

What is Mitochondrial Disease?

• Energy Crisis in the Cell •



Comparing a Battery with our Mitochondria



- A new (healthy) **battery** generates energy for flashlights, iPods, and cell phones – producing light, sound, and photographs.
- Healthy **mitochondria** are the power plants in almost every cell, in every person's body. Your heart, brain, muscles, kidneys, and lungs depend on the **mitochondria** to generate energy for them to work properly.
- The **mitochondria** take the food we eat and the air we breathe to produce the energy we need to jump rope, read a book, or sing a song.
- An old (sick) **battery** has a lot of trouble making your electronics work. If you don't replace the **battery** in your flashlight occasionally, it will become dim or leave you completely in the dark. Your iPod won't play music if the **battery** is drained, and you won't be able to use your cell phone to make phone calls, text, e-mail, or take pictures if you haven't charged the battery in a while.
- Damaged (sick) **mitochondria** can cause children and adults to have problems in making their bodies work. Some kids cannot digest foods, cannot move their legs, cannot hold their mother's hand, or just cannot find the energy to get out of bed in the morning. They may lose their sight, have seizures, or cannot hear their father telling them good night.
- **Mitochondrial disease** is not contagious, which means you can't catch it by touching or being near someone with the disease. It is a genetic disease, which means it's part of your family's health history.
- **What can you do to help?** Tell your family, friends, and other people about mitochondrial disease and join our efforts to help researchers find a cure!

