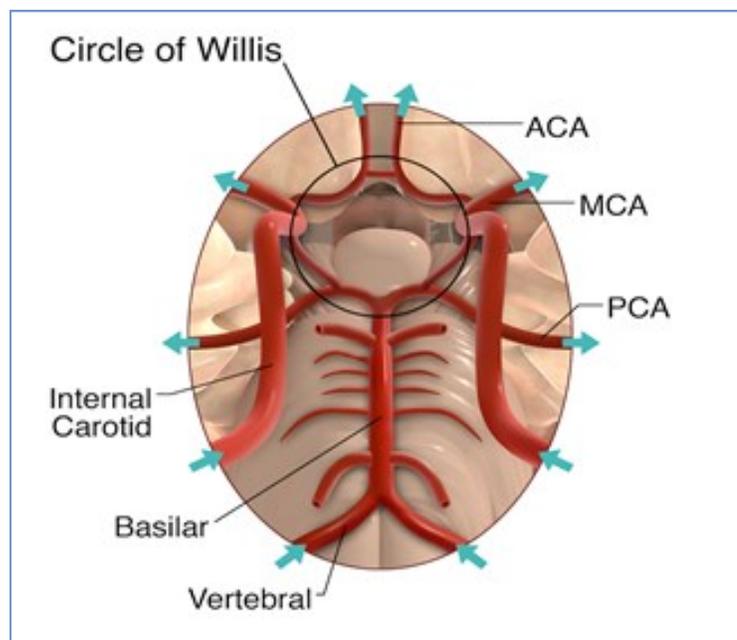


Blood Vessels of the Brain

Blood in the brain is supplied by two pairs of large blood vessels (arteries): the carotid arteries and the vertebral arteries:

- **Carotid Arteries:** These vessels run along the front of the neck. There is a right-sided carotid and a left-sided carotid artery. If a stroke happens in this area, it can cause changes with speech, vision and sensation.
- **Vertebral Arteries:** These vessels run along the back of your neck. There is a right-sided vertebral and a left-sided vertebral artery. The right and left vertebrals join to form one **basilar artery**. If a stroke happens in this area, it can cause changes with your level of awakensness, problems with muscle movement and coordination, speech changes and vision problems.

At the base of the brain, the carotid arteries and vertebral arteries come together to form the **Circle of Willis**. This is a circle of arteries that provide many paths for blood to supply oxygen and nutrients the brain.



Blood Vessels of the Brain

From the Circle of Willis, major arteries arise and travel to all parts of the brain. Some common blood vessels in the Circle of Willis that are affected by stroke are:

Anterior Cerebral Artery (ACA): This vessel supplies blood to the front part of your brain, known as your frontal lobe. There is a right-sided ACA and a left-sided ACA. If a stroke occurs in this area, you may see leg weakness and/or difficulty thinking and making decisions. There could also be changes in personality.

Middle Cerebral Artery (MCA): This vessel supplies blood to the middle part of your brain. There is a right-sided MCA and a left-sided MCA. These blood vessels are the most commonly affected in a stroke. **If a stroke** occurs in this area, you may see:

- Paralysis on one side of the body
- Changes in sensation
- Blindness (either on the left or right side)
- Language problems, such as difficulty with forming words and sentences or difficulty with understanding what others are saying.

Posterior Cerebral Arteries (PCA): These vessels supply blood to the back of the brain. There is a right-sided PCA and a left-sided PCA. If a stroke occurs in this area, you may notice problems with vision.

