

**OBJECTIVES:**

Review definition
of Stroke (CVA)

Review body
system affected
by a Stroke

Review assisting
clients after a
Stroke

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References:

<https://medlineplus.gov/stroke.html>

NCDHHS/DHSR/HCPE
C | Home Care Aide
Curriculum | July 2021
Module 15 Common
Diseases Seen in Home
Care. Module 16
Restorative Care.

<https://www.stroke.org/en/life-after-stroke>

<https://www.cdc.gov/stroke/signs-symptoms/index.html>

STROKE

Stroke, also called Cerebrovascular Accident (CVA), occurs when the blood supply to part of the brain is stopped due to a blocked blood vessel or a leak or rupture in a blood vessel. A TIA (transient ischemic attack), or "mini stroke", is caused by a temporary clot. The result of a stroke depends on which blood vessels are blocked, leaking, or ruptured and which brain center is destroyed. If a stroke occurs and blood flow can't reach the region of the brain that controls a particular body function, that part of the body won't work as it should. The results of a stroke may be paralysis or loss of speech or vision because nerve impulses do not reach the brain due to damaged brain tissue. Brain injury can cause changes in certain sensory, motor, or cognitive (i.e. thinking, remembering, reasoning) functions. Collateral circulation sometimes will take over the circulation for the damaged blood vessel and supply blood to the injured brain tissue. Causes of a stroke include:

- Thrombus – a blood clot forms in the brain and blocks the blood vessel
- Embolus – a blood clot which forms in the body, travels to the brain and lodges in a small vessel. A thrombus that breaks loose and travels from one location in the body to another is called an embolus
- Plaque – accumulates in the blood vessel and eventually closes it
- Hemorrhage (aneurysm) – a blood vessel bursts, most common in people with high blood pressure.

Each side of the brain controls the opposite side of the body:

- A stroke on the left side of the brain affects the right side of the body
- A stroke on the right side of the brain affects the left side of the body
- If the stroke occurs toward the back of the brain, it's likely that some disability involving vision will result

Physical, communication, and emotional changes that can happen after a stroke:

- Weakness or paralysis on one side of the body
- Fatigue- for some, tiredness may continue for years
- Muscles in limbs contract (shorten or flex), this creates stiffness and tightness, which is referred to as "spasticity"
- Seizures- seizures are brain malfunctions that alter a person's awareness
- Aphasia is a common communication problem after a stroke. There are three types: expressive (know what they want to say but have trouble saying it), receptive (have trouble understanding words other people speak) and global (may be unable to speak, name objects, repeat phrases or follow commands)
- A swallowing disorder called dysphagia that can be caused by paralysis or weakness of the mouth and/or throat
- Incontinence when muscles that control urine and stool are weakened
- After a stroke, people often experience emotional and behavioral changes because the brain controls our behavior and emotions. A stroke may make a person forgetful, careless, annoyed or confused. Stroke survivors may also feel anxiety, anger or depression. Their behavior depends on which part of the brain is affected and the extent of the injury.

STROKE

There are many devices that may assist a client who is receiving restorative care. Examples of adaptive equipment include:

- Canes, walkers, or walking sticks to assist with walking
- Slide boards to assist with getting to/from a wheelchair
- AFO (lower leg and foot) splints to assist with walking, especially for those with mild to moderate neurological deficits
- Wrist supports to assist with using one's hands and adding strength
- Button fasteners and zipper pulls to assist the client with self-dressing
- Silverware grips to assist with holding utensils for eating
- Long-handled brushes to assist with bathing and/or self-care
- Doorknob grippers to assist with opening doors
- Electric toothbrushes to assist with dental care
- Lifeline alert system installed to assist in case of a fall



Assistive devices are designed to help clients do things for themselves. For a client to be able to eat without assistance is a physical need as well as an emotional one. A client with a disability may be at a higher risk of falling, falls prevention is important. Follow the plan of care for assisting a client with ambulation and mobility and report changes in the client's level of functioning. As well as physical devices to assist a patient, it is also important to exercise one's mind. Simply doing a crossword puzzle can stimulate the brain. In addition to crossword puzzles, other types of brain stimulating games /puzzles/activities are healthy. Sudoku, word searches, and computer games also work to exercise the brain and can be beneficial to post stroke clients and others as well.

Technology has contributed to restorative care and rehabilitation. Video games with a joystick or controller can assist with hand/eye coordination. They tend to be more interesting and feel less like work for the client. Video games can be played alone, so a client can practice or play on his/her own time, and for as long as the client is able. Some video games now have the capability to assist with exercise and yoga as well. There may be times when adaptive equipment alone will not be enough. Home modifications will have to be made to assist the client with functioning at home. These modifications will be at the discretion of the client's care team, but it is what the client wants and feels would work best for him/herself for better daily function. Examples of home modifications include:

- Grab bars
- Raised toilet seat
- Shower chair
- Wheelchair ramp
- Wider doorways
- Chair lift/stair lift and overhead lifts

Not all clients will require home modifications; however, for those who do, there will be a learning process for a new feature of their home. It is important to be patient, as your client is going through a great deal of change currently in his/her life.

Some clients may require home modifications but may not have the financial means to ensure that those modifications are completed. Speak to your supervisor if this concern arises. Your supervisor may be able to assist with securing community resources to help with the home modifications. Provide encouragement as your client is learning to adapt to new equipment and during rehabilitation.

Range of motion exercises are also called ROM exercises. ROM exercises are important if the client must stay in bed or in a wheelchair. ROM exercises help keep their joints and muscles as healthy as possible. ROM exercises may be active or passive. Active ROM is performed when a person can do the exercises by himself. Active assisted ROM exercises are performed by the person and a helper. Passive ROM exercises are performed for a person by a helper. The helper does the ROM exercises because the person cannot perform them by himself. Do not perform passive ROM exercises on a person without being instructed to by your supervisor. Range of motion exercises may be necessary in some situations. These must be assigned by your supervisor and reviewed with you to ensure you are completing them properly so that no harm comes to the client.