

## FREQUENTLY ASKED QUESTIONS ABOUT THE CLASSIC AND MODIFIED KETOGENIC DIETS

QUESTIONS	ANSWERS
<b>What is the ketogenic diet?</b>	The ketogenic diet is a special high-fat diet that is used for difficult to treat seizures. Heavy cream, butter and vegetable oils provide the necessary fat. The diet also completely eliminates sweets such as candy, cookies, and desserts. Other carbohydrate rich foods such as bread, potatoes, rice, cereals, and pasta are not allowed on the strictest form of the diet, but are allowed on more liberal forms of the diet. All foods must be carefully prepared and weighed on a gram scale. Each meal must be eaten in its entirety for the diet to be most effective. The Classic diet consists of a ratio in grams of fat to non-fat (protein and carbohydrates) of 4:1 and 3:1. The modified ketogenic diet consists of ratios of 2:1 and 1:1.
<b>Who can be helped by the diet?</b>	Children with seizures from infancy through the teenage years may be helped by the diet. There is no way to predict beforehand whether it will be successful. Traditionally the diet has been used for children with myoclonic, atonic and tonic-clonic seizures. In every decade since the 1920's, studies consistently show that 50-75% of children with difficult to control seizures of all types are helped by the diet. Creative recipes have helped to make the diet more palatable in the past few years.
<b>How effective is the diet at controlling or eliminating seizures?</b>	Four major meta-analyses (reviews of many studies) have been published in the past 10 years and have determined that the ketogenic diet is effective in reducing seizure frequency in children with difficult-to-control epilepsy. A controlled study published in 2008 revealed that seizure frequency after 4 months was significantly lower in 54 children on the ketogenic diet than the control group of children who were on medication therapy.
<b>How does the diet work?</b>	No one is certain how the diet works. A metabolic change occurs in the body which affects brain chemistry. Despite many hypotheses, the mechanism by which the diet works to control seizures remains a mystery. Scientists in several laboratories around the world are working to unlock this mystery with animal studies.
<b>How is the diet prepared?</b>	A calorie level is determined by a dietitian for each child based on their age and activity level. To achieve a desired level of ketosis, the diet is calculated in terms of ratios such as 4:1, 3:1, and 2:1. In a 4:1 ratio, there is 4 times as much fat as there is protein and carbohydrate combined. The dietitian devises meal plans that complete the required fat, protein and carbohydrate for each meal. Each meal plan indicates the exact gram weight of each food which must be weighed on a gram scale. A typical meal includes a small amount of fruit or vegetable, a protein rich food, and a source of fat such as heavy cream and butter or vegetable oil.
<b>Will anti-seizure medications be reduced after my child goes on the diet?</b>	If the child is on more than one anti-seizure medication, one may be reduced as the child starts the ketogenic diet. The reduction of remaining seizure medication may be made if the child's seizures improve over time. Some children are able to have their medications completely discontinued. Medications may act stronger with the ketogenic diet therefore close medical monitoring is necessary.
<b>How do you begin the diet?</b>	The diet is started under close medical supervision. The diet is begun gradually and increased to the full amount over a 3 to 4 day period or longer. During this time blood sugar and ketone levels are monitored. A fasting period is not necessary to start the diet according to recent studies.
<b>How soon does it take for the diet to reduce or eliminate seizures?</b>	The diet can become effective immediately or can take several months. Each child is unique and has different seizure patterns and frequency. There is usually improvement within the first 10 weeks on the ketogenic diet.

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<b>What would happen if my child “cheated” on his/her diet?</b>	If a child ate or drank something that was not part of his/her diet, they could experience a seizure within a short period of time.
<b>Is the diet healthy for my child?</b>	The diet alone does not contain enough vitamins or minerals. A nutritional deficiency could develop without supplements. Special vitamin and mineral supplements are prescribed for each child while on the ketogenic diet. It is also important that the child drink adequate liquids while on the diet.
<b>How long is the diet used for?</b>	The diet is generally used for a period of up to 3 years if it is helpful in reducing or eliminating seizures. If the diet is not helpful, it will be stopped within a few months.
<b>Are there any adverse effects of the ketogenic diet?</b>	The most common adverse effect of the diet is constipation. There are dietary options to prevent this problem including eating high fiber vegetables that are allowed on the diet and drinking enough water. A less common adverse effect is kidney stones. This problem can be prevented by making sure that the child drinks adequate water. There are two anti-seizure medications which can cause acidosis and kidney stones which should be monitored very closely when used with the ketogenic diet (Zonegran® and Topamax®).
<b>Will my child gain too much weight with this high fat diet?</b>	The ketogenic diet is calculated at a specific calorie level for each child. The dietitian will keep track of your child’s growth to determine if a change in calories is needed to ensure normal growth.
<b>Will the diet cause high cholesterol?</b>	Most children do not develop high cholesterol levels while on the diet. If a child develops high cholesterol or lipids, the diet can be modified to lower these. Lipid levels are drawn prior to starting the diet and at regular intervals throughout the course of the diet.
<b>Can the diet be used for children with feeding tubes?</b>	The ketogenic diet can be provided to children with feeding tubes. Special ketogenic formulas are designed for this purpose. A dietitian will determine the type and amount of formula for your child.
<b>Are there any special tests that are needed before starting the diet?</b>	There are blood tests that may be needed to determine if the diet is safe for your child. These include metabolic tests to rule-out fatty acid disorders or a carnitine deficiency.