

THE GLUTEN AND CASEIN-FREE DIET

A powerful piece of the recovery puzzle

Presented by
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The Gluten and Casein-Free (GFCF) Diet serves as an important biomedical foundation in improving symptoms or recovering individuals from with autism, Asperger's Syndrome and ADHD (collectively known as neurodevelopmental disorders or "NDs") as well as several chronic illnesses.

There are several diets commonly used in our community. The GFCF is the one most commonly used and is often the diet that is tried first. This document was designed for people to gain a better understanding of the GFCF Diet.

Why does the GFCF diet work?

We may not know all the reasons why the GF/CF diet works today. What we do know is that children on the autistic spectrum, or with ND's and chronic illness often have abnormal reactions to certain foods including gluten and casein. Many of these individuals also suffer from some type of digestive or gastrointestinal (GI) issue and/or have symptoms of a leaky gut (contents leaking into the rest of the body) and mal-absorption (difficulty digesting nutrients).

Digestively, the body has more difficulty breaking down longer chains of molecules like gluten and casein. In a perfect world, the intestines produce enzymes to break down these chains into single sugars. These sugars are then absorbed directly but the left overs are food for bacteria and fungus and can also leak through the gut and cause havoc in the body.

A person with a leaky gut has damaged villi and cell junctions inside the GI tract, leaving gaps in the intestinal wall. Growing evidence shows that these longer

protein chains go through a permeable gut wall, enter the bloodstream and affect the brain where the protein chains attach themselves to opioid receptors in the brain causing a morphine-like or “foggy brain” effect.

The consumption of gluten and casein may contribute to the following reactions:

- Clouded mental function
- Insomnia
- Diarrhea
- Constipation
- Impaired Social Connection
- Blocking of pain messages
- Dilated pupils
- Anxiety
- Craving the opioid effect like a drug addiction

A Trial of the GF/CF Diet

With the removal of gluten and casein, parents have reported positive results such as better sleep patterns, better bowel movements, an increase in language, expression, affection, calmness, better cognition, less stimming, better sensory processing, the ability to stay on task and improved potty training.

My son’s hyper-focus problem was completely gone after eliminating casein from his diet. We saw a difference within days. Improvements due to the removal of gluten often take a few weeks to show up. However, after we removed the gluten, we saw a child who finally could go with the flow, was much better socially, and overall happier and calmer. Today my son often talks about how gluten, casein and soy (I’ll get to that in a bit) make his brain foggy, his tummy hurt and make him feel impulsive.

Strangely, our children are addicted to the foods that do the most damage to them. My son’s favorite food was cottage cheese. He sobbed when I took it away. I told him that mommy and daddy’s jobs are to love, protect and keep our children safe and healthy. I just rocked him in my arms and told him that we were going to get through this together. There would be no more cottage cheese for mommy, daddy and his brother either. Now my son has a very healthy view of his GFCF diet and appreciates how good he feels on it.

In the first week or so of the GFCF diet parents often report that children go through withdrawals from the foods they craved the most but then report developmental and physical gains. Day 3 seems the worst, but be strong and stick to it. Concentrate on yummy new food. This healing process is so worth it. I know you can do this.

What is Gluten?

A Simple definition

Gluten is a protein found in the Plant Kingdom. Plants that contain gluten are members of the grass family of wheat, barley, rye and their derivatives. Derivatives include: malt, grain starches, hydrolyzed vegetable/plant proteins, textured vegetable proteins, grain vinegars, soy sauce, grain alcohol, flavorings and the binders and fillers found in some vitamins and medications.

A More Detailed Definition

Gluten is a composite of the proteins gliadin and glutenin. These exist, conjoined with starch, in the endosperms of some grass-related grains, notably wheat, rye and barley. Gliadin and glutenin comprise about 80% of the protein contained in wheat seed. Being insoluble in water, they can be purified by washing away the associated starch. Worldwide, gluten is an important source of nutritional protein, both in foods prepared directly from ingredients containing it, and as an additive to foods otherwise low in protein.

The seeds of most flowering plants have endosperms with stored protein to nourish embryonic plants during germination, but true gluten, with gliadin and glutenin, is limited to certain members of the grass family. The stored proteins of corn and rice are sometimes called gluteins, but their proteins differ importantly from wheat gluten by lacking glutenin. The glutenin in wheat flour gives kneaded dough its elasticity, allowing leavening and contributing chewiness to baked products like bagels. Although wheat supplies much of the world's dietary protein, a small percentage of the population, including those with Celiac Disease, is gluten-intolerant and cannot consume it safely.

What is Casein?

A Simple definition

Casein is milk protein, which has a molecular structure that is extremely similar to that of gluten.

A More Detailed Definition

Casein (from Latin *caseus* "cheese") is the predominant phosphoprotein found in milk and cheese. When coagulated with rennet, casein is sometimes called paracasein. British terminology, on the other hand, uses the term caseinogens for the uncoagulated protein and casein for the coagulated protein. As it exists in milk, it is a salt of calcium. Casein is not coagulated by heat. It is precipitated by acids and by rennet enzymes, a proteolytic enzyme typically obtained from the stomachs of calves.

In addition to being consumed in milk, casein is used in the manufacture of adhesives, binders, protective coatings, some plastics, fabrics, food additives and many other products. It is commonly used by bodybuilders because of its anti-catabolic effect, meaning that casein consumption inhibits protein breakdown in the body. Casein is frequently found in otherwise nondairy cheese substitutes to improve consistency, especially when melted.

Casein has been documented to break down to produce the peptide casomorphin, an opioid that appears to act primarily as a histamine releaser.

Remember opioids cause brain fog and histamines cause inflammation.

Casein has a molecular structure that is extremely similar to that of gluten. Thus, most gluten-free diets are combined with casein-free diets and referred to as a gluten-free, casein-free (GFCF) diet. Casein is often listed as sodium caseinate, calcium caseinate or milk protein. These are often found in energy bars, drinks, and packaged goods.

What's up with Soy?

Many families avoid soy protein because the soy protein molecule is reported to be similar in make up to the gluten and casein molecules.

It's important to note that there are only trace amounts of protein in soy lecithin and soybean oil. Therefore, you may want to avoid all other soybean products, but still allow lecithin and oil. However, some parents report that their children even react to the oil and lecithin. You will only find out through your own trials.

My son reacts to soy protein, but not to soybean oil or soy lecithin.

Lets' Get Started On the GFCF Diet

Implementing the GFCF Diet is all about behavior modification and better physical health. It's not unlike going on a weight loss diet. As a parent, you will encounter that same emotional roller coaster, as well as a big learning curve. However, in a few months, you will be over the hump and will be teaching others about this amazing way of eating.

My top suggestions to set you up for success are:

1. Make the change over a two-month timeframe. Don't go cold turkey tomorrow.

2. You have a greater chance of success if you switch the entire household over to GFCF.
3. It's best if the whole family sits down to the same meal together. Didn't you ever hear that mothers should not be short order cooks? The same applies in this situation.
4. Make this a positive experience. Help your child get excited about trying new foods.
5. There's a substitute for almost every gluten and casein-containing food. Include the whole family in experimenting with new ingredients.
6. If you have a child with a very limited diet or one who is texture sensitive, then be creative.
 - a. Find ways to hide fruit and vegetables in foods that you can get your child to eat.
 - b. Present food in a more kid-friendly, eye-appealing way
 - c. Buy a juicer and make nutrient-rich drinks

Are you worried about your child's food variety? As you heal your child's gut, break their addictions and change their metabolism, most children will try new foods.

How to explain GFCF to your family:

Note: Cater this to your own child's cognitive age and ability. I also recommend that you sit the entire family down together when you start the diet.

What I did with my family is tell them that everything we eat affects how we think and feel. I like to drink a cup of coffee every morning. I asked my son if he knows why I do that. He responded that he understands that coffee helps mommy wake up and get her day started. I told him that he's exactly right. Then, I asked him why I don't let him and his brother have sugar too close to bed time. He responded that sugar makes him active and awake and that he needs to relax and get ready to go to sleep. I gave him a big smile and told him how smart he is.

Next, I told him that we wanted to do a 2-month family experiment where we all try eating differently to see if we felt better and stronger. I stressed that mommy, daddy and his brother would all do this with him. He said that he would definitely be into trying this out.

Finally, I briefly explained that there were good substitutes for almost every kind of food. But I very honestly told him that he would not be able to have his beloved cottage cheese. That made him sad, but he was still ready to give it a try. And, off we went and we never looked back.

Suggested GFCF Dietary Two Month Plan

Because the GFCF diet can be overwhelming if tackled all at once, the following is a suggested strategy for eliminating gluten and casein. The idea is to create a feeling of success and to minimize frustration. If you feel confident enough to move quicker than the proposed plan then do so. It's very important to not eliminate gluten and casein at the same time.

The MOST IMPORTANT Rule – NO CHEATING Allowed!

Cheating or infractions can send your child into a temporary regression.

Week 1: Educate Yourself

- Don't do this alone. Make sure you have a Generation Rescue, Rescue Angel <http://www.generationrescue.org/rescue-community.html> . Having a mentor is so important. (I called my Rescue Angel while walking through Whole Foods crying because I didn't know what to buy the first time I tried the diet.)
- TACANow.org has a tremendous resource list for you. Visit: <http://www.talkaboutcuringautism.org/gfcf-diet/index.htm>.
- During the first two weeks, I also suggest reading the book "Special Diets for Special Kids" by Lisa Lewis to get more great advice on the WHYs and HOWs of GFCF.
- Go to Google (www.google.com) and search for GFCF. There are dozens of people blogging about the diet.
- Go to helpful web sites where you can purchase GFCF food that is shipped to your home, like www.gfMeals.com or www.allergygrocer.com.
- Find your nearest natural foods markets and ask if they have a GFCF, or at least a GF list you can use as a guide for the store.
- Go to Yahoo Groups (groups.yahoo.com). Get a free username and password. Search the groups for GFCF and/or autism. Join whichever groups look interesting to you. Make sure to choose the Daily Digest option so you're not completely overwhelmed by emails. My essential groups are:
 - GFCFkids
 - GFCFrecipes
 - MB12Valtrex (an advanced group on diets and infections often affecting our children)

Week 2: Remove Casein

Casein removal includes milk, butter (except for clarified butter, a.k.a. ghee), whey, cheese, yogurt, ice cream, Pediasure, milk-based formulas, and all sub-ingredients. To replace milk, use rice milk, almond milk or hemp milk.

My family loves Almond Breeze from Blue Diamond. I buy the sweetened original for cereal, and chocolate and vanilla for drinking. They also like chocolate hemp milk, which is high in protein.

Note: Many of our children have problems with yeast overgrowth in their guts. If your child is one of them, then you will want to avoid rice milk.

As stated above, soy is a complex sugar and similar in molecular structure to casein and many people avoid it when replacing milk and yogurt. It may have to be eliminated all together later, but at least avoid it as a total replacement for milk. Also, an overuse of soy is linked to the erosion of the digestive tract and it can affect estrogen (hormone) levels.

Important: Since your child will be consuming less milk, it is a good idea to add a calcium and vitamin D supplement to your child's diet.

Week 3: Clean Out Your Refrigerator and Pantry and Implement GFCF Breakfasts

Cleaning

Read the food labels in your house. Pack up and put away, or give away, everything that contains gluten or casein. If you're not sure about an item, go to the manufacturer's web site and read the FAQ page, or call or email customer service and ask your questions.

Make a list of foods for which you need to find substitutes. If you don't see an obvious substitute in the stores or online, then go to the Yahoo groups you joined and ask your questions or search their archives.

Breakfast

Find a selection of GFCF foods that your child will eat for breakfast. Here are my suggestions:

- Frozen GFCF waffles, French toast or pancakes and real maple syrup
- Nitrate and nitrite-free bacon, Canadian bacon or sausage
- Eggs
- All natural hash browns
- Cream of rice cereal or cream of buckwheat cereal
- GFCF cereals with your choice of milk substitute

- GFCE Bagels with homemade cashew cheese spread
- GFCE toast with all natural jam and/or clarified butter
- Sautéed potatoes with onions, eggs and ground turkey. Serve with corn tortillas
- Use GFCE sliced bread to make cinnamon toast, French toast, eggs in a whole, etc.

Week 4: Implement GFCE Lunches

Find a selection of GFCE foods that your child will eat for lunch. Here are my suggestions:

- GFCE nitrate/nitrite-free hot dogs cut in half on GFCE bread or without bread
- Boar's Head or Applegate Farms lunch meats
- Whole Foods Market Chicken Taquitos (The 365 brand)
- gfMeals.com chicken tenders or breaded pork cutlets
- Sandwiches on GFCE bread
- Original flavored Fritos
- Most plain potato chips are fine
- Homemade French fries or sweet potato fries
- Most tortilla chips
- All natural fruit leathers
- Fresh fruit and veggies
- Most 100% juice boxes

My best tip is to purchase a small thermos so you can send warm lunches to school. I send leftovers from dinner, like brown rice pasta, meatballs, chicken and rice, etc.

Stay away from most fast food restaurants until you research them very carefully. If you are going to eat fast food, your best bet is In-N-Out Burger.

Week 5: Implement GFCE Dinners

Find a selection of GFCE foods that your child will eat for dinner. Here are my suggestions:

- You can make just about anything as long as you avoid gluten and casein. Use clarified butter, GFCE buttery spread, unsweetened almond milk, good quality vegetable oil (I stick with olive oil), coconut milk and coconut oil.
- Use GFCE bread crumbs in meatloaf or to bread anything. You can buy them at a natural food stores.

- A good GFCF dinner is one where you serve clean, unprocessed food. Know what your eating and serving. Can you read all of the ingredients on the label?

My children eat a lot of meat with rice and a vegetable.

Week 6: Replace All Snack Items and Desserts

- There's a wide variety of chips, dried fruit treats, GFCF cookies and GFCF ice creams and sorbets available.
- Don't forget that fresh fruit and vegetables are great snacks.
- You can purchase GFCF baking mixes in stores or online, or even very good baked goods online at places such as www.gfMeals.com.

Week 7: GFCF Household Items

Check all soaps, shampoos, lotions, sunscreens, toothpaste, laundry detergent and over the counter medications for gluten and casein. You will be surprised how many shampoos contain wheat germ oil. There are a wide variety of brands that are GFCF. Just do your research.

Week 8: School

Now you are well underway and should be feeling much more comfortable with your new way of feeding your family. It's time to deal with the classroom.

- Call a meeting with everyone at the school who deals with your child on a weekly basis. If you have an IEP. Call for a Student Success Team meeting. Prepare packets of research about the diet to hand out to everyone at the meeting. Explain the GFCF diet and insist that they help you keep your child clean and healthy. Be assertive and explain that there is no wavering on this diet. Get everyone to tell you that you can count on them to be on the GFCF bandwagon.
- Check all soaps and classroom craft items. There are some good GFCF classroom item lists available on the Web. The biggest surprise for most is that Play Dough and various glues have gluten. Play Dough is made from wheat flour. You can find recipes online for GFCF play dough and many educational stores now carry a comparable gluten-free item in multiple colors.
- Ask the teacher to notify you whenever she expects there will be a classroom party so you can provide a dessert for your child.
- Make sure that the teacher understands that your child can't even touch gluten. Tell her that you will do your best to provide comparable supplies. My son's teacher once surprised us with a pasta project for math.
- Place GFCF cupcakes in the school freezer just in case the teacher gets hit with a surprise birthday party.

- Explain to your child that he/she should only eat food from home.

Where's That Darn Gluten Hiding?

These are some ingredients that can contain gluten and they should be avoided.

Wheat	Rye
Barley	Bulgar
Oats (unless marked certified GF)	Cereal Binding
Durum	All common pasta (including couscous)
Filler (such as in spice blends)	Farro/Spelt
Graham Flour	Kamut
Malt	Wheat Flour Roux
Semolina	Triticale (hybrid of wheat and rye)

Gluten-Free Grains and Grain Substitutes

Amaranth	Arrowroot
Buckwheat	Corn/Polenta
Cassava/Yucca	Dahl (made from lentils)
Flax	All Beans
Nuts	Potatoes
Rice	Sorghum
Teff	Soy (unless you've eliminated it)
Millet (a super grain, full of protein)	Quinoa (a super grain, full of protein)

Watch Out For These Products...They May Contain Gluten

Baking Powder	Beverage Mixes
Bouillon	Condiments
Dried Fruit and Raisins	Dry Roasted Nuts
Flavorings	Icing and Sugar Products
Imitation Seafood	Licorice and Candies
Marinades and Sauces	Modified Food Starch
Rice Mixes	Processed Meats
Rice and Soy Beverages	Salad Dressings
Seasonings and Seasoning Blends	Regular and Seasoned French Fries
Poultry Seasoning	Soups and Broths
Herbal Tea	Soy/Teriyaki/Oyster Sauce
Worcestershire Sauce	Hydrolyzed Vegetable or Plant Protein

Tips

- Check product ingredients regularly. Manufacturers may change ingredients without notice.
- Ensure that anti-caking and flow agents are GF. These agents are usually not identified on ingredients lists. i.e. Many brands of raisins are coated with wheat flour to keep them from sticking together. If your raisins don't stick together, don't eat them. However, it's safest to check with the manufacturer.
- Select pure spices, rather than seasoning blends that may contain gluten fillers. Some seasoning blends are safe. Just check with the manufacturer.
- Safe thickening agents can be used in place of flour. i.e. potato, tapioca or corn starch.

Preventing Contamination and Cross Contamination

When preparing a GFCF meal, it is important to prevent the contamination of GFCF ingredients from gluten and casein-containing food particles and residues. Even small amounts of contamination may cause stomach issues and behavioral regression.

- Select a prep area that is separate from other areas that were recently exposed to gluten or casein.
- Ensure that all prep surfaces, cooking surfaces and cooking utensils have been thoroughly cleaned and sanitized. These include counter tops, grill surfaces, toasters, pans, bowls, knives, utensils, thermometers, sponges and dish towels.
- Use dedicated pots, pans, utensils and cutting boards whenever possible.
- Rolled edge pans are easiest to clean.

Let's Go To a Restaurant

"I'll have the chef salad please, with the oil and vinegar on the side and the apple pie a la mode. But I don't want the ice cream on top, I want it on the side, and I'd like strawberry instead of vanilla if you have it, if not then no ice cream, just whipped cream, but only if it's real, if its out of the can then nothing. (Waitress) Not even the pie? (Sally) No just the pie, but then not heated."

A quote from the movie, When Harry Met Sally, 1989

That's what I sound like when my family orders at a restaurant...and now you can sound like that too!

We are fighting everyday for our child's health and well being. There's no reason why you should stop going to restaurants. Just remember that your child has serious food allergies, it's your responsibility to keep him/her clean and on the road to recovery.

Here are some suggestions and tips for dining out:

- Always ask if they have a gluten-free menu.
- Ask to speak to the chef, cook or manager or even call and speak to them in advance.
- Be very clear about your needs.
- Let them know that the cook should wear clean gloves when handling your child's food.
- Request that the cook sanitize any surfaces that might touch your child's food before he actually places the food on those surfaces.
- Ensure that all ingredients in the meal are GF/CF.
- Ask if fries are made in a dedicated fryer. Deep fryer oil previously used for gluten or casein-containing breaded foods, like onion rings or chicken strips, is unsafe for GF/CF frying.
- Ask if fries are made in house or are purchased frozen. If they are purchased frozen, I can almost guarantee you that they are coated in flour to keep them from sticking and to give them a golden brown outside when fried. If they are made in house, then ask if they coat them in anything.
- Fresh water must always be used for boiling, poaching or steaming. This is one item that can easily trip up a restaurant that has the best intentions.
- You can bring your own GF/CF bread and a toaster bag to prevent contamination.
- Most restaurants use gluten-containing chicken base in rice.
- Stay away from all breaded menu items.
- Find your favorite neighborhood restaurants and introduce yourself to them. That way they get to know you and you can feel more comfortable and safe eating there.
- My favorite cuisines are Mexican and Thai.
 - Mexican restaurants have corn tortillas, they cook with oil (not butter) and refried beans are usually safe (ask them to leave off the melted cheese). Watch out for marinades on their meats.
 - Thai Restaurants have many dishes with rice noodles. We ask them to substitute fish sauce for soy sauce and I love that they use a lot of coconut milk, which is a deliciously safe ingredient.

Final Suggestions

- Always Plan Ahead. Take GF/CF goodies to birthday parties, restaurants, on trips, etc.
- Create your **TEAM** for your child and get everyone on board with your new plan. Your team includes your immediate family, grandparents, doctors, therapists, teachers and close friends.

- Supplement with digestive enzymes, calcium, a multi-vitamin and whatever other supplements your doctor tells you are necessary. Our kids have a lot of deficiencies and need a great deal of nutritional support.
- If you feel like this diet doesn't work, then please carefully check everything your child is eating or touching because you are very possibly making an unintentional mistake.
- Once you are well under way with the GFCF diet, you should consider eliminating the following things from your child's diet:
 - Soy
 - Nitrates and nitrites (found in many smoked meats, lunch meats and hot dogs)
 - Everything artificial (colors, flavors and preservatives)
 - Don't be surprised if your child does better when not eating: corn, sugar, eggs.

I know I already said this, but it couldn't hurt to reiterate it:

**GFCF MUST BE FOLLOWED 100% OF THE TIME.
&
REMEMBER TO TAKE DEEP CLEANSING BREATHS.**

And Finally...

Recovery is a marathon...not a sprint.

- Pace yourself, pace your body, your spirit and your finances
- There will be hills and valleys – if frustration sets in, don't give up...the result is worth it
- Never be complacent with what you achieve, but savor the progress
- Always celebrate the milestones achieved
- As hard as it is for us, it is harder work for our children

Borrowed and adapted from Jerry Kartzinel, MD, Science Advisory Board for Generation Rescue.

Roni Piterman is co-owner of gfMeals, by Your Dinner Secret, and mother of a son in recovery from ADHD.

gfMeals makes feeding a child a gluten and casein-free (GFCF) diet easy, delicious and stress-free. Offering a vast menu of family-friendly, ready-to-cook entrees and sides, as well as the most delicious GFCF baked goods, gfMeals ships food nationwide to your door. Every meal comes frozen, with simple cooking instructions. Children will be delighted by our chicken tenders, meatballs, turkey burger macaroni, polenta fries, faux buttermilk sliced bread and chocolate chip cookie dough, just to name a few.

Place your order today at www.gfMeals.com or call 888-700-5610.

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