

Name: _____

Celiac Disease Case Study

It is Matt's birthday, but he will not be eating any cake. Matt has gluten enteropathy, also called celiac disease. Celiac disease results from an inappropriate immune response to gluten, a group of proteins found in wheat and various other grains. After eating food containing gluten, such as most breads and cereals, Matt has bouts of diarrhea because his intestinal lining is unable to properly absorb water and nutrients. The poor absorption is due to a reduced number of villi, or folds of the intestinal lining, and reduced transport capacity of the remaining cells within the villi. In chapter 3 we learned that water and nutrients enter and exit the body's cells by osmosis and other transport processes. Chapter 4 describes how tissues are specialized to allow this flow of water and nutrients.

Identify the type of tissue affected by Matt's disease.

Which parts of the cells in this tissue are damaged, thus reducing their ability to absorb water and nutrients?

Explain why Matt has diarrhea after eating food containing gluten.

“Tissue Issues”
List of Possible Tissue Related Diseases

1. Lupus
2. Scleroderma
3. Rheumatoid arthritis
4. Vasculitis
5. Polymyositis
6. Dermatomyositis
7. Amyloidosis
8. Osteoarthritis
9. Fibroma
10. Marfan Syndrome
11. Muscular dystrophy
12. Eczema (Dermatitis)
13. Psoriasis

***Tissue Issues* Research Graphic Organizer**

Which disease is being researched?

What are the signs and symptoms of the disease?

Which tissue or tissues are affected by this disease?

How are the tissues affected?

Describe a feedback loop associated with this disease.

Explain the procedure for diagnosing this disease.

Labeled Drawing of Healthy vs. Damaged Tissues

Works Cited [Research to support your statements, with MLA documentation (3-5 sources)]

Tissue Issues Lab Report Graphic Organizer

Purpose

What are you trying to do, prove, find out... What questions are you trying to answer?

Hypothesis

Your answer is your objective in a complete sentence as an IF ... THEN... statement. Do NOT refer to anything as IT.

Materials

LIST all the materials used to perform the lab activity.

Procedure

LIST all the steps used to perform the lab activity

Data

Any drawings, observations, data tables/charts, graphs, calculations

Data Analysis

How will the data be analyzed in order to confirm a reject a diagnosis?

Conclusion

MUST include:

- The answer to your objective
- Whether your hypothesis was correct or incorrect and why.
- All claims must be backed with evidence from your data AND research
- Explain the criteria used to come up with the diagnosis
- Correct use of scientific vocabulary

Works Cited

Research to support your statements, with MLA documentation (3-5 sources)

Tissue Issues

Presentation Checklist

Your presentation must include:

- ____Drawn and labeled model(s) of healthy and damaged tissue & actual pictures of tissue samples
- ____Feedback loop(s) with explanation
- ____Body Systems affected by the disease
- ____Signs and symptoms of the disease
- ____Procedures for diagnosing the disease
- ____Hand in research graphic organizers and CRAAP tests from all group members.
- ____Cite sources in MLA format (minimum of three sources).

Student Reflection Survey

1. How effectively did you work with your group members?
2. What went well or was the easiest part about this assignment?
3. What didn't go well or was the hardest part about this assignment?
4. What part of this assignment would you change? Why?