

## TREATMENTS AND THERAPIES

# Drug-Resistant Epilepsy

### ■ What is drug-resistant epilepsy?

Drug-resistant epilepsy (also called *refractory* epilepsy) occurs when seizures cannot be controlled with medication. One-third of people with epilepsy will continue to have seizures despite taking anti-seizure drugs. If you have drug-resistant epilepsy, it means that you may need a different type of treatment to control your seizures.

### ■ How do I know if I have drug-resistant epilepsy?

If you have tried two different anti-seizure drugs and you are not seizure-free, you may have drug-resistant epilepsy. This may depend on the type of drugs, the length of time you were taking each drug for, or if you changed drugs because you were experiencing side effects. Your doctor can help you to figure out if this applies to you.

**TIP:** If you are not seizure-free after trying two different anti-seizure drugs, ask your doctor if you may have drug-resistant epilepsy.

If you do have drug-resistant epilepsy, there are different treatment options that might help to control your seizures.

### ■ What can I do if I have drug-resistant epilepsy?

You can ask your doctor to refer you a specialized centre that can offer different treatments for your seizures. These centres are located in hospitals throughout Ontario and are known as District Epilepsy Centres (DECs) or Regional Epilepsy Surgery Centres of Excellence (RESCs). A DEC or RESC can provide a

number of tests and assessments to see if you might be a candidate for epilepsy surgery or other treatments.

**TIP:** If you are not seizure-free after trying two different anti-seizure drugs, you can ask your doctor for a referral to an epileptologist (a neurologist specializing in epilepsy) at a DEC or RESC to discuss your treatment options.

### ■ Where are these specialized centres located?

A DEC provides assessments for epilepsy surgery. The DECs in Ontario are located at:

- Hamilton Health Sciences, Hamilton (Adult & Pediatric)
- The Ottawa Hospital, Ottawa (Adult)
- Children's Hospital of Eastern Ontario, Ottawa (Pediatric)
- Kingston General Hospital, Kingston (Adult & Pediatric)

A RESC provides the same services as a DEC and also offers epilepsy surgery. The RESCs in Ontario are located at:

- London Health Sciences Centre (formerly known as Children's Hospital of Western Ontario), London (Adult & Pediatric)
- The Hospital for Sick Children (SickKids), Toronto (Pediatric)
- Toronto Western Hospital, Toronto (Adult)

## Drug-Resistant Epilepsy *continued*

### ■ How will I know if I'm a candidate for surgery?

In order to know if you are a candidate, you will need to stay in an epilepsy monitoring unit (EMU) at a DEC or RESC, where a medical team can observe and monitor your brain activity. During your stay, you may be asked to undergo several different tests and assessments, and they may take some images of your brain. At the end of the stay, the medical team will determine whether you are a surgical candidate depending on the results of the tests. If you are a candidate and you choose to proceed with surgery, the procedure will be booked for a later date.

**TIP:** A stay in an EMU can last anywhere from several days to a few weeks. Since there is usually a wait list, you might feel compelled to take the first spot that opens up. But it's okay to delay your stay until a more convenient time.

### ■ If I'm not a candidate for surgery, what other treatments are available?

When surgery is not possible, an epileptologist at a DEC or RESC will help to identify which treatment option is best for you.

- There are many different kinds of anti-seizure drugs available. Even if you have drug-resistant epilepsy, you may benefit from trying a new drug or a different combination of drugs.
- The ketogenic diet, -a high-fat, low-carbohydrate diet - can be an effective treatment for drug-resistant epilepsy in children and adults. Other, less-restrictive diet therapies are also available.
- Medications to suppress or adjust the activity of your immune system may be prescribed in cases where immune activity might be contributing to your seizures.
- Electrical stimulation of specific nerves or brain regions can change the level of activity in your brain and reduce the risk of seizures.

**TIP:** You can still be referred to a DEC or RESC without a diagnosis of drug-resistant epilepsy

*Adapted from the Epilepsy Guidelines Series (Critical Care Services Ontario).*

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