

# Nutrition & Epilepsy

## Do people with epilepsy require a special diet?

It is important that people with epilepsy follow a nutritious, well-balanced diet. Good nutrition and a healthy lifestyle are important in obtaining optimal seizure control. However, there is no special diet for epilepsy itself.

To avoid nutrient deficiencies and ensure proper intake of vitamins and minerals, it's best to follow as varied a diet as possible. Here are a few key nutrients of concern:

- Folate or folic acid: this is found in leafy green vegetables (like spinach, broccoli, cauliflower, Brussels sprouts and kale), legumes (beans, peas or lentils), bananas and whole grain wheat.
- Calcium and magnesium: these minerals are essential for building and maintaining healthy bones. Many anti-epileptic drugs can increase the risk of osteoporosis, so it's especially important for people on such medications to get these minerals in their diet. Dairy products are the richest source of calcium, and magnesium is found in nuts and seeds, particularly pumpkin seeds.
- Vitamin B12: this vitamin, along with folate, is important for the health of our brain and nervous system. It is found in animal products (meat and fish) and dairy. If you are following a vegetarian or vegan diet, it's important to let your doctor know – you may need a B12 supplement.
- Vitamin K: This is found in leafy green vegetables like salad greens, spinach and broccoli.
- Vitamin D: This vitamin is particularly important for the health of our bones. It is found in fish oils and is added to milk, but it is also made by the body in response to sun exposure on the skin. Because we live at such a northern latitude, Canadians need to take care they're getting enough Vitamin D, through adequate dairy or through a Vitamin D supplement, especially during the winter months.

“Canada's Food Guide” is a great resource for understanding nutrition and provides a simple framework to follow, to ensure a healthy diet. If you have other conditions in addition to epilepsy that require a special diet (diabetes, for example), it is important you follow that specific diet.

## Can high or low blood sugar lead to seizures?

High or low blood sugar can lead to seizures, but only in extreme cases. Nevertheless, blood sugar levels should be kept steady and moderate for people with epilepsy. Sweets, refined carbohydrates, excessive caffeine and alcohol all cause blood sugar levels to fluctuate and should be kept to a minimum. On the other hand, high-fibre foods help control fluctuations of blood sugar, making these a great option. Whole grain breads, oats, legumes (beans, chickpeas and lentils), berries and green vegetables are all excellent sources of fibre. Protein is also important in the metabolism of certain brain chemicals and hormones, and helps keep our appetite and blood sugar consistent.

## Do anticonvulsants affect nutrients in the body?

The medicines that control seizures may interfere with the body's ability to use certain nutrients, including Vitamin D, Vitamin K, calcium, magnesium, manganese and folic acid. While this happens to most people taking anti-epileptic medications, it is usually mild and causes no harm. Those most vulnerable to vitamin deficiencies include people on large doses of medication or multiple drugs; the elderly; growing children; pregnant women; people who abuse alcohol; and those with poor dietary habits.

## What about calcium and magnesium to control epilepsy?

It is true that if the body is depleted of these minerals, convulsions may occur. However, unless you have another condition that affects these substances, you won't end up depleted, provided you eat a balanced diet.

## What about other vitamins and minerals?

As stated above, the use of anticonvulsants may have an adverse effect on blood levels of certain vitamins. Problems can generally be avoided with a proper diet. However, in rare cases, more serious problems may arise. For example, anemia can result from severe folic acid deficiency, and weak bones are related to inadequate amounts of Vitamin D. Vitamin deficiencies can be discovered by medical examination and laboratory screening and supplements can be prescribed as necessary. Please note that self-diagnosis of vitamin deficiency is discouraged. Extreme, self-prescribed "megavitamin" therapy will do no good and could be harmful.

## **Is it important to eat regularly?**

Yes, some individuals are sensitive to missing meals. If meals are missed or delayed, seizure frequency may increase. Therefore, regular meals and a balanced diet are recommended.

## **Can caffeine, alcohol or smoking cause problems?**

These substances are best-considered drugs rather than part of the diet. Like other drugs, they can do harm, particularly if taken too often or in large amounts. Alcohol is of special concern. When used frequently or in large amounts, alcohol may interfere with anticonvulsant medications and may lower seizure threshold. Having a seizure while smoking could lead to fire.

## **Do food allergies cause epilepsy?**

Allergies do not cause epilepsy. However, they may aggravate a pre-existing seizure problem.

## **What is the “Ketogenic Diet”?**

This special, high-fat diet approximates the metabolic circumstances of starvation. The ketogenic diet causes the body to produce chemicals called ketones, and it can control seizures when anticonvulsants prove ineffective. It is commonly prescribed for children but can be effective in adults as well. Those following the diet must get the majority of their calories from fatty foods. A medically directed ketogenic diet is quite unpalatable and difficult to maintain and may cause loss of bone minerals if not done correctly. Three versions of the diet are used: the Classic Ketogenic Diet, the Medium Chain Triglyceride (MCT) Diet and the Modified-Atkins Diet.

Check out the Ketogenic Diet Spark Sheet for more information or visit the Matthew's Friends website.

## **Who should I speak to about nutrition and epilepsy?**

You and your physician are most familiar with your particular condition. Please consult them for more advice on epilepsy and diet, or to be referred to a dietitian.