CONDITION

# Functional neurological disorder

Functional neurological disorder causes genuine movement, sensation, or seizure-like symptoms because nervous system functioning is disrupted.

**WHAT IT IS**
Disrupted nervous system functioning causing genuine neurological symptoms

**BODY SYSTEM**
Nervous system

**MAIN SYMPTOMS**
Weakness, abnormal movement, sensory changes, seizure-like episodes

**WHAT CAUSES IT**
Altered brain network functioning, often without one trigger

**HOW IT IS DIAGNOSED**
Positive examination signs; video-EEG for seizure-like episodes

**MAIN TREATMENT**
Education, rehabilitation, psychological therapy, and symptom management

**CAN IT BE CURED?**
Sometimes - symptoms can fully resolve

**IS IT AN EMERGENCY?**
Sometimes - new stroke-like symptoms need emergency assessment

**LONG-TERM OUTLOOK**
Many improve, but symptoms may persist or return

## Overview

Functional neurological disorder, or FND, affects how the brain and nervous system control the body. It can cause weakness, abnormal movements, changes in sensation, or episodes that look like epileptic seizures.

The symptoms are real and can interfere with walking, work, communication, driving, relationships, and everyday independence. They are not imagined, consciously produced, or a sign that you are "faking."

In FND, the structure of the nervous system may look normal on routine scans, but the way brain networks communicate and control attention, movement, sensation, and awareness is disrupted. The problem is with nervous system functioning rather than damage that can always be seen on a scan.

FND is diagnosed by identifying characteristic features during an examination or a recorded episode. It should not be diagnosed only because tests are normal. FND can also occur alongside conditions such as epilepsy, migraine, multiple sclerosis, Parkinson's disease, chronic pain, or a previous stroke.

## Symptoms

Symptoms differ from person to person. They may be continuous, occur in episodes, or change over time.

Movement-related symptoms can include:

Some people have functional seizures, also called dissociative seizures. These episodes may involve shaking, collapse, unresponsiveness, staring, or changes in awareness. They resemble epileptic seizures but are not caused by the abnormal electrical activity seen in epilepsy.

Sensory symptoms can include numbness, tingling, altered vision, hearing changes, dizziness, or a feeling that part of the body does not belong to you.

FND can also occur with fatigue, pain, poor sleep, difficulty concentrating, and problems processing information. These symptoms may come from FND, another condition, medication effects, or a combination of factors.

Symptoms may become worse with physical illness, pain, lack of sleep, emotional strain, or close attention to the affected movement. They can also worsen without an obvious reason.

- Weakness or paralysis in an arm or leg
- Difficulty walking, dragging a leg, or sudden knee buckling
- Tremor, jerking, spasms, or unusual fixed postures
- Problems with balance or coordination
- Difficulty speaking, a changed voice, or trouble swallowing
- Facial movements or eyelid closure that cannot be controlled

## Causes and risk factors

There is no single cause of FND. Research suggests that brain networks involved in movement, sensation, attention, emotion, and the sense of control are working differently.

Symptoms may begin after a physical injury, infection, operation, migraine, panic attack, or another neurological event. Sometimes they develop gradually, and sometimes there is no

clear trigger.

Stressful experiences, anxiety, depression, or trauma can increase vulnerability or affect symptoms in some people. However, they are not present in everyone with FND and are not required for diagnosis. Telling someone that symptoms are "just stress" is inaccurate and can delay useful treatment.

Factors that may contribute to symptoms continuing include pain, fatigue, disrupted sleep, fear of movement, repeated medical emergencies, loss of physical conditioning, and uncertainty about the diagnosis. These are not personal failings.

FND is not known to have a simple inherited pattern. Having another neurological or mental health condition does not mean that new symptoms must be caused by FND.

## Diagnosis

FND is usually diagnosed by a neurologist or another clinician with relevant expertise. The diagnosis is based on positive signs: patterns that show that a symptom is functional and potentially reversible, rather than simply unexplained.

For example, functional weakness may change between different tasks. A leg that appears weak during one movement may produce more normal power during an automatic movement. A functional tremor may change rhythm when you copy a movement with the unaffected hand. These findings show altered control of movement; they do not show that the symptom is deliberate.

Functional seizures are often assessed using video-electroencephalography, or video-EEG. This records your behaviour and the brain's electrical activity during a typical episode. A recorded event without the electrical pattern of an epileptic seizure can support the diagnosis. Some people have both functional and epileptic seizures, so identifying their different episode types matters.

Depending on your symptoms, assessment may include blood tests, brain or spinal imaging, heart tests, or nerve and muscle tests. These tests look for other causes and for conditions that can exist alongside FND.

A useful diagnostic discussion should explain which positive features support FND, rather than saying only that scans were normal.

## Treatment and management

Treatment usually begins with a clear explanation of the diagnosis. Understanding that the symptoms are real, recognised, and related to nervous system functioning can make rehabilitation easier. You may need more than one appointment to discuss the diagnosis and review examination signs.

Treatment is matched to the main symptoms and may involve several professionals.

Specialist physiotherapy can help with weakness, walking problems, tremor, or other movement symptoms. Functional rehabilitation focuses on restoring more automatic movement, reducing unhelpful attention to each movement, and gradually rebuilding everyday activity. It differs from simply strengthening a damaged muscle.

Occupational therapy can help you manage personal care, household tasks, study, or work. It may also address fatigue, pacing, routines, equipment, and confidence in daily activities.

Speech and language therapy may be used for functional voice, speech, communication, or swallowing symptoms.

Psychological therapy can help some people understand symptom triggers, manage fear and distress, improve sleep, and change patterns that keep episodes going. Cognitive behavioural therapy is one option studied for functional seizures. Psychological treatment does not mean that the symptoms are invented or that FND is purely a mental health condition.

Medicines do not directly correct FND. They may be used for associated problems such as depression, anxiety, migraine, or certain types of pain. Anti-seizure medicines do not treat functional seizures unless epilepsy is also present. Medication changes should be planned with the prescriber rather than made suddenly.

If you have functional seizures, a safety plan may help people around you respond calmly. During an episode, they should protect you from injury, move dangerous objects away, and avoid restraining you or putting anything in your mouth. Local driving rules may restrict driving after episodes that affect awareness or control.

## Complications

FND can limit mobility, education, employment, social contact, and independence. Falls or seizure-like episodes can cause injury. Long periods of reduced activity may lead to loss of fitness, stiffness, and greater fatigue.

Repeated emergency visits and investigations can be distressing. An incorrect diagnosis may expose someone to unnecessary anti-seizure medicines, procedures, or other treatments.

Pain, poor sleep, anxiety, depression, and social isolation can add to the impact of the

neurological symptoms. Some people experience stigma because others misunderstand the condition.

FND can also make it harder to recognise a separate illness. A previous FND diagnosis should not automatically be used to explain every new symptom.

## Prevention

There is no proven way to prevent FND because it does not have one predictable cause.

Early recognition, a clear explanation, and suitable rehabilitation may reduce avoidable disability and unnecessary treatment. Managing sleep problems, pain, migraine, emotional distress, and other health conditions may support recovery, but it cannot guarantee that FND will not begin or return.

## Living with it and what to expect

The course of FND is different for each person. Some people improve substantially or become symptom-free, particularly when they understand the diagnosis and can take part in targeted treatment. Others have long-lasting symptoms or periods of improvement followed by relapse.

Recovery is often uneven. A temporary increase in symptoms does not necessarily mean that treatment has failed or that permanent damage is occurring. Illness, pain, disrupted sleep, major life events, or returning to demanding activities may bring symptoms back.

Over time, treatment often shifts toward recognising early warning signs, using rehabilitation strategies independently, and returning gradually to valued activities. Progress may mean fewer episodes, safer walking, more predictable energy, returning to work or study, or needing less help-not only complete symptom disappearance.

Regular follow-up may be useful when symptoms are changing, rehabilitation needs adjustment, or another condition is being managed. If the diagnosis remains unclear to you, it is reasonable to ask which examination findings support it.

## When to get medical help

Do not assume that a sudden or unfamiliar symptom is FND. Seek emergency help for:

These symptoms can have causes that need rapid assessment, even if you already have FND.

Arrange routine medical follow-up if established symptoms are becoming more frequent,

causing falls, limiting eating or drinking, or preventing normal activities. You should also seek review for new symptoms, medication side effects, worsening mood, or uncertainty about how to follow your treatment plan.

- New facial drooping, one-sided weakness, speech difficulty, or sudden vision loss
- A sudden, unusually severe headache
- A first seizure-like episode or a clearly different type of episode
- An episode lasting more than five minutes, repeated episodes without recovery, serious injury, or breathing difficulty
- Chest pain, severe shortness of breath, or loss of consciousness without prompt recovery
- Immediate risk of self-harm or suicide

## Common questions

Is functional neurological disorder a mental illness?

FND is classified as a neurological condition involving altered nervous system functioning. Thoughts, emotions, attention, and past experiences may influence symptoms, just as they can in many neurological conditions. Some people also have anxiety, depression, or trauma-related symptoms, while others do not.

Is FND all in my head?

FND involves the brain, but "all in your head" wrongly suggests that the symptoms are imagined. Weakness, tremor, sensory changes, and functional seizures are genuine and can cause substantial disability. They are not under ordinary voluntary control.

Can FND go away completely?

Yes, complete recovery is possible, but it cannot be promised. Some people improve partly, and some have persistent or recurring symptoms. The type and duration of symptoms, coexisting conditions, access to treatment, and response to rehabilitation can affect the course.

Does a normal MRI rule out other neurological conditions?

No. An MRI can identify many structural problems, but not every neurological condition appears on a routine scan. FND should be diagnosed from positive clinical features while appropriate assessment considers other possible causes.

Are functional seizures the same as epilepsy?

No. Epileptic seizures are caused by abnormal electrical activity in the brain. Functional

seizures arise through a different mechanism and do not show that epileptic electrical pattern during a typical recorded event. A person can have both conditions.

Can I work or exercise with FND?

Many people can work and exercise, although temporary adjustments may be needed. A gradual, structured return is often more manageable than alternating between complete rest and intense activity. Rehabilitation should focus on safe movement and meaningful daily goals.

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