening
2. Resist the urge to sleep in the evening, even if it means using light therapy to delay melatonin release

## On the web

Get information, learn how to recognise the main symptoms of various pathologies and find practical advice on sleep.

www.cenas.ch

www.cenas.ch/blog

Discover the Sleep Blog and test your sleep quality on Cenas' website.

# You believe you might be suffering from a circadian rhythm disorder ?

**Solutions exist to readjust your rhythm. If you think you might be affected by such disorder, make an appointment with your doctor. In most cases, they have the right tools to help you.**

You can also consult a doctor specialising in sleep disorders. They will give you the right diagnosis and guide you towards the most appropriate therapies.


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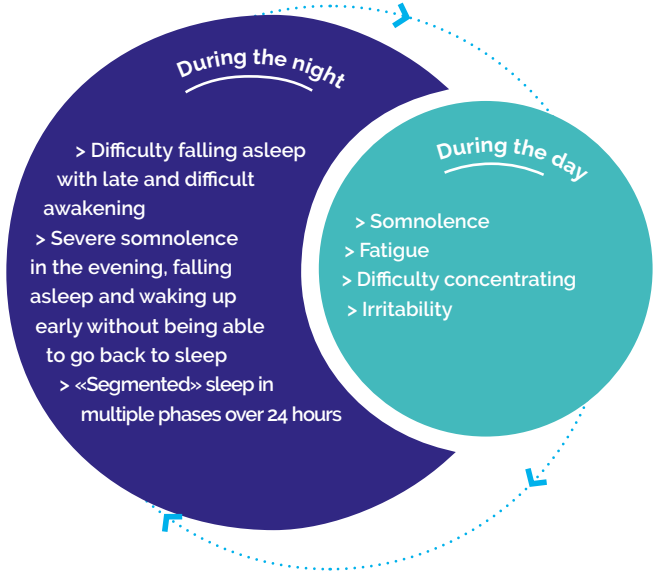
# Circadian rhythm disorders

Learn how to identify symptoms :

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## Did you know ?

**24.2h** This is the **average length of our circadian rhythm**. Due to this slight difference from the astronomical day, our internal clock has to adapt and synchronise itself every day.

**3 - 4 am** This is **the time of day when our body temperature is at its lowest** and we struggle to remain awake during a nightshift at study or work.

**10'000** This is **the number of neurons that make up our circadian clock** in the brain structure called the hypothalamus.

**9pm** This is the time of day when our melatonin levels start to rise significantly. **It's almost time for bed !**

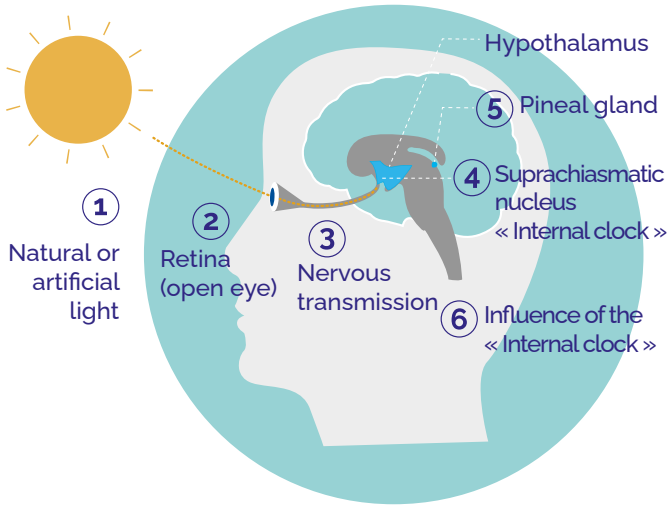
## What exactly is the circadian rhythm ?

In medicine, the circadian rhythm is a rhythm that « naturally » exists even without external cues. To regulate our sleep-wake cycle and synchronise it with the Earth's 24-hour cycle, our internal clock relies on external synchronisers or zeitgebers (time givers) such as meals, exercising, but the strongest remains daylight level.

### Using light for synchronisation

For light to be effective, you should favour fairly intense white or blue light in the morning and restrict it in the evening. Beware of screens before bed, which emit blue light that keep you awake.

## How does light affect our brain ?




**2** Light is perceived by specialised cells in the retina.

**3** Transmission of information on light intensity.

**4** Regulation of the sleep-wake cycle. Transmission of information to various areas of the brain and the rest of the body.

**5** Secretion of melatonin. In a bright environment, secretion is blocked.

**6** Variation of body temperature and hormone levels, meal rhythm, etc.

## Sleep-wake rhythm disorders

### Jet lag

Linked to the time difference experienced during long-distance travel. The rhythm created by the body's internal clock does not match external day-night signals.

### Delayed sleep phase disorder

The person naturally falls asleep and wakes up rather late. A physiological tendency in teenagers, this can be accentuated by screen time in the evening.

### Advanced phase sleep syndrome

The person falls asleep earlier than average, 7 or 8pm (sometimes even sooner), and wakes up between 2 and 4am. This is a physiological tendency in the elderly.

### Irregular sleep-wake rhythm

The person experiences segmented sleep patterns across at least 3 short and irregular phases. This disorder should not be confused with the need for a nap, which can be a sign of non-restorative sleep.

### Free-running circadian rhythm

In this case, sleep shifts every day by several dozen minutes. Most often, this disorder is related to living in a low-light environment or suffering from blindness.

### Shift work

Strongly staggered or irregular working hours (e.g. 3x8) are not compatible with our internal biological clock and can cause specific rhythm disorders, with an increased risk of accidents.

## Specific therapies

### Light therapy

Light therapy consists of exposure to white light of a given intensity and duration at specific times, depending on the disorder.

### Chronotherapy

Chronotherapy consists of shifting the bedtime and wake-up time of patients with a significant phase delay over a period of several days until a normal rhythm is restored.

### Melatonin

Melatonin-based medicines can be administered before bedtime. In visually impaired patients, for instance, this is a good way of recalibrating sleep over a 24-hour cycle.