

# KETO NEWS

Medical University of South Carolina

Winter Edition 2017

## Holiday Treats & Tips

Just because you or your child are following a ketogenic diet doesn't mean you have to miss out on the joy of having a delicious holiday season! Although the whole family can enjoy these recipes, remember to measure and portion out your keto servings to ensure accurate carb counts.

Here are some great links for tasty ketogenic friendly recipes to celebrate the holiday season:

- [KetoCal Christmas Recipe Ideas](#)
- [Holiday Baking](#)
- [Mini Gingerbread House](#)
- [KetoCal Hanukkah Recipes](#)

Check out these blogs for tips and tricks on managing a ketogenic diet over for the holiday season:

- [A Keto Mom's Tips for Managing the Holidays on the Ketogenic Diet](#)
- [Tips for Managing Your Child's Ketogenic Diet Over the Holidays](#)
- [Tips for Keto Friendly Travels](#)

## Patient Spotlight

We are looking for patient stories for upcoming newsletters. If you or your child is on a ketogenic diet and would like to be featured in our next newsletter, please let us know.

## Article Suggestions

What would you like featured in the next newsletter. Please let us know what topics you want to learn more about and we will be sure to include in future editions.



Ketogenic diet therapy is expanding and can potentially treat multiple diseases.

## In This Issue

- Holiday Tips/ Recipes
- Patient Spotlight
- GLUT-1 Conference
- Local Fundraiser
- Ketogenic Diet Cost Savings



## Patient Spotlight

Meet Daniel, a 16-year-old young with GLUT-1 deficiency. For those who aren't familiar with GLUT-1 deficiency, it is a disorder of glucose transport where the brain cannot derive energy from carbohydrate. The ketogenic diet is the first line of therapy for patients like Daniel. He was started on the classic ketogenic diet at 3 ½ years old and has remained on diet since.

His mom, Kristan, says one of the hardest things about starting the diet was not being able to give him snacks that other kids his age were eating like Teddy Grams or pretzels. "American kids eat lots of carbs! It was really difficult," she reflected. Daniel also disliked many high-fat foods at first, but Kristan just kept finding new ways to present them to him. She says it took Daniel about 3 months to get used to the diet and start fully accepting the meals she was preparing for him.

Kristan is very thankful for the [KetoDietCalculator](#)© and [My Keto Planner](#)™ and recommends that new keto families play around with creating new recipes to make meals more interesting. She admits that sometimes the creativity of her non-keto meals for the rest of the family suffers, but she feels it's a small price to pay for the drastic improvement they have seen in Daniel's behavior. Before Daniel started the diet, she says it would take him ages to get out just 4-5 words (the most he could say at once). He loved music, but could never sing along. While in the hospital for diet initiation, Kristan fondly recalls when Daniel burst into "Twinkle Twinkle Little Star," perfectly articulating each word. Kristan was astonished. Within 6 weeks, Daniel had also potty-trained himself.

Nearly 13 years later, Daniel continues to do great on diet. Kristan emphasizes that Daniel is still a normal kid – they just have to make some modifications. For example, instead of taking Daniel out for ice cream as a reward for a good test grade or other accomplishment, they might take him to his favorite store. Kristan regularly has conversations with Daniel about how, "food is important to give us energy and keep us healthy...but it's not the end all be all." As Hippocrates once said, "Let food be thy medicine."

## New Products:

KetoVie Café Savoring Stuffing is just in time for the holiday season. This stuffing is a 3:1 ketogenic ratio and contains 2.2 grams of net carbohydrates.



KetoVie Café Kwik Mix is a 4.5:1 ketogenic ratio that can be used to make baked goods including muffins, cookies, breads and even waffles.



Ordering information can be found [here](#).

## Lab Reminder

Most patients need ketogenic diet labs done every 3 months in order to prevent or treat any side effects and to make sure you are obtaining the full benefit of the diet.

If you have not done your labs in more than 3 months, please contact us at 843-792-3307 to see what labs are needed at this time.

## GLUT-1 Conference Highlights

The 7th conference on Glut1 Deficiency was held in Nashville, TN. The event had families, professionals, and exhibitors from 26 states and 11 countries. [Check out the updates from the event.](#)



PLAE-IT-FORWARD Featured Rosemary as an August Ambassador

## Keto Hope Foundation

Rosemary Lee (inspiration behind the Keto Hope Foundation) was featured as an [August Ambassador for the PLAE-it-forward community program](#). PLAE is supporting the Keto Hope Foundation by donating 10% of any purchases that utilize the code GIVE711 at



checkout. This code never expires and can be used multiple times. PLAE is an eco-minded shoe brand that makes amazing kiddo shoes that have interchangeable tabs allowing kids to easily customize

shoes and make them their own with different color, material and print options. They even have a shoe that can fit easily over orthotics and AFOs. So if you are shopping for new shoes, check out [www.goplae.com](http://www.goplae.com) and use GIVE 711 at check out to support the Keto Hope Foundation.

The [Keto Hope Foundation](#) has also recently been featured on the KetoConnect blog and parent support webinar. Check out [A Parent's Ketogenic Diet Journey & Creation of the Keto Hope Foundation blog](#) to learn more about the inspiration behind forming this foundation to support pediatric epilepsy patients treated with a ketogenic diet.



# The Ketogenic Diet Results in Cost Savings to Health Care

A recent study published in Epilepsy Research by a keto diet center in Canada led by Dr. Sharon Whiting has shown that the ketogenic diet can reduce both emergency department and outpatient clinic visits. In this study, 166 patients were evaluated who started the ketogenic diet between 2000 and 2010 at 3 pediatric hospitals in Ontario, Canada. The study evaluated ED visits and hospital admissions in this group before and after starting the diet and the cost of health care in these 2 settings. The study found that in the 2 years before starting the KD, the children had a total of 841 visits to the ED versus 490 visits in the 2 years after starting the KD which translates to \$630 dollars per patient per year. In addition, the number of hospital admissions was also reduced, resulting in \$1059 in savings per patients per year. In addition, the team compared the total number of hospital visits between this group and another group of children who did not receive the KD. Even though both groups of children showed a decrease in hospital visits over time, the group on the KD had fewer hospital visits. This suggests that the decreased healthcare costs in the KD group were due to the diet and not other factors such as children needing fewer visits to the hospital as they age.

Initial costs are high when starting the diet due to need for an inpatient stay as well as services of a team including a trained dietitian. However, this study shows that over time, the reduction in hospital visits in children on the KD results in significant cost savings to the health care system.

#### References:

Whiting S, Donner E, Ramachandran Nair R, Grabowski J, Jette N, Rodriguez-Duque D. Decreased health care utilization and health care costs in the inpatient and emergency department setting following initiation of ketogenic diet in pediatric patients: The experience in Ontario, Canada. Epilepsy Res 2017;131:51-57.

<http://www.epilepsy.com/article/2017/5/ketogenic-diet-results-cost-savings-health-care>

## Happy Holidays!

From my family to yours, I want to wish everyone a wonderful holiday season.

Thank you for being patient and understanding during my maternity leave. I appreciate each and every one of you and am honored to be able to support you on your ketogenic journey!

-Laura Dority-



## Contact Us

Give us a call with any questions or concerns about ketogenic diet therapy.

**MUSC Neurology & Pediatric Neurology**  
Charleston, SC 29425

(843) 792-3307 (pediatric)

(843) 792-3223 (adult)

Visit us on the web at  
[www.musckids.org](http://www.musckids.org)  
[www.musc.edu](http://www.musc.edu)

# Ketogenic Diet Therapy 101: Info for Caregivers

**i** **Ketogenic Diet Therapies** - used for almost 100 years for people that have seizures that do not respond to medicines.

## Ketogenic diet plans

1

VERY HIGH IN FAT → brain → fuel



Ketogenic diet plans are very high in fat to give the **BRAIN** a different fuel called ketones.

2

PROTEIN → muscles → working optimally



You eat enough protein to keep your **MUSCLES** working at their best.

3

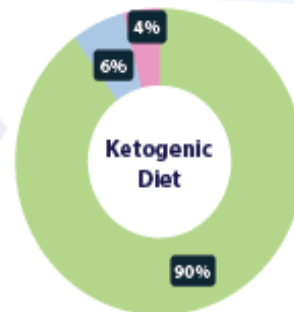
NO SUGARS → limited fruits & veggies



Sugars, also known as carbohydrates, are severely **LIMITED**. Even the servings of fruits and vegetables are small.

## Compare

Strictest Ketogenic Diet vs. Average North American's Diet



■ Fat  
■ Protein  
■ Carbs



# FAQs (Frequently Asked Questions)

## Is this diet "healthy"?

This is not like following a diet to lose weight. It is mathematically calculated for each person's needs. People on this diet must take vitamin and mineral supplements to make sure they receive everything they need every day. These supplements are as important as their seizure medicines. The person following a ketogenic diet must see the doctor and dietitian regularly to make sure their weight and growth are normal and have blood tests done to check that they are safe.

## Will this diet make them have a heart attack with all of that fat?

In the beginning, fat levels in the blood may increase but since the body is using them for fuel they come down over time.

## Why would anyone want to eat like that?

It's not how people like to eat but anything that will stop seizures is a good thing. We want to save brain cells for more important things like reading, writing, or arithmetic!

## So how does this diet work?

Despite almost 100 years of research we still do not know. The key is having fats with every meal or snack and limiting carbohydrates.

## What does a meal look like?

Most meals are made up of 4 foods: heavy whipping cream, protein about the size of a golf ball, a small serving of vegetables (about 5 green beans) or part of a piece of fruit (1/2 a strawberry), and a large serving of fat, like 4-5 pats of butter.

## Those portions are really small, won't they be hungry all day?

High fat foods have a lot of calories in a very small serving. They keep you feeling full for a long time and leave the stomach very slowly. Ketones, the new fuel, also makes you feel less hungry. Some even have a hard time finishing these small meals!



## So, if they "cheat" on this diet, what will happen?

Having an extra bite of egg or one more green bean might mean having an extra seizure that day. Having a single bite of a cookie or one piece of candy could cause seizures so bad they wind up in the hospital. There are special "keto-friendly" desserts or sweets this person can have without having to cheat.

## Is there anything else that needs to be different?

Yes – there are two more areas where sugars (carbs) can hide: medicines and body care products.

- 1 Medicines:** Liquid and chewable medicines are usually a "no-no" with keto therapy. Tablets, capsules, and suppositories have the lowest amounts of hidden sugars.
- 2 Body Care Products:** Sugars can also be absorbed through the skin so it is best to use low carb lotions, sun screens, toothpaste, and insect repellents. Lists of "keto safe" products are available on the Charlie Foundation website: [charlifoundation.org/resources-tools/resources-2/low-carb](http://charlifoundation.org/resources-tools/resources-2/low-carb).

## What can I do to help make the diet a success?

Food is such an important part of how we comfort and celebrate. Offering non-food rewards is a healthier option for everyone. Instead of giving a piece of candy for a job well done, how about a hug, a sticker, small toy, or going to the park to play.

## How will we celebrate birthdays or holidays?

Keto meals can be designed around any celebration meal. KetoVie even has foods that can be used to make stuffing for Thanksgiving or a birthday cake. Go to our website, [KetoVie.com](http://KetoVie.com), to learn more about ketogenic diets and keto-friendly foods.

## Where can I go to learn more about this diet therapy for seizures?

The Epilepsy Foundation, [epilepsyfoundation.org](http://epilepsyfoundation.org), is always a good place to start. Other organizations are devoted strictly to ketogenic therapies like The Charlie Foundation, [charlifoundation.org](http://charlifoundation.org), and Matthew's Friends, [matthewsfriends.org](http://matthewsfriends.org).