

## Isovaleric Acidemia (IVA) (I-so-val-ER-ic A-sid-EE-mia)

### What is IVA?

Isovaleric acidemia (IVA) is a metabolic disorder. This means the baby has a chemical imbalance. IVA is a condition in which the body is not able to process proteins properly. People with this condition do not have enough of a certain enzyme. The enzyme is needed to break down an amino acid called leucine. Leucine is a part of many proteins. The lack of the enzyme leads to a build up in the body of a chemical called 3-methylcrotonyl-CoA. IVA is also known as “sweaty foot syndrome,” because of an odor which comes from a building up of isovaleric acid in the body. IVA is inherited. This means it is present at birth.

### What type of problems occurs with IVA?

A baby who has this condition might get sick very quickly. The baby may refuse to eat, or may develop vomiting. If untreated, this condition can lead to seizures, mental retardation, and loss of motor skills. The baby might go into a coma and die. Early diagnosis and treatment will help prevent these problems.

### What is the chance my baby will have IVA?

This condition occurs in about 1 in every 50,000 births. Babies born with this condition have a changed gene from each parent. A person who has one changed gene is called a carrier. A person who is a carrier does not have symptoms. If both parents are carriers, either parent can pass on the changed gene to their baby. If both parents pass on the changed gene, the baby will have the condition. If both parents are carriers, for each pregnancy:

- There is a 25% chance that the baby will be born with this condition.
- There is a 50% chance that the baby will be a carrier for this condition.
- There is a 25% chance that the baby will not be born with this condition and will not be a carrier.

### What is the treatment of IVA?

The treatment for this condition is a low protein diet. A medical formula or supplement, such as carnitine or glycine, might be needed. Your baby’s metabolic doctor will help you make sure that your baby gets the right diet and medical care. Routine illness, like the common cold, can make this condition worse. So be sure to contact your baby’s doctor whenever your baby gets sick.

### Where in Virginia can I take my baby for care?

There are three different treatment centers in Virginia. The names of the centers and the metabolic doctor are listed below.

- Virginia Commonwealth University, Richmond, Virginia, Dr. Arti Pandya
- Eastern Virginia Medical School, Norfolk, Virginia, Dr. Virginia Proud
- University of Virginia, Charlottesville, Virginia, Dr. Bill Wilson

If you want to know more about this condition, please contact Virginia Newborn Screening Services, Virginia Department of Health. The telephone number is 804-864-7714 or 804-864-7715. The Web site is <http://www.vahealth.org/genetics>.



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