CONDITION

Chronic inflammatory demyelinating polyneuropathy

Learn how chronic inflammatory demyelinating polyneuropathy affects the nerves, how it is diagnosed, and which treatments may improve strength and function.

WHAT IT IS
Rare immune-mediated peripheral nerve disorder

BODY SYSTEM
Nervous system

MAIN SYMPTOMS
Worsening weakness, numbness, balance problems, difficulty walking

WHAT CAUSES IT
Immune-mediated, exact cause unknown

HOW IT IS DIAGNOSED
Neurological examination, nerve testing, exclusion of other causes

MAIN TREATMENT
Immune treatments and rehabilitation

CAN IT BE CURED?
No, treatments reduce immune activity

IS IT AN EMERGENCY?
Sometimes, severe trouble breathing

LONG-TERM OUTLOOK
Treatment may improve function, but lasting weakness can occur

Overview

Chronic inflammatory demyelinating polyneuropathy, or CIDP, is a rare disorder of the peripheral nerves. These nerves carry messages between the brain and spinal cord and the rest of the body.

In CIDP, the immune system mistakenly attacks myelin, the protective covering around many peripheral nerves. This damage slows or blocks nerve signals. The underlying nerve fibers, called axons, may also become damaged, especially when inflammation is severe or continues for a long time.

CIDP most often causes gradually worsening weakness, numbness, and problems with

balance. Symptoms usually develop or continue to worsen for more than eight weeks. Some people have periods of improvement followed by relapses. Others have a steady or step-by-step decline.

The condition can affect people differently. Classic CIDP usually causes weakness on both sides of the body, affecting muscles near the trunk as well as the hands and feet. Recognized CIDP variants may affect certain body areas or nerve functions more than others.

CIDP matters because untreated nerve damage may lead to falls, loss of independence, and lasting weakness. However, several treatments can reduce immune activity and improve function. Early, accurate diagnosis helps prevent unnecessary nerve injury while also avoiding treatments for conditions that only resemble CIDP.

Symptoms

Symptoms often develop slowly. A person may first notice trouble climbing stairs, rising from a chair, walking on uneven ground, or using the hands. Symptoms commonly occur on both sides, although they may not be perfectly equal.

Possible symptoms include:

Weakness often involves both proximal and distal muscles. Proximal muscles are close to the center of the body, such as the shoulders and hips. Distal muscles are farther away, such as those in the hands, feet, and lower legs.

Some CIDP variants have a different pattern. Symptoms may be mostly sensory, mainly affect the arms or legs, or begin on one side. These patterns require careful evaluation because several other nerve disorders can look similar.

Problems involving breathing, swallowing, bowel or bladder control, or major changes in blood pressure are not typical of classic CIDP. Their presence may point to another condition or a serious complication that needs prompt assessment.

- Weakness in the hips, thighs, shoulders, hands, feet, or lower legs
- Numbness, tingling, or reduced ability to feel touch
- Poor balance, especially in the dark or with the eyes closed
- Difficulty walking, frequent tripping, or foot drop
- Reduced or absent reflexes
- Fatigue related to muscle weakness and the effort needed for daily activities
- Aching, burning, or electric-like nerve pain

- Difficulty with buttons, writing, opening containers, or other fine hand movements

Causes and risk factors

The exact cause of CIDP is not fully understood. It is considered an immune-mediated disorder, meaning the immune system reacts against parts of the peripheral nerves. Both antibodies and immune cells may contribute to inflammation and myelin damage.

CIDP is not contagious. It is generally not considered an inherited disorder, although inherited neuropathies can cause similar symptoms and may need to be ruled out.

CIDP can occur at any age but is more often recognized in adults. Some studies report that it occurs more often in men than in women. In most people, there is no clear trigger.

Certain medical conditions may occur alongside symptoms that resemble CIDP. These include diabetes, an abnormal blood protein called a monoclonal protein, some infections, and other immune disorders. These associations do not prove that one condition caused the other. They are important because common diabetic neuropathy, blood protein disorders, inherited neuropathies, and other illnesses may require different treatment.

A small group of people have antibodies against proteins at or near the nodes of Ranvier, which are gaps in myelin that help nerve signals travel quickly. These disorders may now be classified as autoimmune nodopathies rather than CIDP. They can have different symptoms and may not respond to standard CIDP treatment in the same way.

Diagnosis

There is no single test that confirms CIDP in every person. Diagnosis is based on the symptom pattern, neurological examination, nerve testing, and evidence that another condition is not a better explanation.

A clinician will ask when symptoms began, how quickly they changed, and whether there were relapses. The examination checks muscle strength, reflexes, sensation, coordination, balance, and walking.

Nerve conduction studies and electromyography are central to the evaluation. Nerve conduction studies measure how quickly and effectively electrical signals travel through nerves. Findings such as unusually slow conduction, blocked signals, or prolonged responses can show demyelination. Electromyography uses a fine needle to assess electrical activity in selected muscles and can help identify axon damage or another cause of weakness.

Testing may also include:

Cerebrospinal fluid often contains increased protein without a large rise in white blood cells. This finding can support CIDP, but it does not confirm the condition by itself. Protein can be elevated for other reasons, including age, diabetes, and spinal problems.

Doctors must distinguish CIDP from Guillain-Barré syndrome. Guillain-Barré syndrome usually reaches its most severe point within four weeks, while CIDP progresses or returns over a longer period. Other possible look-alikes include multifocal motor neuropathy, hereditary neuropathies, vitamin B12 deficiency, medication or toxin exposure, amyloidosis, and neuropathy associated with abnormal blood proteins.

Improvement with immune treatment may support the diagnosis, but treatment response alone is not proof of CIDP. Strength and function should be measured in an objective, repeatable way.

- Blood tests for diabetes, vitamin deficiencies, thyroid disease, abnormal blood proteins, infections, and other causes of neuropathy
- A lumbar puncture to examine cerebrospinal fluid, the liquid around the brain and spinal cord
- MRI or nerve ultrasound in selected cases to look for enlarged or inflamed nerve roots and nerve bundles
- Genetic testing when an inherited neuropathy is possible
- Nerve biopsy in unusual cases when other tests have not clarified the diagnosis

Treatment and management

Treatment aims to reduce inflammation, improve strength and mobility, prevent further nerve damage, and support daily function. The best approach depends on symptom severity, other health conditions, treatment response, side effects, and personal preferences.

Established first-line immune treatments include intravenous immunoglobulin, corticosteroids like prednisone or hydrocortisone , and plasma exchange.

Intravenous immunoglobulin, often called IVIG, contains purified antibodies collected from screened donor plasma. It is given through a vein and changes harmful immune activity through several mechanisms. Some people improve within weeks, while others need repeated treatment to maintain the benefit. Possible problems include headache, infusion reactions, blood clots, kidney injury, and, rarely, more serious reactions. A treatment team assesses individual risks and monitors infusions.

Corticosteroids reduce immune system activity. They may be taken by mouth or given in scheduled high-dose courses under medical supervision. Longer exposure can cause effects such as weight gain, mood or sleep changes, high blood pressure, increased blood sugar, infection risk, cataracts, and thinning bones. Steroids should not be stopped suddenly after ongoing use unless a clinician provides a safe tapering plan.

Plasma exchange removes part of the blood called plasma and replaces it with another fluid. This helps remove harmful antibodies and other immune substances. It can work relatively quickly but requires access to the bloodstream and repeated procedures. Low blood pressure, infection, bleeding, and catheter-related problems may occur.

For maintenance treatment, immunoglobulin may be given through a vein or under the skin. Subcutaneous immunoglobulin allows smaller amounts to be given beneath the skin on a regular schedule. It is generally used to maintain improvement rather than as the initial treatment for significant weakness.

If standard treatments do not work well or cause unacceptable effects, a neuromuscular specialist may consider other medicines that suppress or modify the immune system. Evidence for these medicines varies, and they may require blood tests or other safety monitoring.

Rehabilitation is an important part of care. Physical therapy can address strength, flexibility, balance, and safe movement. Occupational therapy can suggest ways to make dressing, bathing, work, and household tasks easier. Braces, canes, walkers, or other devices may improve safety and independence. Exercise plans should be adjusted to current strength so that activity is helpful without causing prolonged exhaustion.

Pain, sleep problems, and emotional stress also deserve attention. Nerve pain may need a different treatment approach from muscle or joint pain.

Complications

CIDP can lead to lasting weakness or sensory loss if nerve inflammation damages the axons. Recovery may be slower and less complete once significant axon loss has occurred.

Possible complications include falls, injuries, reduced hand function, difficulty working, and needing help with personal care. Weakness and changed walking patterns may also cause muscle tightness or joint discomfort.

Treatment can create complications of its own. These depend on the therapy and may include infection, blood clots, changes in blood pressure or blood sugar, bone loss, kidney problems, or difficulties with intravenous access. Regular monitoring helps identify these issues early.

Symptoms can also affect mood, relationships, and confidence. Anxiety or depression should be discussed with a healthcare professional rather than treated as an unavoidable part of living with CIDP.

Follow up

Routine follow-up usually includes checks of muscle strength, walking, balance, reflexes, sensation, and ability to perform daily tasks. Clinicians may use timed walking tests, grip strength, or disability scales to track whether treatment is helping.

Report new weakness, more frequent falls, worsening numbness, or a clear decline before the next routine visit. The treatment plan may need adjustment if improvement wears off between treatments or side effects are becoming difficult to manage. Do not change treatment timing or stop immune therapy without speaking with the prescribing team.

Seek urgent medical advice for rapidly worsening weakness, a new inability to walk safely, repeated falls, signs of infection while taking immune-suppressing treatment, or a possible blood clot such as new one-sided leg swelling and pain.

Call emergency services for severe trouble breathing, choking or inability to swallow, fainting, chest pain, sudden facial drooping, sudden one-sided weakness, or difficulty speaking. These symptoms are not typical changes to manage at a routine CIDP appointment and may have another serious cause.

Sources

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