



MAKING THE CASE FOR GLUTEN-FREE SENIOR MEALS



National Celiac Association

November 14, 2019

MAKING THE CASE FOR GLUTEN-FREE SENIOR MEALS

Presenters:

- Katarina Mollo, MEd, RDN, LDN, Director of Education
- Nicola Harrington, Director, Gluten-Free Food Bank

National Celiac Association, Needham, MA



DISCLAIMER

- This presentation is for informational purposes only. It does not replace food safety and allergen training or gluten-free (GF) certification. It is supposed to give you an **overview** of what you may need to consider when providing GF meals. Risk levels of individual facilities will vary.



National Celiac Association



AGENDA

- Gluten 101
- Celiac Disease (CD): Symptoms, Complications, Diagnosis, Treatment
- Gluten-Related Disorders
- Living GF: Challenges
- National Celiac Association Resources



LEARNING OBJECTIVES

- Describe medical aspects of CD including symptoms, diagnosis, treatment, and complications.
- Identify other medical conditions that require a GF diet
- Recognize the importance of the GF diet in the treatment of celiac disease.
- Recognize the complexity of the GF diet and challenges (medical, nutritional, psychosocial, and financial) that seniors with gluten-related disorders are faced with.



POLL

Based on a survey of members of the Canadian Celiac Association what do you think was the average age of celiac disease diagnosis?

- A. 6 years
- B. 16 years
- C. 36 years
- D. 46 years
- E. 66 years



POLL ANSWER

Answer: 46 years

Reference:

Cranney A, Zarkadas M, Graham ID, Butzner JD, Rashid M, Warren R, Molloy M, Case S, Burrows V, Switzer C. The Canadian Celiac Health Survey. *Dig Dis Sci*. 2007 Apr;52(4):1087-95. Epub 2007 Feb 22. PubMed PMID: 17318390.





**The National
Resource Center on
Nutrition & Aging**

Gluten 101

WHAT IS GLUTEN?

Gluten is the most common protein in the human diet. It can be found in these grains:

- Wheat (gliadin)
- Barley (hordein)
- Rye (secalin)



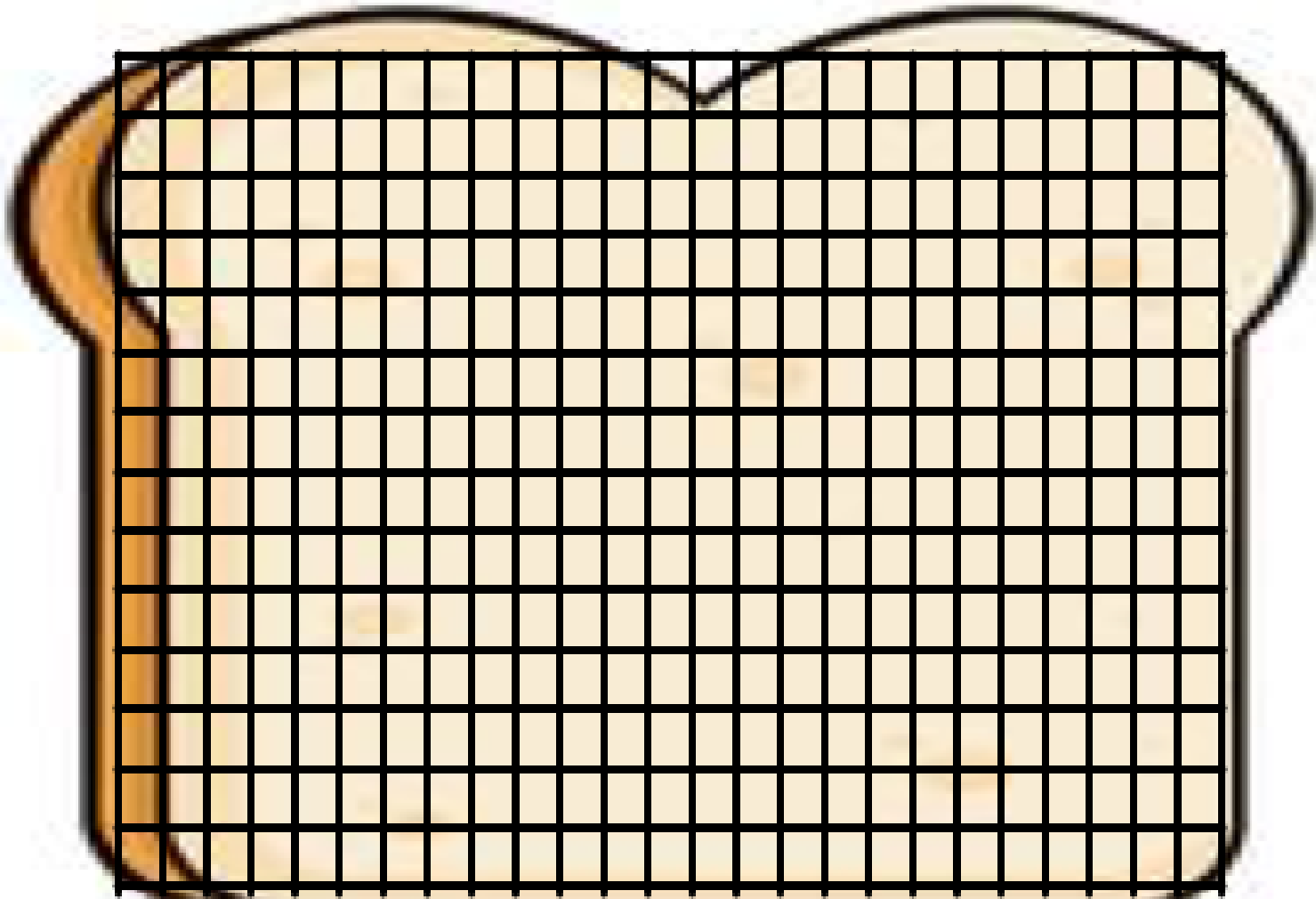
Gluten brings elasticity and structure to baked goods. It is what makes them fluffy and chewy all at the same time. This is why gluten-free products often are crumbly.

HOW MUCH GLUTEN?

- There is no official threshold for gluten consumption, however one study determined that a daily intake of 10 mg of gluten was the threshold that produced damage to the small intestine in individuals with celiac disease.⁷
- How much is 10 mg?



1/350 OF SLICE OF BREAD





**The National
Resource Center on
Nutrition & Aging**

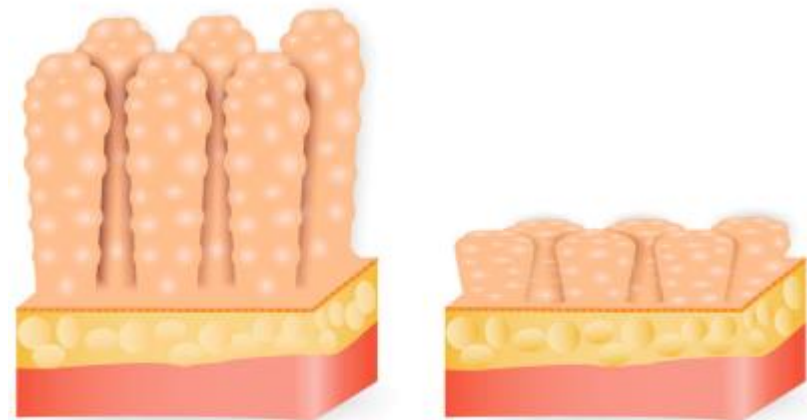
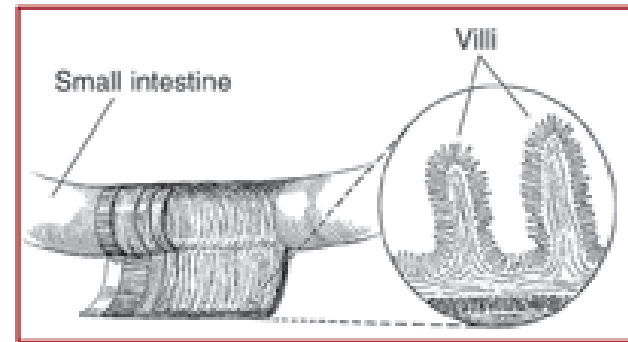
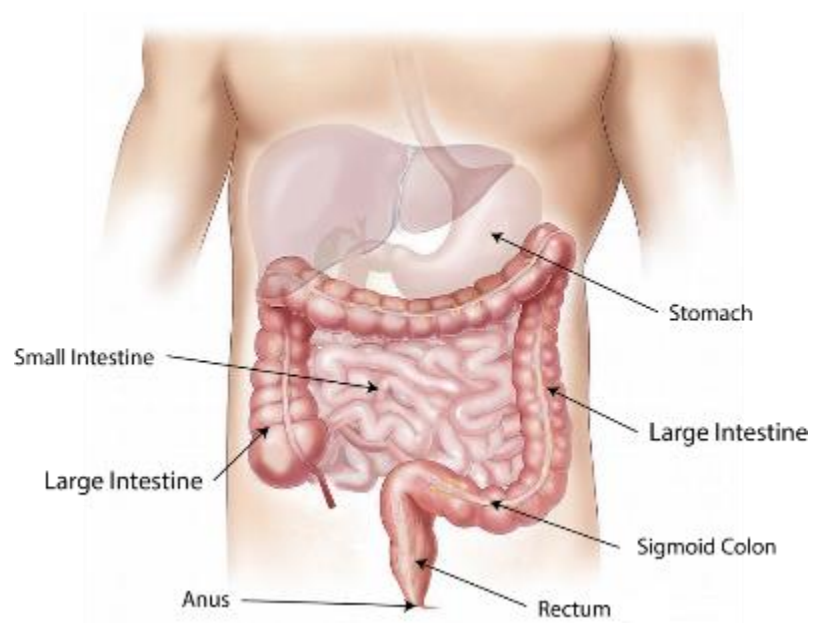
Celiac Disease: Symptoms, Complications, Diagnosis, Treatment

WHAT IS CELIAC DISEASE?

- CD is a genetic, autoimmune disorder that targets the small intestine.
- When gluten is ingested, the body responds by attacking the villi (fingerlike projections in the small intestinal mucosa), which can lead to malabsorption and many other complications. ¹



ANATOMY OF CD



Health

Celiac disease



CD MYTHS

- CD is a childhood disease/you can grow out of it
- Everyone with CD has gastrointestinal (GI) symptoms
- Only people of European descent get CD
- You cannot be overweight/obese and have CD
- It is ok to eat a little bit of gluten when you have CD



CD STATISTICS

- CD affects about 3 million people in the US
 - **~ 83% are still undiagnosed/misdiagnosed** ²
- General population: 1 in 100
- Related symptoms: 1 in 56
- 1st degree relative with celiac disease: 1 in 22
- 2nd degree relative with celiac disease: 1 in 39 ³
- **19-34% of new CD cases are aged 60 years and over** ⁴



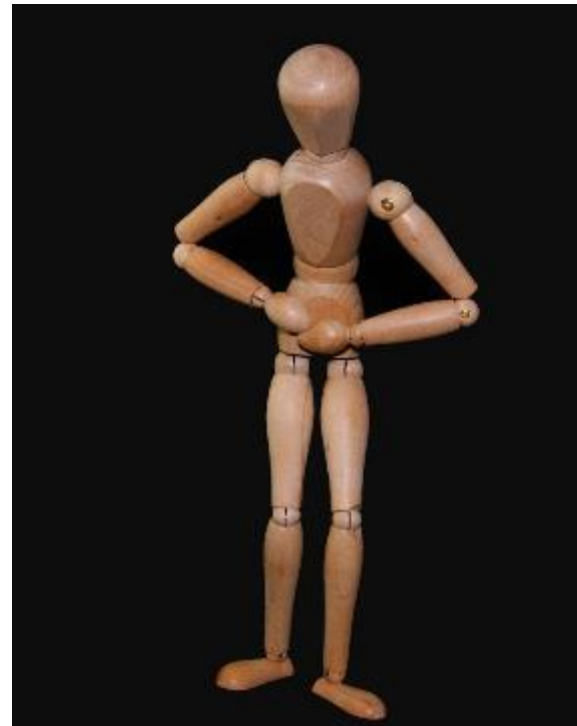
SYMPTOMS OF CD

Gastrointestinal

- Diarrhea
- Fatty stools
- Constipation
- Cramps
- Bloating
- Flatulence
- Lactose intolerance
- Acid reflux
- Nausea

- Vomiting

**Over 200
Symptoms,
or none at all! ¹**



SYMPTOMS OF CD

Malabsorption

- Anemia-Iron deficiency
- Vitamin deficiencies
- Calcium malabsorption leading to osteopenia, osteoporosis
- Protein and calorie malnutrition
- Weight loss or muscle atrophy

Non-Gastrointestinal

- Fatigue
- Depression
- Joint pain
- Muscle aches, cramps
- Peripheral neuropathies
- Menstrual irregularities
- Dental abnormalities ¹



SYMPTOMS/COMPLICATIONS IN SENIORS

- Generally less severe gastrointestinal symptoms
- Nutrient deficiencies related to malabsorption:
 - Anemia
 - Osteoporosis/osteopenia/osteomalacia
- Dermatitis herpetiformis
- Autoimmune thyroiditis
- Ataxia and neuropathy
- Cancers
- Celiac hepatitis ^{4,5}



FALLS IN SENIORS & CD

- Fall from dizziness/confusion: potentially from electrolyte imbalance; anemia, altered blood pressure
- Fall from tripping: lack of muscle strength and atrophy and or neuropathy
- Fall from fracture: weakened bone state from osteoporosis or osteomalacia
- Fall from urgently running to the bathroom



DIAGNOSIS

- A blood test for antibodies associated with celiac disease (also called a celiac panel)
- Endoscopy of the small intestine – is the “gold standard” for diagnosing celiac disease ¹



NOTE: Starting a GF diet before diagnosis may lead to a false negative test



BARRIERS TO DIAGNOSIS FOR SENIORS

- CD is often overlooked in seniors
 - Subtle symptoms
 - Mistaken for signs of aging
 - Lack of awareness in the medical community ⁵



TREATMENT

- The **ONLY** approved treatment for celiac disease is a **STRICT** gluten-free (GF) diet.



OTHER GLUTEN-RELATED DISORDERS

Dermatitis Herpetiformis (DH)

- A different manifestation of CD where the immune system attacks the skin creating an itchy blistering rash when gluten is ingested. May be present with or without damage to the small intestine.
- DH is diagnosed via skin biopsy by a dermatologist.
- Treatment is a strict gluten-free diet and may also include medications to manage symptoms. ¹



OTHER GLUTEN-RELATED DISORDERS CONT.

Non-Celiac Gluten Sensitivity (NCGS)

- An intolerance to gluten ingestion that may show some immune response but little to no villi damage; symptoms may be similar to celiac disease. Affects **about 6 percent** of the population. ⁶
- CD and wheat allergy must be ruled out before a diagnosis of non-celiac gluten sensitivity is made.
- The treatment is a GF diet.



OTHER GLUTEN-RELATED DISORDERS CONT.

Wheat Allergy

- An allergic immune reaction (that involves a different branch of immune system than CD) to wheat ingestion. It may include a reaction in skin, mouth, lungs, and/or GI system.
- Wheat allergy should be diagnosed by an allergist.
- The treatment is a wheat-free diet and may include medications to manage symptoms. ¹



POLL

It is ok for someone with celiac disease to eat a bit of gluten everyday as long as they are mostly gluten-free.

True/False



POLL ANSWER

Answer: False





**The National
Resource Center on
Nutrition & Aging**

Living Gluten-Free

THE CELIAC ICEBERG

Symptoms,
illness, and
the search for
an answer

Celiac Diagnosis and
Pathophysiology

Gluten-Free Diet
is treatment

Modifications of Diet = Improvement
in General Health

Barriers to Diagnosis

Perceived High Treatment Burden

Delayed Healing Time

Limited Access to GF Food in Assisted Living
Facilities/Hospitals/Congregate Meals/Home
Delivered Meals

Hypervigilance

Lifestyle Changes

Confusing Ingredients/Difficult to Read Labels

Psychosocial Impacts

Nutrition Challenges of the Gluten-Free Diet

Economic Burden

Complications of Celiac Disease

LIVING GLUTEN-FREE

- Sharing a Kitchen
- Eating at Restaurants/Congregate Meals/Home Delivered Meals
- Hospitals
- Assisted Living/Nursing Homes
- Holidays & Celebrations
- Travel



PSYCHOLOGICAL AND EMOTIONAL CHALLENGES

- Anxiety
- Depression
- Isolation/avoidance
- Fear of getting sick
- Embarrassment
- Perceived annoyance factor, i.e. “they’re just being picky.” ¹



PSYCHOLOGICAL AND EMOTIONAL CHALLENGES

- **Lower Quality of Life**

Recent studies show that those on a GF diet can have a lower quality of life due to anxiety around food. ⁸

- **Perceived High Treatment Burden**

Studies show the burden of a GF diet is comparative at levels with congestive heart failure (CHF) and end stage renal disease (ESRD). ⁹



CHALLENGES SPECIFIC TO SENIORS

- Change lifetime eating habits
- Adding GF to other nutritional challenges
- Limited financial resources
- Limited social resources
- Increased dependence on others for food
- Limited mobility ⁴



ECONOMIC BURDEN

- A recent study found that gluten-free foods are overall 189% more expensive than regular versions of the food. ¹⁰
- A small 12 oz loaf of GF bread costs \$5-\$6
- Gluten-free food is rarely available at food pantries, leaving few options for getting affordable, safe hunger relief.



RESOURCES

NCA represents and serves individuals with celiac disease and gluten-related disorders.

- Chapters, Local Partners, Resource People (40+ groups and growing)
- Gluten-Free Food Bank (GFFB)
- Semi-Annual Symposium
- Phone hotline 5 days/week
 - 1-888-4-CELIAC
- Check out NCA's website for more resources:



<https://nationalceliac.org/>



TAKE HOME MESSAGES

- CD is a serious medical condition.
- A strict GF diet is the only treatment for CD.
- There are several other gluten-related disorders that also require a GF diet.
- Being on a GF diet can be cumbersome and a psychosocial burden.
- The GF diet can be an economic burden preventing those living with food insecurity from getting access to safe and nutritious meals.



CALL TO ACTION

- Find out who needs GF meals among the population you serve.
- Let your population know that GF meals are available for those with a medical need.
- Explore the possibility of offering GF meals.
- Participate in our upcoming webinar on November 19!



REFERENCES

1. National Celiac Association. Gluten-Free, Off To A Fresh Start. Presentation. May 4, 2018.
2. Beyond Celiac. Celiac Disease Fast Facts. Beyond Celiac Website:<https://www.beyondceliac.org/celiac-disease/facts-and-figures/> Updated 2019. Accessed April 27, 2019.
3. Fasano A, Berti I, Gerarduzzi T, Not T, Colletti RB, Drago S, Elitsur Y, Green PH, Guandalini S, Hill ID, Pietzak M, Ventura A, Thorpe M, Kryszak D, Fornaroli F, Wasserman SS, Murray JA, Horvath K. Prevalence of celiac disease in at-risk and not-at-risk groups in the United States: a large multicenter study. *Arch Intern Med*. 2003 Feb 10;163(3):286-92.
4. Rashtak S, Murray JA. Celiac disease in the elderly. *Gastroenterol Clin North Am*. 2009;38(3):433-446. doi:10.1016/j.gtc.2009.06.005
5. Cappello M, Morreale GC, Licata A. Elderly Onset Celiac Disease: A Narrative Review. *Clin Med Insights Gastroenterol*. 2016;9:41-49. Published 2016 Jul 27. doi:10.4137/CGast.S38454



REFERENCES

6. Igbinedion SO, Ansari J, Vasikaran A, et al. Non-celiac gluten sensitivity: All wheat attack is not celiac. *World J Gastroenterol*. 2017;23(40):7201–7210.
7. Catassi C, Fabiani E, Iacono G, D'Agate C, Francavilla R, Biagi F, Volta U, Accomando S, Picarelli A, De Vitis I, Pianelli G, Gesuita R, Carle F, Mandolesi A, Bearzi I, Fasano A. A prospective, double-blind, placebo-controlled trial to establish a safe gluten threshold for patients with celiac disease. *Am J Clin Nutr*. 2007;85(1):160-6.
8. Wolf RL, Lebwohl B, Lee AR, Zybert P, Reilly NR, Cadenhead J, Amengual C, Green PHR. Hypervigilance to a gluten-free diet and decreased quality of life in teenagers and adults with celiac disease. *Dig Dis Sci*. 2018 Jun;63(6):1438-1448.
9. Shah S, Akbari M, Vanga R, et al. Patient perception of treatment burden is high in celiac disease compared with other common conditions. *Am J Gastroenterol*. 2014;109(9):1304–1311. doi:10.1038/ajg.2014.29.
10. Lee AR, Wolf RL, Lebwohl B, Ciaccio EJ, Green PHR. Persistent economic burden of the gluten free diet. *Nutrients*. 2019 Feb 14;11(2).

* Pictures from Pixabay, no attribution required.





**The National
Resource Center on
Nutrition & Aging**

Upcoming Trainings /
New Resources

UPCOMING EVENT



- *Operational Considerations for Providing Gluten-Free Meals.*
- **What:** Webinar
- **When:** Tuesday, November 19, 2019
- **To Register:** Online

NEW RESOURCE!

- Check out a new resource on CD Facts, developed by NCA focused on seniors.
- You can access it on our social networking platform, NRCNAengage.

Celiac Disease THE FACTS



What is Celiac Disease?

Celiac disease (CD) is an autoimmune disease that mainly affects the gastrointestinal tract. Individuals who have CD are permanently intolerant to gluten, a group of proteins found in wheat, barley, and rye.

Treatment of Celiac Disease

Currently the only treatment for CD is the lifelong adherence to a strict gluten-free (GF) diet. All food that either contains gluten or might have had contact with gluten (known as cross-contact) must be avoided. Even levels of cross-contact that do not produce a noticeable reaction may cause damage to the intestine and should be avoided.

People with CD must watch for cross-contact and/or items that have been used with gluten containing food and cannot be sufficiently cleaned.

- Toasters & toaster ovens
- Food preparation surfaces
- Pasta cooking water
- Condiments and spreads
- Shared utensils
- Colanders/strainers
- Frylater/deep fryer



Medications can also contain gluten and individuals must consult with their pharmacist to ensure prescription and over-the-counter products are safe to consume.

For most people, keeping to a strict GF diet results in an improvement in symptoms.

Who has Celiac Disease?

- CD is common, affecting at least 1% of the population
- Upwards of 83% of people with the condition are undiagnosed
- One or both of these genes must be present to develop CD: HLA DQ2, HLA DQ8
- When a first-degree family member has CD, the probability of developing it increases significantly
- CD can develop at any time in life
- CD affects individuals from a diverse range of ethnicities

Symptoms of Celiac Disease

There are at least 200 symptoms of CD and they vary so widely that there is **no such thing as a typical case**. It should be particularly noted that many people do not experience any of the gastric symptoms that were previously thought to typify the condition. These individuals often face a delay in diagnosis.

Physical symptoms may include:

- Abdominal cramping
- Amenorrhea (absence of menstruation)
- Anemia
- Bloating / distention
- Brain fog / inability to concentrate
- Canker sores
- Constipation
- Dental abnormalities
- Diarrhea
- Edema / swelling
- Electrolyte imbalance
- Elevated liver enzymes
- Fatigue
- Headaches
- Infertility / miscarriages
- Vitamin & mineral deficiencies
- Osteopenia / osteoporosis
- Pain in bones and joints
- Peripheral neuropathy
- Stool abnormalities (loose, hard, small, large, foul smelling, light tan or gray, frothy)
- Rash (see dermatitis herpetiformis)
- Weight loss or gain (unexplained)
- Vomiting

place, the
ications

agnosis

ination, personal interview
s well as blood tests including a
include tissue transglutaminase
total serum IgA. Other available
(omysial antibody) or DGP
del) IgA and IgG.

h a biopsy of the small intestine,
ies should be taken, with
abeled and submitted separately.
f DH, skin biopsies should

to consume gluten through-
Failure to do so can lead to
clusive result.

duals who suspect they have
agnostic process and do not
GF diet because:

ditions can present in a
need to be ruled out.

strict GF diet is a huge social and
his more difficult to maintain
al need.

act diagnosis cannot be made
on of gluten. This has
ications.

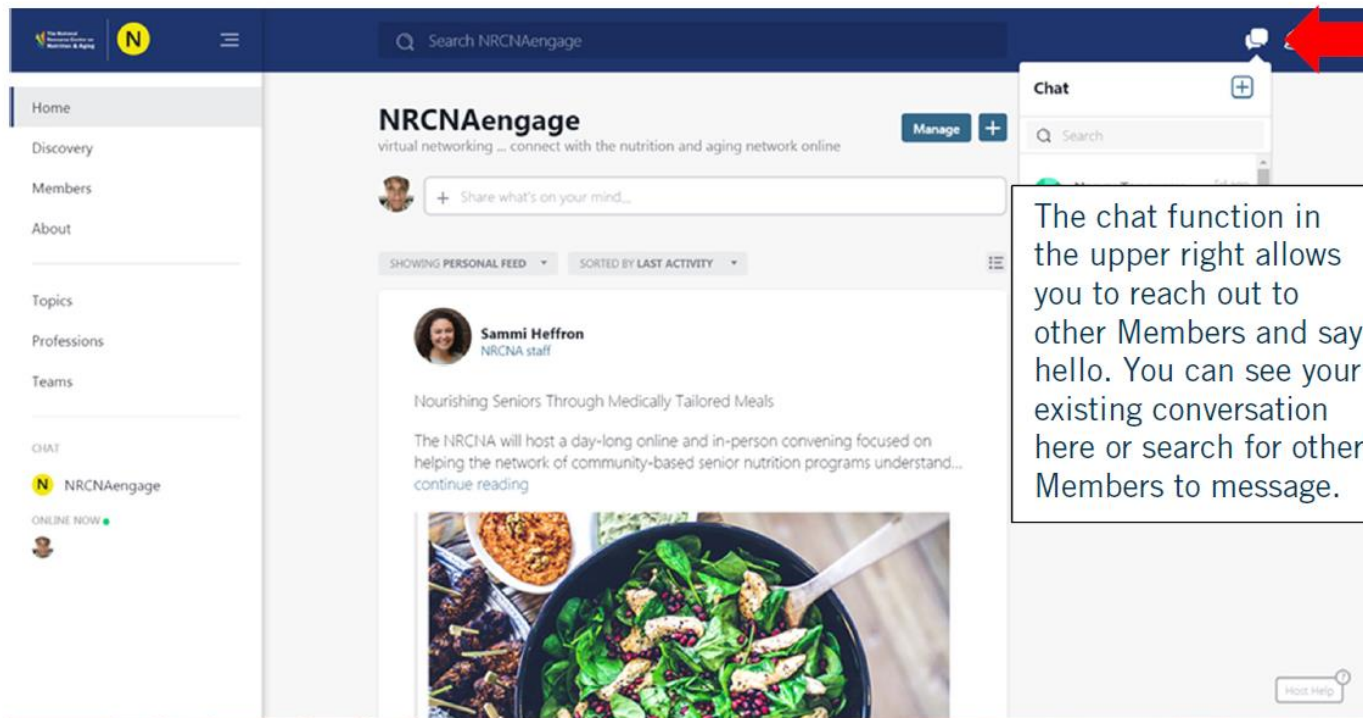
, further testing should take place
ons that are associated with or
e include other autoimmune
ses, type I diabetes) and
in and mineral deficiencies

is also recommended that
rst-degree family members be
tested for CD **regardless of the
presence of symptoms**, as there
is a strong hereditary link. High-
risk individuals should be tested at
regular intervals (3-5 years) as CD
can develop at any stage in life.



NRCNAengage

- Visit: <https://nrcna.mn.co> to sign up today!



The screenshot displays the NRCNAengage website interface. The top navigation bar includes the NRCNA logo, a search bar, and a chat icon in the upper right corner, which is highlighted by a red arrow. The main content area features a post by Sammi Heffron, NRCNA staff, titled "Nourishing Seniors Through Medically Tailored Meals". The post includes a photo of a salad and a description of an upcoming online and in-person convening. A chat window is open on the right side of the page, showing a search bar and a list of chat participants. A text box on the right side of the chat window explains that the chat function allows users to reach out to other members and say hello, and that users can see existing conversations or search for other members to message.

The chat function in the upper right allows you to reach out to other Members and say hello. You can see your existing conversation here or search for other Members to message.





**The National
Resource Center on
Nutrition & Aging**

Thank You