

Stroke Rehabilitation – An Overview of the Journey

Time is of the greatest essence when a stroke strikes. It hits you like a bolt of lightning out of the blue but you can limit its damage and any subsequent disability by getting immediate help. Dr Effie Chew, consultant, Rehabilitation Medicine, National University Health System, tells you why, and walks you through the process of stroke recovery.

I THINK I HAVE A STROKE

Occasionally, over dinner, someone will casually ask me, “I have this numbness in my arm on and off for years. Do you think it is a stroke?”

There are a few things wrong with this scenario:

1. Stroke is a medical emergency. If you think you are having a stroke, it is not the topic of casual dinner conversation. You should rush to the hospital immediately.

Strokes are also known as ‘brain attacks’. The blood supply to part of the brain is cut off abruptly. Other strokes are caused by burst blood vessels bleeding into the brain.

The sooner you get to a hospital equipped to manage your stroke, the higher your chances of limiting the damage that is done to your brain and, consequently, the disability that you will suffer from your stroke.

2. The symptoms of stroke come on suddenly. If the symptoms are gradually getting worse over months to years, chances are it is some other problem, not a stroke.

When symptoms of a stroke resolve within an hour, it is called a ‘mini-stroke’ (transient ischaemic attack). These episodes should not be ignored as they indicate an increased risk to having another stroke.

The most common warning sign of a stroke is sudden weakness of the face, arm or leg on one side. Stroke can also manifest as

sudden numbness on one side of the body, sudden confusion, sudden trouble speaking or understanding speech, sudden trouble seeing, sudden trouble with balance or coordination.

Once you arrive at the hospital, the doctors will administer treatment according to the type of stroke you had. They will investigate the likely causes of the stroke and look for underlying risk factors. Treatment will be targeted at the results of these investigations. We will not go into detail on these treatments here.

REHABILITATION – THE ROAD TO RECOVERY AFTER A STROKE

The process of rehabilitation usually starts in the hospital as soon as possible, oftentimes, the very next day after diagnosis. The goal of rehabilitation is to achieve the highest functional abilities possible, given each person’s individual disabilities and environment. There are those who would rather be assisted and waited upon, but by and large, most people want to be as independent as possible. Through rehabilitation, the stroke survivor relearns the skills of everyday living to regain as much independence as possible.

The earlier stroke rehabilitation is started, the better the outcomes will be. Rehabilitation is the only way to help in the recovery of function after the stroke has occurred. Brain cells damaged by stroke, or other injuries, do not replace themselves easily, particularly in adults. It is through rehabilitative training

that the brain is able to reorganise its connections, a process termed neuroplasticity, so that some of the lost function may be regained.

Early rehabilitation also decreases complications that can happen after a stroke, such as infections of the lung and urinary tract, pressure sores and development of fixed stiffness in the limbs (contractures).

A number of options for continuation of rehabilitation after the acute phase are available, depending on the severity of the disabilities and individual factors

1. Inpatient rehabilitation is appropriate for those who have significant disabilities and can engage in one to two hours of therapy a day at the rehabilitation unit of a hospital, or a community hospital.
2. Home rehabilitation or early supported discharge may be appropriate for those who can be cared for at home.
3. Outpatient rehabilitation at a hospital or day rehab centre may be appropriate for those with milder deficits, or for maintenance of function.

WHAT HAPPENS DURING STROKE REHABILITATION?

Stroke rehabilitation is an interdisciplinary team effort. The team usually involves the stroke survivor, his or her family, the physiotherapist, the occupational therapist, the speech therapist, nurses and the doctor, often a rehabilitation physician. The stroke survivor is at the centre of this team.

A number of body functions may be affected by the stroke, apart from those listed above - awareness of one side of the body, language, memory and thinking abilities, swallowing, bladder and bowel control and mood problems such as depression.

An inpatient rehab programme starts with a formal assessment of the functional deficits resulting from the stroke and how these affect the patient given his particular environment and personal factors. Other medical problems and how they impact on the rehabilitation process will also be assessed. The team, including the patient, then comes to an agreement on the goals for rehabilitation. There will also be screening for early medical and rehabilitation complications, and measures will be taken to prevent and treat these complications.

Therapy will be targeted towards the functional deficits identified during the assessment. Some examples of common daily tasks that are worked on include retraining of balance, walking, toileting, dressing and bathing. Nutrition and swallowing abilities are also looked into, as are cognitive and communication abilities, and bladder and bowel function.

Prior to discharge, an assessment of the stroke survivor's home environment will be made and the equipment necessary to assist the stroke survivor in daily activities will be prescribed. Some equipment that may be needed include wheelchairs or walking aids, grab bars, orthotics to assist with activities of daily living or walking. If necessary, caregivers will be trained in the appropriate skills to assist the stroke survivor.

WHAT HAPPENS AFTER GETTING HOME?

For those with residual disabilities, rehabilitation often continues into the outpatient phase. This may take place at a hospital, a day rehab centre or in a home therapy programme. Some challenges only become apparent when the stroke survivor returns home and faces the actual demands of daily life. Which is why an outpatient review is important. For others, return to work issues, driving, and other higher-level activities, need to be addressed as an outpatient.

WHAT ELSE CAN BE DONE?

Having had a stroke puts a person at an increased risk of having another stroke. So it is very important to work with the doctors to control the risk factors that can be controlled, as much as possible. This may be through lifestyle changes, diet, exercise and medications. Some important risk factors to work on include:

1. Diabetes
2. High cholesterol
3. High blood pressure
4. Heart disease - irregular heart beat, heart valve disease and heart failure.
5. Smoking
6. Obesity

Technology has been advancing in the area of stroke rehabilitation.

Recent advances include the use of robotics to assist in rehabilitation training and noninvasive brain stimulation to improve responses to rehabilitation. You can learn more about participating in ongoing trials from rehabilitation physicians in any of the restructured hospitals.

