



**GLUTEN
INTOLERANCE
GROUP**
of East Central Wisconsin

GUIDE TO GLUTEN CROSS-CONTACT

Gluten Basics

What is gluten? Gluten is the generic term for the proteins found in grains. The proteins found in wheat, barley, rye and commercial oats (think Quaker Oats) are not acceptable for those who are gluten-free. Certified GF oats are acceptable for some.

Where is gluten found?

Just about everywhere! Bread, pizza, cake, cookies, crackers, pasta, cereal, soups, sauces, beer - just to name a few foods. Many processed foods contain gluten in some form or another. It's very prevalent in the Standard American Diet.

What does gluten do?

Gluten provides the structure, the framework - it holds everything together. It gives that chewy texture that is desirable in many foods like bread & pizzas. It also makes a lot of people sick.

Basic kitchen safety rules tell us that we need to separate ready-to-eat foods from raw meats, poultry, seafood, and eggs - and to use separate cutting boards and utensils to reduce the risk of food poisoning.



The same rules apply to gluten and gluten-free foods - they must be kept apart.

Even though a recipe may use gluten-free ingredients, the food must be appropriately prepared, so it remains gluten-free. If you are making meals for a gluten-free guest, you must be mindful of gluten cross-contact.

This guide will help you to understand and prevent gluten cross-contact.

Cross-Contact and Cross-Contamination Aren't they the same thing?

We often use the term "gluten cross-contamination" when speaking with foodservice professionals about the preparation and handling of our gluten-free foods.

Cross-contact and cross-contamination appear to mean the same thing, but there is a subtle difference according to the FDA. Cross-contamination was a commonly used term for allergens, however, **allergenic proteins are a normal component of food and not considered a contaminant**. Due to this shift in scientific literature, the agency began differentiating the conditions two years after

How Much?

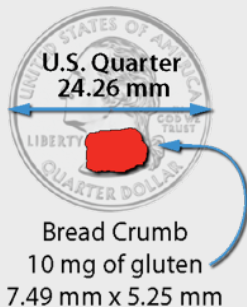
How much arsenic would you like in your food?

Not only must the food be gluten-free, but it also must not come in contact with any gluten.

The concept of "a crumb will hurt you" is hard for people to understand because it involves minuscule amounts.

How small? A [multicenter, double-blind, placebo-controlled, randomized study](#) has shown that up to **10 milligrams of gluten per day to be a safe amount. Yes, per DAY.** (10mg = [1/8th of a teaspoon of flour.](#))

10 mg of gluten



What does 10mg of gluten look like?

<http://bit.ly/GFWD-10MG>

Tricia Thompson, MS, RD of Gluten-Free Watchdog answers this question.

She breaks it all down for us starting with a one ounce (3,515 mg) slice of gluten bread.

Special thanks to Tricia for allowing me to use her pictures to draw this diagram to show the relative size.

BUT - For many, even 10 mg is too much.

the Food Safety Modernization Act (FSMA) of 2011 became law.

Let's explore the differences a bit more.

Cross-contamination happens when biological contaminants (bacteria or viruses) transfer from one food (or surface) to another.

Example: using the same cutting board & utensils for raw meats and ready to eat ingredients. Killing bacteria by heating the food to a recommended temperature makes the food safe to eat. Of course, we know this is not possible for gluten (or any allergenic proteins), however this may give the wrong impression to a foodservice professional.

Cross-contact happens when allergenic proteins transfer from one food (or surface) to another.

Example: using the same cutting board to cut gluten and gluten-free bread. While we expect our food to be biologically contaminate-free, cross-contact is what we're concerned about with gluten.

Using the appropriate terminology with foodservice professionals will help clearly and accurately reflect our needs.

To learn more, please read:
"Avoiding Cross-Contact"

Food Allergy Research & Education (FARE).

<http://bit.ly/FARE-avoid-cc>

Hints & Tips



- ◆ Store gluten-free foods on the top shelf of pantry or fridge. Gluten will not fall into gluten-free food.
- ◆ Store GF items in well marked, sealed containers.
- ◆ Do not purchase food from bulk food bins. High cross-contact risk.
- ◆ Purchase only GF Certified grains & flours. Including oats - no commercial oats (think Quaker Oats).
- ◆ Flour particles can remain airborne for up to 24 hours. Only prepare gluten-free foods after a thorough cleaning and before gluten foods.

Condiments (spreadable) - jars of peanut butter, mayo, butter, margarine, jelly, etc. These containers are large gluten magnets due to "Double Dipping."

- Purchase and use new products. Dispose of compromised products or clearly label as not gluten-free.
- Double dipping is strictly prohibited. Master the fine art of "Gob Dropping" or using a couple of spoons & knives to accomplish the task.
- Purchase squeezable containers when possible.

Any foods like flours, starches, white or brown sugars, etc. that frequently use shared utensils with gluten.

- Do not re-use a measuring cup after it contains gluten flour/ingredient. Thoroughly wash it, or use a clean one.
- Same goes for stirring and serving. Always use a clean utensil for gluten-free foods.
- Have dedicated utensils for only GF use.
- Purchase and use new products. Dispose of compromised products or clearly label as not gluten-free.

Brown sugar has another risk factor. Some people will put a piece of bread in their container to keep the sugar soft. Breadcrumbs compromise the sugar.

- Purchase and use new products. Dispose of compromised products or clearly label as not gluten-free.

Helpful Links



Gluten-Free Diet Boot Camp

bit.ly/GIGECW_GFBootCamp

Gluten-Free Diet Boot Camp is an extensive collection of resources for those just starting their journey to gluten-freedom.



Educating Family & Friends About Gluten-Free

bit.ly/GIGECW_EducatingFamilyFriends

Information to help educate others.

Deep fry oil or pasta water.

- Do not deep fry gluten-free foods in oil that previously fried gluten-full foods. Use fresh oil, or fry GF foods in fresh oil before frying gluten-full foods.
- Do not boil gluten-free pasta in water that previously cooked gluten-full pasta. Use fresh water for GF pasta.

Silverware drawers - take a look in there - lots of crumbs!

- Clean out the entire drawer and re-wash the utensils. Do the same for any other drawers too.

Kitchen surfaces - whenever preparing gluten-free food, make sure work areas, and hands are clean and free of crumbs.

- Dry wipe the crumbs first with a paper towel. Use hot soapy water to wash then rinse with fresh, clean water. Bleach will not do anything to gluten to make it safe.
- It's best to designate a gluten-zero prep area where no gluten is allowed.

Toasters - if you've ever toasted gluten products in it, there is no way to clean it effectively.

- Do not use a toaster that has contained gluten. Purchase a new one.
- Toaster bags are an option.
- Toaster Ovens with Fixed racks – line with foil. Works well for heating, baking, but not good for toasting.

Research

The Amount of Accidental Gluten Consumption

A group of researchers from Immunogenx and Biomedical/ Glutenostics recently published the results of their study - quantifying the amount of gluten being consumed by a selected group of patients with celiac disease. Indeed this was a first-of-its-kind, ground-breaking study. [See below for link to the actual study]

What did the study find?

People with celiac disease are inadvertently consuming more gluten than they realized.

Keep in mind, medical experts recommend gluten consumption be kept below 10 mg per day (a crumb approx. 1/3 of a grain of rice).

Participants were (on average) consuming between 15 and 40 times the recommended limit. 244 mg is approx. 8.5 grains of rice.

While these numbers might explain why an estimated 30% to 70% of celiac patients still experience celiac-related symptoms while following a gluten-free diet, it raises many more questions.

How much gluten is coming from cross-contact?

Continued on next page

- Toaster Ovens with Removable racks – purchase and mark new rack for GF use. Foil existing rack or clean. Do not use a glutened toaster. Purchase a new one.

Ovens & Convection Ovens

- If you can not bake gluten-free items separately from gluten items, always place gluten-free items on the top rack - above gluten items.
- Either turn off the convection feature (circulated air) or make sure you have a tight-fitting lid on your gluten-free dish.

Cake pans - these pans typically have a lot of very deep cuts/grooves in them.

- Purchase new or use disposable aluminum cake pans. Gluten can get stuck in deep cuts.

Cookie Sheets

- Line with parchment paper when baking GF cookies.
- Have dedicated GF cookie sheets.

Cast iron skillets - the "seasoning" develops from years of use. Is definitely something to stay away from

- Replace. Some people re-seasoned their old skillets by heating them to 600-700 degrees for 30 minutes to burn off any residue.

Non-Stick Pots & Pans

- Replace if there are any cuts or scratches on the surface, do not use it, gluten can get caught. As long as it can be well cleaned, it should not be a problem.

Research

"Determination of gluten consumption in celiac disease patients on a gluten-free diet"

By Jack A Syage Ciarán P Kelly
Matthew A Dickason Angel
Cebolla Ramirez Francisco Leon
Remedios Dominguez Jennifer A
Sealey-Voyksner

<http://bit.ly/2lrYKRF>



**GLUTEN FREE
WATCHDOG**

"Significant Study Published on the Amount of Gluten Eaten by Folks with Celiac Disease on a Gluten-Free Diet"

By Tricia Thompson, MS, RD
March 12, 2018

<http://bit.ly/2tNKFL0>

"The study, "Determination of gluten consumption in celiac disease patients on a gluten-free diet" was recently published in the American Journal of Clinical Nutrition. In the opinion of Gluten Free Watchdog this is one of the more significant studies published on celiac disease and the gluten-free diet in recent memory. It is the first study that attempts to analytically determine the actual amount of gluten consumed by a sub-group of individuals with celiac disease."

Any utensil, pot, pan, dish, etc. that has come in contact with gluten. They must be clean before gluten-free use.

- Do not reuse these items for gluten-free foods without thoroughly washing them or grabbing a clean one. For example: Don't use the gluten pasta salad spoon to serve the gluten-free pasta salad.
- Those living in a mixed house should have dedicated gluten-free utensils, cutting boards, colanders, etc. It helps to have them color coded. Consider using the color red for gluten-free.

Colanders/Strainers/Flour Sifters - Since pastas/gluten often get stuck in the small little holes and slits, cleaning them properly is a nightmare if not impossible.

Wooden utensils/boards/rolling pins - Porous items can harbor gluten.

Cutting boards [plastic or wood] - due to the deep cuts and grooves, it's best to get a new one.

- Purchase new colanders, wooden items, cutting boards.

Ceramic bake or cookware (Pizza Stone) - it's porous.

- Foil it or purchase new. Cleaning porous items is difficult.

Notes:

"Gluten-Free Foods in Shared Fryers"

***By Tricia Thompson, MS, RD
Sept. 24th, 2020***

Gluten-Free Watchdog presented their first-of-kind study to the Association of Official Analytical Collaboration (AOAC) International. This study measured the amounts of gluten found in gluten-free foods when cooked in fryers that previously fried gluten-containing foods.

Gluten-Free Watchdog shows that gluten cross contact in shared fryers is problematic for individuals with gluten-related disorders.

For more information (including PowerPoint presentation, video, and white paper):

<http://bit.ly/GFWD-French-Fry-Study>

**Frontiers in Nutrition
March 23rd, 2021**

Authors: Tricia Thompson, MS, RD, Trisha B. Lyons, RDN, LD, Amy Keller, MS, RD, LD, Nancee Jaffe, MS, RDN, and Luke Emerson-Mason, MS.

<https://bit.ly/3ubwIB5>

Dishtowels/sponges/dishrags.

- Use paper towels to do initial clean up. Then use clean/unused items to finish cleaning.
- Sponges - dedicate one for gluten-free cleaning.
- Change them often

Grill Grates

- Cleaning them may be a messy job. It might be time to replace the grates.
- If cleaning or replacing isn't an option - grill gluten-free items on aluminum foil.

Shared bowls or bags of your favorite gluten-free snack food. Shared dips & sauces. They are crumb magnets.

- Snacks must be poured out into an individual bowl before cross-contact.
- Have a marked & dedicated gluten-free chip dip bowl.

TV Remotes, Phones, Keyboards, Mice...anything that has been touched by glutened hands.

- If you have touched gluten - wash your hands before touching anything else.
- Clean them the best you possibly can.

Notes:

Family-style or Buffet-style service - A gluten-free nightmare! Inevitably someone will grab a spoon from the pasta salad bowl for the gluten-free coleslaw.

- If 100% GF buffet-style isn't possible, separate gluten-free foods from the gluten foods. Color coded containers & utensils help lessen the cross-contact risks. Have a "Gluten-Free" sign posted.
- If no room for separate GF/NGF foods, hold back some of the gluten-free foods before they are placed out for service. Tell your GF guest where to find these items.
- Invite GF guests to go through the line first - before any of the GF dishes have a chance to get compromised.

Can you destroy gluten by heat?

- A study appearing at the International Celiac Symposium 2017 India, shows it's quite difficult to destroy gluten with temperatures used in customary cooking methods. And when it is destroyed [requires temperatures in excess of 392F for extended period of time], it's not safe to eat [not that gluten is safe to eat in its un-carbonized state...]

Read more: <http://bit.ly/GIGECW-Heat-Destruction>

Notes:**More information on cross-contact.**

- ***“Tools to Replace in Your GF Kitchen”***
[Gluten Intolerance Group of North America](#)
<https://fal.cn/3erh8> (PDF)
- ***“Producing Gluten-Free Products in a Non-dedicated Kitchen”***
[Gluten Intolerance Group of North America](#)
<http://bit.ly/2Wii9ea> (PDF)
- ***“7 Tips for Avoiding Gluten Cross-Contact at Home”***
[Gluten Intolerance Group of North America](#)
<https://bit.ly/2SpCttO> (PDF)
- ***“A Day in the Life: Living in a Mixed House”***
[GIG of East Central Wisconsin](#)
http://bit.ly/GIGECW_MixedHouse
- ***“Gluten-Free Diet Boot Camp”***
[GIG of East Central Wisconsin](#)
http://bit.ly/GIGECW_GFBootCamp
- ***“Educating Family and Friends about Gluten-Free”***
[GIG of East Central Wisconsin](#)
http://bit.ly/GIGECW_EducatingFamilyFriends