

THE CELIAC SOCIETY OF INDIA PRESENTS

WHEAT VIEWS

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EDITOR'S NOTE



Dear Reader,

“A man with his health has a thousand dreams but take his health away and he has only one dream!” These words have never been truer. Standing against the backdrop of the COVID-19 second wave in India, one can only hope for wisdom to ensure that one's health takes first priority at any cost.

While there is no shying away from the fact that India and the world will face a heavy burden when it comes to ensuring healthcare systems cater to citizens' recovery - both physical and emotional, I see this as a moment to pause, reflect and take into account close-to-home practices we may have ignored, foods that we have taken for granted and nutritional approaches that may have taken a back seat in our lives. It's time to remind ourselves that the way forward for each one of us is to fortify our bodies against inflammation with the right nutrition and diet - the root cause of this entire global catastrophe.

We have to focus on ensuring that we all in our own ways work towards one unanimous goal that is, to restore and maintain a healthy gut - that's where the fight begins and that's where the fight ends. Wish you all good health, a brighter future and moments full of gratitude.

Ishi

Ishi Khosla

FATAL ATTRACTION?

The COVID-19 Vaccination Debate: Are Inflammatory Diseases Like Celiac Disease More Attractive To The Virus?



C OVID-19, caused by the virus SARS-CoV-2 has pulled down human health across the world affecting over 200 countries. As of January 10, 2021 88,383,771 were reported to be infected, the death toll being 1,919,216, as per WHO records. The virus is responsible for a severe disease resulting in high morbidity and excess mortality mainly among the elderly and other vulnerable populations. It has been observed that SARS not only targets the organs of the upper respiratory ways and lungs but also the gastrointestinal tract. Moreover, the risk for the major intestinal inflammatory diseases, such as inflammatory bowel disease and celiac disease to attract covid-19 infection is highly debatable.

SARS-CoV-2 is an auto-immunogenic virus: the interplay between genetic predisposition and environmental factors trigger immune dysregulation

and hyperstimulation, targeting various end organs. The SARS-CoV-2 recently was entitled as the “autoimmune virus”. In fact, 17 autoimmune disorders and various auto-antibodies associated with Covid-19 infection were reported and the list is expanding. It is seen that there is an association with HLA gene polymorphism in genetically susceptible human subjects, the shared peptides between SARS-CoV-2 virus and human antigens, implying molecular mimicry, as an integral part of ASIA symptom. Pathophysiologically, there is a hyper immune stimulation in both the conditions, but the cytokine storm is more prevalent during the Covid-19 deterioration.

CoV-2 affects celiac disease target organ: The bowel: Very interestingly, in contrary to its scientific name SARS-CoV-2 that directs the target organ to the respiratory tract, the human gastrointestinal tract is also affected. Symptoms wise, 8-11.4%

of affected patients had at least one symptom like diarrhea, nausea or vomiting. Notably, in another study originating in Wuhan, China, the percentage of patients with diarrhea reached 49.5%. The Cov-2-induced diarrhea spends all along human life cycle and may be present without any respiratory complains. Interestingly, the proportion of patients with diarrhea in the later stage of the Chinese epidemic increased when compared with the pre-epidemic stage. Of note, gastrointestinal bleeding and abdominal pains were described, but the most common complaint was anorexia. A higher proportion of patients with diarrhea had viral RNA in stool than patients without diarrhea. Elimination of the virus from the nose and throat preceded the enteric elimination. It is reported from several observations that Cov-2 virus infect, overcomes the intestinal protective barrier mechanisms, penetrates and damages the intestinal mucosa and activates the local immune system.

Might gluten enhance and gluten-free diet attenuate Cov-2 gastrointestinal effects?

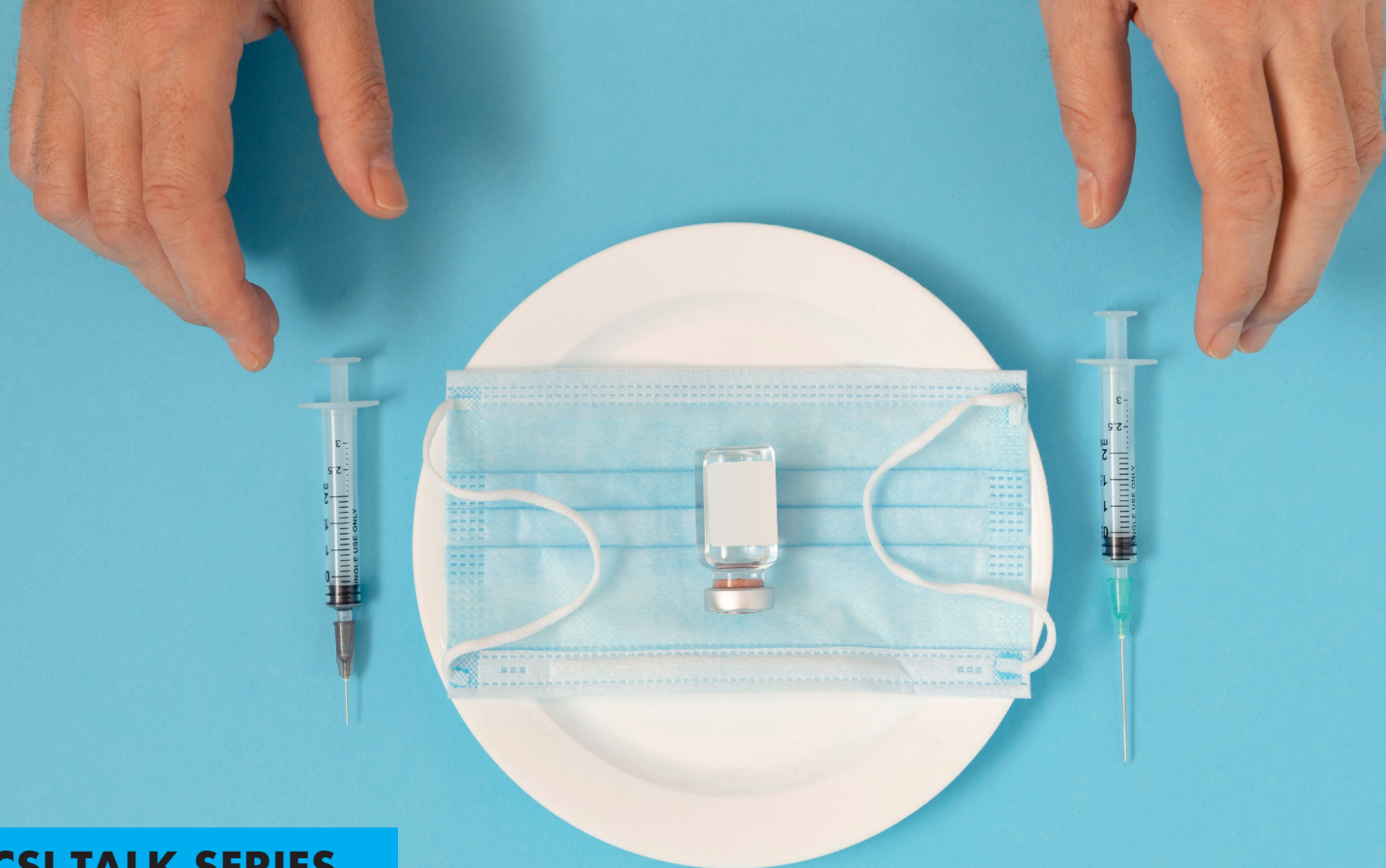
Gluten is gaining popularity for increased intestinal permeability, inducing dysbiosis; it is a pro-inflammatory, pro-oxidative, pro-apoptotic and impacts epigenetics. Furthermore, it is immunogenic, cytotoxic and decreases cell viability and differentiation. These might potentiate the intestinal damage caused by covid-19. On the other hand, gluten-free diet might alleviate the damage and not only in non-celiac autoimmune diseases. Research conducted by Haupt-Jorgensen and Buschard shows that elimination of gluten from the diet induced some anti-inflammatory cytokine profile in mice, and lowered the pro-inflammatory cytokine IL-1beta levels in healthy subjects. improvement in intestinal permeability and probable protection to lung functions by alleviating hemosiderosis and potential reduction in the cytokine storm associated with the Cov-2 infection are few more reported facts of gluten elimination. Interestingly, when Covid-19 infection is compared, the fare East had a much lower incidence than the Western countries. The same is correct for gluten intake, since rice is the major staple food in Asian countries. The authors concluded that the reduced intake of gluten in Asia should be considered as partly protective for COVID-19.

The ratio of diagnosed to undiagnosed celiac patients is 1:7. Celiac disease is not a risky condition to get infected with the CoV-2, but parts of the celiac disease population might be at high risk. Multiple conditions might put the celiac patients at increased risk for Covid-19 infection and complications. Most of the celiac disease patients that adhere to gluten-free diet and don't have the associated high-risk morbidities for covid-19 infection, are safe.

“SARS not only targets the organs of the upper respiratory ways and lungs, but also the gastrointestinal tract.”

Until 2020's end, there was no increased incidence of Covid-19 in celiac population. In New York, among the patients hospitalised with Covid-19, individuals with autoimmune diseases and those on chronic immunosuppressive therapy did not have an increased risk of adverse events. The same holds for CD. An uneventful course in refractory CD patients, during Covid-19 outbreak, was observed in Italy when they got suitable therapies and anti- anxiety measures. The Surveillance Epidemiology of Coronavirus Under Research Exclusion (SECURE-Celiac) registry is an international, database to monitor and report outcomes of COVID-19 occurring in pediatric and adult CD patients. At the end of 2020, 99 cases of CD with Covid-19 were registered, with a 2% death rate.

There is no direct evidence that CD patients are at increased risk of developing consequences of COVID-19, but there is theoretical concern based on studies of other infections. Based on the hypothetical association between CD and the virus, it is not justified to take any additional precautions separate from those recommended to the general population. ■



CSI TALK SERIES

NUTRITION & THE COVID-19 VACCINE

*The Celiac Society of India organised a webinar “Nutrition and the Covid-19 Vaccine” on 12 February 2021: an interactive session with international experts to establish the link between Covid-19 vaccine efficacy and nutrition. **To catch the video, click here.***

In the process of building immunity even after the vaccination, it is the prior nutritional status as well as the nutritional status during that period which really matters. It is the gut flora as well as other microbial flora in our body which also help us in our immune response, and it relies on the nature of our nutrition. If your nutrition has been inappropriate, – ultra processed-sugar sweetened beverages for instance – that stoke a regular ongoing inflammatory process in the body – the resources required for you to build a good immune response are already getting consumed by the ongoing inflammatory process.

A good nutrition should stand on four legs: balance, variety, regularity and moderation. A lot of this is possible with plant-based foods.

“If you want a strong healthy response for protection, you must reduce the level of inflammation in your body”, said Dr. Tom. Inflammation is the mechanism that causes almost all disease. The consumption of fast foods, which exploded in the US, is exactly the mechanism that has fueled all the obesity, increase in diabetes, and the increase in autoimmune diseases.

So, the message of the Celiac Society through this webinar is the rainbow diet – many different colours of your fruits and vegetables – that will help strengthen your immune system, give you a good response to the vaccine.

Dr. Reddy put forward his idea of a diversity of strategies, just as the diversity of our diet: Increase the production of healthier crops, and the manufacturing of healthier food products to give all of the nutrients that we require in a relatively natural form without having to depend on supplements. An alteration of our agricultural and food processing

practices altered will ensure affordability as well. Unhealthy foods are produced (particularly those which are likely to be ultra-processed or sugar-sweetened beverages) because of the urge to prolong the shelf-life of foods. Almost everything that prolongs the shelf-life of foods shortens human life. Only after this, comes the question of ensuring that there is food fortification in order to make sure that some other deficiencies are corrected. “But I think all of these needs to take place, we just can’t leave the agricultural practices and the food manufacturing and processing practices just as they are and then depend only on nutrients to be added as supplements or looking at treatments for diseases which are being created by unhealthy diets. So I think we do require an action all across the food chain,” added Dr. Reddy.

Probiotics help in reducing inflammation. Most probiotics produce anti-inflammatory cytokines; they help in reducing the chances of a leaky gut because they regulate something known as trijunction protein.

Talking about the efficacy or effectiveness of vaccine, it is shown that people living in developing countries with poor sanitation and poor hygiene, develop a condition of environmental enteropathy, which is basically morphological and functional changes in the intestine where the intestine has blunted villi and inflammation.

It is important to consider that many wheat changes came in with several revolutions making major changes to crops like rice and wheat, for example, nature of rice changed from unpolished rice to polished rice in the last 60-70 years. A loss of dietary diversity is seen which can be restored with appropriate dietary policies. If you actually subsidise healthier foods and ensure that there is a higher pricing of unhealthy foods to your taxation system then you can actually make healthier foods more affordable and easily available.

We also require nutrition literacy for the people and actually explain the benefits of these changes then obviously they are more likely to adopt healthier alternatives. In fact, we are going to have a major challenge which has to compel us to do that because with climate change and global warming we know that rice and wheat which are already being produced almost at the very upper limit of the temperature sensitivity; even if there is even 1°C further rise in

“In the whole process of building up immunity even after vaccination, it is the prior nutritional status that really matters.”

temperature there’ll be a 10% fall of the yield of staples like rice and wheat. Even from the point of view of climate smart agriculture and also to reduce some of the climate change accelerating affects of agricultural systems we need to reorient them and the best way to do it is to make them much more nutrition friendly by building in a great deal of crop diversity and dietary diversity which will actually enable us to reduce the inflammation and build our immunity to much higher levels.

There is no question that the quality of vegetables being grown today at the mass scale, scientists are working for generating more produce per acre and which are pest resistant and sometimes while they’re working with changing the crop they lose some of the nutrients. The quality of food that is available today in general is not quite as high as that was a couple of decades ago. Going for a rainbow diet is always wise. Supplements can help but you can’t live on supplements, you have to live on food. ■



Time for An Anti-Inflammatory Diet?

Nutritionist Ishi Khosla suggests that it is time to focus on an anti-inflammatory diet when it comes to addressing the effects of the Covid-19 vaccine and the virus itself. There are studies to show that people with obesity (an inflammatory condition in itself) definitely show a lower response to antibodies even after vaccination. Apart from proteins and polyphenols, we must also take a look at immunogenic components in our diet and immunogenic protein: it includes wheat which has the potential for triggering the immune system for creating inflammation in people with celiac disease as well as wheat sensitivity which is a relatively new entity in the absence of celiac disease we have an inflamed gut and an increased intestinal permeability or we have a leaky gut.

50% of those who have wheat sensitivity are also dairy sensitive and will provoke your immune system causing inflammation. Your food should be anti-inflammatory and if you have sensitivity, then it's time to change your grains. It's time to bring in the treasure of grains that India offers. 2023 is going to be the year of millets in India: adding anti-inflammatory fats like omega-3 or good fats such as mustard oil, sesame oil, flax seeds, chia seeds is vital.

We should talk about yoga, therapeutic exercise, meditation, sleep. Another element here we must add, is fasting – whether it is intermittent or alternate day fasting, it has its merits in reducing inflammation. The alternate day fasting is a scientifically proven method of increasing polyphenols in our diets (it is all about having plant foods) vegetables and fruits every alternate day. So these elements should also be a part of the narrative of vaccine diet or anti-inflammatory diet. ■



How is the Gut linked to the Immune system?

Probiotics expert Dr. Hajela helps us understand how the gut is linked to the immune system: 70% of our body's immunity is found in the gut. The gut-associated lymphoid tissue is 70% of the body's immune system, which is why the gut is also called the largest immune organ of the human body.

The microbes our gut features are crucial to build immunity – both innate as well as adaptive immune response. There are several ways by which these microorganisms act: They help in colonisation resistance and extrusion of pathogens. Others increase production of mucus



in the intestine, and prevent the translocation of harmful bacteria and toxins into the circulatory system. They also help in binding or increasing the production of tight junction proteins thereby ensuring an intact gut barrier. ■

*Source: Celiac Disease Foundation
Society for the Study of Celiac Disease Releases Statement
on COVID-19 Vaccination*

WHAT'S COOKIN'?

This month: Quinoa Salad & Poita Bhat



QUINOA SALAD

INGREDIENTS

Quinoa	1 1/2 cup
Olive Oil	1/2 cup
Apple Cider Vinegar	1/4 cup
Sweet Potato	68gm
Black Pepper	To taste
Salt	To Taste
Green Apple	2
Parsley	1/2 cup
Red Onion	1/2
Arugula	3/4 cup

METHOD

- In a saucepan, heat 1 tablespoon of olive oil. Add the quinoa and toast over moderate heat, stirring for 2 minutes.
- Add 2 cups of water.
- Season with salt and bring to boil. Cover and simmer the quinoa for 16 minutes.
- Remove from the heat and let stand for 10 minutes. Fluff the quinoa, spread it out on a baking sheet and refrigerate until it is chilled for about 20 minutes.
- On a baking sheet, toss the sweet potatoes with 1 tablespoon of the olive oil and season with salt and pepper.
- Roast the potatoes for about 25 minutes, stirring once, until golden and softened. Let cool.
- In a large bowl, whisk the remaining 6 tablespoons of olive oil with the vinegar; season with salt and pepper.
- Add the quinoa, sweet potatoes, apples, parsley, onion and greens and toss well.
- Dig in and Enjoy!

POITA BHAT

INGREDIENTS

Small grain rice.....	1 cup
Chopped onions.....	2
Slit green chillies.....	4
Lemon.....	1 slice
Roasted dry red chilli.....	3
Mustard oil.....	1.5 tbsp
Salt.....	To taste

METHOD

- Soak the cooked rice overnight in water. The water level should be just sufficient enough to soak the entire rice.
- Next morning, crush the rice using hand. Do not discard the water.
- Add onion, green chilli, roasted red chilli, lemon juice and salt to taste.
- Serve with mashed potatoes, fried fish.



SUPERFOOD - ALMONDS

5 reasons why you should add almonds to your daily diet!

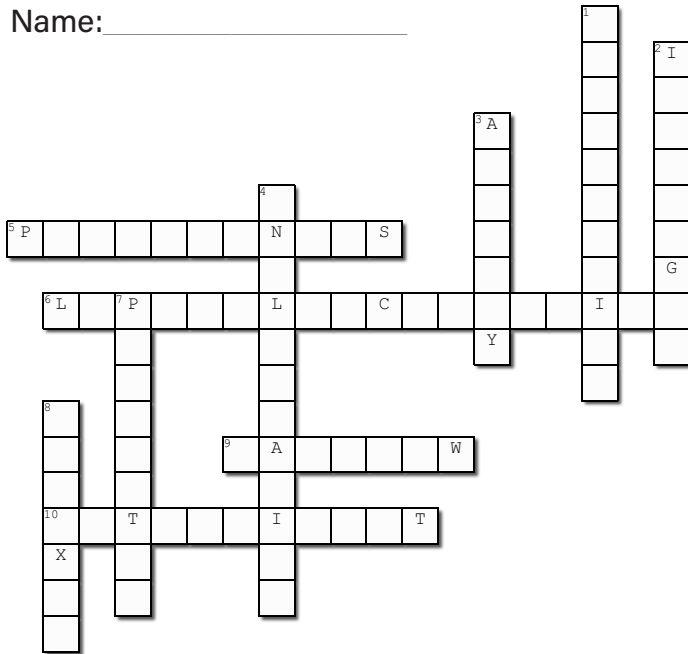
- Almonds don't just lower your bad cholesterol levels...
- They prevent your LDL levels from oxidation to help the heart.
- Almonds are stuffed with Vitamin E!
- They have a remarkably high amount of magnesium!
- Eating almonds reduces your hunger to lower calorie intake.



FOOD FOR THOUGHT

Complete the crossword puzzle below

Name: _____



Across

5. Reducing agents, together with other dietary reducing agents like vitamin C, E and carotenoids protect against oxidation
6. Cell wall coating of harmful bacteria in the gut that cause inflammation leading to many diseases
9. diet provides all the required phytochemicals
10. A substance that inhibits oxidation, especially one used to counteract the deterioration of stored food products

Down

1. Treatment with a vaccine to produce immunity against a disease
2. Antigen or any substance that may be specifically bound by components of the immune system
3. A decrease in the size of a tissue or organ due to cellular shrinkage
4. A process by which your body's white blood cells and the things they make protect you from infection from outside invaders
7. A microorganism introduced into the body for its beneficial qualities
8. Covid-19 vaccine in India which is a 2-dose vaccination regimen given 28 days apart

Across:

5. Polyphenols
6. Lipopolysaccharide
9. Rainbow
10. Antioxidant

Down:

1. Vaccination
2. Immunogen
3. Atrophy
4. Inflammation
7. Probiotic
8. Covaxin

SAY YES TO TASTE, NO TO GLUTEN



Introducing Spring, India's first Indo-Irish venture in gluten free foods.
We produce gluten free baked goods of the highest standards without compromising on taste or texture.



"Going Gluten-Free Saved My Life!"

This college student went gluten-free to gain her breath back.

I'm Anisha, a 19-year-old college student. During the lockdown, I started watching my diet and lifestyle to rid myself of a few kilos gained from living the sedentary life of a typical 12-board candidate.

In July 2020, I started feeling breathless. In addition to this troubling affliction, my hands and feet would tingle constantly, and I started suffering from severe migraines, tiredness and disturbed sleep cycles. My consultations with doctors pointed to anxiety, but I didn't want to take any sleeping pills and anti-anxiety pills. At the back of my mind, I knew I wasn't anxious. The problem had to be something else.

After a thorough testing, based on my dietician's advice, I discovered some severe disorders. I was low on magnesium, which was the cause of breathlessness, low on vitamin B12, iron, vitamin D

and calcium. To my surprise, I was wheat intolerant! Without fail, I started with my gluten-free diet and supplements: 2 months later, my symptoms have minimised heavily. I'll be honest, I cheated once. A single day of cheat wheat meals sent me back into relapse! I decided to give up the wheat for good, and stick to gluten-free.

Being a hosteller, I had to prepare my own breakfast because we get puri-sabji in the morning. My solution to it was our traditional rice porridge. The parboiled rice is roasted and ground to coarse flour. I have it with warm water (I have also cut down on dairy) and jaggery. Going gluten-free saved my life and my health. ■



Remembering Dr. K.K. Agarwal

Innumerable tragedies have struck the globe amidst the COVID-19 pandemic. The Celiac Society has lost three luminaries in the last year and amongst them is the exceptional, Dr. K.K. Agarwal. An eclectic personality to say the least, extremely driven and always full of purpose.

Dr. K.K. Agarwal, made it his undying mission to spread the right information about various aspects of one's health and well-being to everyone through out his life. He not only made effective outreach his true endeavour but also displayed a streak of curiosity like no other.



He readily and selflessly accepted to take up our mission of The Celiac Society and added his excellence to our flagship event, ISWD (International Symposium on Wheat related Disorders) in 2019.

On behalf of the ISWD team and The Celiac Society of India, I would like to convey our deepest condolences to his family.

He will be deeply missed as a personal friend and visionary who changed the way an average citizen consumes information around health forever. May his vision stay alive and we can all do our bit to follow his dream.

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The Celiac Society of India presents its new website, found at celiacsocietyofindia.com.
 More information about ISWD 2019 can be found at iswd2019.com.