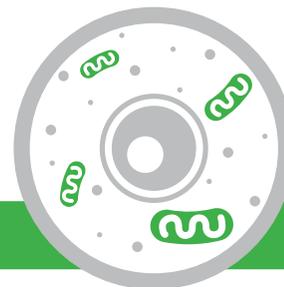


# AN INTRODUCTION TO MITOCHONDRIAL DISEASE

## PATIENT INFORMATION FACTSHEET

### What are mitochondria?

Mitochondria can be found in all cells in the human body except red blood cells. They come in many different shapes and sizes and do a number of essential jobs, the most important of which is producing energy.



Mitochondria produce around 90% of the energy the human body needs.

### What is mitochondrial disease?

Mitochondrial disease ('mito' for short) is caused by a fault (mutation) in one or more of the genes that make up the mitochondria. These faulty genes can be inherited from the mother or the father. Recent research demonstrates that mitochondrial mutations are present in at least 1 in 200 people and that around 1 in 5,000 will develop serious illness.

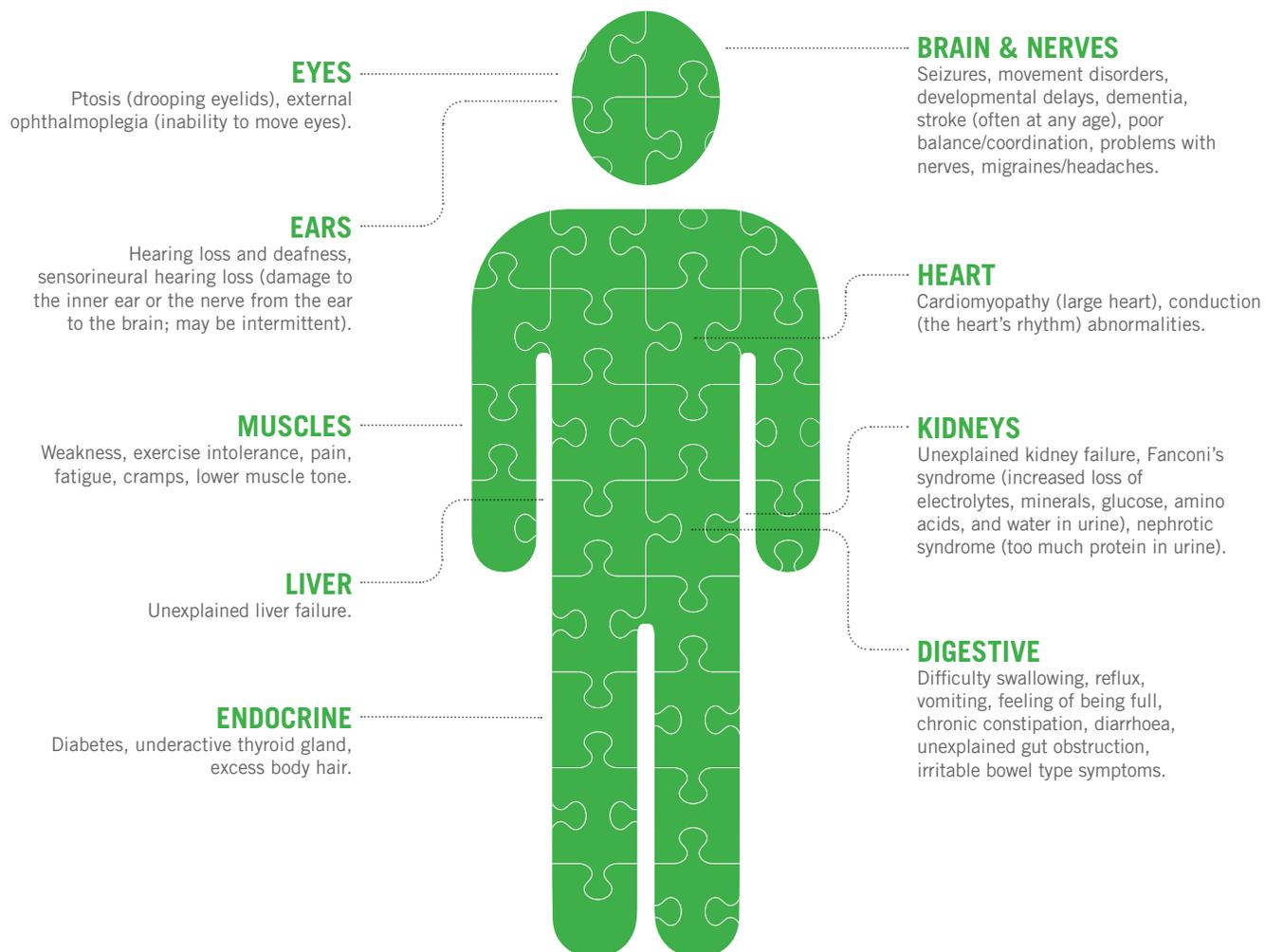
Mito is caused by genetic mutations that disrupt the production of energy by mitochondria.

### What are the symptoms of mito?

Mito can be summarised as...

any symptom, in any organ, at any age.

The diagram below shows the organ systems that may be affected and the wide range of different symptoms that can be associated with mito.



## How is mito managed?

You and your healthcare team will come up with a management plan to help you live as well as you possibly can with mito. While there are no cures for mito, there are a number of things that you can do to minimise the impact it has on you.



### Eating well

Getting the right nutrition can help you stay well and slow the progression of the disease. Eating smaller meals more regularly and avoiding fasting is recommended. Taking certain vitamins and supplements may be helpful but it is important that you speak to your doctor first.



### Getting enough sleep

Not getting enough sleep can cause fatigue, weakness, lethargy, behavioural issues, and difficulty with memory, learning and concentration. Speak to your doctor if you are having trouble sleeping.



### Staying active

Regular exercise can not only improve your overall physical condition, it can also increase the number of mitochondria in your cells and help them work better. It's important that you don't overdo it though as excessive exercise can cause exhaustion, pain and/or nausea.



### Preventing infections

Infections can cause prolonged and debilitating fatigue and weakness, as well as worsening of existing symptoms, in people with mito. It is important that you get all of the usual vaccinations and that these be kept up-to-date, including the seasonal vaccinations (e.g. influenza) and that you tell your doctor immediately if you think you might have an infection.



### Keeping warm/cool

People with mito are often more sensitive to heat and cold. Extreme temperatures can cause worsening of symptoms. This means that you may be more dependent than usual on the ambient temperature to feel comfortable and stay well.



### Avoiding toxins

Alcohol and smoking cause damage to mitochondria so are best avoided. Certain medicines must be used with caution. It's important that you speak to your doctor before taking any new medicine, including those available over the counter from the pharmacy, vitamins and supplements.



### Getting regular health checks

Close monitoring can help your doctor detect any worsening in your symptoms or new symptoms early, allowing for better management. Depending on your individual condition, you will likely have routine medical checks every 1–2 years.



### Getting support

The Mito Foundation offers support services and educational materials for people affected by mito in Australia, including peer support initiatives.

Visit [www.mito.org.au](http://www.mito.org.au) for more information and to find support.

This information is not intended to replace information or advice from your healthcare professional. Although every effort is made to ensure that the content of this publication is accurate and current, all data is subject to change without notice. Reliance on the content of this publication is entirely at your own risk, and the Mito Foundation accepts no liability whatsoever for any injury, loss or damage suffered or incurred by your use of, or reliance on, the information provided in this publication. AMDF00002. Date of preparation: August 2018.

This content was produced by Saatchi & Saatchi Wellness in partnership with Australian Doctor Group, with an independent educational grant from the Mito Foundation (ABN 84 135 324 391).

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