

Sleep disorders - narcolepsy

Excessive daytime sleepiness that is not due to a mood disorder or medication is a common health problem that has three broad causes:

- Inadequate quantity of sleep from sleep restriction, sleep deprivation or timing disorders such as jet lag and shift work
- Inadequate quality of sleep due to a problem that fragments sleep such as sleep-disordered breathing, excessive limb movement, chronic pain or chronic illness
- A primary problem with keeping awake and vigilant during the daytime. The term narcolepsy is used for this group of disorders, although some would argue that narcolepsy should only be used when there is excessive daytime sleepiness and cataplexy.

Diagnosis of narcolepsy

Since symptoms vary so much between people, there is a laboratory test called the Multiple Sleep Latency Test, where daytime sleepiness is measured during four to five naps of 20 minutes. This test may also show if there is very early interruption of REM sleep.

Narcolepsy is a rare sleep disorder. A person with narcolepsy has excessive daytime sleepiness, with repeated episodes of sleep attacks, falling asleep involuntarily at inappropriate times, often several times every day. Narcolepsy can develop at any age, but it commonly starts either during the teenage years or in middle age. A person with narcolepsy usually has the condition for life.

All people with narcolepsy have extreme levels of sleepiness during the day, but how this shows itself can differ. For instance, some people with narcolepsy might fall asleep for 10 to 20 minutes several times every day, whether they want to or not. Others with this condition have more control over their naps and can choose when and where they will sleep, such as during lunch breaks.

Symptoms of narcolepsy

As well as extreme sleepiness and a tendency to fall asleep during the day, other symptoms of narcolepsy all reflect the intrusion of REM or 'dreaming' sleep outside of established sleep, including:

- **Cataplexy** – a sudden, brief reversible episode of muscle weakness brought on by a powerful emotional trigger such as laughing or anger. This can cause a collapse without loss of consciousness and can last for a few seconds to minutes. It is thought to be related to the muscle paralysis that occurs to everyone during REM or 'dreaming' sleep.
- **Hypnagogic hallucinations** – vivid dream-like perceptions that happen when the person isn't quite asleep and may involve hallucinations of sight, sound or feeling (seeing or hearing things).
- **Sleep paralysis** – at the point of falling asleep, or more often on waking, the person cannot speak or even breathe. This immobilisation can last for a few seconds.

A faulty brain structure is to blame

The hypothalamus is a small structure that sits deep inside the brain. Some of its vital roles include controlling body temperature, appetite and thirst. The hypothalamus is also connected to the reticular activating pathways, which are the brain structures that govern our sleep and wake cycles.

It is thought that narcolepsy is caused by a malfunctioning of the hypothalamus, which prevents pathways in the brain from working properly. Instead of introducing sleepy feelings towards the end of each day, narcolepsy prompts random sleepiness.

Some people with narcolepsy have a deficiency of a wake-promoting chemical called orexin or hypocretin. This deficiency seems to be common in patients who have cataplexy.

Treatment for narcolepsy

Treatment depends on the severity of the condition. If the symptoms are mild, simple management and coping techniques, like making time for naps during the day, are helpful. In more severe cases, medications that stimulate the nervous system are used, such as amphetamine, methylphenidate or modafinil.

Other conditions

Narcolepsy is a rare disorder. More common conditions that cause excessive daytime sleepiness include:

- **Sleep restriction** – is from not getting enough sleep due to late nights from social activities, TV or computer.
- **Jet lag, shift work** – the brain's internal 'clock' sets our sleep and wake cycles to coincide with day and night and this rhythm is disrupted by a different time zone or sleeping routine.
- **Depression** – lethargy to the point of sleepiness is a symptom of this emotional disorder.
- **Snoring and/or sleep apnoea** – broken sleep over a period of time leads to a sleep debt, which causes daytime sleepiness.
- **Fatigue, lethargy and lack of energy** – is a common problem that often needs to be investigated to exclude sleepiness.
- **Chronic fatigue syndrome** – is thought to be triggered by a viral infection. Other symptoms include weakness, aching muscles, sore throat and headaches.

Where to get help

- Your doctor
- Sleep disorder clinic

Things to remember

- A person with narcolepsy is extremely sleepy all the time and, in severe cases, falls asleep involuntarily several times every day.
- A malfunctioning brain structure called the hypothalamus is at fault.
- Mild cases of narcolepsy can be managed with regular naps, while severe cases need medication.

This page has been produced in consultation with, and approved by:

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