National University Hospital

Stroke

Stroke, also known as a cerebrovascular accident (CVA), occurs when the supply of oxygen and nutrients to the brain is disrupted resulting in damage to the brain tissue. This usually happens when a blood vessel in the brain is blocked by a blood clot (ischemic stroke), or when blood vessels burst (hemorrhagic stroke). A transient ischemic attack (TIA), also known as a mini-stroke, is a temporary period where symptoms similar to those of a stroke manifest when blood supply to the brain is temporarily disrupted.

If left untreated, individuals with a stroke may experience significant physical, perceptual and/or cognitive deficits, such as weakness in the limbs or memory problems. Some may also experience post-stroke depression.

Each individual's ability to recover varies, depending on the severity and location of the stroke and individual factors such as age and pre-existing co-morbidities. At times, family members may need to take on the role of the caregiver to assist most severely affected individuals in his/her daily activities.

How is it treated?

Depending on the type and location of stroke, treatment will primarily be guided by the medical team. Stroke rehabilitation begins as soon as the patient is medically fit, in order to maximise recovery.

What does rehabilitation involve?

Stroke rehabilitation aims to minimise overall impairment, enable stroke survivors to regain as much independence as possible, and improve their quality of life.

A multi-disciplinary team is involved in the rehabilitation process, and this includes physiotherapists, occupational therapists, and speech therapists.

Occupational therapists assist stroke survivors to resume valued roles at home and in the community, through:

- Maximising the patients' performance in day-to-day activities e.g. dressing, grooming, showering
- Facilitating retraining of the affected upper limb
- Improving patients' cognitive functions with remedial or compensatory means
- Prescribing assistive devices e.g. wheelchairs
- Providing caregiver training
- Assessing and facilitating the patients' ability to return to work

Speech therapists will assist patients with communication disorders, such as aphasia and dysarthria, to help patients communicate more effectively, through:

- Personalised therapy activities
- Communication strategies, and/or

- The use of alternative communication methods e.g. communication board

Speech therapists are also involved in assessing the swallowing function of patients post-stroke. If a patient has swallowing difficulties, the speech therapist will ensure safe swallowing by modifying diet texture or fluid viscosities, or prescribe swallow rehabilitation exercises to improve the swallowing function.

The physiotherapist's role in stroke rehabilitation is to help patients regain as much movement and normal function as possible. This may include, but is not limited to:

- Helping patients in re-learning how to perform basic movements such as getting out of bed, transferring out of bed or to a chair, standing and walking
- Teaching patients specific exercises to strengthen weak muscles and improve balance
- Teaching patients new ways to compensate for persisting visuo-spatial and sensory impairments to complete a task
- Prescribe and teach patients and caregivers on the use of walking aids to maximize mobility and function

Useful websites

What is stroke?

Care after stroke

Rehabilitation after stroke

Stroke Support Station (Singapore)