

Mitochondrial Disease 101

The United Mitochondrial Disease Foundation offers *MITO 101: A Primer for Physicians and Patients*, a collection of information intended to familiarize general practitioners and families with the most common problems raised by mitochondrial diseases. You can view *MITO 101* online by scanning the code to the right or by visiting www.umdf.org/mito101Revised.



Since 1996, the UMDF has funded over \$10 million in research to treat mitochondrial disease. The UMDF strives to inform physicians and medical professionals of mitochondrial disease through our Grand Rounds program, our annual symposium, patient meetings and Energy For Life walkathons. You can learn about UMDF online by scanning the code or by visiting www.umdf.org.



**UNITED
MITOCHONDRIAL
DISEASE
FOUNDATION®**

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Is it Mitochondrial Disease?

Chances are good you will see a patient with Mitochondrial Disease - in fact, you probably already have.

Mitochondrial disease occurs when the mitochondria in most cells in the human body fail to convert food and oxygen into the energy needed to power muscles and organ systems. Because symptoms are diverse and vary from patient to patient, mitochondrial disease is frequently undiagnosed or misdiagnosed. Mitochondrial disease is not as rare as you may think: 1 in 2000 people suffer from it. Today, there is no cure.

What are some signs of Mitochondrial Disease?

- The parts of the body that need the most energy, such as the heart, brain, muscles and lungs, are most seriously affected.
- The affected person may have strokes, seizures, muscle failure, gastrointestinal problems, (reflux, severe vomiting, constipation, diarrhea), difficulty swallowing, failure to thrive, delayed milestones, blindness, deafness, heart and kidney problems, heat/cold intolerance, diabetes, lactic acidosis, immune system problems or liver disease.
- The affected person may be unable to fight typical childhood infections or suffer fevers of unknown origin.
- A "red flag" for mitochondrial disease is when a patient has more than three organ systems with problems or when a "typical" disease exhibits atypical qualities.
- Neurological and organ damage can occur during and following an illness, like a simple flu or cold, and must be treated immediately with IV fluids and IV antibiotics.
- Although most patients are children, there are affected adults as well. Some have been ill their whole lives but were undiagnosed. Others did not show any symptoms until triggered by an illness.



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Our patients need your help.

A greater awareness of mitochondrial disease and its symptoms among clinicians could lead to faster diagnosis and treatment.