Title: “The Growing Popularity of Diet Therapy to Treat Seizures”
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“You’re listening to Brain Talk, from the Johns Hopkins Brain Science Institute.”

Dr. Kossoff: “Typical foods for a child would be for breakfast: eggs, bacon, sausage, things that are often consumed are heavy whipping cream, meat, shrimp, steak, hamburgers, cheeses…”

Dale: “Dr. Eric Kossoff [KAW-soff] is an associate professor of neurology and pediatrics at Johns Hopkins University. It might sound like he's detailing exactly what health experts don’t want kids to eat. Actually, he's describing a healing diet… one that helps prevent the brain seizures often associated with epilepsy.

Today on Brain Talk: the growing popularity of diet therapy to treat brain seizures.”

Dr. Kossoff: “A seizure is when there's an electrical discharge of the brain. All of our brains work on electricity, and that's what we wish to have happen, but sometimes the electrical activity is not the way we want it to be.”

Dale: “According to Dr. Kossoff, sometimes the electricity in our brain doesn't function correctly. And when discharges build up…”

Dr. Kossoff: “You can have an uncontrollable bodily reaction, it can be motor such as shaking, or jerking, or twitching; it can be sensory where they feel something unusual; some people refer to that as an aura, sometimes with a seizure you'll see something unusual. Often you lose consciousness; most seizures are about 30 seconds long.”

Dale: “It’s difficult to treat epilepsy and seizures. The primary treatment methods include drugs, electrical stimulation and surgery.

Another rather “old-fashioned” method, however, is gaining in popularity among neurologists and researchers like Dr. Kossoff: a high fat, low carb diet. It’s actually a version of what’s known as the Ketogenic [KEE-toe-JEN-ik] diet introduced in the 1920's. In fact, as far back as the late 1800's, doctors found that making changes to the body’s metabolism helped treat seizures.”

Dr. Kossoff: “They recognized that your body metabolically would go into starvation state if you provide it with an extremely high fat low carbohydrate diet carb diet. This diet would create ketones bodies in the blood and in the urine which were, back then, theorized to be why these therapies would work.”

Dale: “Beginning in the 1930s, drugs became the preferred treatment for seizures in children. Today, around 30% of patients don’t respond to the drugs, so a modified version of the high fat, low carb diet is
becoming popular again. But what's really interesting to the medical community is that the diet is getting results."

**Dr. Kossoff:** “The statistics overall would say about half of children, half of adults, will have at least half of their seizures reduced. They will go from 10 seizures a day down to 3 or 4 seizures a day. There certainly are some that become seizure free and about 10% of those children with epilepsy that go on the diet will become seizure free.

**Dale:** “Research today is focusing on how to make the diet more tolerable and how to identify which children will be helped the most. There's also focus on how adults suffering from seizures might benefit from this diet. 'The diet', Dr. Kossoff says, 'is part of a larger trend in neurology: finding ways to treat other illnesses – such as Alzheimer's – with diet therapy'."

**Dr. Kossoff:** “I think it has become more popular as more centers are now offering diets, and that it's not difficult therapy to get. I think other fields within, specifically at least right now, neurology are looking at the diet as perhaps another option for similar situations in their disease processes that are not responding to medication.

**Dale:** “To find out more about epilepsy, seizures and diet therapy, log onto brainscienceinstitute.org. I'm Dale Connelly and this is Brain Talk from Johns Hopkins University.”

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**Additional Information:**

- What are Epilepsy and seizures ? – Johns Hopkins Health Library
- Learn more about the Johns Hopkins Ketogenic Diet Center
- Learn more about the Johns Hopkins Epilepsy Center
- www.charliefoundation.org
  The Charlie Foundation was established to raise awareness about the Ketogenic diet as a treatment for childhood epilepsy.
- www.carsonharrisfoundation.org
  Their mission is to increase awareness on the issues that affect individuals with epilepsy and raise funds in support of clinical and research efforts on the diagnosis of epilepsy and its treatment including, but not limited to, diets, surgery, and anticonvulsant medications.
- www.epilepsy.com/ketonews
  Epilispy.com’s bi-monthly Ketogenic news feature

http://www.brainscienceinstitute.org