



EXERCISE FOR STROKE FAQs

What is a stroke?

A stroke occurs when the brain is denied oxygen, caused either by a block or a bleed in an artery supplying the brain. The result is an area of dead brain cells. [Here's a good video.](#)

Will these cells regenerate?

The affected part of the brain will not regenerate, but with the right input, the brain can figure out how to replicate the actions the dead part of the brain was responsible for. This is called neuroplasticity. Thanks to neuroplasticity, it is possible to regain some muscle activation and strength. The key to recovery is engaging in high-repetition therapeutic exercises that will boost neuroplasticity and allow you to see the greatest improvements in function.

What physical challenges am I likely to encounter?

- One or multiple parts of your body could be paralysed after a stroke.
- You may experience significant weakness throughout your body.
- You may have difficulty coordinating your movements, causing you to feel a little slow or clumsy.
- Your muscles may be tight and stiff to the point where using them is difficult. Conversely, they could be abnormally loose and soft.
- You could often feel unsteady or dizzy.
- If the mobility of your legs or feet is lost, fluid can often build up in the limbs where movement is compromised.
- Commonly, people lose feeling, have increased feeling, or start to feel pins and needles on part of their body.
- You might find that you feel tired after tasks that used to be no problem for you, like walking short distances. Simple movements can become complex and involved tasks.
- Feeling pain in your hip, leg or on one side of your body is quite common.

How does neuroplasticity work?

The brain talks to the body via neural pathways. The more an action is performed, the stronger the pathway it uses gets. In the case of neurological conditions like stroke, Parkinson's and MS, repeatedly mimicking the actions we want to encourage leads to new neural pathways being formed and those actions being restored to some degree. In some ways, the stroke brain is a slow learner, so the key here is repetition, i.e. showing the brain time after time what is required and thus strengthening the neural pathways used for those actions.

How much function can I regain?

Research indicates that stroke survivors can spend almost 80% of their days sitting or lying down, which results in significant deconditioning. But with the right exercise programme, it is possible to regain function. How much function is dependent on several factors including the nature of the stroke and how hard you are prepared to work.

What does a typical exercise programme consist of?

Stroke survivors are like anyone else in that they need a general exercise programme to stay in shape but there are specific things to work on:

- ✓ Muscle atrophy is common after stroke, so strength training is important.
- ✓ But actions like getting out of a chair also require power in the legs and arms. Power is a function of speed which requires a different form of resistance training.
- ✓ Gait is often compromised, so we spend a lot of time working on stride length, knee bend, heel strike and so on.
- ✓ Talking about gait, stroke survivors can face 'smaller' impairments like foot drop, which are worked on in the gym and at home.
- ✓ Stability also tends to be challenged by stroke, so we focus on balance.
- ✓ Range-of-motion can be an issue for stroke survivors. This is countered with stretch exercises.

Resources

This is an excellent resource from [The Stroke Foundation NZ](#).