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Research Article

**CELIAC DISEASE: A GLUTEN FREE DIET AND DIET  
QUALITY**<sup>1</sup>Dr. Hassan Shoaib, <sup>2</sup>Dr. Awais Nazir Tarar, <sup>3</sup>Dr. Muhammad Zain Ul Abideen<sup>1</sup>PGR/MO, DHQ Hospital, Sheikhpura.<sup>2</sup>House Officer, Mayo Hospital Lahore.<sup>3</sup>MO, BHU, Pir Khana, Sarai Alamgir.**Abstract**

**Objective:** Celiac Disease (CD) is one of the biggest issues of the medical world. The immune system of the body releases antibodies that target the mucosa of the small intestine. Intake of food containing gluten protein containing gluten protein provokes the immune system to react. The need is to find a gluten-free balance diet plan for the patient CD that prevents the secondary diseases in the patient.

**Patient and methods:** For CD, a molecular study was conducted in which structures and functioning of protein was analyzed on the molecular level. After determining the nature of gluten, its role normal functioning and effect caused by gluten-free diet on the body, new drugs and strategies can be discovered [1].

**Result:** In the analysis, a connection is established between CD support groups, its patients, and treatment of disease.

**Purpose of study:** The purpose of research is to discover new technologies and methods for treatment of CD. It helps in forming connection between the influences of CD support groups on patients.

**Conclusion:** A balanced diet and CD support groups are effective tools for reducing the symptoms of the CD.

**Keywords:** Celiac disease, small intestine inflammation, CD support groups

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**INTRODUCTION:**

Celiac disease is a genetic disorder in which victim faced the allergy with gluten intake. It is associated with the inflammation of small intestine with the exposure of gluten. Celiac disease is caused by the exposure to gluten. Gluten is a type of protein that is mostly found in the cereals. When any person suffering from the celiac disease is exposed to the diet containing gluten, an enzyme named as transglutaminase comes in action and converts the gluten in such a chemical that causes the immune system to provoke that is autoimmunity. In most severe cases, the villi present in the small intestine are destroyed and losses their normal shape. The other nutrients from the diet could not be absorbed that causes the associated and the secondary diseases [2]. As a survey, it has been analyzed that celiac disease is more common in the people having the family background of diabetes, autoimmune thyroid disease, and microscopic colitis. Celiac disease is a rare disease caused by immune system malfunctioning. There is a wide range of symptoms of this disease. The most common and classic symptoms of celiac disease are lost in weight and diarrhea. They occur due to the poor absorption of proper nutrients in the body. In a survey, it has been summarized that these symptoms appear in less than half of victims. The symptoms greatly vary in intensity and presentation. In some cases, the symptoms are not related to the bowel functioning but appear due to the associated diseases. Some other symptoms are Headache, Weakness, Fatigue, Joint pain, Paraesthesia of hand and feet. Osteoporosis and other bone diseases due to lack of vitamins and abdominal pain and heartburn [3].

**METHODOLOGY:**

In this study, a survey was used to analyze the dietary intake of a patient suffering from Celiac disease. An online survey was conducted on the volunteer basis. The survey conducted covers the points of demography and diet routine. This survey was aimed at getting the comparison of CD patients vs. non-CD patients [4].

Population and sample: There were two populations included in the survey. One was study population that consists of members associated with Louisville and Lexington CD support groups and target population consists of individuals of 18 years and above.

Research design: An online survey was conducted on the volunteer basis. There was no control or experimental group. The online survey was approached by the managing authorities through the common email address [5].

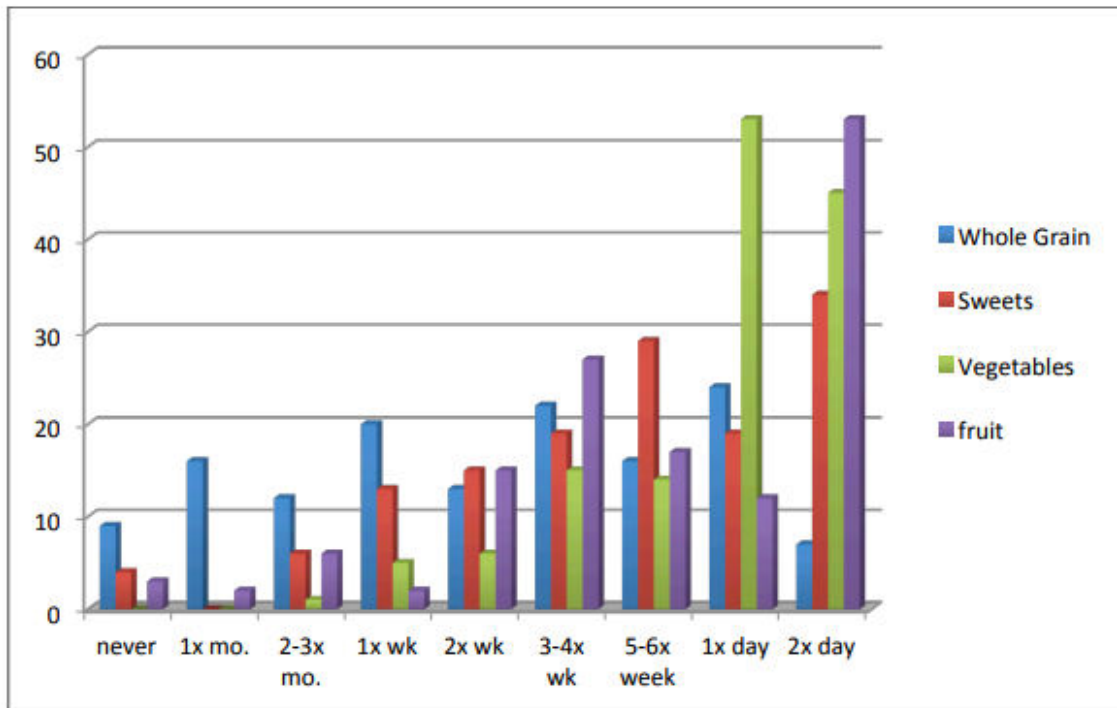
**RESULTS:**

Demographics: It was a random sample that consists of 117 females and 66 males. Total participants in the survey were 145 individuals. 8 participants were not reported. For the demography survey, participants were asked to give their per annum income and educational degree [6]. The annual income as divided into three categories. These categories were \$70,000 per year, \$70,000 to \$120,000, per year and above \$120,000 per year. For the educational background, three categories were made. These categories were less than graduate, graduate and above graduate [7].

Income		
	n = subjects	Percentage
>\$70,000	47	32.4%
\$70,000- \$120,000	42	28.9%
>\$120,000	20	13.8%
Unsure	14	9.7%
Not reported	22	15.2%

Education		
	n = subjects	Percentage
less than a college degree	53	36.5%
4 year degree and above	79	58.5%
Unsure	3	2.2%

Diet: A survey was also conducted for diet on the same group and participated. The results obtained are represented by following graph for 30 days



### DISCUSSION:

As a result of this survey, a link was obtained between the income, education and participants in CD support groups. It was reported that the participants with the income of \$70,000 or more were more willing to join the CD support group. The reason behind this is supposed to be the financial burden of the treatment [8]. Along with higher income participants, members having the degree of four years were more inclined to join CD groups. It is assumed that participants in the college degree may have the high income and more aware of the importance of healthcare facilities. So they would be

more inclined toward CD support groups to ensure better health facilities [9].

### CONCLUSION:

In the survey it is concluded that participants of the higher income and education are more inclined toward the CD support groups. There are more women as compared to men in the support group. The CD dealing physicians are focused on the processes that can ensure a healthy and a gluten-free diet for CD patients [10].

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