Ketogenic diet to help children control seizures

A ketogenic diet is a strict diet that is high in fat but includes a normal number of calories. Sometimes your child’s seizures can be controlled if they stay on this strict diet.

How does a ketogenic diet control seizures?
The ketogenic diet controls seizures by making your child’s body use fat instead of carbohydrates for energy. A high-fat diet creates an energy source called ketones, which power cells in the brain and heart. These cells create more brain energy, which can protect the brain from seizures.

What is the ketogenic diet?
The ketogenic diet is high in fat, has a normal amount of protein, and is low in carbohydrates. Your child’s diet must have all three to control seizures, and it must create enough ketones to generate energy in the brain. To do this, the diet is calculated in ratios like 2:1, 3:1, and 4:1. In a 4:1 ratio, for example, there is 4 times as much fat as protein and carbohydrates combined. The dietitian creates meal plans and recipes with the right amount of fat, protein, and carbohydrates for each meal.

The ketogenic diet alone does not have enough vitamins or minerals. Your child must also take special vitamin and mineral supplements and drink enough fluids. If you feed your child through a tube, they can have a special ketogenic formula. If your child is bottle-fed, you can use the KetoCal formula.

Is a ketogenic diet right for my child?
Children 3–8 years old can usually try the ketogenic diet. Sometimes younger children can also try it. However, children younger than 3-years old must be watched carefully to make sure they grow properly. Older children may try the ketogenic diet, but the child’s family has to be motivated. Families have to promise to use the ketogenic diet for at least 2 months.

If your child has tried prescribed medicines and continues to have seizures, they may find success with a ketogenic diet.

How does my child begin the ketogenic diet?
• Meet with your child’s healthcare team about the ketogenic diet. A dietitian will give you sample menus to see if your child will accept this diet. The team will also make sure your child’s lab tests are normal.

• Bring your child to stay at the hospital to start the diet. Healthcare providers will gradually introduce the diet and increase it to full strength over 3–4 days. Your child will begin with meals and eggnog shakes, and healthcare providers will check blood sugar and urine ketones often. They may adjust the
diet based on ketone levels. The dietitian will provide recipes and tell you how many fluids your child should drink.

- Learn to feed your child at home. Healthcare providers will teach your family to measure foods, develop menus, and read food labels. You will also learn to test for ketone levels with ketone strips and watch for signs of low blood sugar. If you feed your child through a tube, the dietician will teach you about the ketogenic formula and the feeding schedule you’ll use at home.

What are the side effects of the ketogenic diet?

Side effects of the ketogenic diet include constipation and kidney stones. Prevent these problems by having your child eat high-fiber vegetables allowed on the diet and drink enough fluids. Some anti-seizure medicines can cause kidney stones, so healthcare providers will watch your child closely while on the ketogenic diet.

What tests will my child have?

Before starting the diet, your child may need a blood test to see if the diet is safe for them. They will need more blood tests after starting the diet, usually at 2 months and then every 3–6 months after. The results of the blood test will determine the vitamins and minerals your child needs.

When should my child see a healthcare provider?

Your child will have a clinic visit 1 month after leaving the hospital and then every 3–6 months. At each visit, your child will meet with the ketogenic team, including the nurse practitioner and the dietitian. You can also meet with your child’s neurologist during these visits. You will talk regularly to the dietician and nurse practitioner through phone and email while your child is on the ketogenic diet.

Notes