Guillain-Barré syndrome

**Guillain-Barré (pronounced ghee-lan bar-ray) syndrome is a rare and serious condition of the peripheral nervous system. It occurs when the body's immune system attacks part of the nervous system.**

The exact cause of Guillain-Barré syndrome is unknown. However, most people (around 60%) develop the condition shortly after having a viral or bacterial infection. It's thought infection may trigger the immune system to attack nerve roots and peripheral nerves.

The symptoms of Guillain-Barré syndrome usually develop two to four weeks after a minor infection, such as a [cold](http://www.nhs.uk/conditions/cold-common/pages/introduction.aspx), [sore throat](http://www.nhs.uk/conditions/sore-throat/pages/introduction.aspx) or [gastroenteritis](http://www.nhs.uk/conditions/Gastroenteritis/Pages/Introduction.aspx) (an infection of the stomach and bowel).

Symptoms often start in your feet and hands before spreading to your arms and then your legs. Initially, you may have:

* pain, tingling and numbness
* progressive muscle weakness
* co-ordination problems and unsteadiness (you may be unable to walk unaided)

The weakness usually affects both sides of your body, and may get worse over several days.

The peripheral nervous system

The peripheral nervous system is the network of nerves that lie outside the central nervous system, including the motor nerves, which the brain uses to control the muscles.

In Guillain-Barré syndrome, the immune system (the body's natural defence against infection and illness) attacks these nerves, causing them to become inflamed and stop working.

Diagnosing Guillain-Barré syndrome

It can sometimes be difficult to distinguish the symptoms of Guillain-Barré syndrome from other brain and nervous system disorders. Therefore, two tests are usually used to confirm the diagnosis. They are:

* **nerve conduction studies and electromyography (EMG)**–tests that measure nerve and muscle function
* [**lumbar puncture**](http://www.nhs.uk/conditions/Lumbar-puncture/Pages/Introduction.aspx) – where a small needle is used to remove a small amount of fluid from the spinal canal for analysis

You may also have [blood tests](http://www.nhs.uk/conditions/Blood-tests/Pages/Introduction.aspx) to rule out other possible causes.

Treating Guillain-Barré syndrome

Guillain-Barré syndrome is treated in hospital in a general ward, a neurology ward or an [intensive care unit (ICU)](http://www.nhs.uk/conditions/Intensive-care/Pages/Introduction.aspx), depending on the severity of the condition.

There are two main treatments:

* intravenous immunoglobulin
* plasma exchange (plasmapheresis)

These treatments target the antibodies (infection-fighting proteins) produced by your immune system to prevent them further damaging your peripheral nerves.

Intravenous immunoglobulin is slightly safer and easier to give than plasma exchange. However, both treatments are equally effective.

Recovery

Most people with Guillain-Barré syndrome make a full recovery.

However, you may need to spend several weeks or months in hospital and it may take a year or more to fully recover.

Therapies such as counselling, physiotherapy, occupational therapy and speech and language therapy are available to help you recover.

Complications

Some people won't recover completely from Guillain-Barré syndrome and up to 20% of people still experience some muscle weakness after three years.

Possible long-term complications include:

* not being able to walk unaided – for example, needing a [wheelchair](http://www.nhs.uk/nhsengland/aboutnhsservices/social-care-services/pages/nhs-wheelchair-services.aspx)
* loss of sensation (sensory [ataxia](http://www.nhs.uk/Conditions/Ataxia/Pages/Introduction.aspx)) that may cause a lack of co-ordination
* loss of balance
* muscle weakness in your arms or legs
* problems with your sense of touch (dysaesthesia) – often felt as a burning or tingling sensation

Some people with Guillain-Barré syndrome also experience persistent fatigue (extreme tiredness).