Mobility After Stroke

Issues facing stroke survivors and their families
Moving around safely and easily is not something you may think about, until you have a stroke. Someone in the United States has a stroke every 40 seconds. As a result, many survivors have difficulty with movement of their arms and legs and/or have difficulty with sitting or standing balance. Statistics show that 40 percent of all stroke survivors experience serious falls within a year after stroke. This brochure offers helpful tips about treatments, home adaptations and lifestyle changes that may increase your safety and ability to move around.
Understanding Movement Problems and Spasticity
After a stroke, signals from the brain to muscles often don’t work properly. This is due to the damage the stroke caused in the brain. This damage can cause the arm and/or leg to have difficulty moving or may cause you to have trouble controlling your movements. After your stroke you may notice:

Weakness—Your arm or leg may be weak or not move at all. Paralysis on one side of the body is called hemiplegia. Weakness on one side of the body is called hemiparesis.

Planning or coordination problems—You may have difficulty planning movements. This is called apraxia. You may also have difficulty coordinating movements making them feel jerky or clumsy. This is called ataxia.

Changes in the muscles—Spasticity is a condition in which the muscles are tight and stiff, and resist being stretched. Most of the time it affects the arms, fingers and legs. It can result in an arm being bent and stiff, a hand that has trouble opening, or a twisted foot resulting in difficulty walking. It can also result in painful muscle
spasms. The opposite may happen as well, your muscles may be floppy or loose. This is called flaccidity or hypotonia.

**Changes in balance or dizziness**—You may find it hard to keep your balance, feel unsteady or dizzy. You may want to watch for any type of head spinning or dizziness with head movements. You may also notice that you feel more off balance in busy places.

**Fatigue**—You may feel very tired after walking even a short distance. This can be made worse because you may have to think about every move you make to avoid falling.
Medications and Therapies

Treatment for movement problems are often a mix of therapy and medication. This helps to get the best results possible. It is important to remember that all therapies and medications could have risks and side effects. Be sure to weigh the risks and side effects against the benefits. Ask your healthcare provider about the best treatment options for your needs.

• If your arm is floppy or loose it may make you more comfortable to put it on a table or pillow to keep it from being hurt and to give some support.

• There are many medications that are used to treat movement problems, including Tizanidine, Baclofen, Dantrolene Sodium, and benzodiazepines. Some of these medications work directly on the muscles, but others act on the central nervous system (brain and spinal cord) to help with the stiffness. Possible side effects include muscle weakness, drowsiness and fatigue.
These medications vary in strength, so it is important to talk with your healthcare provider in deciding which medication may be right for you. It is important to always follow the dosage and directions on all of your medications.

• Injections of botulinum toxin can prevent the release of chemicals that cause muscles to contract. These injections can be used to target the specific muscle groups that are affected by spasticity. When side effects are present, they may include pain during an injection, a burning or tingling sensation, swelling and soreness of the area injected and lack of energy. You should always contact your doctor immediately if you notice any of these side effects. A single shot can be effective immediately or may take up to four weeks to help. This type of treatment is often repeated every three months.

• The last treatment option involves the delivery of a drug directly into the spinal fluid using a surgically placed pump. This pump can release medication slowly throughout the day to help with spasticity and pain.
Braces, Splints and Serial Casting
Many times, after a stroke braces or casts are used on the arm or leg to hold the joint in position to keep it from permanently losing motion. Often braces are used on the foot and ankle, called an ankle foot orthosis or AFO, to hold the foot up so the survivor will not drag their toe or trip over their foot, which would make them more likely to fall. There are many different types of AFOs. Your therapist or orthotist can help you determine which one, if any, would benefit you most. Splints also are used on the elbow, hand and wrist to position the joints and prevent the elbow from getting stuck in a bent position or the hand getting stuck in a fist. These types of braces also can be helpful in making sure the skin gets good air circulation and can keep you from getting sores on the skin and/or developing an odor due to poor air flow.
Exercise and Stretching
After a stroke it is helpful to exercise and stretch every day per your healthcare provider’s appropriate evaluation and recommendations. Gentle stretching of tight muscles can help alleviate the feeling of tightness. While it is important that you move every joint through a full range-of-motion, you should never lift the arm above the shoulder if you cannot do it by yourself. Moving the arm too high can cause further damage to the shoulder.

Keep in mind, stroke survivors have different needs. Some want to continue therapy in a clinic, but may have problems with access (insurance coverage, transportation, etc.). Whether you are able to attend a therapy clinic or prefer to do a program in your community or at home, whichever you choose, remember that stroke is a complex condition which can make it hard for you to exercise safely. As needs can be different from one person to the next, a custom exercise plan developed specifically for you by a therapist or other healthcare professional will assure your exercises meet your necessities and are safe for you.
After a stroke, it is important to improve walking and prevent falls. There are several things you can do to keep from falling:

- Stay active
- Keep your leg muscles strong and improve balance by exercising
- Follow your therapist’s advice about safety and which device is best for you to walk with, if any
- Wear comfortable, flat shoes with a low broad heel and soles that grip; Do not wear loose slippers or walk in socks
- Do not use furniture or walls to help steady you while walking
- Know the possible side effects of your medications
- Always walk with a brace, cane, or walker if you were told to use one
Safety at Home
There are also many ways to prevent falls in the home. Your occupational or physical therapist may check your home and give you tips to avoid falls and possible injury:

- Clear paths to the kitchen, bedroom and bathroom
- Wear non-skid shoes and avoid slick surfaces
- Remove all throw rugs to prevent tripping
- Use handrails for going up and down stairs
- Use a handrail or shower chair

If you feel unsteady or find yourself having more trouble walking you may want to talk to your healthcare provider about starting physical therapy to reduce the risk of falls.

Be on the safe side and don't take chances. Listen to the advice of your healthcare providers. Getting better does not happen overnight and takes a lot of patience.
ACT FAST
Call 9-1-1 IMMEDIATELY at any sign of a stroke. Stroke is an emergency.

Use FAST to remember warning signs of stroke:

FACE: Ask the person to smile. Does one side of the face droop?

ARMS: Ask the person to raise both arms. Does one arm drift downward?

SPEECH: Ask the person to repeat a simple phrase. Is their speech slurred or strange?

TIME: If you observe any of these signs, call 9-1-1 immediately.

NOTE THE TIME WHEN ANY SYMPTOMS FIRST APPEAR. Medical options exist that may reduce the long term effects of stroke if administered soon after the onset of symptoms.

Learn about more signs of stroke at stroke.org/symp
The National Stroke Association’s mission is to reduce the incidence and impact of stroke by delivering education and programs focused on prevention, treatment, rehabilitation and support for all impacted by stroke.

A stroke is a brain attack that occurs when a blood clot blocks an artery or a blood vessel breaks, interrupting blood flow to an area of the brain. Brain cells begin to die.

CALL 9-1-1 IMMEDIATELY IF YOU SEE ONE OR MORE SIGNS OF A STROKE.

STROKE HELP LINE
1-800-STROKES (787-6537)

stroke.org

All publications are reviewed by the National Stroke Association’s Publications Committee.

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