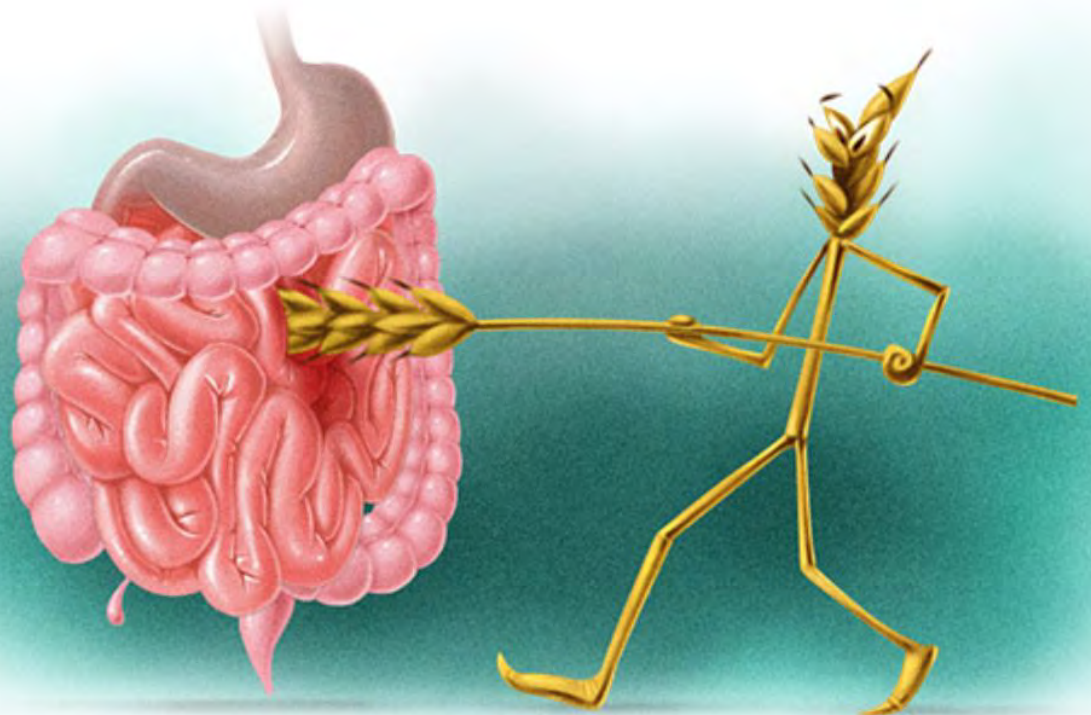
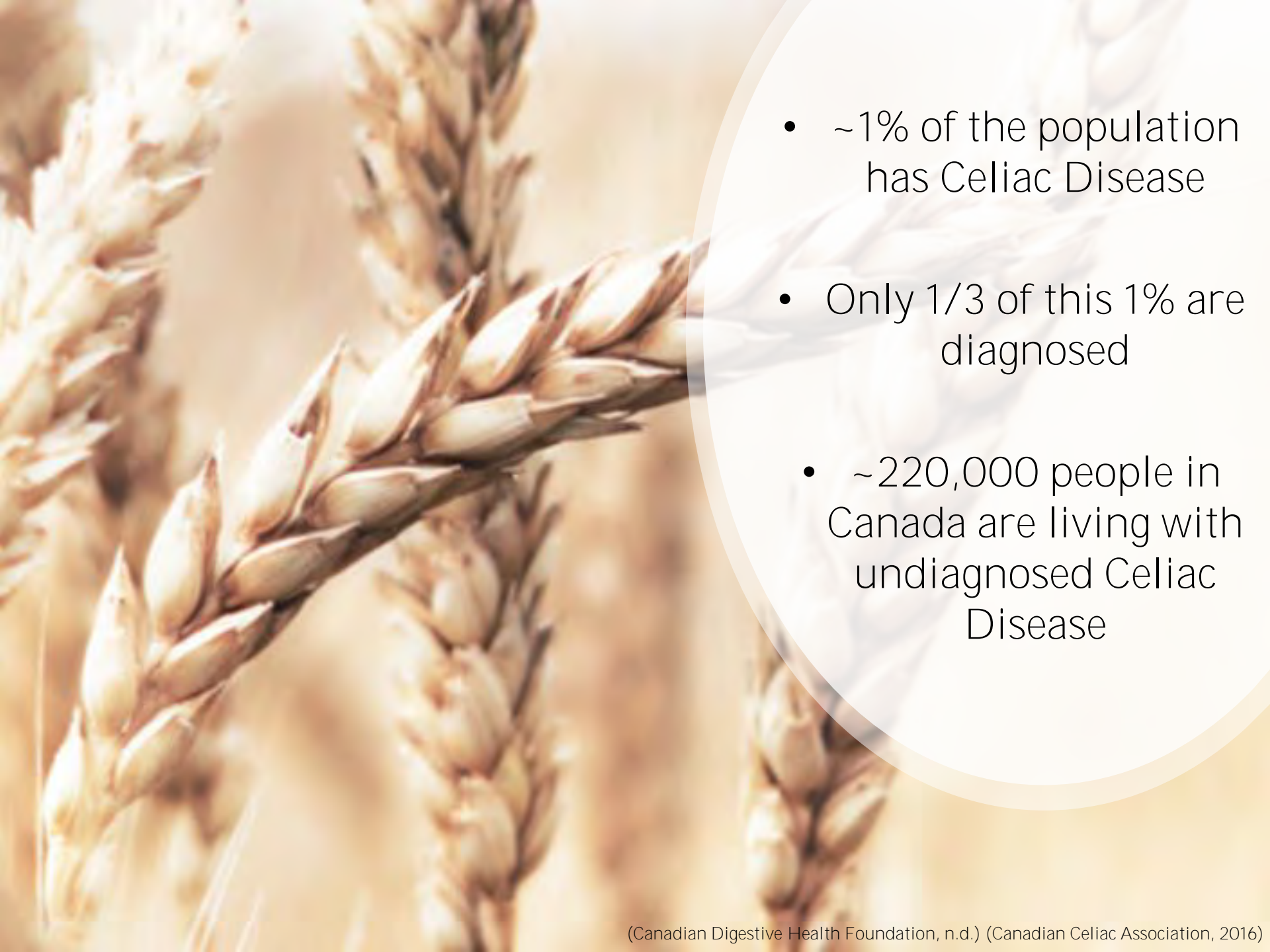





Celiac Disease

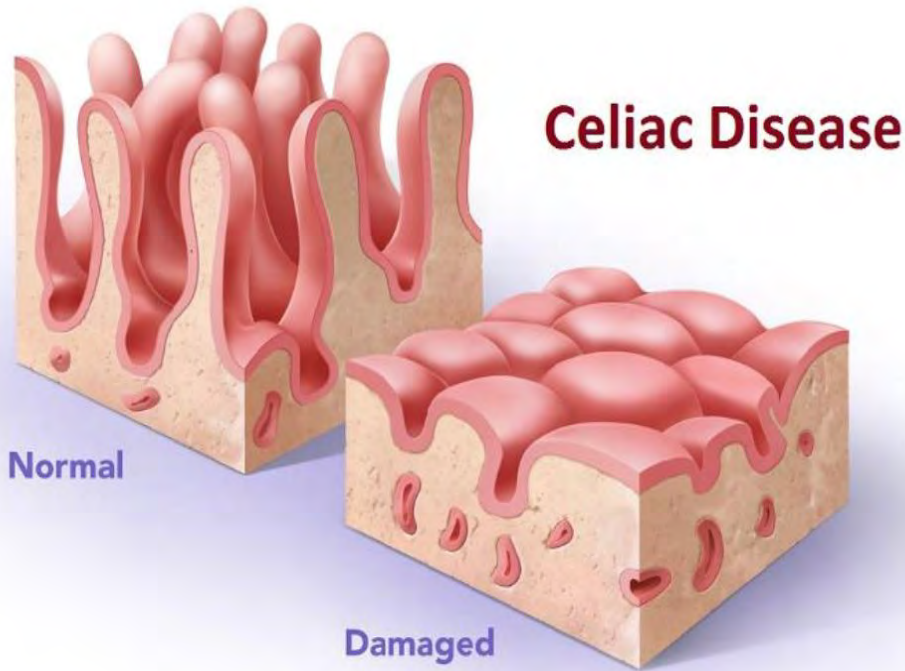


- 
- A close-up photograph of several wheat stalks, showing the golden-brown grains and the structure of the awns. The background is softly blurred, emphasizing the texture of the wheat.
- ~1% of the population has Celiac Disease
 - Only 1/3 of this 1% are diagnosed
 - ~220,000 people in Canada are living with undiagnosed Celiac Disease

The image features three circular insets on the left side, each containing a different type of grain. The top inset shows wheat grains, which are small and oval-shaped with a light brown color. The middle inset shows barley grains, which are slightly larger and more elongated than wheat grains, with a similar light brown hue. The bottom inset shows rye grains, which are the largest of the three, more rounded, and have a slightly darker, more golden-brown color. The background is a plain, light gray.

What is Celiac Disease (CD)?

Lack of the enzyme in the GI tract to digest the protein gluten that found in wheat, rye, & barley.



- Immune response causing inflammation to the lining of the intestines.
- Untreated CD flattens and deteriorates the intestinal villi, impairing digestion.
- Impairs the ability to absorb fat, protein, carbohydrates, and vitamins & minerals that are essential to maintaining health.

Affects
infants to adults



- Primarily 40-60 years old
- 20% of diagnosed adults are 60+ years old

3 Main Factors Contribute to CD



Genetic
Inheritance



Consumption of
Gluten



Environmental
Trigger



=

Celiac Disease
“Autoimmune
Response”

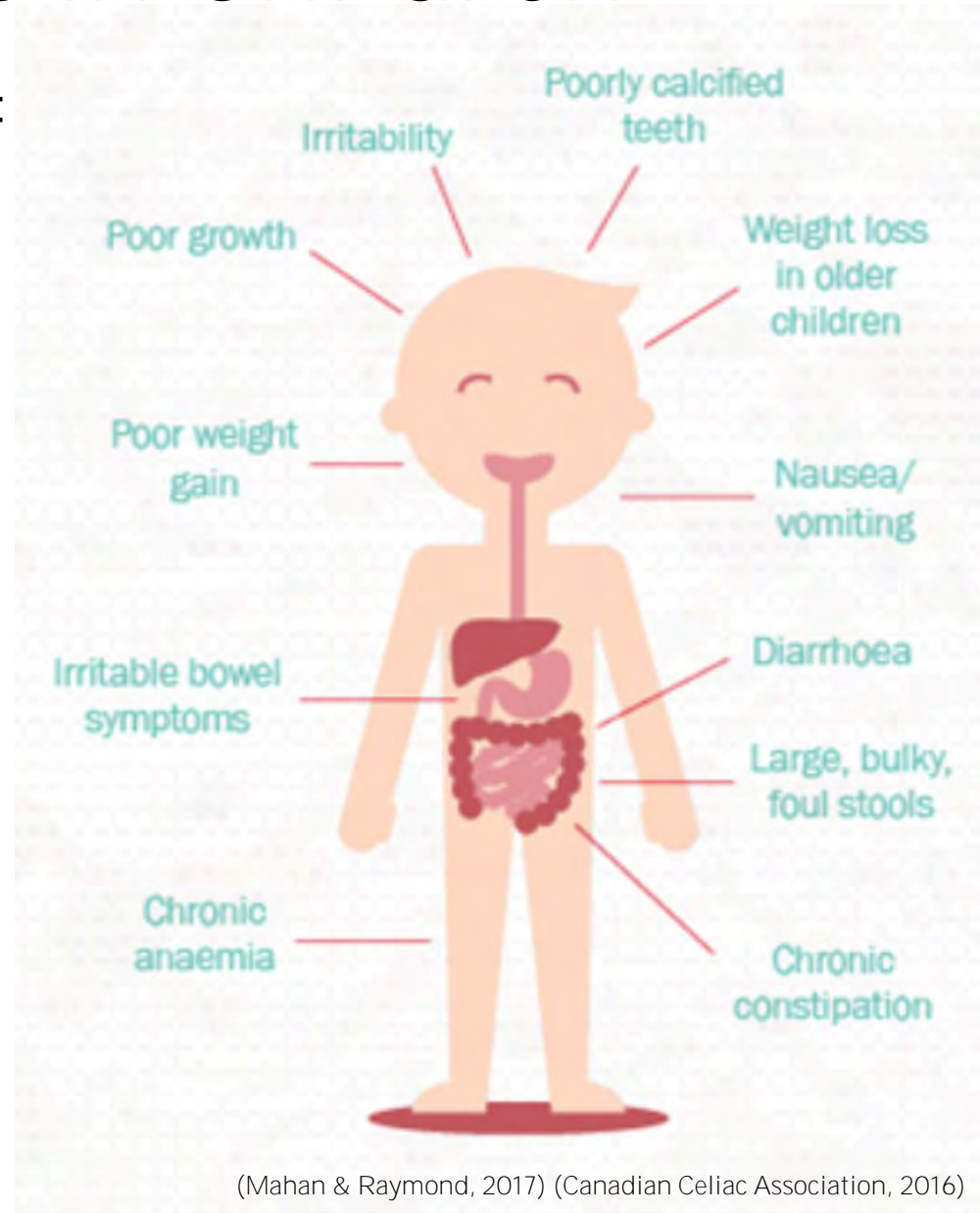
*Trigger → stress, trauma, GI surgery, pregnancy,
or a viral infection*

~200 Symptoms of CD

- Abdominal pain
- Nausea & vomiting
- Bloating
- Gas, flatulence
- Diarrhea, foul-smelling stools
- Constipation
- Mouth ulcers
- Pale appearance
- Weight loss (although may be overweight)
- General weakness and fatigue
- Anxiety, Depression
- **“Foggy mind”**

Symptoms in Children

- GI symptoms (most common):
 - Diarrhea,
 - Steatorrhea malodorous stools
 - Abdominal bloating
- Other symptoms
 - Apathy
 - Fatigue
 - Poor weight gain (can be overweight)
- Children specific:
 - Short height
 - Irritability
 - Vomiting



Diagnosis

- Blood test
 - Elevated levels of specific autoantibodies
 - IgA transglutaminase antibody
- Video capsule endoscopy
 - Show inflammation of the small intestine
- Biopsy of small intestine
 - Determine if the intestinal villi is flattened and damaged.



Dermatitis Herpetiformis

- Itchy skin rash
 - **AKA “Celiac Disease of the Skin”**
 - Itchy blistery rash
 - Skin biopsy to diagnose CD

Treatment of CD

Following a strict gluten-free diet for life!

- Following a well-balanced, strict GF diet may prevent the need for supplements.
- If considering taking a supplement getting assessed for a nutritional deficiency is recommended. from your primary health care practitioner.

In 2-8 weeks following a GF diet

- The lining of the intestine will heal & symptoms will start improving
- Symptoms will improve and vary
- Dependent on the following:
 - Duration of CD
 - Age of individual
 - Compliance to a GF diet

“Healthy Intestinal villi”



Going gluten-free is restrictive, eliminating gluten can cause deficiency in essential vitamins and minerals!

CD: Secondary Food Allergies

- Lactose intolerance (primarily)
- Fructose intolerance (high fructose fruits)
 - Apples
 - Pears
 - Grapes
 - Cherries
- Sugar alcohol intolerance
 - Sorbitol
 - Mannitol
 - Xylitol
 - Isomalt

*Once the GI tract heals you can reintroduce these foods to their diet

CD
is often
misdiagnosed
as the following:

- IBS
- Lactase deficiency
- Gallbladder disease

CD
associated
Secondary conditions:

- Anemias
- Generalized fatigue
- Weight loss or inability to thrive
- Osteoporosis
- Vitamin or mineral deficiencies
- GI malignancy (in rare cases)



Safe Foods

“Plain & Unseasoned”



Grains that do not contain gluten

Vegetables & Fruits

Meat

Fish

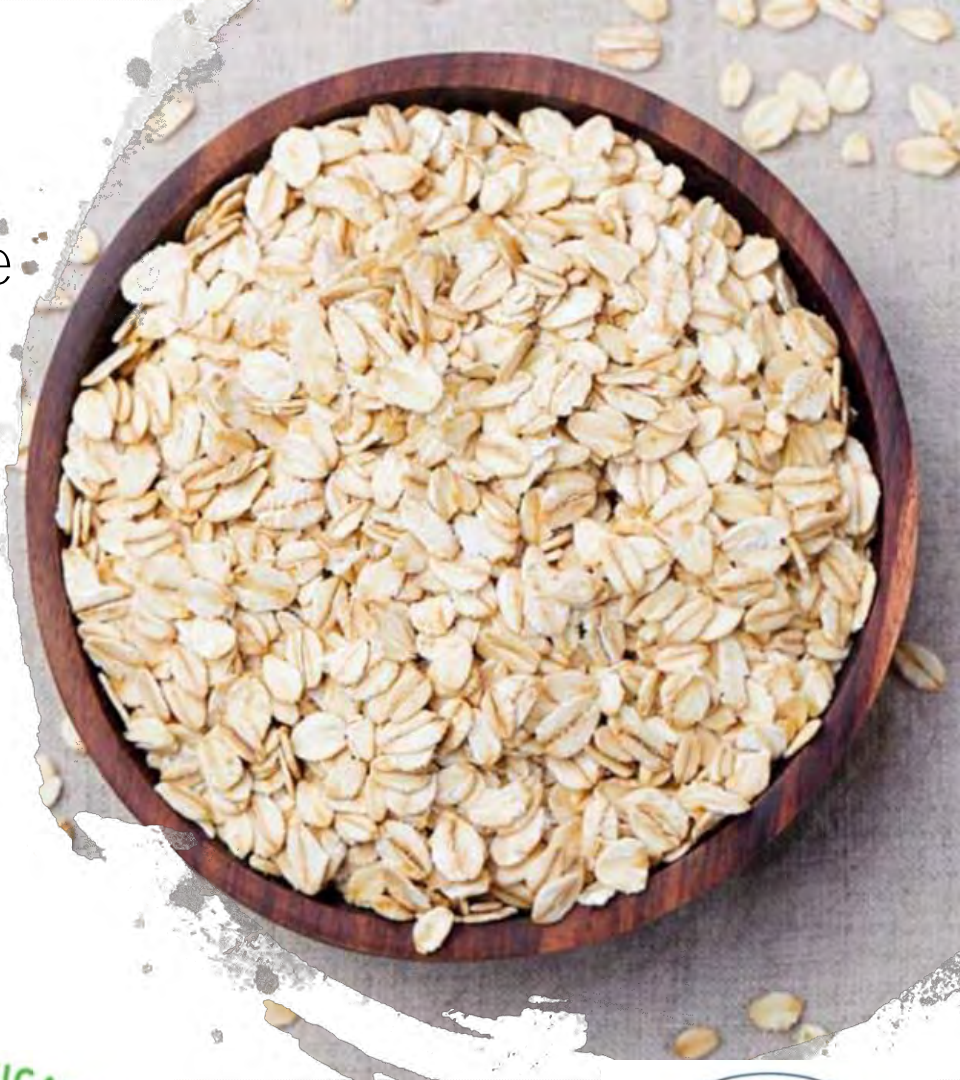
Beans

Nuts & seeds



Oats “uncontaminated”

- Many people with CD may be able to tolerate oats.
- It is imperative oats, and gluten-free products are processed in an uncontaminated facility



Prevent cross contamination

Separate	Separate toaster that is only for GF bread
Separate	Separate condiment jars labelled “Gluten Free”
Avoid	Avoid bulk food bins when shopping; buy packaged foods instead
Avoid	Avoid buffet lines & order from the menu
Avoid	Avoid deep fried foods

Common
Products
containing
gluten

Pastas	Sauces	Processed lunch meat	Soy sauce
Noodles	Gravies	Candy & Candy bars	Self basting poultry
Breads	Flour tortillas	Soup	Pre-seasoned meats
Pastries	Beer	Salad Dressings	Cheesecake filling
Crackers	Brewers yeast	Starch or dextrin	Eggs at restaurants
Baked goods	Granola Bars	Brown rice syrup	Medication
Croutons	Potato Chips	Meat substitutes	Play Dough

Characteristics of a Wheat Allergy

Carrying an epinephrine autoinjector may be essential!

Wheat Allergy

- Immune response that can be life threatening
- Immune response to to any of the hundreds of proteins found in wheat
- Onset: minutes to a few hours
- Symptoms: nausea, abdominal pain, itching, swelling of lips & tongue, trouble breathing, or anaphylaxis
- Treatment: Avoid all forms of wheat and wheat containing products (may tolerate other forms of gluten from non-gluten sources)

Characteristics of Non-Celiac Gluten Sensitivity

Non-Celiac Gluten Sensitivity

- **AKA “Gluten Sensitivity”**
- Not an immune response (like that of CD) and symptoms are non-specific.
- No damage is done to the intestines & intestinal villi
- Symptoms: nausea, abdominal cramps, & diarrhea
- Diagnosis: CD and wheat allergy needs to be ruled out

Non-Celiac Gluten Sensitivity



Both of these are terms used when an individual experiences the following symptoms that mimic IBS after the consumption of gluten:

- Nausea
- Abdominal cramps
- Diarrhea

Symptoms overlap with CD!

Symptoms
vary and can
include one
or any
combination
of the
following
symptoms

Intestinal symptoms:

- Bloating
- Abdominal pain
- Diarrhea
- Mimic IBS
- Nausea
- Acid reflux
- Mouth ulcers
- Constipation

Non-intestinal symptoms:

- Fatigue
- Headaches
- Foggy mind
- Numbness
- Joint pains
- Skin rash
- Malaise

“Feeling unwell”

Difficult to Diagnose:

- No damage to the small intestine
- Not an immune reaction

A referral to a registered dietitian will help navigate this challenging dietary change

- Following a GF diet can put you at risks for vitamin and mineral deficiency.
- GF products are not fortified with iron, folate, and other B vitamins
- GF products often contain higher than normal fats, sugar.
- Challenging to follow

	Gluten Sensitivity	Celiac Disease	Wheat Allergy
Cause:	Unknown response to gluten	Autoimmune response to the protein in gluten	Immune response to proteins in wheat
Symptoms:	Nausea, abdominal cramps, diarrhea	Nausea, abdominal cramps, diarrhea, intestinal damage, vitamin deficiencies, fatigue, headaches, ect.	Nausea, abdominal pain, itching, swelling of lips & tongue, trouble breathing, or anaphylaxis
Treatment:	Eliminate gluten 100%	Eliminate gluten 100%	Eliminate wheat and possibly all gluten

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Thank You!



National
Aboriginal
Diabetes
Association

103 - 90 Garry Street
Winnipeg MB R3C4H1
nada.ca

The National Aboriginal Diabetes Association envisions Diabetes-free healthy communities

