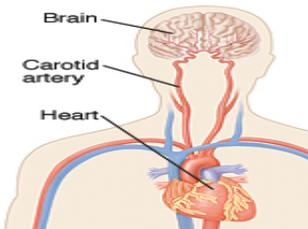


## What Is Ischemic Stroke?

The brain needs a constant supply of blood to work. During a stroke, blood stops flowing to part of the brain. The affected area is damaged. Its functions are harmed or even lost. Most strokes are caused by a blockage in a blood vessel that supplies the brain. They can also occur if a blood vessel in the brain **ruptures** (bursts open).



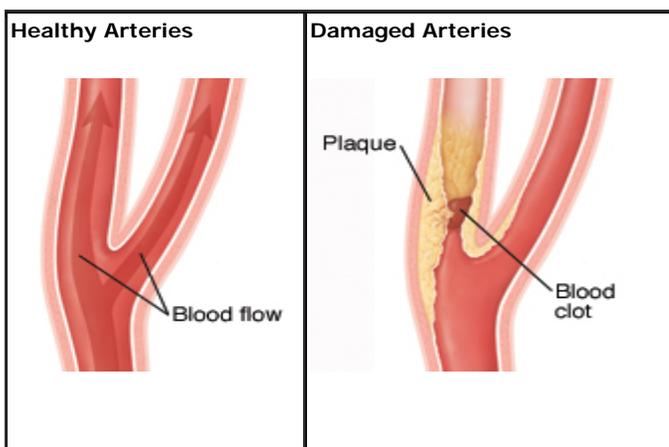
The carotid arteries carry blood from the heart to the brain.

## From the heart to the brain

The heart is a pump. It sends oxygen-rich blood out through blood vessels called **arteries**. If an artery between the heart and the brain is blocked, the brain can't get enough oxygen. Some artery blockages are caused by fatty deposits (**plaque**). Arteries can also be blocked by blood clots. Some clots form on the plaque. Others can form in the heart — especially in people with atrial fibrillation, an irregular heart rhythm. If a piece of plaque or clot breaks off and enters the bloodstream, it can flow to the brain and cause a stroke.

## How a stroke occurs

**Ischemic** stroke occurs when an artery that supplies the brain is greatly narrowed or blocked. This can be caused by a buildup of plaque. It can also occur when small pieces of plaque or blood clot (called **emboli**) break off from the blood vessel or heart into the bloodstream. The emboli flow in the blood until they get stuck in a small blood vessel in the brain.



**Healthy arteries.** In a healthy artery, the lining of the artery wall is smooth. This lets blood flow freely from the heart to the rest of the body. The brain gets all the blood it needs to function well.

**Damaged arteries.** High blood pressure, cigarette smoking, or other problems can roughen artery walls. This allows plaque to build up in the walls. Blood clots may also form on the plaque. This can narrow the artery and limit blood flow.