

The Modified Atkins Diet Manual

Adult Epilepsy Diet Center



JOHNS HOPKINS
M E D I C I N E

Welcome to the Modified Atkins Diet!

By sticking to this diet, you have a good chance of reducing your current seizure activity. Since this is a new diet for you, please take the time to read through all the materials and ask many questions to ensure that you understand your new diet.

The food that we eat and the liquid that we drink are made up of three basic ingredients: carbohydrates, fats (also called lipids) and protein. Different foods and drinks have different amounts of carbohydrates, fats, and protein. Our body uses all of these nutrients for energy to build bones, to power your brain, to pump your blood and to live. However, our bodies use each of these three differently.

The Modified Atkins Diet is a diet that is very low in carbohydrates and very high in fat. You can eat some of the same foods you do now and even eat out at some of your favorite restaurants.

In this information manual, everything you need to know to start, maintain, and enjoy the diet will be explained, including:

- What are carbohydrates and fats?
- What foods are high and low in these nutrients?
- How to plan meals
- Where to turn for credible information

Contact info for clinicians has been removed for publication.

Thanks and good luck!

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Modified Atkins Diet Summary

- Eat no more than 20 grams of net carbohydrates each day.
- Eat either 3 regular sized meals or 4 - 5 smaller meals each day.
- Do not skip meals or go more than 6 waking hours without eating.
- Drink at least eight-8 oz. glasses of water each day to hydrate your body and avoid side effects.
- Take a multivitamin and calcium with vitamin D supplement daily.
- Adjust the amount of food you eat to suite your appetite. Eat until you are satisfied.
- Eat multiple servings of fats with every meal—your food should SHINE!

EAT LIBERAL COMBINATIONS OF FAT AND PROTEIN, BUT MOSTLY FAT!

Fat

- Oils, Butter
- Mayonnaise
- Heavy/whipping cream
- Avocado



Protein

- Eggs
- Poultry
- Fish, Shellfish
- Red meat



LIMIT THE AMOUNT OF HIGH CARBOHYDRATE FOODS.

- Fruit
- Bread, pasta, rice
- Crackers, cereals, grains
- Starchy vegetables like potatoes, corn, green peas
- Dairy products (other than cheese, cream, or butter)



WARNING—BE ON THE LOOKOUT!

- Don't assume any food is low in carbohydrates. Read the Nutrition Facts food label.
- Do not trust products with labels such as—Sugarless, Sugar-free, No Sugar Added. You must still read the carbohydrate grams on the Nutrition Label.
- Watch out for Low Fat and Fat Free products which will most likely contain carbohydrates.
- Prepared salads, like coleslaw and tuna salad, are often made with sugar. Be careful at salad bars and deli counters. It is best to make your own.

Side Effects of the Diet

Are there potential side effects?

All therapies have either side effects or potential side effects. You may feel sluggish for a few days after the diet is started. Other potential side effects may include nausea, vomiting, constipation and dehydration. These can become serious if not managed correctly. Kidney stones and high cholesterol have also been reported.

How do I manage side effects?

Dehydration: Ketosis decreases thirst as well as causes sedation; therefore fluid intake may be less than optimal. We encourage you to drink plenty of water and monitor for signs of dehydration such as weakness, dizziness, palpitations, confusion, dark colored urine, and fatigue. Call your doctor if you suspect you are experiencing dehydration.

Vomiting: Excess ketosis and acidosis may result in vomiting. If vomiting is repeated, please contact the Adult Epilepsy Diet Center or call your doctor.

Kidney Stones: Kidney stones are uncommon, but a potential side effect because of the high amount of fat. A stone may manifest as non-specific illness, fever, poor appetite and abdominal pain. Kidney stones will not usually warrant a discontinuation of the diet. To reduce the risk of kidney stones, ensure that you get plenty of water throughout the day. Large kidney stones may require lithotripsy or even surgical removal.

Constipation: A change in bowel habits is expected on the diet, which may or may not be considered constipation. The diet has less bulk than regular food, so you may have fewer bowel movements than before starting the diet. If constipation is a problem, there are a few things you can do. The most important way to manage constipation is staying ahead of it with generous hydration. That means at least 8 large glasses of water a day! Some treatment options for mild constipation are daily stool softeners such as docusate sodium (Colace®) or a laxative like Senokot®. For more difficult constipation, some other treatment options are Milk of Magnesia, Miralax®, unflavored Fleet Phosphosoda®, and Fleet Enema. Talk to your doctor, Dr. Cervenka, or Bobbie Henry if you have problems with constipation.



Beverage Choices to Stay Hydrated and Minimize Side Effects

Staying hydrated can help to minimize the side effects of MAD, so aim for about 8 cups of water daily.



There are many name brands and store brand flavored waters and powder drink mixes available today. Some are artificially sweetened, some are unsweetened, and some are carbonated. Remember to read the Nutrition Facts label for total carbohydrate content. Some may even have fiber. Subtract fiber grams appropriately.



Make a large jug from no-carb powdered mixes to refill your water bottle periodically throughout the day, or carry around individual packets to flavor water on the go.

Some people find it helpful to keep track of how much they are drinking by setting up phone or desktop reminders. Other ways include drinking a small cup of water at each hour of your work day, or a large cup of water every time you use the restroom.



Examples:

- *Brand names have been removed.*
- *Example 1*
- *Example 2*

Remember to drink more than usual if you are exercising, sweating, or in a dry climate. It may be necessary to use an electrolyte replacement beverage. Carb-free and low carb varieties that are easy to find include:

Pictures of carb-free and low carb varieties have been removed for publication.

How to Read the Nutrition Facts Label – BACK of the package

What is the layout of the Nutrition Facts Food Label?

Most food labels will look similar to the one below. The information on the top has the serving size and servings per container. Then, the nutrients and amounts are listed. Amounts are per serving—not per container—unless of course there is only one serving per container, as in a 1-oz bag of chips or a small yogurt container. Below the nutrients there is a footnote section with the Daily Values (DVs) for 2000-2500 calorie diets. This information is not important to know on this diet.

What should I look for on the food label?

1. Total Carbohydrate! Remember you can have up to 20 grams net carbs for the whole day (unless otherwise specified). Choose wisely.
2. Dietary Fiber (if there is any): Fiber is a type of carbohydrate that is very important for health, but it does not get digested and metabolized the same way other carbs like sugar do. You may subtract the grams of fiber to get the “Net or available Carbs”. Look at the example below. Total Carbohydrate reads 6g and the Dietary Fiber reads 2g. The net/available carbs would be $6g - 2g = 4g$. If soluble and insoluble fiber are listed under Dietary Fiber, only subtract Dietary Fiber grams.
3. Serving size: Pay extra attention to the serving size. If you have two servings, double the grams of carbohydrates (or net/available carbs, if there is fiber). If you eat this whole bag of veggies, that’s 16 grams of carbs to count towards your 20.
4. Sugar alcohols (e.g. maltitol, xylitol) — **do not subtract sugar alcohols (unless it is erythritol). Be careful here!**

BROCCOLI, CARROTS, SUGAR SNAP PEAS & WATER CHESTNUTS

A crunchy combination of broccoli, carrots, sugar snap peas and water chestnuts

Amount Per Serving	% Daily Value	Amount Per Serving	% Daily Value
Total Fat 0g	0%	Total Carbohydrate 6g	2%
Saturated Fat 0g	0%	Dietary Fiber 2g	8%
Trans Fat 0g		Sugars 3g	
Cholesterol 0mg	0%	Protein 1g	
Sodium 25mg	1%		

Vitamin A 15% • Vitamin C 25% • Calcium 2% • Iron 2%

HIGHLIGHTS

All Natural • No Preservatives • Heart Healthy • Low Calorie
• Fat Free • Cholesterol Free • Very Low Sodium • Source of Vitamins

If the food label says it has 0 grams of carbohydrates, does that *really* mean ZERO?

The Food and Drug Administration made rounding rules to be used when reporting the quantities of nutrients in foods. This applies to the Nutrition Facts labels and is used by food journalists and recipe writers who report the nutritional composition of their published recipes. Carbohydrate is rounded to the nearest 1 gram. If the item has less than 1 gram, it may be reported as “less than 1 gram”. If the item has less than 0.5 gram, it will be rounded to zero.

Sugar Alcohols and FRONT of the Package Labeling

There are many “low carb” products in the marketplace. Be advised that these products may label the FRONT of the package with carbohydrates grams, called “Net Carbs” or “Impact Carbs”. This number is likely incorrect according to the MAD, because the way these manufacturers calculate and the way the MAD calculate net carbs is different. These manufacturers are subtracting the sugar alcohols grams from the total carbohydrate amount. This is very common in ready-to-eat snack bars, like the one shown below. On MAD, sugar alcohols are not subtracted from the total carbohydrate content.

Picture of an example of a low carb product with sugar alcohols.

Sugar alcohols are neither sugar, nor alcohol. They are derived from sugar and are still considered a type of carbohydrate. Sorbitol, mannitol, xylitol, maltitol, maltitol syrup, lactitol, and erythritols are some types of sugar alcohols. They are commonly used in the food industry in sugar-free, reduced-sugar, and diabetic foods because they

do not contribute as many calories as sugar does. Yet, each sugar alcohol is different and some will contribute just 1 calorie fewer than sugar. It is suspected that people will metabolize and digest sugar alcohols differently. For this reason, while on the MAD, only subtract fiber from the total carbohydrate content.

To get the correct number of carbohydrates, turn the package over and read the Nutrition Facts label for the total carbohydrate and fiber grams. Take the total carbs and subtract the amount of fiber only. This is the correct number of carbohydrates. In special situations, it is OK to subtract erythritol ONLY, as this has the least impact on the body.

For more information about sugar alcohols, please visit the Sugar Alcohols Fact Sheet at www.foodinsight.org.

What about foods without a food label?

As you may have noticed, not all foods have a Nutrition Facts label. Foods without labels include most fresh fruits and vegetables—the kind you bag yourself at the store. Frozen, canned, and fresh packaged produce *do* contain nutrition facts. During your first month on the diet, you may learn the carbohydrates in produce by using food lists (provided here) or by eating packaged produce that has the carbohydrate content already on the label. Keep in mind, packaged food may contain additional ingredients like preservatives, sauces, and/or flavorings that have carbohydrates. Always read the Nutrition Facts Label, if one is provided.

How do I know how many carbohydrates are in fresh, unpackaged produce?

The next few pages are quick reference sheets for the carbohydrate content of fruits and vegetables. Produce is listed alphabetically. You may also use one of the many websites that provide nutrition facts for foods. All you do is type the food in the search bar, find the food you are looking for, and locate the serving size, and carb and fiber grams. Good websites are www.calorieking.com and www.fatsecret.com.

Produce carb counting sheets have been removed for publication.

How to Shop and Stock Your Pantry/Fridge/Freezer



Shop the perimeter of the grocery store for fresh fruits and vegetables, meats, fish, poultry, and low-carb dairy products.

More of your food items will be perishable—keep in refrigerator and freezer. You may find that you have to shop more frequently.

Plan ahead!

- Keep frozen meats and vegetables for quick meals.
- Make meals in advance for the week. You don't have to be creative and vary meals if you really like one low-carb recipe!
- Keep refrigerator full of ready-to-eat low-carb veggies and fruits. See the produce sheets in this manual.

Stock Your Pantry Great for power-outages

- Mayonnaise
- Herbs and spices
- Capers
- Canned Veggies
- Canned seafood and chicken
- Sugar-free gelatin dessert
- Sugar-free jams and jellies
- Canned green chilies
- Coconut milk
- Sun dried tomatoes in oil
- Pesto
- Dill Pickles
- Lemon or lime juice
- Macadamia nuts and almonds
- "Natural" peanut butter
- Almond butter

Be extra careful with these pantry items as many brands will have carbohydrates. Read the nutrition facts label to find the lowest carb versions.

- Broths/bouillon
- Extracts
- Horseradish
- Hot sauces
- Ketchup
- Mustard
- Mayonnaise
- Salsas
- Soy sauce/tamari
- Salad dressings
- Vinegars
- Tomato sauce
- Alfredo sauce

Your First Shopping List

PRODUCE

- avocados
- spinach
- leafy greens
- cucumber
- boston, bibb, butterhead lettuce
- celery
- cauliflower
- eggplant
- blueberries
- raspberries
- strawberries

DELI

- sliced lunch meat
- sliced cheeses

MEAT

- bacon
- salami
- ground beef
- chicken wings
- chicken thighs
- breakfast sausage
- pepperoni

DAIRY

- sour cream
- unsweetened almond milk
- unsweetened coconut or hempmilk
- sliced or block cheese
- mascarpone cheese
- eggs
 - heavy whipping cream
- cream cheese
- sugar-free Jello, prepared
- butter

CONDIMENTS

- bacon bits
- mayonnaise
- salad dressing
- tomato sauce
- horseradish
- sauerkraut
- hot sauce
- mustard
- capers
- pickles
- olives
- pesto

FROZEN

- veggies and fruit
- fish fillets
- chicken wings
- meatballs

CANNED

- tuna in oil
- salmon
- chicken

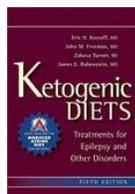
SNACKS

- pork rinds
- almonds, pecans, walnuts, macadamia nuts

BAKING

- olive, canola oil
- coconut oil
- unsweetened coconut flakes
- baking chocolate
- unsweetened cocoa powder
- coconut flour
- almond flour
- Splenda, stevia, other artificial sweetener
- Plastic or glass to-go storage containers

Books Shown in Clinic



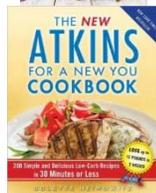
Ketogenic Diets: Treatments for Epilepsy and Other Disorders. Written by Eric H. Kossoff, M.D., John Freeman, Zahava Turner, James Rubenstein.



The Keto Cookbook: Innovative Delicious Meals for Staying on the Ketogenic Diet. Written by Dawn Marie Martenz and Laura Cramp.



Fighting Back with Fat: A Parent's Guide to Battling Epilepsy Through the Ketogenic Diet and Modified Atkins Diet. Written by Erin Whitmer and Jeanne Riether.



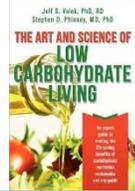
The New Atkins for a New You Cookbook: 200 Simple and Delicious Low-Carb Recipes in 30 Minutes or Less. Written by Colette Heimowitz.



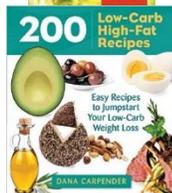
Dana Carpender's NEW Carb Counter--Expanded, Revised, and Updated: Your Complete Guide to Total Carbs, Net Carbs, Calories, and More. Written by Dana Carpender.



Fat Fast Cookbook: 50 Easy Recipes to Jump Start Your Low Carb Weight Loss [NOOK Book] by Dana Carpender, Rebecca Lathan, Andrew DiMinio, and Jimmy Moore.



The Art and Science of Low Carbohydrate Living. By Jeff S. Volek, PhD, RD and Stephen D. Phinney, MD, PhD



200 High Fat Low Carb Recipes by Dana Carpender

Useful Websites for Epilepsy and the Modified Atkins Diet

www.aesnet.org

About AES



The American Epilepsy Society is one of the oldest neurological professional organizations in this country. The Society seeks to promote interdisciplinary communications, scientific investigation and exchange of clinical information about epilepsy.

Membership consists of clinicians, scientists investigating basic and clinical aspects of epilepsy, and other professionals interested in seizure disorders. Members represent both pediatric and adult aspects of

epilepsy.

The American Epilepsy Society's Annual Meeting features symposia, lectures, poster presentations and exhibitions. The AES Annual Meeting provides an open forum for members to communicate and disseminate current findings in the field of epilepsy.

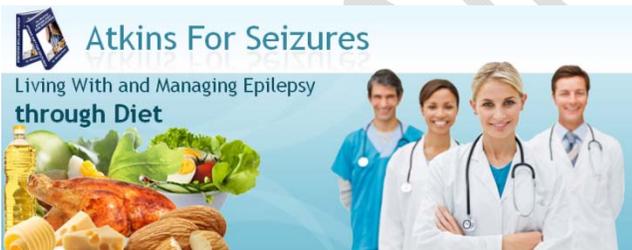
www.epilepsyfoundation.org



Modified Atkins Diet Shown to Cut Epileptic Seizures in Adults

A modified version of a popular high-protein, low carbohydrate diet can significantly cut the number of seizures in adults with epilepsy, a study led by Johns Hopkins researchers suggests. The Atkins-like diet, which has shown promise for seizure control in children, may offer a new lifeline for patients when drugs and other treatments fail or cause complications.

www.atkinsforseizures.com



www.atkins.com



www.matthewsfriends.org



www.charlifoundation.org

THE CHARLIE FOUNDATION TO HELP CURE PEDIATRIC EPILEPSY



www.epilepsy.com



Information. Community. Empowerment.

www.calorieking.com



www.fatsecret.com



<http://www.carsonharrisfoundation.org/>



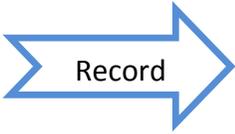
Modified Atkins Diet Sample Menu

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Coffee or tea with heavy cream Ham & Cheddar Cheese Omelet	Coffee or tea with heavy cream Bacon Scrambled Eggs Avocado	Coffee or tea with heavy cream Sausage Links Fried Eggs	Coffee or tea with heavy cream Poached Egg Tomato Avocado	Coffee or tea with heavy cream Cheese Omelet Peppers and Mushrooms	Coffee or tea with heavy cream Egg Avocado Bacon	Coffee or tea with heavy cream Steak & Eggs Spinach
Water Chicken slices wrapped in romaine lettuce, avocado, cucumbers, Italian dressing	Diet Soda Unbreaded Chicken Wings Celery Sticks Blue Cheese dressing	Water Bunless Double Cheeseburger Lettuce Tomato, Mayonnaise Dill Pickle	Water Egg Salad with extra mayo over mixed greens Avocado	Club Soda Chicken Cobb Salad: Chicken Breast Romaine lettuce Cucumber Boiled Egg, Blue Cheese dressing	Diet Soda Sautéed Beef & Vegetables Olive oil Cauliflower rice	Water Braised Short Ribs Side lettuce salad Blue Cheese dressing
Diet Soda Broiled Salmon Steamed Broccoli Cheddar Cheese	Water Taco Salad: Ground beef, iceberg lettuce, cheese, olives, salsa and sour cream	Diet Soda Fried Pork Chops Buttered cabbage	Diet Soda Turkey Breast Spinach Salad with Mushrooms & Hot bacon dressing	Water Tuna Steak Asparagus Spears with lemon mayo	Water Shrimp sautéed in garlic and butter Shirataki Noodles Baby Spinach	Water Grilled Sea Bass Steamed Buttered Cauliflower

Adult Epilepsy Diet Center Seizure Calendar

Your Name: _____ Date of Birth: _____ MONTH: _____

Ex: Sun



- The information above – name, dob, month
- The day you started the diet, for your first calendar only
- **Your number and type of seizures daily**
- **Your urine ketones twice a week for the first month, then weekly**
- **Your weight weekly**
- **Your menses start and end date, if female**

21
160 lbs.
Moderate
No Seizures

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
—	—	—	—	—	—	—
—	—	—	—	—	—	—
—	—	—	—	—	—	—
—	—	—	—	—	—	—
—	—	—	—	—	—	—
—	—	—	—	—	—	—

Please fax this calendar at the end of every month.



Vitamin and Mineral Supplements

Multivitamin (MVI) with minerals:

- Take a multivitamin with minerals for the duration of the diet. Follow dosing directions according to package.
- Take with food (except dairy) to help with absorption

Calcium:

- Look for elemental calcium on the label and adjust your dose to make sure you're getting 500-600 mg of calcium two times per day, separated by at least 2 hours. If you have a history of kidney stones or drink a milk substitute (like unsweetened almond milk) daily, take only 500-600 mg/day of elemental calcium. Consult with your dietitian if you have questions.
- Must contain vitamin D (at least 600 IU) and magnesium.
- Choose any form - chewable, liquid, caplet, or gel tab.

Vitamin D:

- Aim to get a total of 1200-1800 International Units of vitamin D3. You are likely getting 400-600 from your calcium supplement. The RDA is 600 IU for an adult, but the Endocrine Society recommends a higher amount for people taking anticonvulsants.
- The tolerable upper level set by the Institute of Medicine is 4,000 IU.
- If you suspect that you may be low in vitamin D, please ask your PCP to check your 25-hydroxyvitamin D [25(OH)D] level and replete if low.

Most products are ok to take. Just be sure to check the Nutrition Facts Label for carb content.

Pictures of supplements have been removed for publication.

Modified Atkins Diet Checklist

BEFORE STARTING THE DIET

- LABS
- 3-DAY FOOD RECORD

FOR THE FIRST MONTH

- START MULTIVITAMIN
- START CALCIUM+VITAMIN D
- NO CHANGES TO SEIZURE MEDS
- SCHEDULE 3-MONTH VISIT

Fill out SEIZURE CALENDAR:

- NAME
- MONTH
- DAY STARTED
- DAILY SEIZURES
- KETONES TWICE A WEEK
- WEIGHT WEEKLY

AFTER THE FIRST MONTH

- ASK ABOUT CHANGING MEDS
- CONTINUE MULTIVITAMIN, CALCIUM+VITAMIN D

Fill out and submit SEIZURE CALENDAR:

- NAME
- MONTH
- DAILY SEIZURES
- KETONES WEEKLY
- WEIGHT WEEKLY

EVERY MONTH

- SUBMIT SEIZURE CALENDAR
- CONTINUE MULTIVITAMIN, CALCIUM+VITAMIN D
- FILL OUT 3 DAY FOOD RECORD WHEN ASKED BY DIETITIAN

AFTER THE THIRD MONTH

- FOLLOW UP LABS BEFORE VISIT
- FOLLOW UP CLINIC VISIT

Additional content that has been removed for publication includes:

- Carb counting guides for commonly eaten fruits and vegetables (in alphabetical order and in ascending order from 0-5 grams of net carbohydrates)
- Pictures and nutrition information for low carbohydrate products including bread, pasta, and milk substitutes, snacks, and sweet treats
- Pictures and nutrition information for high fat products and foods like heavy cream, butter, mayonnaise, avocados, etc.
- Tips on eating out at fast food, fine dining, and other restaurants. This includes information on phone apps, guidance on menu selection, and safe food choices.
- Descriptions and pictures of ketogenic formulas and specialty products.
- Clinician contact information and guidance as to which clinician to contact for certain situations
- Clinic scheduling information
- Physician hotline information