

# Muscle Health

- **Damaged nerves from polio can lead to muscle weakness.**
- **There are some tests you can have to see changes**
- **It is important to be aware of your fatigue to help keep muscle strength**

The polio virus destroys the nerves that connect to muscles. These nerves are called motor neurones. Damage to motor neurones may cause obvious muscle weakness and wasting (atrophy). Sometimes the person doesn't notice problems until years later. For example, they might feel fatigue because of increasing muscle weakness.

## Managing muscle weakness

You may notice your muscles get weaker as you get older. This can happen for three reasons:

- History of polio
- Ageing process
- Lifestyle changes

It can be hard to identify which your weakness may relate to. Sometimes combinations of reasons occur.

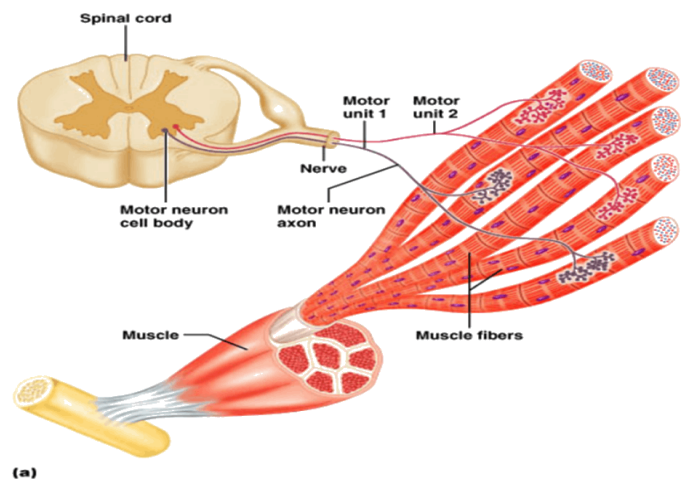
Some muscle weakness feels like fatigue or heaviness in your body. Other muscle weakness is when you cannot stand up easily, or trip when walking, or drop things.

## How much should I use my muscles?

There are no strict rules on how much muscle activity you should do as a polio survivor. Not using your muscles leads to weakness, but over-using the muscles can also lead to weakness.

The best and first thing you can do is to listen to your body.

When you use your muscles more, do you have more fatigue or pain?



<https://imgbin.com/>

**If yes:** try to do less or take more rests, and talk to your doctor.

**If no:** continue what you are doing, but be aware if this changes.

Your general practitioner or other health professional such as an occupational therapist, physiotherapist, or exercise physiologist may be able to help you:

- Find the right amount of activity for you
- Learn to pace your activities
- Look at aids or strategies to manage muscle weakness and fatigue
- Continue with regular muscle testing and monitoring

The fact sheet exercise and the fact sheet on fatigue may also give you some helpful tips.

### Muscle loss and metabolism

If you have muscle wasting (atrophy), consider that it may impact your metabolic rate. Metabolic rate is the amount of energy your body uses in day-to-day functioning. Some polio survivors have a reduced metabolic rate because of loss of muscle wasting. This affects the body's ability to manage weight, and may also change the way medications and alcohol affect you. We recommend you discuss any concerns about this with your doctor.

### Testing muscle strength

Health professionals can test muscle strength and give advice about how much activity you can do. For example, a doctor might refer you for a test called an electromyograph (EMG).

The EMG gives information on the size of muscle motor units, and how muscles respond to the message that tells them to contract. EMG can be helpful, but it only looks at the specific muscles being tested. To test your whole body would take a long time, and could be expensive.

A motor unit includes the nerve body, the axon (or branch) of the nerve, and the muscle fibres that the nerves connect to. If the motor unit is bigger than normal, it shows that healthy nerves have grown "sprouts". These sprouts are extra nerve endings to help do the work of damaged nerves – they adopt orphaned muscle fibres. This helps the muscle to work in spite of the damage from polio. However, these sprouts can fail later in life. There will then be fewer nerve endings connecting to muscle fibres.

A GP or health professional might test your muscle strength manually (by hand). They may use a muscle

chart, which is a scale from 0 to 5. In this scale, 0 means no muscle response and 5 means a strong muscle response. The test looks at your muscle strength and endurance as you try to move your joints. For polio survivors, there may be both weakness and fatigue in muscles. Fatigue is noticed by having less strength with repeated attempts. This muscle test does not show how much your motor units have changed, or how many "sprouts" are still present. What it can show is how these changes have affected your muscle function. This test is not difficult to do, but it does take some time. You might feel tired from the exertion of this testing.



<https://imgbin.com/>

### See also:

[The Late Effects of Polio](#)

*Disclaimer: The views expressed in this publication are not necessarily those of Polio Australia, and any products, services or treatments described are not necessarily endorsed or recommended by Polio Australia.*