



Medium-Chain Acyl-CoA Dehydrogenase Deficiency (MCAD)

Family Fact Sheet

What is a positive newborn screen?

Newborn screening is done on tiny samples of blood taken from your baby's heel 24 to 36 hours after birth. The blood is tested for rare, hidden disorders that may affect your baby's health and development. The newborn screen suggests your baby might have a disorder called MCAD.

A positive newborn screen does not mean your baby has MCAD, but it does mean your baby needs more testing to know for sure.

You will be notified by your primary care provider or the newborn screening program to arrange for additional testing.

What is MCAD?

MCAD affects an enzyme needed to break down fats in the food we eat, so they can be used for energy and growth. In MCAD, the enzyme used to break down fats is missing or not working properly.

A person who has MCAD doesn't have enough enzyme to break down fat into energy. Using stored fat for energy is especially important in between meals when the body is not getting new energy from eating food.

MCAD is a genetic disorder that is passed on (inherited) from parents to a child. The mother and father of an affected child carry a gene change that can cause MCAD. Parents usually do not have signs or symptoms, or even know they carry the gene change.

What problems can MCAD cause?

MCAD is different for each child. Some children with MCAD have only a few health problems, while other children may have serious complications.

If MCAD is not treated, a child might develop:

- Serious illness (Metabolic crisis)
- Sleepiness or little energy
- Behavior changes (such as crying for no reason)
- Irritable mood
- Poor appetite
- Seizures
- Coma

It is very important to follow the doctor's instructions for testing and treatment.

What is the treatment for MCAD?

MCAD can be treated. Treatment is life-long and can include:

- Frequent meals/snacks and low fat/high carb diet - a dietician will help you set up the best diet for your child.
- Special approaches to routine illnesses.
- Medications to help the body make energy and get rid of harmful toxins.

Children with MCAD should see their regular doctor, a doctor who specializes in MCAD, and a dietician.

Prompt and careful treatment helps children with MCAD live the healthiest lives possible.

Michigan Resources and Support

Michigan Newborn Screening
Nurse Consultant
Toll-free: 1-866-673-9939
newbornscreening@michigan.gov

Children's Hospital of Michigan Metabolic Clinic
Toll-free: 1-866-442-4662

Children's Special Health Care Services
Toll-free: 1-800-359-3722