

Cerebrovascular Diseases

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Cerebrovascular disease

- Cerebrovascular disease refers to a group of disorders that the function or structure of cerebrum is disturbed due to problems in its blood vessels (arteries and veins).
- Cerebrovascular diseases may cause a reduction of blood flow to the brain (ischemia) or bleeding (hemorrhage) in a part of brain.
- Restrictions in blood flow may occur from vessel narrowing (stenosis), clot formation (thrombosis), blockage (embolism) or blood vessel rupture (hemorrhage). Lack of sufficient blood flow (ischemia) affects brain tissue and may cause a stroke.

What are the types of cerebrovascular disease?

- Stroke
- Brain bleed, hemorrhage (intracranial hemorrhage).
- Reversible cerebral vasoconstriction syndrome.
- Subarachnoid hemorrhage (SAH).
- Transient ischemic attack (TIA) or mini stroke.
- Hereditary hemorrhagic telangiectasia (HHT).
- Moyamoya disease.
- Cerebral Venous Thrombosis

Stroke

- A stroke is a serious life-threatening medical condition that happens when the blood supply to part of the brain is cut off.
- Strokes are a medical emergency and urgent treatment is essential.
- The sooner a person receives treatment for a stroke, the less damage is likely to happen.

Symptoms of a stroke

The main symptoms of stroke can be remembered with the word FAST:

- Face – the face may have dropped on 1 side, the person may not be able to smile, or their mouth or eye may have dropped.
- Arms – the person with suspected stroke may not be able to lift both arms and keep them there because of weakness or numbness in 1 arm.
- Speech – their speech may be slurred or garbled, or the person may not be able to talk at all despite appearing to be awake; they may also have problems understanding what you're saying to them.
- Time – it's time to dial emergency immediately if you see any of these signs or symptoms.

Causes of a stroke

- Like all organs, the brain needs the oxygen and nutrients provided by blood to function properly.
- If the supply of blood is restricted or stopped, brain cells begin to die. This can lead to brain injury, disability and possibly death.
- There are 2 main causes of strokes:
 - ischaemic – where the blood supply is stopped because of a blood clot, accounting for 85% of all cases
 - haemorrhagic – where a weakened blood vessel supplying the brain bursts

TIA

- There's also a related condition called a transient ischaemic attack (TIA), where the blood supply to the brain is temporarily interrupted.
- This causes what's known as a mini-stroke. It can last a few minutes or persist up to 24 hours.
- TIAs should be treated urgently, as they're often a warning sign you're at risk of having a full stroke in the near future.
- Get medical advice as soon as possible, even if symptoms get better.

RFs of stroke

Certain conditions increase the risk of having a stroke, including:

- high blood pressure (hypertension)
- high cholesterol
- irregular heart beats (atrial fibrillation)
- diabetes

Diagnosis and Tests

- Cerebrovascular disease is a medical emergency that needs a quick diagnosis. A healthcare provider will first ask about medical history, and will do a physical exam.
- If your provider suspects cerebrovascular disease, they'll sometimes use tests such as:
 - Brain CT scan
 - MRI (magnetic resonance imaging)
 - Electrocardiogram (EKG).
 - Cerebral angiography.
 - Coronary computed tomography angiogram.

Recovering from a stroke

- People who survive a stroke are often left with long-term problems caused by injury to their brain.
- Some people need a long period of rehabilitation before they can recover their former independence, while many never fully recover and need ongoing support after their stroke.
- Local authorities should provide free reablement services for anyone assessed as needing them. These services help the person recovering from a stroke learn or relearn the skills they need to live at home independently.
- Some people will continue to need some form of care or help with their daily activities.

Complications of hemorrhagic stroke may include:

- Blood clots (deep vein thrombosis or pulmonary embolism)
- Brain swelling
- Seizures
- Memory loss
- Vision and hearing problems
- Muscle weakness
- Bed sores
- Depression
- Risk of pneumonia

Complications of ischemic stroke may include:

- Blood clots (deep vein thrombosis or pulmonary embolism)
- Urinary tract infections, or UTI
- Bowel and bladder problems
- Risk of pneumonia
- Muscle weakness
- Bed sores
- Mobility problems and falls

Complications of TIA – also referred to as – may include:

- Blood clots (deep vein thrombosis or pulmonary embolism)
- Difficulty swallowing
- Urinary tract infections, or UTI
- Bed sores
- Mobility problems and falls

Complications of brain stem stroke may include:

- Difficulty swallowing
- Difficulty breathing
- Loss of sensation
- Vision problems
- Motor control problems
- Coma
- Locked-in syndrome, when the entire body is paralyzed except for the eyes