

# Falls in Adults and Seniors – *Could Celiac Disease Be the Culprit?*

by Carla Carter

As a staff member of National Celiac Association (NCA), I proudly get to serve our gluten-free community in ways I have always hoped. Many of these ways echo the basic tenets of my past career as an Occupational Therapist (OT): helping people to restore, compensate, and adapt to their disease or disability in order to live as functional a life as possible.



Illustration: didiaCC/Shutterstock.com

As an OT, I worked with the adult and senior populations for over 15 years. I was blessed with more clinical experience than I ever would have thought possible and made amazing connections with some of the most kind-hearted people.

One of my biggest jobs as a therapist was to **prevent falls**, especially considering that statistically, one in four Americans aged 65 and over falls each year (1). Whether my role as an OT concerned ensuring proper furniture setup in the home, education on exercises to strengthen joints and muscles, improving balance, or conserving energy, my job involving fall prevention was never done. As an OT, we were trained to look at the whole person, the big picture from start to finish. We asked the questions: **WHY** did this person fall? **WHAT** were the factors that precipitated the fall? **HOW** can we prevent another fall?

Over the years, as I pored over the medical histories and diagnoses of those who were falling, patterns arose with signs in some people pointing to celiac disease (CD). I started to ask myself and the patient's doctor, "*Could this person be **ONE OF THE 83% OF UNDIAGNOSED individuals with CELIAC DISEASE?***" Or, on the occasions when someone already came to rehab with a diagnosis of CD and a fall, it made me question how they were managing their disease or if they were unfortunately dealing with the consequences of a late diagnosis?

It must be stated that people fall for a whole host of reasons including underlying conditions and environmental factors, both of which might have nothing to do with CD. However, CD, in particular can be difficult to manage and diagnose in older adults and seniors as many of the

associated afflictions can be easily written off as age-related conditions.

The table on page 32 lists some of *my personal observations* as a therapist with supportive information connecting some of the signs and symptoms common to celiac disease with their potential relationship to falls. Also note that at the moment, there is no research in this area and while this is not a comprehensive list, I hope that more consideration will be taken when examining the whole story.

If you or a loved one has experienced a fall and have been diagnosed with CD or perhaps not, take a step back to look through the eyes of an OT. Ask yourself the questions to find an answer to the reason why the fall happened. Then, if necessary, bring the information you gather to your care team or the team of

*continued on page 32*

## Falls in Adults and Seniors -

continued from page 31

your loved one. Taking the required steps to prevent another fall can be life-saving and will raise the quality of life of someone at any age, despite having to be on a gluten-free diet if it is determined that CD is truly the culprit.

FALL FROM	POTENTIAL RELATIONSHIP	SUPPORTING INFORMATION
<b>Dizziness</b>	Iron Deficiency Anemia	-Seen in 23–48% of adults (2). -Anemia is present in 60-80% of elderly patients with celiac disease (8).
	Atrial Fibrillation (“Afib”) & other Heart Disease	-“...to the present time there has been substantial documentation of a number of other cardiovascular conditions found in conjunction with untreated CD including thrombosis and thromboembolism, ischemic heart disease, stroke, and arrhythmia.” (3)
	Inner Ear Problems	-8% of those with CD have vestibular dysfunction (4).
<b>Tripping</b>	Decreased muscle strength; muscle atrophy; electrolyte imbalance	-Hypokalemia, a prominent feature in celiac crisis can lead to muscle weakness (6).
	Fatigue	-Although frequently reported in clinical practice, fatigue has been scarcely studied in celiac disease (7).
	Uncoordinated movements; impaired reflexes	-Neurological symptoms present in ~24% of adults with undiagnosed CD (2). -Reduced ankle reflexes present in 14% of those with CD (5). -Stance and gait problems in ~ 1/3 those diagnosed with CD (5).
	Impaired Sensation (peripheral neuropathy)	-“Gluten neuropathy was a neurological manifestation in CD (up to 39%) in 13 studies.” (9)
<b>Fracture</b>	Osteoporosis risk and overall fracture risk	-Osteoporosis in the hip = 44% and in lumbar spine = 38% for those with CD (10). -“Celiac patients have an increased risk of fractures, up to 7 times higher than that in the general population of same age and gender.” (10)
<b>Confusion</b>	Brain fog/confusion can alter decision-making & problem-solving.	-“...cognitive impairments associated with brain fog are psychologically and neurologically real and improve with adherence to a gluten-free diet. There is not yet sufficient evidence to provide a definitive account of the mechanism by which gluten ingestion causes the impairments to cognitive function associated with brain fog...” (11).
<b>Bathroom Urgency/Fecal Incontinence</b>	GI issues can cause urgency, exceeding body’s ability to get there in time.	-Very common in celiac disease, subjectively reported, however, statistics not yet provided.
<b>Pain</b>	Joint pain can be a hallmark of celiac disease and so it can often be overlooked as a symptom in older adults; this pain can cause people to alter their ways of walking and moving, which can also result in a fall.	-Subjective reports throughout the literature, however, statistics not yet provided.
<b>Seizure</b>	Seizure activity may inadvertently cause a fall.	-Approx. 6% of those with CD have seizure activity (5)

1. <https://www.ncoa.org/news/resources-for-reporters/get-the-facts/falls-prevention-facts/>

2. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6115849/>

3. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5583538/>

4. <https://onlinelibrary.wiley.com/doi/abs/10.1002/mds.22821>

5. <https://www.ncbi.nlm.nih.gov/pubmed/19845007>

6. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4548427/>

7. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6266448/>

8. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3227015/#targetText=The%20classical%20malabsorptive%20symptoms%20such,common%20in%20elderly%20celiac%20patients.&targetText=It%20should%20be%20noted%20though,in%20those%20over%2065%20years.>

9. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6412791/>

10. <https://synapse.koreamed.org/DOIx.php?id=10.11005/jbm.2018.25.4.213>

11. <https://www.ncbi.nlm.nih.gov/pubmed/28244662>