When Baby Needs A Second Test for a Fatty Acid Disorder
Elevated C8

A small sample of your baby's blood was collected soon after birth and sent to the DHEC laboratory for testing. This testing is called Newborn Screening. In SC, newborns are tested for several genetic and chemical disorders. Some times, a second test is needed to help your doctor decide if your baby has one of these disorders. In many cases, the second test will be normal. However, if your baby does have one of the newborn screening disorders, early treatment will give him or her the best chance to grow up healthy.

Because a compound called C8 (octanyl carnitine) was high in your baby's first test, he or she could possibly have a Fatty Acid Disorder called Medium Chain Acyl co-A Dehydrogenase Deficiency (MCAD).

What are fatty acid disorders?

Fatty acid disorders like medium chain acyl co-A dehydrogenase deficiency (MCAD) are genetic disorders that are found in a few babies born each year. Some of these disorders can be identified when compounds called acyl carnitines are measured in a baby's blood. When a baby has a fatty acid disorder, he or she cannot use fat for energy. Most of the time our bodies use a sugar called glucose to give energy to the body's systems. Some of the ways our bodies get glucose are:

⏩By eating foods that have glucose as a part of their make-up (like breast milk and formula for babies)

⏩By changing stored fats and proteins in our bodies into glucose

If we become sick and are not able to eat very much for a while, we turn our fat stores into glucose for energy until we are able to eat again.

Babies with a fatty acid disorder are not able to turn fat into glucose. So when their bodies run out of glucose, they get sick very fast. They may have seizures, be very hard to wake up, or have problems breathing. Babies with a fatty acid disorder may get sick when they have an illness that makes them not want to eat. Almost any childhood illness can cause a baby to eat less than usual, like a cold, an ear infection or a virus. Stomach viruses that cause vomiting and/or diarrhea are a real concern in babies with a fatty acid disorder.

How will I know if my baby really has MCAD?

If your baby's newborn screening result showed very high C8 levels, he or she probably has MCAD. The newborn screening test will be repeated and additional tests will be done to help the doctors figure out if your baby has MCAD. Usually the results of these tests take a few days to come back. You will also be referred to a doctor who specializes in these kinds of disorders.

What do I need to do until I know the final results?

MCAD can cause your baby to get very sick. Even minor illness can be a medical emergency in a baby with MCAD. Follow your doctor's instructions very carefully. You will need to make sure your baby eats at least every four hours including through the night. If your baby is hard to wake up, refuses to eat, or seems to be getting sick, your doctor may have you call 911 for emergency help.

How is MCAD treated?

MCAD is treated by making sure that the baby doesn't go a long time between feedings. At first the baby may have to be woken up during the night to eat. Feeding through the night can be adjusted when the baby gets a little older.

What else should I do to keep my baby as healthy as possible?

Follow your doctors' instructions carefully! Babies with MCAD can get sick very fast when they are not able to eat their usual diet or when they have any illness. Almost any childhood illness can cause a baby to eat less than usual, like a cold, an ear infection or a virus. Stomach viruses that cause vomiting and/or diarrhea are a real concern in babies with MCAD.

Treating illnesses before they become serious and following your baby's diet plan carefully are the best things you can do to help your baby grow and develop.