



# Myositis Association Australia

*Keeping in touch*

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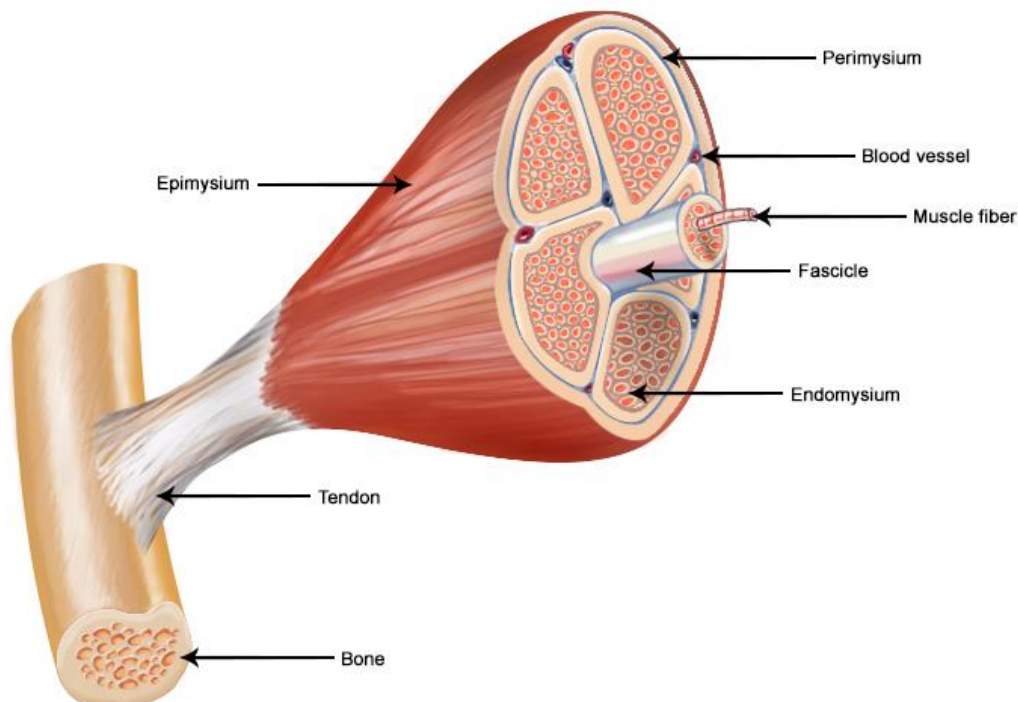
## Why do my muscles get tired so easily?

A common symptom in people with muscle weakness is muscle fatigue, where after just a small amount of activity or exercise, the muscle feels too tired to work effectively. Why then do people with muscle disease feel tired so often?

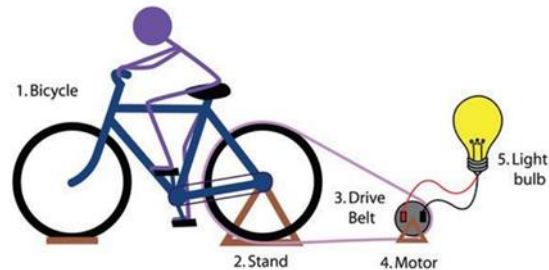
Firstly, let's look at how muscles work in a person with no muscle damage. It's important to know that not all muscles are the same. This article will focus on skeletal muscles which are the main muscles of the body that produce movement in our limbs and trunk

Muscles are made up of many muscle fibres bundled together. The diagram is a cross section of a typical muscle

### Structure of a Skeletal Muscle



When performing regular routine tasks not all muscle fibres need to contract at once. If the task is prolonged but not requiring a lot of effort such as walking, the muscles fibres take it in turn to work. They only ever all work together when the muscle is contracting against a maximum resistance. It may be easier to imagine a muscle fibre being like a bike that is used to generate electricity.



A normal muscle for example might have 10 of these electricity generating bikes to keep the lights on.

### Normal Muscle



Of the 10 cyclists, only 1 and 2 will need to work to generate enough energy to light the bulb. After 5 minutes or so, these cyclists will start to feel tired and will need to rest and recover. When that happens cyclists 3 and 4 take over. As before, when they get tired cyclists 5 and 6 start working and so on. By the time that cyclists 9 and 10 are getting tired, cyclists 1 and 2 will have recovered fully to take over again. It is the fact that not all the muscle bundles are working at the same time, that allows muscles to work all day as long as the activity is not too strenuous.

When muscles are inflamed or damaged then in effect that muscle may only have fit 4 cyclists to keep the lights on.

### Inflamed and Weakened Muscle



As before cyclists 1 and 2 get started. Once they need to rest then cyclist 3 and 4 start to work. The catch now is that when cyclists 3 and 4 are feeling tired 1 and 2 need to take over again. Cyclists 1 and 2 may have only just finished their coffee and not had time for lunch before they need to go back to work. As a result, they may only be able to cycle for a shorter period than previously. Because cyclists 3 and 4 are tiring quickly also, 1 and 2 are back in action again before too long. Its not surprising that muscles with less cyclists start to run out of steam and the lights go out.

### Managing fatigue

Using the cyclists as an analogy to muscle fibres, it is easy to see why your muscles tire so easily. So, what can you do minimise the impact of this? The following are a few ideas:

## **Pacing**

Given the reduced capability of damaged muscle to work over long periods it makes sense to try to plan your daily activities in advance. Using the 4 cyclists analogy again, we know that they will all fatigue quickly so one way to help them recuperate is to give them enough time to rest and recover before they need to work again. Simply put, it means stretching out your activities over the day rather than trying to do too much all at once. If you have 4 things you were going to do that involved a lot of walking, getting in and out of cars etc then its better to plan each activity to allow sufficient time for the muscles to recover in between. Another option to consider is only doing your regular exercise programme on quiet days. There is little benefit of trying to exercise already tired muscles so there is no harm in having a day off from exercise if you know you have a busy day ahead.

## **Exercise**

Its somewhat of a catch 22. Despite the fact that exercise will fatigue muscles, this is not an excuse to not do any. Looking at our cyclists again, one thing to remember is that every one of these cyclists can be made fitter. Whilst the exercise won't create more cyclists they can however make each one fitter. Where previously cyclists 1 and 2 could manage 5 minutes before they needed a rest with regular exercise, they may manage 6-7 minutes before they need a rest

## **Talk to your doctor**

Whilst muscle fatigue is to be expected in inflamed and weakened muscles, any sudden changes need to be reported to your doctor. This may be an indicator of disease activity. If muscle pain becomes an added problem, then there may be some strategies that they can help with to reduce this. Pain often impacts activity. It can create a vicious cycle of reduced activity resulting in increased muscle fatigue which in turn reduces activity even further. Remember also that not all fatigue is related to your impaired muscles so your doctor may want to explore other factors that are contributing to your fatigue

## **Healthy Diet**

If you have never spoken to a dietician then it is worth considering consulting with one to ensure that your diet is appropriate for your level of activity and that you intake is sufficient to keep your muscles as healthy as they can be. If you are having problems with swallowing and chewing, they may also be able to help in consultation with a speech pathologists on the best food consistencies for you

## **Sleep**

Whilst easier said than done, a good nights sleep will help your muscles rest and recover. If you are not getting at least 7-9 hours per night of sleep on a regular basis then you should discuss this with your doctor. Problems with breathing associated with myositis can often be worse at night and there are a number of ways in which your doctor can help you manage this