

Ketogenic Diet

What Is a Ketogenic Diet?

A ketogenic diet is a special high fat, low-carbohydrate diet used to treat certain types of **epilepsy**. Sometimes called the epilepsy diet, a ketogenic diet provides the recommended dietary allowance for protein, and causes the body to continually produce ketones. Ketone production causes a state called ketosis, which decreases seizures in some children.

Children who are candidates for the diet can eat normally, use feeding tubes, or use a combination of both methods to take in nutrition. The diet requires a carefully controlled start (induction), strict adherence to the diet, and regular follow-up care by trained professionals.



Who Benefits From a Ketogenic Diet?

Children whose **seizures** don't respond to antiepileptic medicines are candidates for the ketogenic diet. The diet is often most helpful for children who have atonic, tonic, myoclonic and generalized seizures.

Children who have seizures that are related to specific syndromes—such as those listed below—often respond well to the diet.

- Glucose transporter type 1 deficiency syndrome.
- Pyruvate dehydrogenase deficiency.
- Myoclonic epilepsies:
 - ▢ Myoclonic-astatic epilepsy (Doose syndrome).
 - ▢ Severe myoclonic epilepsy of infancy (Dravet syndrome).
- Tuberous sclerosis complex.
- Rett syndrome.

- Infantile spasm.
- Certain mitochondrial disorders:
 - ▢ Phosphofructokinase deficiency.
 - ▢ Glycogenosis type V.
 - ▢ Mitochondrial respiratory chain complex disorders.
- Landau-Kleffner syndrome.
- Subacute sclerosing panencephalitis.

Other types of conditions can improve on the diet as well.

What to Expect with a Ketogenic Diet

Starting a Ketogenic Diet

Your child will begin the ketogenic diet at the hospital, where blood sugar levels, vital signs and ketones can be closely monitored. We also perform routine baseline tests, such as:

- Renal ultrasound.
- Electrocardiogram.
- Other exams as needed.

We use a ratio to describe the ketogenic diet's macronutrient (fat, carbohydrate and protein) requirements. For most children, the ratio falls between 3:1 and 4:1. The ratio shows that on a ketogenic diet meal plan, your child should take in three to four times as many calories from fat as from protein and carbohydrates.

Life on a Ketogenic Diet

After your child starts the diet, follow-up visits typically happen every three months.

In addition to following the diet's nutrition requirements and eating approved ketogenic diet foods, you or your child must monitor the ingredients in medicines and nonprescription products (such as vitamins and dietary supplements). Other factors that can affect the diet include:

- Intravenous fluids that contain dextroses.
- Tooth swabs, syrups or suspensions.
- Toothpaste, deodorant, sunscreen and other topical lotions.

At Gillette, we take all these items into consideration along with carbohydrates when planning your child's diet.

Ketogenic Diet Side Effects

Side effects of the ketogenic diet can include:

- Constipation.
- Low blood sugar (also known as hypoglycemia).
- Poor or delayed growth.
- Renal stones.

To avoid some side effects, children on the ketogenic diet must take vitamin and mineral supplements as prescribed by their care team.

Going off a Ketogenic Diet

Children usually go off the ketogenic diet after two or three years of successful seizure control. The process happens gradually over six months. In rare cases, children must continue the diet or follow a modified version to maintain seizure control for more than two or three years.

How a Ketogenic Diet Helps

For many children, the ketogenic diet makes seizures less common, or stops them altogether. However, the diet only helps if followed very strictly and regulated by a health care professional.

Integrated Care

If your child experiences seizures, our highly trained experts can help you manage a ketogenic diet as a treatment for severe epilepsy. Our team has extensive experience identifying patients who might benefit from the diet. Gillette is a regional leader in pediatric neurology and neurosurgery, and our team includes specialists in pediatrics, nutrition and nursing.

Your child might receive care from specialists in the following disciplines:

- [Neurology](#).
- Nursing.
- [Nutrition and feeding](#).
- [Specialty pediatrics](#).

Whether your child uses a ketogenic diet or other treatments for seizures, we provide support and education in a family-centered environment. You'll work closely with our internationally recognized experts to develop a customized treatment plan to fit your child's needs.

Make An Appointment

651-290-8707

Refer a Patient

651-325-2200

This information is for educational purposes only. It is not intended to replace the advice of your health care providers. If you have any questions, talk with your doctor or others on your health care team.

If you are a Gillette patient with urgent questions or concerns, please contact Telehealth Nursing at **651-229-3890**.