

What Happens to Your Body When You Eat Gluten?



Story at-a-glance

- Gluten is a protein that's made of glutenin and gliadin molecules that form an elastic bond in the presence of water
- Gluten intolerance is a condition wherein a person's immune system responds abnormally to gluten. It may often be confused with celiac disease (another gluten-related disorder) or simply thought of as a wheat allergy
- A gluten-free diet is an important recourse for combating gluten-related disorders. Extreme vigilance is only likely if you have celiac disease since exposure to gluten can cause sickness and threaten your health in the long run

By Dr. Joseph Mercola | mercola.com

The word “gluten” has become such a buzzword in recent years, most likely because of the sudden popularity of the gluten-free diet that’s been endorsed by famous personalities. Before you consider trying this diet, read this page first to learn about gluten, and how it can negatively impact your body and health in the long run.

What Is Gluten?

A type of protein, gluten is composed of glutenin and gliadin molecules that form an elastic bond when mixed with water. Gluten is highly noted for its adhesive abilities that can maintain a compact structure for holding bread and cakes together, and providing a spongier texture. This ability isn’t surprising, considering that the word “gluten” is derived from the Latin word for “glue.”

While it does wonders for these foods, the same cannot be said for your body. Research has shown that gluten can be quite harmful for you because of the vast range of complications it might cause (more on this to come in a while).

What Does Gluten Do to Your Body?

A major caveat linked to gluten is its tendency to impede proper nutrient breakdown and absorption from foods, regardless if they have gluten or not. This may prevent proper digestion because excess gluten leads to the formation of a glued-together constipating lump in the gut. Afterward, the undigested gluten prompts the immune system to attack the villi, or the fingerlike projections lining your small intestine.¹ This may lead to side effects such as [diarrhea](#) or constipation, nausea, and abdominal pain.

Excessive gluten consumption and further small intestine

damage and inflammation may predispose a person to nutrient malabsorption, nutrient deficiencies, anemia, osteoporosis, other neurological or psychological diseases, and complications linked to the skin, liver, joints, nervous system and more.

What Are the Types of Food That Contain Gluten?

Gluten is predominantly found in whole grains like rye, barley, triticale, and oats; in wheat varieties like spelled, Kamut, farro, durum; and in other products like bulgar and semolina.² Wheat-based flours and byproducts that also contain high quantities of this protein include:^{3,4,5,6}

Wheat-Based Flours	Wheat Byproducts
<ul style="list-style-type: none">• White flour• Whole wheat flour• Graham flour<ul style="list-style-type: none">• Triticale• Wheat germ• Wheat bran	<ul style="list-style-type: none">• Pasta• Couscous• Bread, bread crumbs and croutons<ul style="list-style-type: none">• Flour tortillas• Cookies, cakes, muffins, and pastries<ul style="list-style-type: none">• Cereal• Crackers• Beer• Gravy, dressings, and sauces• Conventional oats (these have a high chance of being contaminated during the growing, harvesting or processing stages)

If there's another compelling reason why you shouldn't eat [processed foods](#), it's because these items often contain gluten. Here are examples of foods with gluten, even though they're not made from grains:^{7,8}

Processed broth and bouillon cubes ⁹	Fried foods	Candies	Lunch meats and hot dogs
Cold cuts	Dumplings	Self-basting poultry	Crab cakes
Imitation fish	Seasoned rice ¹⁰	Matzo	Modified food starch ¹¹
Salad dressings	Seasoned chips and other seasoned snack foods	Processed yogurt ¹²	Ice cream cones

Even worse, manufacturers deceive customers by “hiding” gluten products like wheat under other names in food labels, such as: ^{13,14}

- Malts
- Starches and other derivatives
- Hydrolyzed vegetable protein (HVP)
- Hydrolyzed wheat protein¹⁵
- Textured vegetable protein (TVP)

Common Signs of a ‘Gluten Allergy’ You Should Watch Out For

Consuming too much gluten can prompt various complications, such as a gluten allergy, wherein the immune system produces “weapons” to combat gluten in your system. However, a gluten allergy is not to be confused with gluten intolerance, gluten sensitivity¹⁶ or [celiac disease](#).¹⁷ It is quite similar to other

food allergies since these are all responses to a particular allergen. Some of the most common gluten allergy symptoms are:

Coughing	Nasal congestion
Sneezing	Tightness of throat
Asthma	Tingling
Itching	Tongue and/or throat swelling
A metallic taste in your mouth	Abdominal pain
Muscle spasms	Vomiting
Diarrhea	

As the book “Gluten-Free Cooking for Dummies” further highlights, a gluten allergy may lead to adverse effects such as anaphylaxis or an anaphylactic shock that may affect different organs. People may experience agitation, hives, breathing problems, reduced blood pressure levels, fainting or even death, if the reaction is very severe.¹⁸

Warning Signs of Gluten Intolerance

Should the immune system have an unusual response to gluten in your system, then it might be a sign that you have a gluten intolerance.¹⁹ Sometimes it can be mistaken for celiac disease (another gluten-related disorder) or a wheat allergy.²⁰ The root cause of gluten intolerance is not fully understood, although it has been linked to the digestive system, compared to celiac disease where a genetic link has been found.²¹

Typical gluten intolerance symptoms include bloating, belly pain, diarrhea, tiredness and a general feeling of being unwell. Someone with a gluten intolerance might also experience these indicators, although these are less frequent and already affect areas beyond the gut:

Joint or muscle pain	Anxiety
----------------------	-------------------------

Headache	Nausea
Confusion	Numbness

If you or someone you know experiences any of these symptoms seek medical attention immediately. This will help you determine whether you have gluten intolerance or if the symptoms occur because of other health reasons. This greatly applies if you or someone you know has severe belly pain. An extreme stomachache is not a sign of gluten intolerance, so it might be due to another potentially devastating disease that may require immediate treatment.

Having gut-related symptoms checked immediately may be helpful too, as numerous conditions that target the gut can overlap with other diseases. Fortunately, these can be examined during a checkup and your doctor may rule out other causes. Take note that symptoms of gluten intolerance are generally similar to those of celiac disease, although the reactions that people with these conditions experience aren't identical.

To diagnose gluten intolerance, it's important that you continue eating your usual meals, especially if it's abundant in foods with gluten. This could help the doctor determine the main cause of the symptoms. An inaccurate diagnosis might occur if the patient decides to stop eating gluten-loaded foods prior to, or during, a consultation.²²

Common Indicators of Gluten Sensitivity

In various studies, gluten sensitivity is also called non-celiac gluten sensitivity (NCGS) as celiac disease patients are sensitive to gluten too. The difference between gluten sensitivity and celiac disease is that the former may be triggered not just by wheat, but by other grains like rye and barley, too, as these grains are known to have the glutenin and gliadin proteins (or protein fragments) also found in

wheat.²³

Typical symptoms of gluten sensitivity include nausea, skin irritation, bloating and gas, brain fog and fatigue. However, these indicators can widely vary and may also occur alongside gynecologic conditions, lactose intolerance and irritable bowel syndrome.²⁴

Because there is no specific laboratory test for gluten sensitivity, your physician will have to rule out other possible causes. In some cases, patients may need to be checked for wheat allergy or celiac disease. Should test results be negative, a gluten-free diet may be advised.²⁵ However, if any of the aforementioned tests deliver positive results, then you may want to continue eating gluten-rich foods for a more accurate diagnosis.²⁶

Why a Gluten-Free Diet Works

A gluten-free diet is an important course of action for combating gluten-related disorders, and picking gluten-free foods is the first step in doing so. Because there are foods that are incorrectly labeled “gluten-free,” it may be quite tricky at first to select the correct items. A set of guidelines on proper gluten-free labeling standards released in 2013 by the Food and Drug Administration (FDA) may help. The organization states that for a food product to bear the gluten-free label and be considered such, it must be:

- **Naturally gluten-free:** Rice, non-GMO corn, quinoa, sorghum, flax and amaranth seed are naturally gluten-free grains.
- **Refined to remove gluten:** Gluten must be removed from any gluten-containing grain. As such, the final product should not contain more than 20 parts per million (ppm) of gluten.

Extreme vigilance is only likely if you have celiac disease

since exposure to gluten can cause sickness and threaten your health in the long run. What's great about a [gluten-free diet](#) is that nearly everyone can benefit from it, whether you have a gluten intolerance or not. Grains, even whole sprouted varieties, tend to cause many problems because of the following factors:

Wheat hybridization	Gluten	Other wheat proteins
Fructans	Milling or baking process	Glyphosate contamination

Grains have high net carbs, so removing them from your diet can help improve mitochondrial function. Taking care of your mitochondrial health is important if you want to reduce your risk for problems linked to insulin resistance, such as being overweight and having high blood pressure levels, as well as diseases like Type 2 [diabetes](#), heart disease, and cancer.

Prior to beginning a gluten-free diet, consult a dietitian or health expert who can give advice on how to effectively avoid foods with gluten while eating a healthy and balanced diet.²⁷

Best Foods to Eat if Following a Gluten-Free Diet

Once you're given the go-signal to try a gluten-free diet, stock up on these natural and unprocessed foods:^{28,29}

Beans (provided that you try to sprout and/or ferment your beans to reduce its lectin content, which may negatively impact your health in the long run)	Seeds (chia , pumpkin or sunflower)	Nuts (pecans , macadamias or walnuts)
---	--	--

Organic and pasture-raised eggs	Organic and grass-fed meats that aren't breaded, batter-coated or marinated	Fish (wild-caught Alaskan salmon, sardines, anchovies, and herring) that aren't breaded, batter-coated or marinated
Organically grown, GMO-free fruits and vegetables	Raw, grass-fed milk or yogurt	Healthy fat sources (raw grass-fed butter, coconuts and coconut oil , olives and olive oil and avocados)

If you think to go on a gluten-free diet limits eating choices and preparations, you'd be surprised to know that it won't. Type "gluten-free recipes" on a search engine and you'll see a wide variety of gluten-free recipes, ranging from savory to sweet. A good and delicious example is this Coconut Flour Almond Meal Pancakes Recipe from MindBodyGreen:³⁰

Coconut Flour Almond Meal Pancakes Recipe

- 1/2 cup Dr. Mercola's coconut flour
- 1/3 cup almond meal
- 1 1/2 teaspoons baking powder
- 4 organic, pastured eggs
- 1 tablespoon Dr. Mercola's coconut oil, melted
- 1/3 cup raw cow's milk or coconut milk
- 1 teaspoon vanilla extract
- A pinch of Dr. Mercola's Himalayan salt
- 1 to 2 tablespoons organic, raw grass-fed butter, plus more for serving
- Pure maple syrup to drizzle (optional)

Cooking Directions

1. In a large bowl, mix all the dry ingredients: the

- coconut flour, almond meal, baking powder, and salt.
2. Slowly whisk in the wet ingredients: the eggs, coconut oil, milk, and vanilla. Mix until the batter is smooth. (If it feels a little dry, add more milk until it reaches the consistency you're after).
 3. Heat a large skillet over medium-high heat. Add the butter and allow it to melt, then add scoops of batter (about a 1/4 cup each) for silver dollar pancakes. Cook for about a minute on each side until golden brown. Slather with butter and drizzle maple syrup as desired.

This recipe makes about 16 small pancakes.

Preparation time: 10 minutes

Cooking time: 10 minutes

Additional Reminders When Following a Gluten-Free Diet

Gluten-Free & More magazine highlights these important tips for people who are following a gluten-free diet:³¹

•**Read labels carefully:** Knowing how to read labels properly will greatly help if you're following a gluten-free diet. Ideally, never assume something is gluten-free even if the word "gluten" isn't anywhere in the list.³² As mentioned earlier, some manufacturers purposely use other names to hide gluten in their products.

•**If you're in doubt, don't buy the product:** If you cannot verify that the product is free of grains, don't buy or eat it at all. The same principle applies if you cannot find an ingredients list on the product.

•**Remember that being wheat-free doesn't automatically make a food gluten-free:** This is because spelled, rye or barley-based

ingredients, all of which contain gluten, may be used in products with a wheat-free label on them.

- **Introduce new foods slowly:** Ensure that you incorporate only one new food at a time, and take note of symptoms before adding another item.

- **Be a “food detective”:** Call, email or write a letter to a food manufacturer to verify a product’s ingredients. Take note of the ingredient and the lot number of the food. Once you are in touch with a representative, clearly state your concerns and be persistent, polite and patient.

[Read more great articles at mercola.com](http://mercola.com)