

Glutaric Acidemia type II (GA-II, multiple acyl-CoA Dehydrogenase Deficiency)

A fatty acid oxidation disorder

What is it?

Glutaric Acidemia type II (also known as GA-II) is an inherited fatty acid oxidation disorder. Patients with GA-II cannot efficiently breakdown fats and protein into energy. Once the body uses up its primary source of energy (glucose, or blood sugar), the body begins to fail because it cannot then make energy from fats. Therefore, people with GA-II must eat on a very regular basis and should not go long without food.

What are the symptoms?

People with GA-II may present a few different ways. Newborns may have abnormal features, such as wide spaced eyes and low set ears, genital abnormalities, rocker-bottom feet. They may also have low muscle tone, low blood sugar, large livers, and have the smell of sweaty feet. These babies have a high risk of death. On the other hand, people with GA-II may not have symptoms until later in life. These symptoms may be low blood sugar, liver disease, and neurological problems. Many symptoms of late onset GA-II can be prevented by immediate treatment and lifelong management. People with GA-II typically receive follow-up care by a team of professionals that is experienced in treating people with metabolic disorders.

Inheritance and frequency

GA-II is inherited in an autosomal recessive manner. This means that for a person to be affected with GA-II, he or she must have inherited two non-working copies of the gene responsible for causing GA-II. Usually, both parents of a person affected with an autosomal recessive disorder are unaffected because they are carriers. This means that they have one working copy of the gene, and one non-working copy of the gene. When both parents are carriers, there is a 1 in 4 (or 25%) chance that both parents will pass on the non-working copies of their gene, causing the baby to have GA-II. Typically, there is no family history of GA-II in an affected person. Although GA-II is not a rare fatty acid oxidation disorder, the total number of people affected with GA-II is not known.

How is it detected?

GA-II may be detected through newborn screening. A recognizable pattern of elevated chemicals alerts the laboratory that a baby may be affected. Confirmation of newborn screening results is required to make a firm diagnosis. This is usually done by a physician that specializes in metabolic conditions, or a primary care physician.

How is it treated?

GA-II is treated by eating a diet low in fat and protein, frequent eating and avoiding fasting, and sometimes medication, as recommended by a genetic metabolic medical professional.

DISCLAIMER: This information is not intended to replace the advice of a genetic metabolic medical professional.

For more information:

Genetics Home Reference

Website: <http://www.ghr.nlm.nih.gov>

Save Babies Through Screening Foundation

4 Manor View Circle

Malvern, PA 19355-1622

Toll Free Phone: 1-888-454-3383

Fax: (610) 993-0545

Email: email@savebabies.org

Website: <http://www.savebabies.org>

FOD (Fatty Oxidation Disorder) Family Support Group

1559 New Garden Rd, 2E

Greensboro, NC 27410

Phone: (336) 547-8682 [8am - 8pm EST every day]

Fax: (336) 292-0536 [email/call ahead between 8am and 8pm before faxing]

Email: deb@fodsupport.org

Website: <http://www.fodsupport.org>

United Mitochondrial Disease Foundation

8085 Saltsburg Road, Suite 201

Pittsburgh, PA 15239

Phone: (412) 793-8077

FAX: (412) 793-6477

email: info@umdf.org

website: <http://www.umdf.org>