Mrs. S, aged 35 years, reports numbness, tingling, and weakness in her lower extremities. She is extremely worried because she remembers that her mother had these symptoms prior to being diagnosed with multiple sclerosis (MS). (Learning Objectives: 16 and 17)

1.      What is multiple sclerosis?

2.      Why does the nurse think Mrs. S is so concerned that it could be MS?

3.      What diagnostic testing would be helpful to confirm or rule out MS?

Within 24 hours, Mrs. S started to develop paralysis, which was moving up her legs. A tentative diagnosis of Guillain-Barré syndrome was made.

4.      What is Guillain-Barré syndrome?

5.      How is GB typically treated?

1. Multiple sclerosis (MS) is an immune-mediated inflammatory disease that attacks myelinated axons in the central nervous system , destroying the myelin and the axon in variable degrees and producing significant physical disability within 20–25 years in more than 30% of patients. The hallmark of MS is symptomatic episodes that occur months or years apart and affect different anatomic locations.
2. Because her mother had these symptoms prior to being diagnosed with multiple sclerosis (MS).
3. MS is diagnosed on the basis of clinical findings and supporting evidence from ancillary tests. Tests include the following:

* Magnetic resonance imaging(MRI): The imaging procedure of choice for confirming MS and monitoring disease progression in the CNS.
* Evoked potentials: Used to identify subclinical lesions; results are not specific for MS.
* Lumbar puncture: May be useful if MRI is unavailable or MRI findings are nondiagnostic; CSF is evaluated for oligoclonal bands and intrathecal immunoglobulin G (IgG) production.

1. Guillain-Barré syndrome (GBS) also known as infectious polyneuritis is an autoimmune disease in which there is an acute inflammation of the spinal and [cranial nerves](https://nurseslabs.com/nervous-system/) manifested by motor dysfunction that predominates over sensory dysfunction. The exact cause is unknown, but it is associated with a previously existing viral [infection](https://nurseslabs.com/risk-for-infection/) or immunizations.  Classical clinical manifestation may include ascending and symmetrical motor weakness and absent or diminished reflexes.
2. There's no cure for Guillain-Barre syndrome, But two types of treatments can speed recovery and reduce the severity of the illness:

* **Plasma exchange (plasmapheresis):** The liquid portion of part of your blood (plasma) is removed and separated from your blood cells. The blood cells are then put back into your body, which manufactures more plasma to make up for what was removed. Plasmapheresis may work by ridding plasma of certain antibodies that contribute to the immune system's attack on the peripheral nerves.
* **Immunoglobulin therapy:** Immunoglobulin containing healthy antibodies from blood donors is given through a vein (intravenously). High doses of immunoglobulin can block the damaging antibodies that may contribute to Guillain-Barre syndrome.

These treatments are equally effective. Mixing them or administering one after the other is no more effective than using either method alone.

* Movement of arms and legs by caregivers before recovery, to help keep muscles flexible and strong
* Physical therapy during recovery to help cope with fatigue and regain strength and proper movement
* Training with adaptive devices, such as a wheelchair or braces, to give mobility and self-care skills