



EXERCISE AND MITO

If you have mitochondrial disease (mito), regular exercise can help in lots of ways.

There are lots of benefits from doing regular exercise. It can increase your fitness, improve your physical and mental health and help you feel better.

This fact sheet gives you practical tips on getting started with an exercise program and provides tips on how to keep up this new routine.

It also gives exercise recommendations that are suitable for people with mito, to help you find one that works for you and that you'll enjoy.

WHY EXERCISE HELPS WHEN YOU HAVE MITO

Many people with mito experience tiredness and fatigue. Exercise gives you more energy by increasing the number of healthy mitochondria in your cells, and keeping them functioning at their best.

Exercise helps you feel fit and strong, and helps you live well with mito.

Benefits of exercise

Feel fit and strong

- ✓ Improves your fitness and energy levels, which makes it easier to do daily tasks
- ✓ Increases your strength
- ✓ Improves your coordination, balance and flexibility, reducing your risk of falls and injuries
- ✓ Improves your mood and mental health
- ✓ Reduces body fat
- ✓ Improves your confidence with physical activity

Live well with mito

- ✓ Gives you more energy so you don't feel as tired
- ✓ Makes your muscles stronger and increases muscle mass, reversing any muscle loss due to inactivity or ageing
- ✓ Helps to protect you against chronic illnesses such as diabetes and heart disease
- ✓ Improves your quality of life and helps you maintain independence

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HOW TO START EXERCISING

1

See your doctor

Before you start a new exercise program, talk to your doctor. They can give you advice on the best kind of exercise for you, and help keep track of your health while you start new exercises.

It's also important to have a heart check (known as a cardiac screening) before you start a new exercise program. See your specialist doctor to have this done first.

You may be eligible for medicare rebated sessions with health professionals such as physiotherapists and exercise physiologists to help you get started. Talk to your doctor to find out more.

They can help you work out an exercise plan that's safe, tailored to your needs, and is something you enjoy doing.

2

Build up slowly

When starting a new exercise routine, it's helpful to work with an exercise physiologist. They can help you select the right exercises, and ensure you start slowly and build up steadily.

By gradually building up your exercise routine, you'll notice that you start to feel stronger and have more energy. Starting slow will also help avoid injury or overdoing it.

For example, you could start with a few minutes of stretching or walking every day, and then gradually increase it by one or two minutes a day.

Pace yourself according to how you feel each day. On days when you have more energy, try to do a bit more.

If you have mito, you may find it a challenge to do physical activity. One of the positive effects of regular exercise is that over time, as you get fitter and stronger, it will feel easier. Over the long run, exercise will also help you avoid a "spiral of fatigue" which results in being too tired to exercise.

If you feel too tired to get started, talk to your doctor.

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Do exercise you enjoy

Find an exercise you enjoy, so you look forward to it and enjoy doing it. This will help you set up and maintain a habit of exercising and to see the benefits from it.

Be careful not to overdo it. Gradually increase the difficulty of the exercise and the time you spend doing it. If you have symptoms such as dizziness, nausea or vomiting, excessive tiredness, chest pain or a racing heart, stop and check with your doctor.



Some great options for people with mito are exercises such as:

- Swimming
 - Walking
 - Exercise bikes
 - Tai Chi
 - Yoga
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Do a variety of exercise

Try to include a mix of both cardio and resistance exercise.

Cardio exercise includes walking, running, swimming and cycling. Cardio, or aerobic, exercise increases your heart rate and breathing so that oxygen is transported around your body more quickly. If you gradually exercise for longer periods, your body will use energy more efficiently and your fitness will improve. Regular cardio exercise will build your endurance. The more you do it, the easier it gets. It will also give you more energy for day to day activities.

During cardio exercise, aim to keep your heart rate to less than 70% of your maximum heart rate. Your maximum heart rate is easy to calculate: it's 220 minus your age. Wearable heart rate monitors are available from most large sports stores. Talk to your doctor about what's right for you.

Resistance exercise often involve weights (including your own body weight). Exercises include sit to stands, modified push-ups, squats, machine and free weights, and resistance bands or therabands. These types of exercises make your muscles and bones stronger, and improve your balance and coordination.

A combination of these two types of exercise is recommended if you have mito to give you the most benefits. They are safe to do if you start slowly and gradually increase the duration and difficulty.

If you're just getting started, it's best to work with a physio or exercise physiologist, who can develop a program and oversee your progress.

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Find a group and make it social

Exercising with others helps you to feel supported and motivated. Local medical clinics, community centres, councils and gyms often have adapted exercise programs for people living with chronic conditions. Some centres run exercise classes for people living with arthritis, fibromyalgia, muscular dystrophy or multiple sclerosis.

These might also be suitable for people with mito. Contact local groups near you to find out what kind of exercises they do, and if you're not sure if it's suitable, check with your doctor or physio.

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Eat for an energy boost

As you start to do more strenuous exercise, your body may need more fuel to maintain an increased level of activity. In these situations, plan your meals and drinks around your exercise routine. Eat an hour before you exercise to give your body plenty of energy, and eat again after to refuel.

Good energy boosting foods include:

- Juice
- Skim milk
- Bananas
- Toast with peanut butter

If you're just getting started with your exercise routine or undertaking more gentle exercises, then it's not necessary to eat more food before or after exercise. Listen to your body to understand what's best for you.

Despite the level of exercise intensity, remember to drink water while you exercise to stay well hydrated.

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Monitor any pain levels

When you start exercising, write down your pain levels on a scale of one to 10, before and after you exercise. This helps to monitor your progress.

Going forward, it's helpful to write in your diary if you have a flare-up, and what caused it. This helps you tailor your program to what works best for you.

When you start exercising, try to follow these two guidelines:

- 1. Any pain you experience should be tolerable**
- 2. The pain should not increase from day to day**

It's normal for your pain levels to rise slightly when you start a new type of exercise. For instance, if your pain level rises from an average of three to five when you exercise, that's normal.

But if your pain goes up to eight, reduce your activity levels and talk to your doctor or physio for advice.

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Take regular breaks

It's important to balance your exercise with periods of rest each day to give your body the chance to recover.

Physical activity all adds up over the day: 30 minutes of exercise broken up into three blocks of 10 minutes is just as beneficial as exercising for 30 minutes non-stop.

For instance, you could exercise for 10 minutes, rest for 10, then exercise for another 10 minutes.

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Set goals

Set yourself goals to give yourself something to work towards.

For instance, you could decide to walk an extra 500 steps every week for the next month. Having a concrete goal is easier to focus on and keep track of than something less specific such as "I want to walk more".

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Help kids pace themselves

Children can get so involved in sport that they can forget to take breaks. Taking regular breaks and resting is just as important for kids as it is for adults.

Team sports are great for physical and social development. But keep in mind that kids with mito may not be able to play for the whole game like their friends or classmates.

If your child plays a team sport, encourage them to take regular breaks. There may be other jobs they can do to help the coach or team from the sidelines. They'll also need some rest and a healthy snack afterwards to recover.

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Fuel kids with healthy snacks



Try these healthy snack ideas for kids:

- Fresh fruit salad
 - Yoghurt
 - Hummus with sticks of carrot, celery or capsicum
 - Wholegrain crackers with cheese
 - Wrap with salad and cheese
 - Smoothie with milk, chia seeds, plain yoghurt and bananas or berries
 - Banana pikelets
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Make exercise a habit

Exercising regularly will help you establish a new routine. Over time that becomes a habit, which is easier to maintain.

Remember that starting a new routine takes practice and discipline. But committing to a goal over the long term will pay off, and you'll start to feel better and have more energy.

Treat exercise like an appointment you have to keep, and put it into your calendar or diary.

For some people, energy levels are usually higher in the morning, so try to exercise then. Find an exercise routine that works for you which fits into your daily routine. This will be different for everyone.

Following a regular exercise routine will also help you maintain the positive effects of exercise in the long term.

Give yourself rewards, too, for following your plan and achieving your activity goals.

Stop if you're not feeling well

Remember, you know your body best. Exercise within sensible limits and if you're feeling unwell, then stop and rest.

If you experience any of these symptoms then stop:

- Dizziness
- Light-headedness
- Nausea
- Vomiting
- Excessive tiredness (exhaustion)
- Chest pains
- A racing heart, or heartbeats that skip a beat
- Extreme pain

If you experience any of these symptoms, discuss them with your doctor or physio, and make sure that it's OK to continue.

Summary

- Exercise can help you live well with mito
- Talk to your doctor before starting a new exercise program
- Find a physio or exercise physiologist to help you develop an exercise plan
- Find an exercise you enjoy
- Set small goals
- Build up slowly
- Be aware of your pain levels
- Take regular breaks
- Join a community exercise group
- Stop if you have severe pain, excessive tiredness or other symptoms
- Recognise, enjoy and reward your success



How to access government support

<https://www.mito.org.au/government-support/>

How to find a physio or exercise physiologist who has experience with mito

<https://www.mito.org.au/mito-professionals-directory/>

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