

Spasticity Surgery

What is spasticity?

Spasticity occurs in people who have a medical condition or injury which affects their central nervous system such as spinal cord injury, acquired brain injury, cerebral palsy, stroke or other neurological conditions like multiple sclerosis. The damage to the central nervous system results in changes in the signals between the brain and the muscles and can lead to a muscle becoming more excitable. This is experienced as a constant contraction of the muscle or muscles involved. Over time, the body tries to adjust to the tightness by the muscles and tendons shortening and joints becoming immobile or stiff.

What can be done?

Prior to referral to seeking surgery, most people have tried a large number of different treatments to reduce the impact of their spasticity. These are likely to have included medication, stretching, splinting, active exercise, electrical stimulation and botulinum toxin injections. When these measures are not enough to provide relief for spasticity or when contracture has established itself then surgery can help. Examples of the types of surgery that is used include:

- **Tendon lengthening:** refers to several surgical procedures used to lengthen the tendon of a spastic muscle so that the joint can rest in a more natural position. For example: a Z step lengthening is when a Z is cut into the tendon, the tendon is moved apart to increase its length and re sewn together.
- **Tendon transfers:** refers to using the tendon of a spastic muscle and re-routing the tendon to insert it into a different point, to hold the joint in a different, more functional, position. Usually the muscle is moved to assist the opposing action so as to restore balance.
- **Joint releases:** refers to releasing the capsule and ligaments around a joint, which have tightened to allow the joint to be positioned more naturally.

Will surgery make my hand/arm work like it did before?

No. Surgery is unable to repair the damage caused to the central nervous system. Surgery aims to minimise the functional impact of the spastic muscle pulling on the joint, by lengthening the tendon or altering the direction in which it pulls. While very occasionally patients report some active movement which is 'unmasked' by the surgery, the most common benefits include relieved discomfort, easier hygiene and dressing and a more natural looking and relaxed hand/arm.

What does the surgery involve?

Surgery occurs under a general anaesthetic and takes two to four hours. Most people are in hospital for one or two nights following surgery, depending on the extent of the surgery.

What happens after surgery?

What you require after surgery depends on the surgery that you have. You may have some increased care or equipment needs. You are also likely to need to wear a splint full time for 3-6 weeks and then at night for 3 months after surgery. In some instances, it will be recommended that you wear the splint ongoing at night to avoid recurrence of the contractures. You will need to see Natasha at her rooms for a post surgery

check at around two weeks after surgery and then again at one month and three months after surgery. During this time you will also be under the care of a hand therapist who will help you with the appropriate exercises. If you have a local therapist, they may be able to assist with some of the rehabilitation.

How much does surgery cost?

Once you have contacted Natasha her practice manager will contact you to make an appointment to meet Natasha either in person or, if you are overseas or interstate, via Telehealth (Skype or Facetime). Once you have been assessed as being suitable for surgery then you will be provided with an estimate for surgery and post surgery rehabilitation.

If you are eligible for health care under the public health care system in Australia (Medicare), you can be placed on the waiting list for surgery at Austin Health and managed through the Austin Health's Upper Limb Program. You, your insurer or NDIS would be responsible for transport to and from appointments, equipment hire and increased care needs immediately following surgery, as well as exercise equipment and private therapy if used.

Where will the surgery take place?

Surgery is performed at Epworth Richmond Hospital in Richmond. Rehabilitation is usually conducted in an outpatient setting at Epworth Hawthorn. For those having treatment through Austin Health your surgery will be performed at the Austin Hospital and your rehabilitation will be managed as an outpatient by therapists affiliated with the Royal Talbot Hospital .

How do I organise an assessment?

You can contact Natasha via the contact form on this website. At your appointment Natasha will assess your current upper limb function, talk with you about your goals, answer your questions and discuss what procedures may be best for you. Please bring your referral letter and any relevant documentation about your previous treatment to this appointment. If you would like to be assessed through Austin Health please contact the Upper limb Program at upper.limb.program@austin.org.au or by phone on +61 3 9490 7285