

# Walking with Hemiplegia

The information provided in this handout is to help you understand the general and specific aspects regarding falls in a person with stroke.

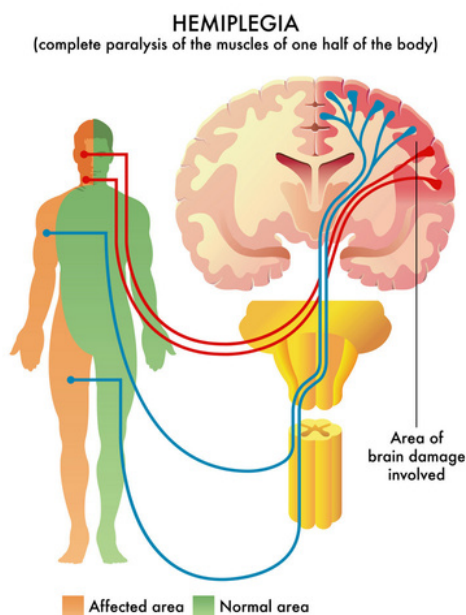
Content of this handout is extracted from national and international stroke organizations, peer reviewed scientific research articles.

If you or your family members have questions after reading this handout, please contact your doctor and or therapist in-charge.



## What is Hemiplegia?






Hemiplegia is a condition caused by damage to the brain that results in paralysis of one side of the body. It can cause difficulty moving the lower part of one's face, arm, and leg on the right or left side of the body depending on the side of brain damage.





Source: <https://www.vectorstock.com/royalty-free-vector/hemiplegia-poster-vector-32294045>

Hemiplegia will be associated with varying degrees of abnormal muscle tone, impaired sensation, visual impairment and loss of movement control on the affected side.

**Signs of Stroke in Men And Women**  
If any of the following signs appear suddenly, call 9-1-1 right away.

-  Numbness or weakness in the face, arm, or leg, especially on one side of the body.
-  Confusion or trouble speaking or understanding speech.
-  Trouble seeing in one or both eyes.
-  Trouble walking, dizziness, or problems with balance.
-  Severe headache with no known cause.



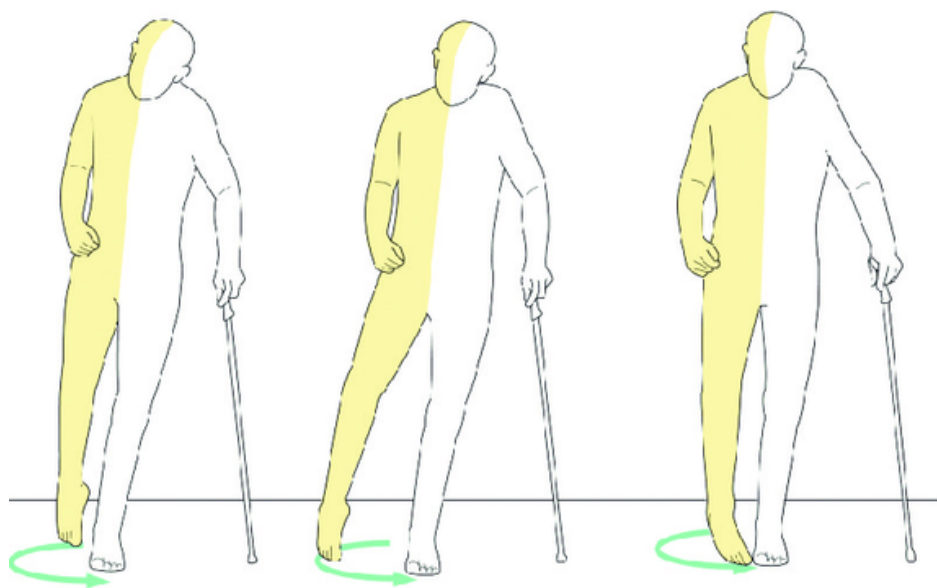
Source: [https://www.cdc.gov/stroke/signs\\_symptoms.htm](https://www.cdc.gov/stroke/signs_symptoms.htm)

## How does hemiplegia affect my walking?

Walking dysfunction occurs in more than 80% of stroke survivors. Despite of rehabilitation efforts, 25% of all stroke survivors have persistent walking impairments that require full physical assistance before hospital discharge.

Consequently, gait impairments cause difficulties in performing activities of daily living and mobility.

- Muscles on your affected side leg may develop high tone (spasticity) over time, leading to difficulties with bending and straightening of your leg while walking.
- You may also have difficulties shifting your body weight on to affected side leg.
- You may have a tendency to walk with the toes on the affected foot striking the ground first, instead of the usual heel strike.
- In order to clear the toes from walking surface, you may develop a variety of ways to compensate. For example, you may compensate by hiking your affected hip, lean trunk to opposite side, moving your leg in a semi-circular manner (Circumduction walking pattern).



Source: [https://www.researchgate.net/figure/Walking-pattern-in-person-with-drop-foot-14\\_fig4\\_317635497](https://www.researchgate.net/figure/Walking-pattern-in-person-with-drop-foot-14_fig4_317635497)

## How does hemiplegia affect my walking?

All these abnormal patterns, over a period of time results in muscle tightness, joint stiffness and joint pain – including hip / knee, ankle joints. Due to the lack of control of your leg muscles, your walking speed will be reduced, you may have shorter step and stride lengths. These abnormal gait patterns increase your effort required for walking, leading to increased tiredness and early fatigue.

The gait abnormalities, along with muscle weakness will affect your standing balance and puts you at high risk of falling. Falls usually occur during walking either at home or while walking outside of home in the community.



Source: <https://www.stroke.org/en/about-stroke/effects-of-stroke/physical-effects-of-stroke/physical-impact/foot-drop>

So, improving walking safety and speed is the major goal for stroke survivors to prevent falls and to improve quality of life.



Source: <https://sehagarden.com/treatments/stroke-rehabilitation/>

## How is my walking impairment treated?

Depending on the nature and severity of a stroke, the body can experience different impairments. Each individual with hemiplegia is different and so it is best to discuss with your rehabilitation team (doctor, physiotherapist and or occupational therapist) about the possible optimal treatment options available for your condition.

The goal of treatment is not to “cure” the condition, but to enable the individual to achieve maximum possible functional potential.

In general, treatments may include assessment of your muscle tone, gait analysis, physical therapy, prescription of suitable walking aids, using some splints to support your ankle and foot, medications to treat your spasticity, such as botulinum toxin injection, serial casting, and surgery.

Your physiotherapist may prescribe techniques of muscle stretching, exercises for strengthening of your leg muscles, standing balance training and walking training.



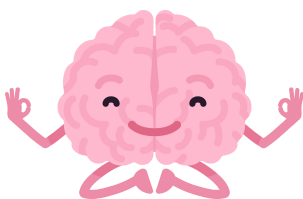
Source: <https://sehagarden.com/treatments/stroke-rehabilitation/>

## What precautions should I take while walking?

1. Most important aspect of safe walking is to understand your physical and functional impairments thoroughly.

Please discuss with your therapist –

- What are your physical impairments and their effects on your standing balance, and walking ability?
  - What is the appropriate walking aid that is suitable for your condition?
  - How much and how long can you exercise each day?
2. It is common to lose balance on your weaker side. So, please do not attempt to walk yourself unless stated by your therapist to walk on your own.
  3. Always use appropriate walking aid as prescribed by your therapist
  4. Be compliant with your exercise and medication regime.
  5. Time your medications which may cause drowsiness 
  6. Please seek help if you are taking any medicines that may cause drowsiness.
  7. Report pain immediately to your family members and or members of your medical team
  8. Watch out for breathlessness while you are walking and report immediately.
  9. Listen to your body – if you feel tired, or fatigue, please rest sufficiently.
  10. Be mindful of your visual / sensory impairments.



## How can I improve my walking?

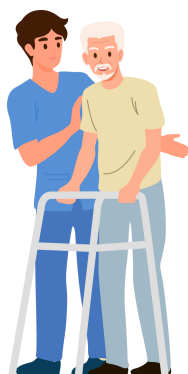
Though challenging, with a strict rehabilitation regime many stroke patients can regain proper walking function. This is largely dependent on the severity of the stroke incurred. Always talk to your physiotherapist and doctor before starting any exercise or rehabilitation program.

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Contributed by Physiotherapy, Rehabilitation, Allied Health Services

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