CONDITION

Sleep epilepsy

Sleep epilepsy is epilepsy in which seizures happen mainly or only during sleep.

WHAT IT IS
Epilepsy with seizures mainly during sleep

BODY SYSTEM
Nervous system

MAIN SYMPTOMS
Jerking or stiffening, unusual movements, confusion, tongue biting

WHAT CAUSES IT
Genetic factors, brain changes, or unknown causes

HOW IT IS DIAGNOSED
Clinical history, EEG, sometimes overnight video-EEG

MAIN TREATMENT
Anti-seizure medicines and seizure-safety planning

CAN IT BE CURED?
Sometimes - surgery can remove a seizure source

IS IT AN EMERGENCY?
Sometimes - seizure lasts five minutes or repeats without recovery

LONG-TERM OUTLOOK
Many gain seizure control; some continue having seizures

Overview

Sleep epilepsy is an informal term for epilepsy in which seizures happen mainly or only while you are asleep. These are also called sleep-related or nocturnal seizures. They may occur soon after falling asleep, during the night, or around waking.

Epilepsy is a condition that causes an ongoing tendency to have seizures. A seizure is a temporary burst of abnormal electrical activity in the brain. The symptoms depend on which brain areas are involved.

Sleep epilepsy is not one single epilepsy syndrome. Several types of focal epilepsy, where a seizure begins in one part of the brain, can have a strong link with sleep. One example is sleep-related hypermotor epilepsy, which causes brief episodes of vigorous or unusual movement.

Recognising sleep-related seizures matters because they can disturb sleep, cause injuries, and affect concentration or mood the next day. They can also be mistaken for nightmares, sleepwalking, panic attacks, or other sleep disorders. One unusual night-time event does not necessarily mean you have epilepsy.

Symptoms

Sleep-related seizures can look very different from one person to another. A person sharing the room may notice them before you do.

Possible signs include:

Some focal seizures are short and happen several times in one night. Awareness may be partly or completely affected. Other seizures spread across both sides of the brain and cause loss of consciousness followed by stiffening and rhythmic jerking. These are called focal-to-bilateral tonic-clonic seizures.

Unlike many sleepwalking or night-terror episodes, seizures are often very brief, begin suddenly, and follow a similar pattern each time. However, appearance alone may not be enough to tell them apart.

Sleep epilepsy can also affect daytime life. Broken sleep may contribute to poor concentration, memory problems, irritability, or daytime sleepiness.

- Sudden stiffening, jerking, kicking, or cycling movements
- Repeated movements that look similar each time
- Sitting up, shouting, laughing, or making unusual sounds
- Turning the head or eyes to one side
- Waking with confusion, muscle pain, a headache, or extreme tiredness
- A bitten tongue, wet bed, bruises, or unexplained falls from bed

Causes and risk factors

A seizure happens when networks of brain cells produce abnormal electrical activity. Why this occurs is not always known.

Possible underlying causes include:

These causes do not mean that epilepsy itself is contagious. Although some forms have a genetic component, having an affected relative does not mean you will certainly develop

epilepsy.

Sleep affects electrical activity in the brain. Changes between sleep stages can make certain seizure networks more active. Lack of sleep may also make seizures more likely in some people who already have epilepsy.

Alcohol, illness, stress, and missed anti-seizure medicine can lower a person's seizure threshold. They are usually triggers rather than the underlying cause of epilepsy.

- Genetic changes that affect how brain cells communicate
- A difference in brain development
- Scar tissue from an earlier injury, stroke, infection, or lack of oxygen
- A brain tumour or another structural brain change
- An unknown cause despite appropriate testing

Diagnosis

Diagnosis begins with a detailed account of what happened. Because you may not remember a night-time event, information from someone who saw it can be especially helpful. A safely recorded phone video may also help, but no one should delay first aid or place themselves at risk to make one.

An electroencephalogram, or EEG, records the brain's electrical activity through small sensors placed on the scalp. It may show patterns that support an epilepsy diagnosis. A normal routine EEG does not rule out epilepsy because abnormal activity may not occur during the short recording.

Further testing may include:

Blood tests may help identify problems such as abnormal blood sugar or salts that can provoke seizures. They do not confirm sleep epilepsy.

If a sleep disorder is also possible, a sleep study may be considered. This records breathing, movement, heart rate, and other signals during sleep. Sometimes video-EEG and sleep-study measurements are combined.

- A sleep-deprived EEG, performed after reduced sleep
- An ambulatory EEG, which records activity over one or more days
- Overnight video-EEG monitoring, which records movement and brain activity together
- An MRI scan to look for structural changes in the brain

Treatment and management

Treatment is based on the seizure type, its cause, and how often it occurs. Age, pregnancy potential, other health conditions, and possible medicine interactions also matter.

Anti-seizure medicines are the main treatment. They reduce the chance of further seizures but do not treat every epilepsy in the same way. Finding the most suitable medicine may take time.

Take prescribed medicine consistently. Missing doses can increase seizure risk. Do not stop an anti-seizure medicine suddenly unless a clinician directs you to, as abrupt withdrawal can cause serious seizures. Report troublesome side effects rather than changing treatment on your own.

Some people continue having seizures despite trying appropriate medicines. Further assessment at a specialist epilepsy centre may then be offered. Depending on the cause, options can include surgery to remove the area where seizures start, an implanted nerve-stimulation device, or a medically supervised dietary treatment.

A personalised seizure plan can explain what others should do, when emergency help is needed, and whether prescribed rescue medicine should be used for prolonged or repeated seizures.

Practical management may also include:

Seizure alarms and movement monitors may reassure some households, but they can miss seizures or give false alerts. They cannot guarantee safety or prevent a serious complication.

- Keeping a record of seizures, sleep, missed medicine, and possible triggers
- Following a regular sleep schedule when possible
- Limiting alcohol if it triggers seizures or interacts with medicine
- Treating sleep apnoea or another diagnosed sleep disorder
- Making the sleeping area safer, such as reducing nearby sharp edges

Complications

Night-time seizures can cause falls from bed, facial injuries, shoulder injuries, tongue wounds, or choking on blood or saliva. Frequent seizures can repeatedly interrupt sleep, even when you do not fully wake.

Epilepsy and poor sleep can both affect memory, mood, school, work, and relationships. Anxiety about sleeping alone is also common and deserves support.

A seizure lasting five minutes or longer, or repeated seizures without recovery, may develop into status epilepticus. This is a medical emergency.

Sudden unexpected death in epilepsy, known as SUDEP, is uncommon but important to discuss. The strongest known risk factor is having ongoing tonic-clonic seizures. Risk is higher when these seizures happen during sleep or are not well controlled. Taking medicine as prescribed and working to control tonic-clonic seizures are important ways to reduce risk.

Prevention

Sleep epilepsy often cannot be prevented. This is especially true when it is linked to genetic factors, brain development, or a past brain injury.

If you already have epilepsy, you may be able to reduce the chance of further seizures by taking medicine consistently, getting adequate sleep, and avoiding triggers that reliably affect you. Treating an underlying cause or a separate sleep disorder may also improve seizure control.

General measures that reduce serious head injuries and strokes may prevent some cases of acquired epilepsy, but they cannot prevent every cause.

Living with it and what to expect

The course of sleep epilepsy is different for each person. Some become seizure-free with the first medicine they try. Others need several treatments, and some continue to have seizures over months or years.

Seizure patterns can change. Events that once happened only in sleep may occasionally occur while awake, so report any new pattern. Growth, ageing, illness, pregnancy, and changes in sleep can also affect seizure control or treatment needs.

Regular follow-up usually reviews seizure frequency, medicine side effects, sleep, mood, and safety. Even after a long seizure-free period, medicine should only be reduced through a planned clinical discussion.

Many people with sleep epilepsy study, work, exercise, travel, and have families. Driving rules depend on where you live and usually require reporting seizures to the relevant licensing authority. Night-time-only seizures may be treated differently in some places, but restrictions still apply.

When to get medical help

Arrange a routine appointment if you or someone close to you notices repeated, unexplained night-time movements, injuries, confusion, or other events that follow a similar pattern. Also seek follow-up if known seizures are becoming more frequent, changing in appearance, disturbing sleep, or causing medicine side effects.

Seek prompt medical advice after a breakthrough seizure if it is unusual for you, especially after a long seizure-free period. A medication review may be needed, but do not change the dose yourself.

Call emergency services if:

During a convulsive seizure, move dangerous objects away and cushion the head. Do not restrain the person or put anything in their mouth. Time the seizure. When the movements stop, place them on their side if you can do so safely, and stay with them until they recover.

- A seizure lasts five minutes or longer
- Another seizure starts before the person recovers
- It is the person's first known seizure
- Breathing remains difficult after the movements stop
- The seizure happens in water
- There is a serious injury
- The person is pregnant or has a serious underlying illness

Common questions

Is sleep epilepsy the same as a sleep disorder?

No. Epileptic seizures come from abnormal electrical activity in the brain. Sleep disorders such as sleepwalking, night terrors, and REM sleep behaviour disorder have different causes. Their movements can look similar, so overnight video-EEG or a sleep study may be needed.

Can I have a seizure in my sleep without knowing?

Yes. You may only notice indirect signs, such as waking with sore muscles, a bitten tongue, wet bedding, bruises, a headache, or unusual tiredness. These signs can have other causes and do not confirm epilepsy by themselves.

Can lack of sleep cause epilepsy?

Lack of sleep does not usually create epilepsy in someone who does not have it. It can trigger a seizure in a person with an existing tendency to seizures. It may also make abnormalities more likely to appear during an EEG.

Can sleep epilepsy go away?

Some people enter long-term remission, meaning seizures stop for years. Selected people may become seizure-free after surgery. Others need ongoing medicine, and some continue to have seizures despite treatment. "Cure" is used cautiously because seizures can sometimes return.

Should someone wake me if I have a seizure in my sleep?

They should not shake or restrain you. For a convulsive seizure, they should protect you from injury, time it, and help you onto your side once the movements stop. They should follow your seizure plan and call emergency services when the event meets emergency criteria.

Does having seizures only at night make them less serious?

Not necessarily. Night-time seizures may still cause injury, affect sleep, or become prolonged. Tonic-clonic seizures during sleep are also relevant to SUDEP risk. Good seizure control and regular follow-up remain important even when no daytime seizures occur.

Sources

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