

# Narcolepsy

**Syed Zuriat Abbas**

1st Year MBBS, Islamabad Medical and Dental College, Islamabad Pakistan

## Key points

- What is Narcolepsy?
- Causes of narcolepsy
- Treatment of narcolepsy
- Factors determining complexity of disease

Narcolepsy is a rare neurological condition that disturbs the sleep wake cycles and is characterized by excessive sleepiness in the daytime at various times throughout the day. People with narcolepsy usually urge to sleep. If the urge becomes overwhelming, one can fall asleep for periods lasting from a few second to several minutes and even hours. This condition of sleepiness can affect the normal routine of patient seriously as patient can fall asleep at any time while doing any type of work like driving, studying, walking, running etc. Suddenly falling asleep during narcolepsy has no cure till now and this chronic condition lasts lifelong.<sup>1</sup>



<https://blog.walgreens.com/wellness/sleep/narcolepsy-causes-symptoms-and-medications.html>

## Causes

Basic cause of narcolepsy is not known. Only thing known is that it is due to deficiency of a chemical called hypocretin or orexin which is released in hypothalamus of brain and controls the sleep wake cycle. Hypocretin

levels are often low in cataplex individuals. Known risk factors include:

**Age** - usually occurs between 10 and 30 years of age.

**Family history** - more likely if the condition is present in the family.

If problem is left untreated for prolonged period, it may lead to psychological complications such as Stigma or misconceptions about the condition, Hindrance with intimate relationships, Physical harm or vulnerability during episodes, and gaining weight.<sup>2</sup>

## Diagnosis

Diagnosis of narcolepsy requires careful analysis by a doctor familiar with the disease. It can go undiagnosed for several years as it is a very rare disease and the symptoms may be confused with several other diseases. The diagnostic process starts with a deep analysis of symptoms and patients past history. As this chronic disease cannot be cured the basic goal of treatment, then, is to control symptoms and improve daytime functioning of patient. Stimulants, lifestyle adjustments, and avoiding hazardous activities are all important in treating this disorder. Moreover, there are several classes of medications used to treat narcolepsy. For example, a health care provider usually suspects narcolepsy based on symptoms of excessive day time sleepiness and sudden loss of muscle tone, known as cataplexy. Doctor will likely refer you to a sleep specialist. Formal diagnosis requires staying overnight at a sleep center for an in-depth sleep analysis.<sup>3</sup>

## Factors determining complexity of disease:

A sleep specialist will likely diagnose narcolepsy and determine how severe it is based on:

**Sleep history:** A detailed sleep history can help with a diagnosis. You'll likely fill out the Epworth Sleepiness Scale. The scale uses short questions to measure your degree of sleepiness. You'll answer how likely it is that you would fall asleep in certain times, such as sitting down after lunch.

**Sleep records:** You may be asked to write down your sleep pattern for a week or two. This allows your provider to compare how your sleep pattern may relate to how alert you feel.

**Use of ACTi graph:** Your health care provider also may ask you to wear an ACTi graph. This device is worn like a watch. It measures periods of activity and rest. It provides an indirect measure of how and when you sleep.

**Polysomnography:** This test measures signals during sleep using flat metal discs called electrodes placed on your scalp. For this test, you must spend a night at a medical facility. The test measures your brain waves, heart rate and breathing. It also records your leg and eye movements.

**Multiple sleep latency test:** This test measures how long it takes you to fall asleep during the day. You'll be asked to take four or five naps at a sleep center. Each nap needs to be two hours apart. Specialists will observe your sleep patterns. People who have narcolepsy fall asleep easily and enter into rapid eye movement (REM) sleep quickly.

**Genetic test:** Occasionally, a genetic test may be performed to see if you're at risk of type 1 narcolepsy. If so, your sleep specialist may recommend a lumbar puncture to check the level of hypocretin in your spinal fluid. This test is only done in specialized centers. These tests also can help rule out other possible causes of your symptoms. Excessive daytime sleepiness could also be caused by sleep deprivation, the use of sedating medicines and sleep apnea.<sup>4</sup>

### Treatment

**Stimulants:** These drugs provoke the central nervous system making individuals to remain wakeful during the day time.

**Serotonin reuptake inhibitors:** Suppress REM sleep, which helps ease the indications of cataplexy, hallucinations and sleep paralysis.

**Tricyclic antidepressants:** Used to treat depression. Recommended in rare cases.

**Central nervous system depressant:** Highly effective for treating cataplexy. Usually recommended in rare cases.

**Measures to reduce narcoleptic episodes:** Certain measures can be taken to evade undesirable and humiliating circumstances of narcoleptic or cataplexic episodes, or to reduce the chance of onset:

- Reducing the stress level
- Taking short naps around the day
- Daily exercises
- Strict sleep time schedules
- Counseling to deal with embarrassment trauma.<sup>5</sup>

### References

1. Scammell TE. Narcolepsy. *New England Journal of Medicine*. 2015 Dec 31;373(27):2654-62.
2. Kornum BR, Knudsen S, Ollila HM, Pizza F, Jennum PJ, Dauvilliers Y, Overeem S. Narcolepsy. *Nature reviews Disease primers*. 2017 Feb 9;3(1):1-9.
3. Bassetti C, Aldrich MS. Narcolepsy. *Neurologic clinics*. 1996 Aug 1;14(3):545-71.
4. Aldrich MS. Narcolepsy. *Neurology*. 1992 Jul 1;42(7 Suppl 6):34-43.