Excessive Daytime Sleepiness Medicine: An Overview of EDS Causes and Treatments

Our easy-to-read patient fact sheets provide clinicians with reliable information to share with patients and their caregivers.

Excessive daytime sleepiness (EDS) is prevalent in the United States, affecting an estimated 33% of Americans daily. The sleep disorder is characterized by increased drowsiness and a desire to sleep. People with EDS often report the following symptoms: persistent tiredness/fatigue, difficulty staying awake during the day, episodes of unintended sleep, frequent naps that do not satisfy tiredness, difficulty concentrating, and mood changes/increased irritability.

EDS can also cause notable physical and mental changes. It can negatively alter a patient's work performance and quality of life. Moreover, it is linked to psychiatric conditions such as depression.

EDS is linked to motor vehicle accidents and can even be equivalent to driving while intoxicated. Thus, it is crucial for patients to get evaluated if exhibiting symptoms.

Causes of Excessive Daytime Sleepiness

Common causes of EDS can fall into several categories, such as conditions that contribute to sleep fragmentation, sleep disruption/deprivation, psychiatric disorders, neurologic disorders, primary central nervous system (CNS) hypersomnias, medication use, and additional comorbidities.

Sleep fragmentation constitutes factors such as jet lag, altered sleep phase, and circadian rhythm disorders. Moreover, sleep disruption/deprivation includes conditions such as restless leg syndrome (RLS) and obstructive sleep apnea (OSA).

Psychiatric disorders that may also contribute to EDS include depression, anxiety, and stress disorders. Neurologic conditions that can lead to EDS consist of various disease processes such as stroke, epilepsy, Parkinson disease, and multiple sclerosis.

The category primary CNS hypersomnias includes narcolepsy and parasomnias.

Medications such as benzodiazepines, opiates, and antiepileptics can also cause daytime sleepiness. Other preexisting conditions that can lead to EDS include obesity, liver disease, chronic renal failure, and congestive heart failure.[2]

Excessive Daytime Sleepiness Evaluation and Diagnosis

During a patient evaluation for EDS, the provider will first ask about the patient's clinical history to gain a more comprehensive understanding of their background. The provider may also ask the patient to fill out a sleep survey known as the Epworth Sleepiness Scale (ESS) to help quantify the daytime sleepiness. Patients are asked to give a number from 0 to 3 on how likely they are to fall asleep in a series of scenarios. Also, patients may be asked to fill out a sleep diary to log their sleep over a few weeks for the provider to assess. Sleep partners may also be questioned to assess for behaviors the patient may not be aware of when sleeping (eg, excessive snoring and waking up).

Providers may prescribe an at-home or in-clinic sleep study called a polysomnography. This test simultaneously collects brain wave activity through probes placed on the patient's body. The patient keeps the test on while sleeping, and the data is then analyzed to characterize sleep quality and the presence of particular sleep disorders (eg, OSA). Another test is the multiple sleep latency test, in which the patient has a series of naps spaced hours apart. The time taken to fall asleep and rapid eye movement (REM) sleep is evaluated to assess EDS.

Managing Excessive Daytime Sleepiness

Managing EDS includes pharmacologic and nonpharmacologic treatments that are chosen based on the underlying cause, such as narcolepsy, OSA, or mood disorders. Common options include modafinil and armodafinil for promoting wakefulness in narcolepsy and OSA. Traditional stimulants like methylphenidate and amphetamine salts are also used to boost dopamine and norepinephrine.

For narcolepsy with cataplexy, sodium oxybate improves sleep quality and reduces daytime sleepiness.[7-9] Newer agents like solriamfetol and pitolisant target different wakefulness pathways without strong stimulant effects. In cases linked to mood disorders, antidepressants may help stabilize sleep patterns. Treatment is personalized based on patient needs and the specific cause of EDS.

Table 1. Medications for Excessive Daytime Sleepiness

Category	**Medications**	**Mechanism of Action**	**Common Indications**
Stimulants	Modafinil, Armodafinil	Promotes wakefulness through dopamine pathways	Narcolepsy, Sleep Apnea, Shift Work Disorder
	Methylphenidate	CNS stimulant that increases dopamine and norepinephrine	Attention-Deficit/Hyperactivity Disorder (ADHD), Narcolepsy
	Amphetamine salts	Enhances release of dopamine and norepinephrine	ADHD, Narcolepsy

Non-Stimulant Wakefulness Agents	Solriamfetol	Dopamine and norepinephrine reuptake inhibitor	Narcolepsy, Sleep Apnea
	Pitolisant	Histamine H3 receptor antagonist	Narcolepsy
Other Medications	Sodium oxybate	GABA receptor modulator, improves sleep architecture	Narcolepsy with Cataplexy
	Antidepressants	Modulate serotonin and norepinephrine	Depression-related EDS

Nonpharmacologic Ways to Improve Sleep Hygiene

Patients should be encouraged to establish a consistent sleep schedule, aiming for 7 to 9 hours of rest each night. Optimizing the sleep environment is essential — this includes keeping the room cool, minimizing light exposure, and ensuring bedding is comfortable.

To reinforce healthy sleep habits, providers recommend keeping the bedroom exclusively for sleep, avoiding activities like watching TV. Patients should also limit caffeine in the afternoon and avoid alcohol close to bedtime, as both can disrupt sleep quality. Relaxation and mindfulness techniques may further enhance sleep onset and quality.

Frequently Asked Questions

What is the difference between fatigue and sleepiness?

Fatigue is characterized by a patient not having enough energy to exert themselves to the same extent or to perform a task they could do normally. Sleepiness is the overwhelming urge to sleep.

How quickly will the medication work for my daytime sleepiness?

The effectiveness of the medication can vary, but many patients start to feel the effects within a few days to a week of starting treatment.

Will the medication make me feel jittery or anxious?

Some medications, particularly stimulants, can cause side effects like jitteriness or anxiety, but these effects are usually mild and can be managed by adjusting the dose.

Can I take these medications long-term?

Long-term use of EDS medications is often necessary for chronic conditions like narcolepsy, but it should be regularly monitored by your health care provider to ensure safety and effectiveness.

Are there any foods or drinks I should avoid while on these medications?

It's important to avoid excessive caffeine or alcohol while taking certain EDS medications, as they can interfere with the medication's effectiveness or increase side effects.

Will these medications cure my excessive daytime sleepiness?

Medications help manage and reduce symptoms of EDS, but they are not a cure, and ongoing treatment may be necessary to control the condition.

For a full list of references, please visit:
https://www.neurologyadvisor.com/factsheets/excessive-daytime-sleepiness-medicine/