

## Narcolepsy

**Narcolepsy:** (naar ko lep see) [Greek narc = numbness, plus lexis = attack] a sleep disorder featuring attacks of REM or dream sleep into wakefulness, as well as attacks of wakefulness into sleep.

Like other Hypersomnias, Narcolepsy is characterized by a feeling of excessive tiredness. Narcolepsy is a chronic, lifelong condition.

## Features

Narcolepsy affects the brain's ability to keep wakefulness and sleep (especially dream sleep) from intruding upon one another. As a result, a 'tetrad' of four unique symptoms tend to accompany narcolepsy:

**Sleep Attacks:** a sudden, overwhelming urge to sleep, which lasts for seconds to possibly more than an hour and may incorporate REM sleep and dreaming. Sleep attacks can happen anytime and anywhere, even while eating dinner or walking across the street.

**Cataplexy:** a sudden loss of muscle tone, possibly involving the arms, legs or facial muscles. It may be precipitated by strong emotion such as anger or laughter. Cataplexy might last from a few seconds to an hour or more, in severe cases.

**Hypnagogic Hallucinations:** glimpses of REM sleep (dreams) that occurs at the onset of sleep, or upon awakening and usually lasts only a few seconds.

**Sleep Paralysis:** the inability to move the skeletal muscles for a few seconds to minutes.

## Diagnosis

A two-part sleep study is needed to identify narcolepsy, which takes a single night and part of the following day. The overnight part of the study involves a Polysomnogram (PSG), which is a standard part of all sleep

studies. The PSG records muscular activity, sleep stages, plus additional bodily functions. The daytime part of the study, called a Multiple Sleep Latency Test (MSLT) records sleep-related activity during at least four scheduled naps the following day. Collectively, this two-part study identifies the misplaced fragments of REM sleep associated with narcolepsy.

## Treatment

Narcolepsy is generally treated with a combination of medication and lifestyle modifications.

**Lifestyle Modifications:** scheduled daytime naps of 30 minutes or less and other lifestyle modifications reduce narcoleptic attacks and help medication to work better. Several medications are available to treat symptoms:

**Stimulating Medication:** promotes wakefulness while reducing or eliminating sleep attacks. Includes: Modafinil (Provigil) and Methylphenidate (Ritalin).

**Anti-cataplectic Medication:** reduces episodes of cataplexy. Includes: tricyclic antidepressants such as clomipramine (Anafranil) and imipramine (Tofranil). Also includes selective serotonin reuptake inhibitors such as fluoxetine (Prozac), and a new drug, Venlafaxine (Effexor).

**Central Nervous System Depressant:** Sodium Oxybate (Xyrem), also known as gamma hydroxybutyrate, treats both excessive daytime sleepiness and cataplexy. This drug has been approved as a Schedule III controlled substance. It is most often prescribed for severe narcolepsy with cataplexy.



## Do I have Narcolepsy?

I feel excessively tired, even after sleeping.

I have irresistible sleep attacks.

I awaken frequently during the night.

I feel tired, even after sleeping.

I do things without realizing what I've done (Automatic Behavior).

I have trouble concentrating.

I sometimes feel as if I cannot move when awakening or falling asleep.

I experience episodes of muscle weakness.

## Narcolepsy Mechanics

Narcolepsy is strongly associated with low levels of a chemical in the brain called Hypocretin. Present in spinal fluid but related to activity in a sleep-regulating area of the brain called the hypothalamus, this protein may be affected by the presence of a certain gene.

A combination of factors tends to be present in those with narcolepsy. Some combination of the following must be present:

**Heredity:** Up to 10% of people with narcolepsy have a relative with symptoms--and quite possibly a gene that effects hypocretin levels.

**Autoimmune disorders:** conditions affecting the body's immune system, which protects healthy cells.

**Brain injuries:** such as brain tumors, degenerative diseases, or strokes.

**Contact with Toxins:** such as bug pesticides and lawn chemicals.

## Risks for Narcolepsy

- ✓ Genetics/heredity
- ✓ Autoimmune disorder
- ✓ Certain brain injuries
- ✓ Contact with toxins

## Effects of Narcolepsy

- ✓ Chronic daytime tiredness
- ✓ Nocturia (increased urination)
- ✓ Chronic memory problems
- ✓ Hypertension (high blood pressure)
- ✓ Lack of concentration
- ✓ Poor Job Performance
- ✓ Gastro-Esophageal Reflux Disease (GERD)

## Need more information?

Visit the SleepMedicine Education web site at: [sleepmedicineeducation.com](http://sleepmedicineeducation.com) for additional publications. See also:

**SleepIssues:** "Can't Wake Up?"

**SleepGuides:** "Treating Sleep Disorders"

To schedule an appointment at any Sleep Medicine Centers location, visit

[www.sleepmedicinecenters.com](http://www.sleepmedicinecenters.com)

or call:

(716)92-DREAM

(877)53-SNORE



Only 20 to 25% of people with narcolepsy experience the full tetrad of symptoms, according to the NHLBI.

The National Women's Health Information Center (NWHIC) reports that 8 to 12% of people with narcolepsy also have a close relative with the condition.

## Did You Know?

According to the American Academy of Sleep Medicine, narcolepsy affects approximately 1 in 2000 (or 125,000 to 250,000 people.

An estimated 150,000 people in the United States have undiagnosed narcolepsy, according to the National Heart, Lung, and Blood Institute (NHLBI).