

# KETO NEWS

Medical University of South Carolina

Fall Edition 2018

## Tips for Eating Out

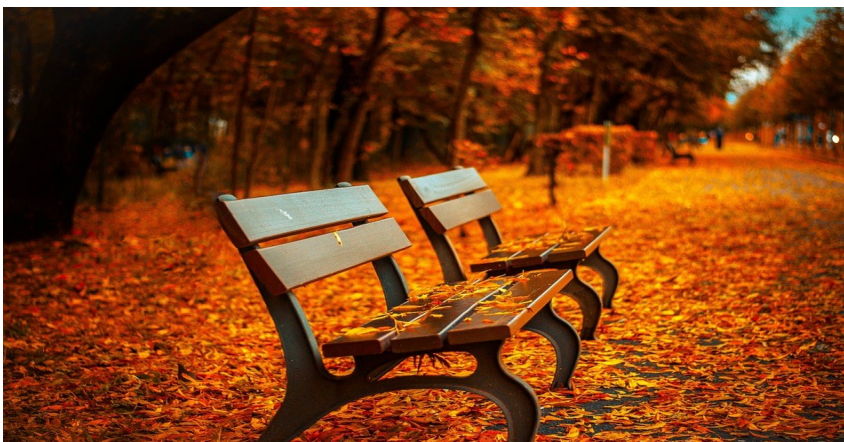
**Plan ahead** – Review the restaurant’s menu online prior to dining out to see what options are available. You can also call ahead to make sure they can be accommodating or ask questions on items you are unsure about.

**Ask questions** – Don’t be afraid to ask questions. Share with your server the importance of compliance on the diet and that the diet is for a medical condition. Compare it to having a food allergy which most servers have some familiarity to the importance of food allergies.

**Stick to the basics** – Simple options like steak, chicken breast, pork chops, turkey, or fish are good options for main dishes. Avoid items that are prepared with a marinade or added sauce as these are likely to have added carbohydrates.

**Ditch the standard sides** – Ask to substitute starchy, high carbohydrate sides such as rice/beans or French fries with non-starchy options such as sautéed or steamed broccoli, cauliflower, zucchini, or a small side salad with olive oil/vinegar as the dressing.

**Order fats** – Ask for extra sides of bacon, sour cream, butter, olive oil, or avocado to add to your meal as a fat source.



## In This Issue

- Tips for Eating Out
- Back to School Lunch Ideas
- Keto Friendly Snacks
- Holiday Recipes
- Patient Spotlight: Hannah
- Ketogenic Practice Updates
- And Much More!

## Keto Kid Lunch Ideas

Here are some suggestions!

- Deli meat roll-ups – Take your child’s favorite low-carb deli meat and top it with mayonnaise and/or cream cheese, cheddar cheese slices, and crunchy veggies then roll it up and secure with a toothpick.
- [KetoVie™ Café Pizza Petites](#)
- Chef salad topped with protein of choice (meat, eggs, cheese, etc.), a few cherry tomatoes and other favorite veggies and creamy dressing.
- Deviled eggs with veggies and ranch or berries and cream on the side.
- [Ham-crust quiche muffins](#) – Replace milk with heavy cream and can be warmed in the microwave for ~30 seconds at school.
- Egg/tuna/chicken salad lettuce wrap
- [Bacon-wrapped fried chicken strips with ranch dressing](#) (omit the maple syrup)
- [KetoVie™ Peanut Butter & Jelly Sandwich](#)



---

## Keto Snack Ideas

Try some of these ideas:

- Homemade cheese crisps – just make tiny piles of shredded cheese and bake until crispy – or try these [Cheddar Crackers](#) from the Keto Hope Foundation
- String cheese and pepperoni slices or deli meat
- Nuts/seeds, especially macadamia nuts
- Pork rinds
- Berries & cream
- Veggies & ranch or natural nut butter
- Beef jerky
- Hard boiled eggs
- Fat bombs – check out the [Sweet & Savory Fat Bombs](#) cookbook for recipes



**This Halloween:**

**Will you Participate in the Teal Pumpkin Project?**

Place a teal colored pumpkin on your porch this fall to show that your home has non-food treats available.

These non food treats could include:

- Glow sticks
- Mini bubbles
- Bouncy balls
- Spider rings
- Vampire fangs
- Stickers
- Stencils
- Whistles



**Or Participate in the Purple Pumpkin Project**

Display a purple pumpkin in your home’s pumpkin patch this fall to raise awareness for epilepsy along with the Epilepsy Foundation.

Or host a Purple Pumpkin Party to help others start to raise awareness too!

## Patient Spotlight: Hannah

Imagine the following – after 2 years of life, your previously healthy child starts to have seizures. It's not until a few years later that she's officially diagnosed with epilepsy and trialed on anti-seizure medications, and months after that until seizure control is achieved. With every passing month, you're relieved that the seizures are still at bay. Then, after years of seizure-freedom, they return; and this time, medications aren't helping.

This is what Hannah has experienced over the past 13 years, and unfortunately, this scenario is all too familiar for many other families.

Hannah was started on the Modified Atkins Diet for Epilepsy (MAD or MADE) after months of medication trials that caused fatigue, anxiety, and depression without seizure control. Upon starting the diet, Hannah's mom, Sherri, recalls being extremely nervous about counting Hannah's carbohydrates, unsure whether she could keep track of everything or find new foods for Hannah to eat. "Stores have special sections for gluten-free, low-fat, and reduced calorie, but there is not a low-carb section," Sherri muses. Relatedly, Hannah says she was upset about giving up many of the foods she loved. Sherri and Hannah ended up cooking mostly from scratch. This was challenging at first because neither one of them liked to cook, but after a few weeks, they had gotten used to it and now enjoy cooking together.



One of the major road bumps Hannah experienced was restriction of sugar alcohols. In the first month on the diet, Hannah was seizure-free. Her seizures then came back and her ketosis level was found to be low, so sugar alcohols were eliminated in case this was contributing to poor ketosis. Hannah had previously been enjoying baking with [Pyure](#), a low-carb sugar substitute that contains erythritol. Without Pyure, finding keto substitutes for her favorite foods was more difficult. They had to use many of the resources provided by their dietitian and in Facebook groups to find new recipes.

Besides the fact that Hannah has now been seizure-free for 2 months, Sherri states that, "the best part of the diet has been losing weight and becoming healthier together." The whole family does MAD to support Hannah. Hannah now feels healthier and is more confident.

Looking back, Sherri says she wishes she had known about MAD from the beginning so they could have avoided drugs and introduced the diet when Hannah was still forming her eating habits. Her biggest piece of advice is to keep things simple at first with meat and vegetables for meals. Once you get the hang of the basics, you can start trying "copycat" recipes. Either way, Sherri highly recommends meal-prepping on Sundays!

Sherri and Hannah would be happy to talk to anyone on the ketogenic diet who is looking for support! If interested, please email your dietitian to request to be connected to Hannah or another support family.



### Product Review

In today's fast-paced society, meal delivery systems have become extremely popular. Until recently the keto community has not been able to enjoy this convenient (yet not so economical) option. But the wait is over... [Keto Fridge](#) is a meal delivery service that specializes in ketogenic meals. On average their meals are formulated to contain 75% fat, 20% protein, and 5% carbohydrates. The menu changes every week which allows for a variety of new foods and includes entrees, sides, desserts and beverages. Meals are delivered with a cool pack and just need to be heated and enjoyed. There is no meal plan or subscription required, however there is a minimum order cost of \$69. Like with any food products, remember to be cautious and read the nutrition profile of the food to ensure that it will fit into your individualized ketogenic diet plan.

---

## Inspiration Station: Holiday Recipe



### Turkey Stuffing



Recipe adapted from The Children's Hospital of Philadelphia [recipe repository](#)

#### ***Ingredients***

#### ***Preparation***

##### Filling

9 g turkey, dark meat  
18 g celery, raw  
7 g onion, raw  
12 g butter, softened  
17 g chicken broth  
Pinch of salt, pepper, and garlic powder

##### Bread

10 g heavy cream  
11 g egg, raw  
6 g Duke's mayonnaise  
10 g butter  
6 g olive oil  
12 g Bob's Red Mill almond flour  
Pinch of baking soda  
Pinch of salt & pepper

Preheat oven to 350° F. Combine bread ingredients in a small bowl; mix until you have created a smooth batter. Pour the batter into a greased muffin tin and bake for 15-20 minutes. In a separate bowl, combine all filling ingredients. Sauté the filling in a frying pan over medium heat. Once the bread is done baking, cut into small squares and combine with the filling in the frying pan. Season to taste and cook for 5-10 minutes and serve warm.

***Nutrition Facts:*** 400 calories, 40 grams fat, 7 grams protein, 3 grams net carbohydrate (~4:1 ratio)

\*For MAD patients or to create a lower ratio, less butter can be used in the filling and more vegetables and/or turkey can be used. The proportions in the bread recipe should remain the same.

\*Looking for a simpler option? Try the [KetoVie™ Café Stuffing!](#)

---

# Ketogenic Diet Practice Guideline Updates

The Ketogenic Diet Practice Guidelines that were published a decade ago recently underwent an update by a group of world renowned experts and were endorsed by [The Charlie Foundation](#), the [Child Neurology Society](#) and [Matthew's Friends](#).

In the past decade, thousands of published articles have been released on the ketogenic diet and its various forms such as the modified Atkins diet (MAD), low glycemic index treatment (LGIT) and the medium chain triglyceride diet (MCT). Due to the vast increase in research available, the ketogenic medical community wanted to assure that the guidelines were fully updated.

Below is a summary of the changes, but if you would like to read the full update it is available in the journal [Epilepsia Open](#). It is free for anyone to download due to a donation from [The Carson Harris Foundation](#).

## Key Points

- The list of “indications” for using the ketogenic diet was clarified and defined as diagnoses with at least a 70% response rate. These diagnoses include:
  - [Angelman syndrome](#)
  - Complex 1 mitochondrial disease
  - FIRES (febrile illness-related epilepsy syndrome)
  - [Ohtahara syndrome](#)
  - Super-refractory [status epilepticus](#)
  - [Dravet syndrome](#)
  - [Doose syndrome](#)
  - [Glut-1 deficiency syndrome](#)
  - Formula-fed children
  - [Infantile spasms](#)
  - Pyruvate dehydrogenase deficiency
  - [Tuberous sclerosis complex](#)
- One ketogenic diet does not fit all! Flexibility in the type of ketogenic diet is key for optimal compliance and success. In the past decade the LGIT and MAD have both been shown to be as effective as the “classic” approach.
- The group suggest that children under age 2 utilize the “classic” ketogenic diet approach and teens over age 12 utilize the MAD or LGIT options.
- Outpatient admissions for diet initiation is becoming increasingly more popular and feasible.
- Fasting prior to diet initiation is no longer being used in the majority of centers and decreases side effects during diet initiation.
- Children should be seen back in 1 month after starting the diet if possible.
- Recommendations for labs at follow-up did not change considerably from 2008, but now selenium levels and total/free carnitine are suggested.
- When considering stopping the diet, an [EEG \(electroencephalogram\)](#) should be considered.

## Reference

Kossoff EH, Zupec-Kania BA, Auvin S, Ballaban-Gil KR, Bergqvist AGC, Blackford R, Buchhalter JR, Caraballo RH, Cross JH, Dahlin MG, Donner EJ, Guzel O, Jehle RS, Klepper J, Kang HC, Lambrechts DA, Liu YMC, Nathan JK, Nordli Jr DR, Pfeifer HH, Rho JM, Scheffer IE, Sharma S, Stafstrom CE, Thiele EA, Turner Z, Vaccarezza MM, van der Louw EJTM, Veggiotti P, Wheless JW, Wirrell EC. [Optimal clinical management of children receiving dietary therapies for epilepsy: Updated recommendations of the International Ketogenic Diet Study Group](#). Epilepsia Open 2018, online.

# Inspiration Station: Holiday Recipe

## Festive Chocolate Peppermint Cookie Bars

Recipe adapted from [Kate's Healthy Cupboard](#)

Makes 16 bars (2"x2" each)

### **Ingredients**

#### Cookies

1 cup almond flour  
½ cup cocoa powder  
½ cup butter  
½ cup granulated [Swerve](#)  
½ tsp pure vanilla extract  
¼ tsp salt

#### Frosting

1 cup powdered Swerve  
¼ cup heavy cream  
2 T butter  
½ tsp pure peppermint extract



### **Preparation**

#### Cookies

Preheat the oven to 325° F and line an 8x8 pan with parchment paper. Melt butter in the microwave; mix with vanilla. Combine flour, cocoa, salt, and [Swerve](#) in a separate bowl. Add dry ingredients to butter/vanilla and mix until combined. Press the batter into the baking pan and bake for 20-25 minutes. Let cool completely before frosting. Store in the fridge.

#### Frosting

Place the butter in a medium sauce pan and melt over medium heat. Remove from heat and stir in heavy cream, powdered [Swerve](#), and peppermint extract. Place in the refrigerator until frosting is set a bit. Pour over cooled cookie bars and spread evenly.

**Nutrition Facts (per serving):** 118 calories, 12 grams fat, 1.5 grams protein, 1.45grams net carbs

\*Note: Swerve contains erythritol, a sugar alcohol that can decrease ketosis for some people. If erythritol is not allowed on your child's diet plan, you can substitute [SweetLeaf® Stevia](#).



## New Product:

Introducing [KetoVie™ Peptide 4:1](#) – a complete peptide based ketogenic formula for ages >1 year old. This formula is created using 100% hydrolyzed whey protein, meaning the protein is partially broken down making it easier to digest and absorb. This product could be useful for patients who are experiencing difficulty tolerating standard ketogenic formulas or those with impaired gastrointestinal function. KetoVie™ products contain medium chain triglycerides which could promote stronger ketosis and carnitine to support fat metabolism. Check with your dietitian to see if KetoVie™ Peptide may be an option for you!

## Clinic Updates: Staff Expansion

The MUSC Pediatric Neurology division is excited to welcome three new doctors and a new ketogenic RD to our expanding team. We hope this will decrease wait times for appointments and improve access to care for our pediatric epilepsy population.

Dr. Emma Carter graduated from the Medical University of South Carolina and completed her fellowship at Vanderbilt University.

Dr. Sonal Bhatia graduated and completed her fellowship at the Medical University of South Carolina.

Dr. Liliana Banari completed her fellowship at Wake Forest Baptist Medical Center.

Both Dr. Carter and Dr. Bhatia are currently available to see patient's in clinic. Dr. Banari will be available starting at the end of October. All three of these MDs specialize in epilepsy.

Abby Barguirdjian (previously Arday) has been with the MUSC nutrition team since 2017 but has recently taken on a new role with the ketogenic diet team. Abby received her nutrition training at the Rochester Institute of Technology and completed her internship at New York-Presbyterian Hospital/Weill Cornell Campus.

Laura Dority, ketogenic dietitian, has taken a part-time role to spend more time with her family. Both Laura and Abby are committed to supporting you and your family on your ketogenic diet journey. Laura will be in clinic on Tuesdays and Thursdays while Abby is available on Monday and Wednesdays.



**KeYo®** is a chocolate flavored, ready to eat, pudding-like ketogenic food produced by Nestle. It is a 3:1 ratio and can be used as a meal replacement or snack. Each cup has 310 calories, 30 grams of fat, 2 grams of carbohydrate, and 8 grams of protein.



## 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.

## 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)