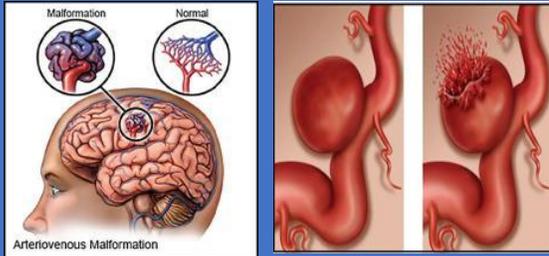


# WHAT IS A STROKE?



A stroke occurs when the blood supply to a part of the brain is interrupted. A blocked or broken blood vessel deprives brain cells of crucial oxygen and nutrients, which causes cells to die. Damaged brain cells do not regrow. The problems experienced after a stroke are usually a result of brain cell death.

There are 2 primary types of stroke, *hemorrhagic* and *ischemic*. In a hemorrhagic stroke, a blood vessel breaks. In an ischemic stroke, a blood vessel becomes blocked. In either case, brain cells are deprived of the oxygen and nutrients they need.

## Types of Hemorrhagic Stroke

2 kinds of hemorrhagic stroke. In both, a blood vessel ruptures, disrupting blood flow to part of the brain.

### 1. Intracerebral Hemorrhage:

- Most common type of hemorrhagic stroke
- Occurs when a blood vessel bleeds or ruptures into the tissue deep within the brain
- Most often caused by chronically high blood pressure or aging blood vessels
- Can be caused by an arteriovenous malformation (AVM) = A cluster of abnormally formed blood vessels which can rupture and cause bleeding into the brain

### 2. Subarachnoid hemorrhage:

- Occurs when an aneurysm (a blood-filled pouch that balloons out from an artery) on or near the surface of the brain ruptures and bleeds into the space between the brain and the skull
- Often caused by high blood pressure
- Can be more likely to occur in conjunction with high blood pressure, cigarette smoking, use of oral contraceptives (particularly those with high estrogen content), excessive alcohol consumption or use of recreational drugs

## Types of Ischemic Stroke

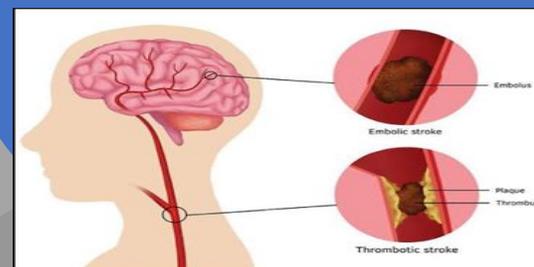
2 kinds of ischemic stroke:

### 1. A thrombotic stroke:

- Occurs when a blood clot (thrombus) forms in an artery in the brain and blocks blood flow
- Is typically caused by a clot that forms in arteries damaged by fatty deposits called plaque

### 2. An embolic stroke:

- Is caused by a wandering clot (embolus) formed somewhere other than the brain, such as in the heart or neck arteries
- Occurs when the clot is carried in the bloodstream to the brain and blocks a blood vessel in or leading to the brain



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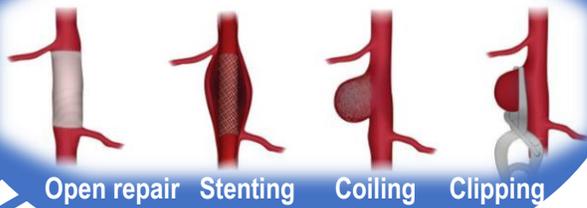
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SCAN ME



## Aneurysm Treatment



Open repair   Stenting   Coiling   Clipping

## Diagnosis of Ischemic & Hemorrhagic Strokes

When a person has shown symptoms of a stroke or transient ischemic attack (TIA), a doctor will gather information and make a diagnosis. He or she will review the events that have occurred and may:

- Take a medical history from you or a family member and perform physical and neurological examination
- Obtain a computed tomography (CT) or magnetic resonance imaging (MRI) scan and order certain blood tests (labs)
- Study the results of these and any other diagnostic tests that might be needed

## Treatment for Hemorrhagic Strokes

Because of bleeding into the brain, hemorrhagic stroke may be life-threatening and requires immediate hospital care. Medication is used to control high blood pressure to prevent the bleeding from worsening. Medication may also be given to reduce the brain swelling that sometimes follows a stroke. Surgery may be needed depending on the cause of the hemorrhage. For vascular abnormalities (such as aneurysms or AVMs), surgeries may include placing a metal clip at the base of an aneurysm or removing abnormal vessels. Some procedures are less invasive and use a thin tube called a catheter threaded through an artery in the groin or wrist up to the brain to prevent rupture.

	IV Alteplase (tPA)	Endovascular Thrombectomy (EVT)
<b>Also Called...</b>	“Clot buster”	“Clot grabber,” “clot sucker”
<b>Purpose...</b>	Dissolve a stroke-causing clot	Remove a stroke-causing clot
<b>Procedure...</b>	<ul style="list-style-type: none"> <li>• Medication called alteplase infused through an IV</li> <li>• Medication travels through bloodstream to break up the clot in the brain</li> <li>• Blood flow restored to the brain</li> </ul>	<ul style="list-style-type: none"> <li>• Small, straw-like tube (called a catheter) threaded through an artery in the groin area / wrist up to the blocked artery in the brain</li> <li>• Devices used to suck out or grab the clot inserted through the tube and up into the brain</li> <li>• Clot physically removed if possible &amp; blood flow restored to brain</li> </ul>
<b>Timing...</b>	<ul style="list-style-type: none"> <li>• Seek emergency medical treatment immediately!</li> <li>• Must be given within 4½ hours of the start of stroke symptoms in most cases</li> </ul>	<ul style="list-style-type: none"> <li>• Seek emergency medical treatment immediately!</li> <li>• Procedure must be started within 24 hours of the start of stroke symptoms</li> </ul>



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