

Recovering After Your Stroke



When you have a stroke, part of your brain becomes damaged. Scientists used to think that when a part of the brain was damaged, there was no way to recover what

was lost. However, it has been found that this is not the case. The brain can adapt and form new networks to help restore function, even after stroke. This ability is called **neuroplasticity**.

Neuroplasticity: The ability of the brain to form and reorganize synaptic connections, especially in response to learning or injury

While you are in the hospital after a stroke, depending on your symptoms, you may meet with a physical therapist, occupational therapist, speech language pathologist, or possibly a physical medicine and rehabilitation doctor. These healthcare providers will be your rehabilitation team. This team will evaluate your overall function and create a therapy plan to help you with your recovery.

The best way to restore and maintain function is by repeating the activities outlined in this therapy plan often.

Physical Therapy	Therapy to help improve movement and restore physical function. Physical therapists help you regain strength, coordination, balance, and the ability to walk.
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Occupational Therapy	Therapy to help adapt and increase your independence in activities of daily living. This may include activities like dressing, bathing, brushing teeth, and writing.
Speech Language Pathology	Therapy to prevent, assess, diagnose, and treat speech, language, communication, and swallowing disorders.
Physical Medicine and Rehabilitation (PM&R)	Doctors dedicated to enhancing and restoring physical function and quality of life.

After your initial therapy treatments in the hospital setting, your rehabilitation team will help you choose the right setting to go to after discharge from the hospital and will help decide whether you need to continue with therapy. This is discussed more in the next chapter.

Common complications after stroke

If you have had a stroke, you may be at risk of having other medical problems or complications. In the days and weeks following a stroke, there are some things you can do to decrease your risk of some of these complications.

Common complications after a stroke include:

- Falls
- Depression
- Fatigue (tiredness)
- Seizure
- Spasticity
- Pneumonia
- Deep vein thrombosis (DVT)

- Urinary incontinence (losing control of your bladder)

Falls

Falls are one of the most common complications after stroke. Falls can lead to both minor and serious injuries including bruising, cuts, head injuries, and bone fractures. Patients who have had a stroke are often on medications to keep blood clots from forming (often referred to as “blood-thinners”). These medications can make falling more dangerous because they cause you to bleed and bruise more easily. We will work with you to set up a plan to reduce your risk of falling.

The ABC’s of fall prevention

- **Ask for help:** Call the nurse or nurse aide if you want to get up.
- **Be aware of your body:** Do you feel dizzy or weak?
- **Caution:** Is there enough light? Are you wearing slip-resistant socks or shoes?
- **Danger:** Do not use unsteady items such as bedside table or IV pole to get up.

The video at the link below explains what you and your caregiver can do to prevent falls.

- <https://tinyurl.com/6v84sypt>

Depression

Depression affects at least one-third of stroke patients. Depression can occur anytime during your stroke recovery, including during the days or months after your stroke. Stroke survivors and their families will often ignore symptoms of depression because they think it is “normal” to feel

sad or down after a stroke. Depression can cause stroke survivors to lose interest in their usual activities and can impact the ability to concentrate and take part in their rehabilitation programs. This can slow the recovery process.

What are the symptoms of depression?

- Depressed mood
- Loss of interest or pleasure in formerly pleasurable activities
- Change in appetite or weight
- Not being able to sleep (insomnia) or sleeping too much
- Fatigue or loss of energy
- Irritability
- Thoughts of self-harm or actual self-harm

If you experience any of these symptoms, contact your primary care doctor for help and support. Social workers can also help you cope with your emotions.

You can call the **Guest Assistance Program** at **(800) 888-9825** to request social work services. It is best to get treatment early to prevent worsening symptoms.

If you or someone you know is having thoughts of harming themselves, tell your healthcare provider immediately. If you have strong thoughts of suicide or a suicide plan, go to an emergency room right away or call one of the following:

- 911
- The 24-hour Suicide & Crisis Lifeline at 988

Post-stroke fatigue (tiredness)

Everyone feels tired sometimes, but this usually happens after a very busy day or from not getting enough sleep. Post-stroke fatigue is the tiredness you feel after a stroke. It is different from regular fatigue and is considered one of the most common side effects of stroke, occurring in almost one-third of stroke patients. You may feel a lack of energy or strength and feel constantly tired. Post-stroke fatigue does not always get better with rest and is not necessarily related to how busy or active you have been.

What are the symptoms of post-stroke fatigue?

- Feeling tired, even after a good night's sleep
- Feeling like your symptoms never seem to get better
- Feeling easily tired when you perform a task requiring physical or mental focus
- Experiencing fatigue that occurs without warning and makes it harder to do routine daily activities as well as social or work activities

What factors can affect my level of fatigue after a stroke?

Post-stroke fatigue can be present even when all other contributing factors are controlled. However, some factors can increase post-stroke fatigue, including:

- **Depression:** Untreated depression can lead to an increase in fatigue.
- **Untreated sleep apnea**
- **Medications:** Some medications may make you more tired than usual.
- **Post-stroke effects:** Physical symptoms such as limb weakness can mean movements and activities of daily living require more energy than they used to.
- **Pain:** Pain requires energy to cope and often increases fatigue.

- Other untreated medical problems including **hypothyroidism** (underactive thyroid) and **anemia** (not having enough healthy red blood cells).

How can I manage post-stroke fatigue?

- Treat medical conditions such as obstructive sleep apnea, depression, pain, anemia, and hypothyroidism.
- Practice good sleeping habits and work with your doctor to get a full night's rest.
- Rest when you need to and try to rest before getting too tired or over-fatigued. Listen to what your body is telling you.
- Balance rest with an adequate amount of activity.
 - Start small and slowly increase the number of tasks you do each day.
- Prioritize your daily activities and eliminate unnecessary tasks.
- Talk to your speech language pathologist or occupational therapist about the "Spoon Theory."

Seizure

Having a stroke can increase your risk of having a seizure. Stroke causes injury to the brain which can change the brain's electrical activity; the change in electrical activity can cause a seizure. Certain types of strokes are more likely to cause a seizure. These include venous strokes, large-sized strokes, and strokes located within the **cerebral cortex**, or outer layer of the brain.

What does a seizure look like?

Seizure can present in many ways and can go unnoticed by the person having the seizure. Be sure that you and your support system are aware of common seizure symptoms.

Seizure symptoms can include:

- Shaking or twitching movements (can include just one arm or only part of the face)
- Staring blankly and not responding
- Sudden loss of consciousness, followed by getting stiff, and then having jerking movements (typically called “grand mal” or “tonic-clonic” seizure)

What do I do if I observe someone having a “grand mal” or “tonic-clonic” seizure?

- Call 911.
- Note the time the seizure started.
- Roll the person onto their side, cushion their head, and loosen collars.
- Do not put anything in their mouth, even medicine or water.
- Do not move them unless the immediate area is unsafe.
- Stay with them until the seizure ends or emergency response has arrived.

Pneumonia

What is pneumonia?

Pneumonia is an infection in the lungs that can cause coughing, fever, and trouble breathing. It is a common complication in the first few weeks following a stroke.

What are the symptoms of pneumonia?

Common symptoms include:

- Cough
- Fever
- Trouble breathing
- Pain when you take a deep breath
- Chills

What causes pneumonia?

The primary cause of pneumonia after stroke is **aspiration**. Aspiration occurs when food, liquid, saliva, or vomit are breathed into the airways, instead of being swallowed into the esophagus and stomach. Some stroke patients have **dysphagia**, or difficulty swallowing, after their stroke. This can increase your risk of aspiration.

How do you prevent pneumonia?

When you first come to the hospital, you will not be given anything by mouth until a **swallow screen** is completed. For this, your nurse will follow a few simple steps to evaluate your swallowing. If we have any concerns, we will refer you to **Speech Language Pathology** for additional evaluation and treatment.

Other ways to prevent pneumonia:

- Quit smoking.
- Walk as soon as you safely can.
- If you cannot walk, ask your nurse or doctor if you can use an **incentive spirometer** (a device that helps exercise and strengthen your lungs).
- Eat and drink with the head of the bed raised up to prevent aspiration.

Deep vein thrombosis (DVT)

What is a DVT?

Deep vein thrombosis (DVT) is a condition in which a blood clot (**thrombus**) forms in a deep vein inside the body. This most commonly occurs in the lower leg or thigh.

What are the symptoms of a DVT?

Only about half of people who have DVT will have signs and symptoms. Common symptoms include:

- Swelling of the leg
- Pain or tenderness in the leg
- Red or discolored skin on the leg
- Increased warmth along the leg

What causes a DVT?

Anything that prevents your blood from flowing or clotting normally can cause a DVT. This includes not moving enough while lying in bed or decreased movement of an extremity after stroke.

How do you prevent a DVT?

- Walk as soon as you can safely.
- If you cannot walk, exercise while you are in bed. If you can, try pointing your toes toward the bottom of the bed, then up toward your face. Repeat 10 times each hour you are awake.
- We may give you certain blood thinning medications (Lovenox or heparin) while you are in the hospital to help prevent a DVT.
- We may place an inflatable device called **sequential compression devices** (SCDs) on your legs to help prevent a DVT.

Spasticity

What is spasticity?

Spasticity is the uncontrolled tightening or contracting of muscles on the side of your body affected by the stroke. This occurs when the part of your brain affected by the stroke can't control muscle movement.

Spasticity can cause pain and decreased mobility which can interfere with your daily functioning and sleeping. There are some benefits to spasticity, including increase in leg tone which can help with some activities, such as standing.

What are the symptoms of spasticity?

- Increased muscle tone
- Muscle spasms
- Rapid muscle contractions
- Contractures (loss of movement of the joint)

How do I prevent spasticity?

You can prevent spasticity through regular muscle stretching, range of motion exercises, and frequently moving the parts of your body that are affected.

Occupational and **physical therapists** can assist you with these types of exercises.

Talk to your doctor if you notice symptoms of spasticity to discuss treatment options.

Urinary incontinence (losing control of your bladder)

What is incontinence?

The term continence is used when you have control of your bowel or bladder.

Urinary incontinence is when you have poor bladder control. This is common after stroke. Your stroke may have affected the part of your brain that helps you control urination. This can lead to urinary urgency and frequency.

There are certain things you can do to help you cope with incontinence as you recover at home:

- Use adult briefs or underwear liners in case of an accident.
- Keep a bell or phone at your bedside or chair to ask for help when you need to get up.

- Remove furniture and rugs on the way to the bathroom to allow you to get there safely.
- Set a schedule so that you visit the bathroom every 2-3 hours during the day.
- Wear clothing that is easy to get off such as pants with Velcro closures or elastic waistbands.

Assistive bathroom equipment that may be helpful (available at most local pharmacies):

- Bedside commode or a urinal for use at night
- Commode frame over the toilet to give support while sitting and standing
- Toilet seat elevator

Additional information

For additional information on post-stroke recovery, please visit <https://careguides.med.umich.edu/browse-by-medical-service/stroke> or ask your healthcare team for one of the dedicated handouts listed below:

- ☐ Coping with Cognitive Changes After Stroke
- ☐ Physical Activity for Stroke Survivors
- ☐ BORG RPE Scale
- ☐ After a Stroke: Speech-Language Pathology (SLP)
- ☐ Occupational and Physical Therapy's Role in Stroke Rehabilitation
- ☐ Diplopia
- ☐ Homonymous Hemianopia
- ☐ Essential Home Equipment for Adapting After Stroke
- ☐ Coping Strategies to Manage Stress
- ☐ Importance of Leisure After Stroke

- ☐ Managing Daily Activities After Stroke
- ☐ Sexuality After a Stroke: Encouragement, Support & Advice for Stroke Survivors
- ☐ Stress Management and Relaxation Techniques after Stroke
- ☐ Traveling After Stroke
- ☐ What I need to know after having a seizure or loss of consciousness: A message about safety for our patients

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