

Guillain-Barre syndrome

Guillain-Barré syndrome is an autoimmune condition in which the person's nerves are attacked by the body's own immune defence system. As a result of the attack, the nerve insulation (myelin) and sometimes even the inner covered part of the nerve (axon) is damaged and signals are delayed or otherwise changed - this causes a spreading paralysis.

The syndrome appears to be triggered by acute viral or bacterial illnesses, such as respiratory or gastrointestinal infections, occurring one to three weeks earlier. The resultant antibodies attack the myelin sheaths that coat the nerve cells, causing paralysis, muscular weakness and strange sensations as the sensory nerves of the skin are affected.

Usually the symptoms start in the feet or legs and progress up the body over a few days or weeks. The disorder can be mild, moderate or severe, with life support needed in the worst cases. The exact cause is unknown and there is no cure. Most people spontaneously recover, though some will be left with permanent disabilities. This rare illness strikes between two and eight people in every 100,000 irrespective of gender or age, although it is more common in the 30 to 50 years age group. Other names for Guillain-Barré syndrome include acute idiopathic polyneuritis, acute idiopathic polyradiculoneuritis and Landry's ascending paralysis.

Symptoms

The symptoms of Guillain-Barré syndrome include:

- Muscle weakness and paralysis affecting both sides of the body.
- Jerky, uncoordinated movements.
- Numbness.
- Muscle aches, pains or cramps.
- Odd sensations such as vibrations, buzzing or 'crawling' under the skin.
- Blurred vision.
- Dizziness.
- Breathing problems.
- The symptoms typically start in the feet or legs and progress up the body.
- Sometimes, the symptoms start in the arms and progress downwards.
- Symptoms may take a few days or weeks to progress.
- After the symptoms remain steady and peaked for a short time, the person starts to recover.
- Recovery may take six months to two years or more.

The syndrome is potentially life threatening

The symptoms of Guillain-Barré syndrome vary from mild to life threatening, depending on which nerves are damaged and to what extent. The nerves of the autonomic nervous system can be affected, leading to changes in blood pressure, heart rate, vision, kidney function and body temperature. Potentially fatal complications of Guillain-Barré syndrome include pneumonia, deep vein thrombosis and respiratory failure.

The cause is unknown

The exact cause of Guillain-Barré syndrome remains unclear. In most cases, a person with Guillain-Barré syndrome experienced some form of viral or bacterial infection some days or weeks prior to the onset of symptoms. The most commonly identified trigger is gastrointestinal infection with *Campylobacter jejuni* - one of the most common causes of food poisoning. Some of the viral infections associated with the syndrome include respiratory and gastrointestinal infections, herpes zoster, glandular fever and viral hepatitis. Other triggers may be surgery, insect bites and vaccinations. Whatever the trigger may be, the immune cells of the body are prompted to attack and destroy the insulation of the nerve cells (myelin sheath). Sometimes the nerve cell bodies are targeted too. There is no evidence to suggest that Guillain-Barré syndrome is contagious.

Diagnosis methods

Guillain-Barré syndrome can be difficult to diagnose because the symptoms may seem vague and unrelated. Diagnosis relies on a number of tests including:

- Physical examination
- Muscle strength tests
- Muscle activity tests
- Reflex tests, such as the knee-jerk reaction
- Nerve conduction velocity tests
- Spinal tap, to check for higher than expected levels of protein in the cerebrospinal fluid.

Treatment options

The progress of the disorder is very difficult to predict. Most people diagnosed with Guillain-Barré syndrome are hospitalised so that any complications which affect their vital functions can be treated promptly. There is no cure, but treatment options include:

- **Plasmapheresis** - blood is taken from the patient. The immune cells are removed, and the remaining red blood cells are returned to the body.
- **Gammaglobulin (IVIG)** - trials have proven the effectiveness of this form of treatment. IVIG is given by infusion into a vein, usually every day for five days. Each infusion takes about two hours.

Long term outlook

Estimates vary, but around nine out of 10 people with Guillain-Barré syndrome survive and approximately 75 to 90 per cent recover completely. Around 10 to 15 per cent will be troubled by some form of permanent disability. Generally speaking, the earlier the symptoms start to ease, the better the outlook. Even so, it can take anywhere from six months to two years or more to fully recover. Physical therapy is important as it prevents muscle contractures and associated deformities. Health care professionals involved in the person's rehabilitation may include neurologists, physiotherapists, occupational therapists, social workers and psychologists.

Where to get help

- Your doctor
- Guillain-Barré Syndrome Association Tel. (02) 9869 1839

Things to remember

- Guillain-Barré syndrome is a form of nerve inflammation.
- The cause is unknown, but most cases seem to be triggered by a bacterial or viral illness.
- Most people recover, but it may take six months to two years or more.
- There is no cure.

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

Guillain-Barre Syndrome Association

Content on this website is provided for education and information purposes only. Information about a therapy, service, product or treatment does not imply endorsement and is not intended to replace advice from your doctor or other registered health professional. Content has been prepared for Victorian residents and wider Australian audiences, and was accurate at the time of publication. Readers should note that, over time, currency and completeness of the information may change. All users are urged to always seek advice from a registered health care professional for diagnosis and answers to their medical questions.

For the latest updates and more information, visit www.betterhealth.vic.gov.au

Copyright © 1999/2012 State of Victoria. Reproduced from the Better Health Channel (www.betterhealth.vic.gov.au) at no cost with permission of the Victorian Minister for Health. Unauthorised reproduction and other uses comprised in the copyright are prohibited without permission.