

Basal Ganglia Stroke



THE OHIO STATE UNIVERSITY
WEXNER MEDICAL CENTER

Arteries carry blood that contains oxygen to the brain. The flow of blood through the arteries can stop if the artery is blocked or bleeds. This is called a stroke. It is also known as a cerebrovascular accident or CVA. This handout looks at what occurs when a stroke happens in the basal ganglia.

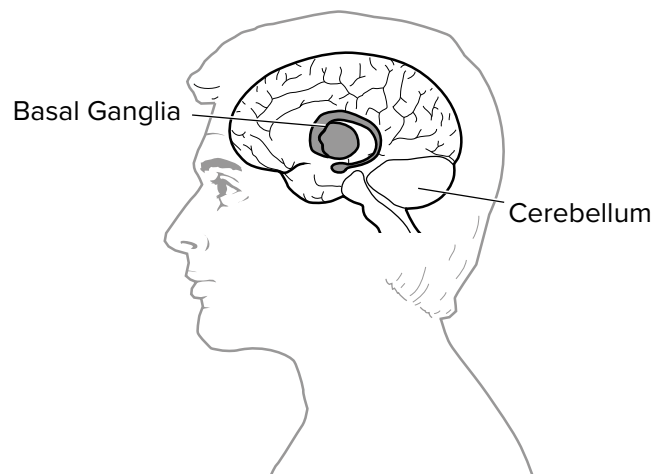
Effects

The basal ganglia are “messengers” in the middle of the brain. They sort out information for the spinal cord and cerebellum. Many arteries work with the basal ganglia. This means a stroke can injure the basal ganglia in many places.

The effects of stroke will depend on the damage to the basal ganglia. It can affect:

- Body movement and sensation
- Vision
- Motivation and judgment
- Personality
- Speech

Bleeding in the arteries can put pressure on the rest of the brain also, damaging areas outside of the basal ganglia.



Changes in Movement

There may be a range of changes in body movement, depending on the damage to the basal ganglia. The person may have:

- Loss of movement, such as stiff, rigid, or weak muscles.
- Tremors or body shakes.
- Changes in the ability to swallow if the muscles of the mouth, tongue, and throat are affected. Food may be held on one side of the mouth. This is called pocketing.
- Changes in facial muscles (face droops), such as smiling when talking.
- Left-side neglect, which means a person may ignore things on their left side. This occurs when the stroke affects the right side of the brain, causing problems such as:
 - Not moving the eyes or the head to the left.
 - Eating food only on the right side of the plate.
 - Ignoring anything on their left side, including someone standing or speaking.

- **Ataxia** – When the body is unable to coordinate how the muscles move together, this is called ataxia (a-tax-ee-a).
 - For example, you may fall because you are not able to put your foot where you want to walk.

Ataxia can affect the arms, legs, and chest muscles. It can lead to uncontrolled body shakes, called tremors. Tremors often occur when the body starts or stops. Preventing falls or other accidents are safety concerns.

Changes in Body Sensation

The person may have changes in body sensation in the face on the same side of the stroke and in the body on the opposite side. The person may:

- Have trouble feeling touch or knowing where they are being touched.
 - For example, something touching your foot may feel like someone touching your leg.
- Not feel pain and temperature in that area.
- Find it hard to know where the body is and how it is moving.

Changes in Eye Movement

The stroke may change how the eyes move. The person may:

- Have trouble looking up or one eye may look to the side.
- Lose control over the muscles that control the size of the eye's pupil, so one pupil may be larger or smaller than the other.
- Be missing parts of their visual field. This is the area in which objects can be seen in your side vision as you focus your eyes on something in the center.

Changes in Judgement and Motivation

Changes in judgment are common. The person may:

- Be confused and have a hard time knowing what is going on around them.
- Feel frustrated or nervous.
- Become unmotivated and lack interest in activities.

Changes in Personality

The stroke may affect personality. Some examples include:

- Having a strong emotional response to things that didn't affect the person before.
- Laughing or crying at times when it doesn't make sense.
- Having problems with depression.

Changes in Speech

Problems with speech and understanding language, called **aphasia**, are common with this type of stroke. There are two broad groups of aphasia, with several types within these groups:

- **Non-fluent aphasia** – The most common problems of non-fluent aphasia range from finding the right word to being able to say that word. A person with non-fluent aphasia may sound hesitant while searching for the right word to say. It can be frustrating for the person affected because he or she usually understands better than he or she is able to express.
- **Fluent aphasia** – A person with fluent aphasia does not have trouble saying words, but the words spoken may be nonsense or real words that are used incorrectly. The person with fluent aphasia may be unaware that his or her speech is not meaningful. This can lead to frustration and anger toward the listener for not understanding.

Talk to your doctor or health care team if you have any questions about your care.

For more health information, contact the Library for Health Information at **614-293-3707** or e-mail **health-info@osu.edu**.