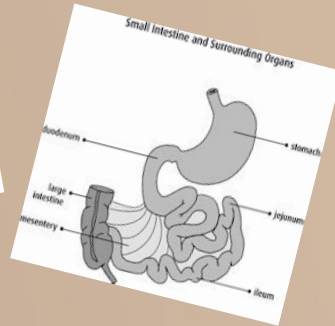
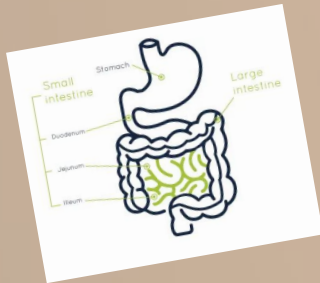


introduction



Our topic question!

~how can gluten affect your small intestine ~ the small intestine is the part of the body where it affects gluten A LOT because the small intestine is the part of the body where it digests food~



We **might** create a diagram that shows how gluten affects the small intestine , and how it works//

EXTRA QUESTIONS

- ~What is brain fog?
- ~what are early warning signs for celiac Disease?
- ~how do allergies form?
- ~what is a gluten belly?
- ~are there different types / levels of celiac disease?
- ~how do you know if you have celiac disease?

Website~<https://www.glutenfreejio.com/frequently-asked-questions-about-celiac-disease/>

Author~Annika dhariwal (there was nobody else that worked with her.)

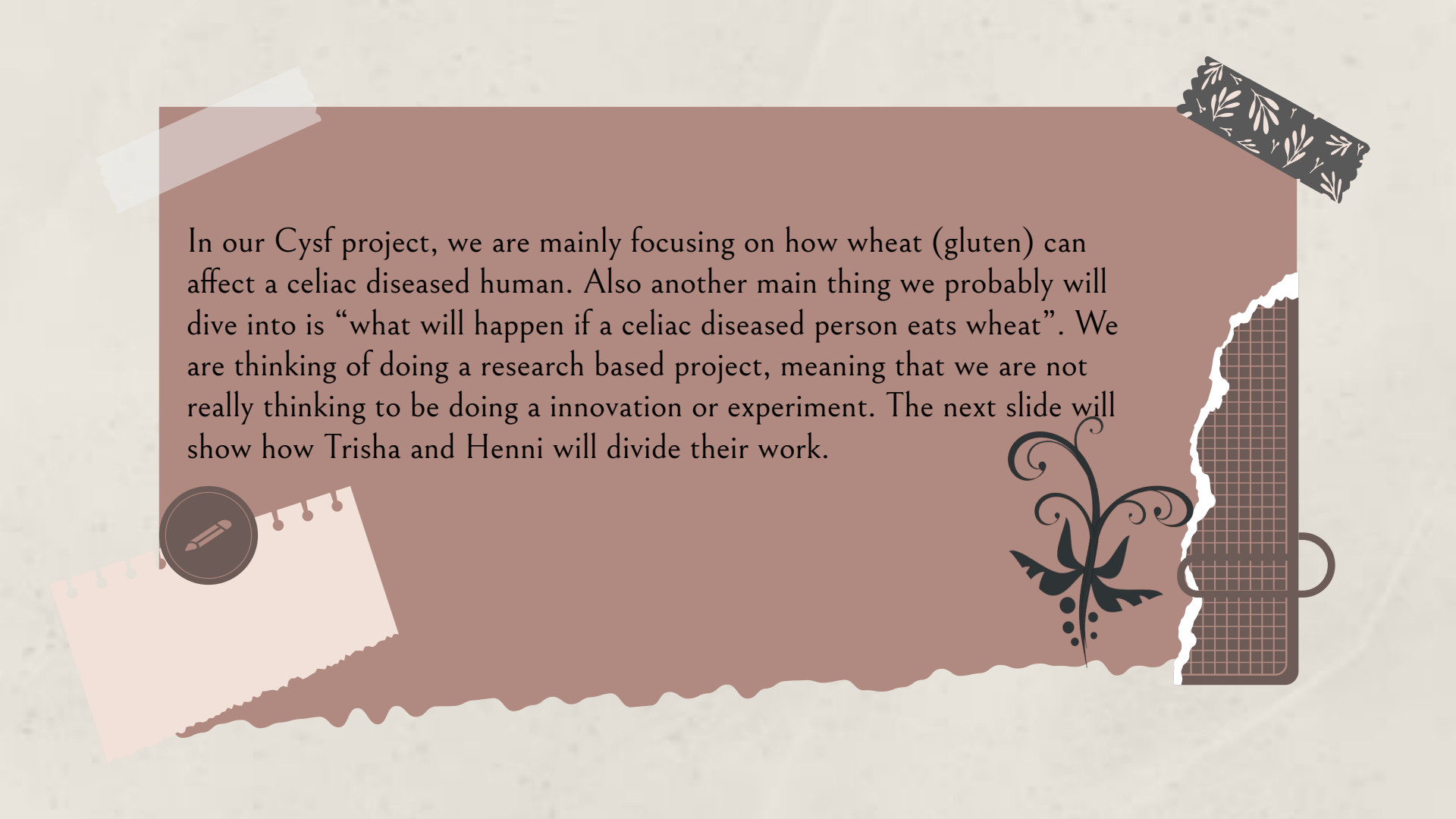
Date~ June 24 , 2022

Part we used~ we kinda randomly made our own questions combined with the reference questions, but we used the info that was on the main page/part

<https://www.eatthis.com/gluten-free-questions/> - we got reference questions from here! we couldn't find info abt it

Nov 15th
Thurs

5:22~
6:00



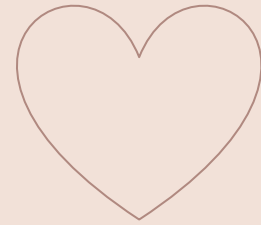
In our Cysf project, we are mainly focusing on how wheat (gluten) can affect a celiac diseased human. Also another main thing we probably will dive into is “what will happen if a celiac diseased person eats wheat”. We are thinking of doing a research based project, meaning that we are not really thinking to be doing a innovation or experiment. The next slide will show how Trisha and Henni will divide their work.

Here are the following 5 (somewhat) starting research questions

- What is a celiac disease?
- Who should avoid eating gluten?
- Is gluten free healthier
- Why is a celiac disease so serious?
- What are examples of gluten free food?
- What are some symptoms of sensitivity?



Henni's &
Trisha's
Logbook



Nov, 4th 2023

Time~ 4:56 -

KEY INFORMATION~

~Make sure to add the date and time your editing your logbook.

~For ***citations*** add the author of the website, when the website was created {date}, the exact info your using, add quotations if your copying their words, reference

~also make sure to start doing your 10 page research page and record everything that your doing

~ highlight **important** keywords/ notes

~ we also tried our best to put a backup link so we know the info is correct from the websites we find

October, 20 2023 Time~ 4:03 -5:33 / Nov 5th~ adding citation stuff/ 1;00-300 / 3 slides at a time

Who should avoid eating gluten?

Celiac disease~ If you have a celiac disease and consume food with gluten , it will affect your immune system and will start growing pain to your intestine. Which is able to stop you from eating foods with nutrients. But a celiac disease can be hard to diagnose, infact **30%** of the world are properly diagnosed.

The Question~ Who should avoid eating gluten? - Celiac

Author - // Valerie Abadie, PhD ~~ Daniel C. Adelman, MD ~~ Benjamin Lebwohl, ~~ Michael Karp, MD, FACP, ~~ Maureen Leonard, MD, MMSc, ~~ Kristin Yarema, PhD, ~~ Jocelyn Silvester, MD, PhD,~~Kristin Yarema, PhD // here are the people who found the research for the first reference // For the second reference the author is Selvi Rajagopal, M.D., M.P.H //

<https://www.hopkinsmedicine.org/research/profiles/browse/a> , here are the people who helped with this website and/or other projects

Website date - First reference: 1990 (the celiac org thingy majiggy was established in 1990 we couldn't find exact date) // Second reference: (nd)

Page/part of info I used- For the first reference I used majority of the first paragraph/in the “about celiac disease” section/ For the second reference it was the 5th question, I used the first bullet point.

Reference-

1. <https://celiac.org/about-celiac-disease/what-is-celiac-disease/>
2. <https://www.hopkinsmedicine.org/health/wellness-and-prevention/what-is-gluten-and-what-does-it-do>

October, 20 2023 Time~ 4:03 -5:33 / Nov 5th~ adding citation stuff/ 1;00-300 / 3 slides at a time

Gluten intolerance~It is able to make you unwell after devouring gluten , and some of the signs for that is bloated, nauseous or gassy.gluten intolerance also causes most symptoms likes a celiac disease , but not the same condition.gluten intolerance is a autoimmune disorder that has mostly all the symptoms that Celiac disease has. Gluten Intolerance also has other symptoms.

The Question~ Who should avoid eating gluten? - Gluten Intolerance

Author - // here are the people who found the research : Selvi Rajagopal, M.D., M.P.H. - the head director , <https://www.hopkinsmedicine.org/research/profiles/browse/a> , (way to many researchers for us to name all of them.)

Website date - (nd)

Page/part of info I used-in the health section/ 5th question / 2nd bullet point

Reference- <https://www.hopkinsmedicine.org/health/wellness-and-prevention/what-is-gluten-and-what-does-it-do>
2. <https://my.clevelandclinic.org/health/diseases/21622-gluten-intolerance>

October, 20 2023 Time~ 4:03 -5:33 / Nov 5th~ adding citation stuff/ 1;00-300 (also we did this other days 2)

Wheat allergy~ If you have a wheat allergy and you consume wheat, you will get a **allergic reaction** that can vary to every human being.

The Question~ Who should avoid eating gluten? - Wheat Allergy

Author - // here are the people who found the research : Selvi Rajagopal, M.D., M.P.H. - the head director (there were way to many researchers for us to name.) <https://www.hopkinsmedicine.org/research/profiles/browse/a>

Website date - (nd)

Page/part of info I used- In the health section / 5th question / 3rd bullet point

Reference-

- 1 . <https://www.hopkinsmedicine.org/health/wellness-and-prevention/what-is-gluten-and-what-does-it-do>
- 2 (backup) . <https://www.mayoclinic.org/diseases-conditions/wheat-allergy/symptoms-causes/syc-20378897>

Is gluten free healthier?

Eating gluten is much more healthier, the reason why eating gluten is much more healthier than a gluten free diet is because a gluten free diet has less minerals, and vitamins. Also, apparently gluten free foods have less fiber but more sugar and fat. //

<https://www.health.harvard.edu/staying-healthy/ditch-the-gluten-improve-your-health#:~:text=While%20many%20people%20think%20gluten,than%20regular%20foods%20containing%20gluten>

Author - // By Robert H. Shmerling, MD,

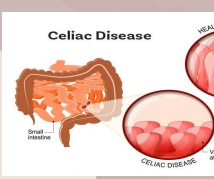
Website date - april 22 , 2022

The Question~ Is gluten free healthier?

Page/part of info I used- 5th question/ we used the majority of these following sentences
“While many people think gluten-free diets are more nutritious and contain more minerals and vitamins than conventional foods, the opposite is often true. Gluten-free foods are commonly less fortified with folic acid, iron, and other nutrients than regular foods containing gluten”

Reference-1.<https://www.health.harvard.edu/staying-healthy/ditch-the-gluten-improve-your-health#:~:text=While%20many%20people%20think%20gluten,than%20regular%20foods%20containing%20gluten>

[BACKUP~https://www.hopkinsmedicine.org/health/conditions-and-diseases/celiac-disease/what-is-a-glutenfree-diet#:~:ext=Keep%20in%20mind%20that%20some,necessarily%20make%20a%20food%20healthy.](https://www.hopkinsmedicine.org/health/conditions-and-diseases/celiac-disease/what-is-a-glutenfree-diet#:~:text=Keep%20in%20mind%20that%20some,necessarily%20make%20a%20food%20healthy.)



Why is a celiac disease so serious?

With a untreated celiac disease , it can start developing other autoimmune disorders , like type 1 diabetes, and a lot of other conditions, Abdominal bloating and pain, Anxiety and depression, Fatigue, Headaches, and weight loss. If you eat wheat, and you have Celiac Disease, you can put your life in risk.

<https://celiac.org/about-celiac-disease/what-is-celiac-disease/#:~:text=Untreated%20celiac%20disease%20can%20lead,conditions%20like%20epilepsy%20and%20migraines%2C>

The Question~ Why is a celiac disease so serious?

Author - Valerie Abadie, PhD ~~ Daniel C. Adelman, MD ~~ Benjamin Lebwohl, ~~ Michael Karp, MD, FACP, ~~ Maureen Leonard, MD, MMSc, ~~ Kristin Yarema, PhD, ~~ Jocelyn Silvester, MD, PhD,~~Kristin Yarema, PhD // here are the people who found the research

Website date - 1990 (the 1990 thingy majiggy was the year the foundation was established)

Page/part of info I used- 3rd part of the “ Symptoms Of Celiac Disease” Its a particular section in the website

Reference-<https://celiac.org/about-celiac-disease/what-is-celiac-disease/#:~:text=Untreated%20celiac%20disease%20can%20lead,conditions%20like%20epilepsy%20and%20migraines%2C>

Backup cite~

<https://www.mayoclinic.org/diseases-conditions/celiac-disease/symptoms-causes/syc-20352220#:~:text=Your%20small%20intestine%20is%20lined,necessary%20for%20health%20and%20growth.>

What are some examples of foods that are gluten free?

Here are the following food items that do not contain gluten/wheat

~ Fruits and vegetables

~Rice flour

~Eggs

~Most low-fat dairy products

The Question~ What are some examples of foods that are gluten free?

Author-

<https://www.mayoclinic.org/about-this-site/meet-our-medical-editors>// here are the list of people that helped with this website and information.

Website date - This website was published during december 11 , 2021

Page/part of info I used- at the 3rd subtitle there is a “thing” that says “allowed fresh food” that is the only part I used in the website

Reference-

1.<https://www.mayoclinic.org/healthy-lifestyle/nutrition-and-healthy-eating/in-depth/gluten-free-diet/art-20048530>

2

(backup).<https://celiac.org/gluten-free-living/gluten-free-foods/>

What are some examples of foods that have gluten?

Here are some of the following food items that contain Wheat/ Gluten

~Muffins

~pretzels

~cookies

~chocolate {only some tho}

~Cake

~Bread

~Brownies

The Question~ What are some examples of foods that contain wheat?

Author - // here are the people who found the research : Henni & Trisha!

Website date - Did not use a website

Page/part of info I used- Did not use a website

Reference- henni has used the information that she knows because she know what she cant consume.

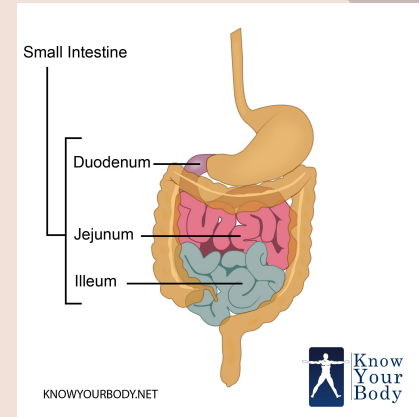
More info about this question;

<https://www.mayoclinic.org/healthy-lifestyle/nutrition-and-healthy-eating/in-depth/gluten-free-diet/art-20048530>

January 12th, 2024 ~ 10:09 to 10:58//

Your small intestine! Your small intestine is the body part that break down food, absorbs nutrients from your food, and get rid of unnecessary stuff (like unnecessary nutrient and waste). Your small intestine is about as big as 20-25 feet in length , and about as big as your middle finger.

The small intestine is divided into 3 main parts~ the duodenum, (doo-oh-duh-num) jejunum, (je-jen-num) and the ileum (i-lee-uhm).



reference~<https://muschealth.org/medical-services/ddc/patients/digestive-organs/small-intestine#:~:text=It%20is%20divided%20into%20three,the%20duodenum%2C%20jejunum%20and%20ileum.>

Backup link~ <https://www.cancer.gov/publications/dictionaries/cancer-terms/def/small-intestine>

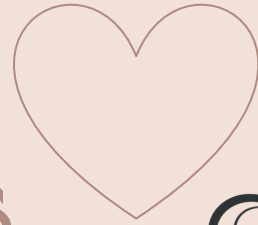
Author/people who helped create this link?

<https://giving.musc.edu/foundation/board-of-directors>

Date the website was published: there foundation was chartered in 1966./

The part we used: We used the info in the main page, under “Small intestine”, we used the first 2 paragraphs under it! So yuhhh

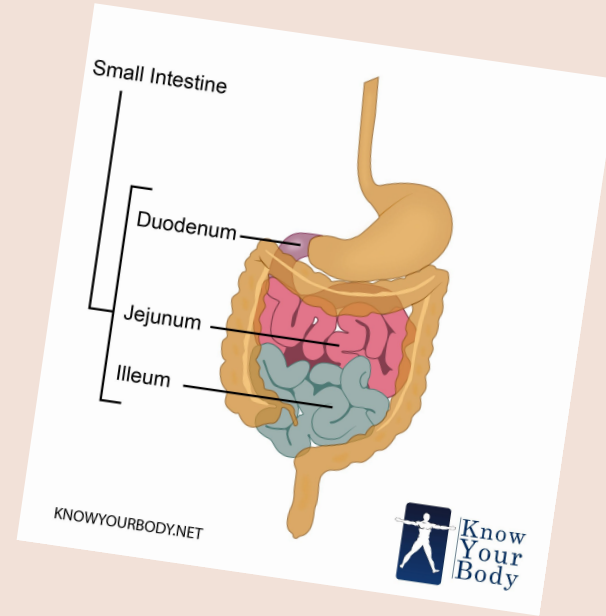
Hennis and
trishas
hypothesis



January 19th, 2024 ~ 5:36

Hypothesis ~henni

Henni~ My hypothesis is on how gluten can affect your small intestine, I think that it can give you like a rash or scar on the celiac body part. I do not have a reaction when I eat gluten, but some people do that have celiac disease, so I think that the people who have a reaction on eating gluten would not only get the reaction but also probably damage their celiac a little bit every time they eat gluten & since its close to their small intestine, + the small intestine is in charge of digestion, I think when the gluten goes through the small intestine then the small intestine hurts since the small intestine breaks down the food and its left with the bad parts which then gives the small intestine pain.



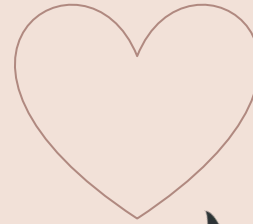
January 19th, 2024 ~ 6:51

Hypothesis

Trisha ~ What i think will happen to your small intestine when you eat gluten , is that the effect on gluten entering the small intestine is that it all depends on that person's health conditions or underlying conditions , such as coeliac disease. i also think that it would cause many headaches and joint pain (for coeliac disease). Another hypothesis that i have is that because the gluten goes through other organs on the way to the small intestine , i think that it would affect those organs as well. Although it does depend on that persons sensitivities & conditions it would still affect your body in some way.



Henni's &
Trisha's
Logbook



January 29th ~ 4:32 - 5:23 henni did this!

What does the jejunum, duodenum, & ileum do in the small intestine?

- One of the things that the **jejunum** does is absorb sugars, amino acids, and also fatty acids. According to the website I used is the jejunum and the ileum is like a protective layer for you stomach.
- The **ileum** is in charge of absorbing any other remaining nutrients that the jejunum, or duodenum did not absorb. Some particular nutrients that the ileum probably absorbs is **vitamins B12** and **bile acids** (like acids that help with digesting fats)
- The **duodenum** is the part of the small intestine where all the absorption actually begins (the duodenum is one of the most important parts of the small intestine for absorbing nutrients and other important chemical molecules) the duodenum is on of the first parts of the small intestine. Apparently there is 4 a parts of duodenum, there is superior, descending, horizontal, & also ascending. The superior part of the small intestine is the only part the is **peritoneal** (like a protective layer).

Citations!!

Reference~<https://www.ncbi.nlm.nih.gov/books/NBK459366/#:~:text=The%20primary%20function%20of%20the,go%20on%20to%20be%20recycled.>

Author/person who helped with the website~ Jason T. Collins; Amanda Nguyen; Madhu Badireddy (there is all information at the very top for author info)

Date that website was published~ I couldn't find the date the web was published, but I did find that the last date that the website was updated was Aug 8th 2023

Part we used of the website~ I used majority of the information under the title "Structure & function"

January 29th ~ 4:32 trisha did this <3

What are the different types / levels of celiac disease

- **The first type is classical.** For the people who have classical celiac disease but tend to still eat gluten, have a higher likelihood that people who have classical celiac disease, will make pale, smelly, and fatty stools. Some warning signs for classical celiac disease are digestive issues and symptoms, diarrhea, unexplained weight loss, & stunted growth in children.
- **The second type is Non-classical.** The difference between classical & non-classical, is that non-classical celiac disease people may not experience bad symptoms of the amount of difficulty it takes to digest food.
- **The third type is silent.** And it is called this because people who suffer with it do not experience any kind of symptoms connected to celiac at all. But wait, if someone doesn't have any symptoms, then how do they know if they have celiac? Well that's because someone who suffers with it, will experience damage to their small intestine, but yet can still live life fine.

1. Reference~
<https://www.letsgetchecked.com/articles/what-is-celiac-disease/#:~:text=There%20are%203%20common%20types,symptoms%20can%20range%20in%20severity.>
2. Hannah Kingston // the person who created this article - Dr Dominic Rowley // the person who medically reviewed it.
3. This article was published during on September 13, on 2023
4. Reference - the part of the article that i used was the topic 4, and got my information from topics 5-7. (NOTE : what i mean by topics is for example, the first topic is "what is celiac disease?" and so on. I decided to chose this way so that it would be easier for me and you:))
5. Backup link~
<https://www.schaer.com/en-int/faqs/types-of-coeliac-disease#:~:text=There%20are%20different%20types%20of,times%20in%20a%20person's%20life.>

January 31st ~ 2024 6:44~ trisha did this <3

What is coeliac disease? , & what causes it?

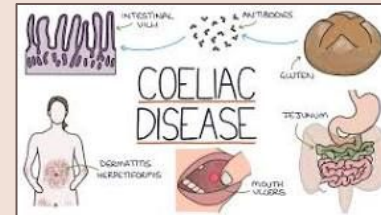
- When you have coeliac disease , you immune system Will attack your very own cells when you digest Gluten. It then damages your small intestine to the Point where your body cannot properly digest Nutrients. It's also about to cause a bunch of Symptoms which includes diarrhea , and Abdominal pain + bloating.
- Because coeliac disease is a **autoimmune system** (that's where the immune system mistakenly Attacks a healthy tissue) . The immune system Mistakes a substance that's inside of the gluten To be a **threat that can harm the body**. So It attacks it. It then damages the surface of the Small bowl (intestines) & disturbing the body's Ability to **digest nutrients from food**.

By the way there is no difference between celiac disease and coeliac disease (there the same)

Reference~

<https://www.nhs.uk/conditions/coeliac-disease/#:~:text=Coeliac%20disease%20is%20a%20condition,diarrhoea%2C%20abdominal%20pain%20and%20bloating>.

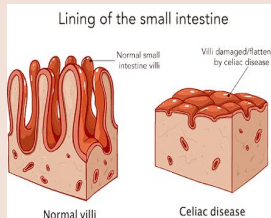
1. The website didn't give me an the author or the when the website was created
2. The part I used of the website: if you were to go onto the website , then the first part of information that's highlighted in purple , and if you scroll down from there , then you see the title "**Symptoms of coeliac disease**". (I didn't name all symptoms)
3. Backup link~
<https://www.hopkinsmedicine.org/health/conditions-and-diseases/ceeliac-disease#:~:text=Key%20points-.Celiac%20disease%20is%20a%20digestive%20problem%20that%20hurts%20your%20small.to%20hurt%20your%20small%20intestine>.



January 31st, 2024 6:44~ 7:30 (henni did this)

What part of the small intestine is affected by celiac disease?

- The main part that wheat affect is the small intestine lining, one of the main reason why is because the small intestine lining absorbs nutrients from digested food, but the fact is that **wheat is a grain** that is sometimes not even digested properly. The small intestine area is mostly damaged by the jejunum (upper part of the intestine).
- The reaction of the gluten to the lining of the small intestine can **inflate and sometimes even become leaky** ~~ like the inside of the villi there is this thick slippery fluid called the Mucosa, so sometimes the cells can **Leak** ; **water & salt** will leak and other molecules.



Citations!!

Referance~<https://muschealth.org/medical-services/ddc/patients/digestive-diseases/small-intestine/celiac-disease#:~:text=Patients%20with%20celiac%20disease%20who,and%20have%20not%20been%20diagnosed.>

The website date + author(s) we not found

Part of the website we used~ I used the information under "Celiac disease" (if you go to the digestive disease centre~patients~ small intestine~ and then celiac disease then it will lead you to the exact paragraph)

Backup link~
<https://www.hopkinsmedicine.org/health/conditions-and-diseases/celiac-disease>



henni 23/11

Small intestine / Food & absorption / January 27

- the digestive system is as long as a bus
- from mouth to anus (9 meters long)

Your digestive system not only includes **digestion**, but also **absorption** & **excretion**

Digestion: **breakdown** of food, from large **insoluble molecules** into **small molecules**
the small molecules (like proteins) will then be used by your body


Digestive enzymes + Bile & emulsification =
break down food

as **carbohydrates** move through the digestive system, they are broken down into **sugars**

Proteins are broken down into **Amino acids**

Fats are broken down into **Fatty acids**

- the small intestine is in charge of absorbing the small soluble molecules - such as the amino, sugars, & fatty acids (these soluble molecules absorb in the blood stream)




Link~ <https://www.youtube.com/watch?v=cEh2Qip0-E4>

The video did not tell any information about the author (channel name "FuseSchool")

Date the video was published ~ May 12th 2020

Reference: until 1;50



February 2nd~ 5:16-5:52

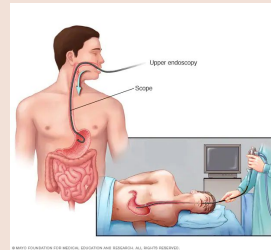
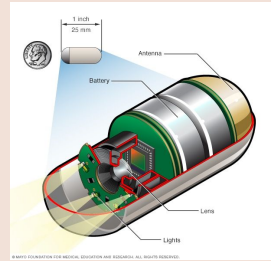
How can you find out if you have celiac disease?

You can find out if you have celiac disease with 2 types of blood tests, **Serology testing & Genetic testing.**

Also, if you really wanna be exact if you have celiac disease then you could take an endoscopy, (there is also a capsule endoscopy) and another surgery is biopsy.

Endoscopy~ Endoscopy works with a long tube with a tiny camera attached to the tube that goes through the digestive system to see the small intestine which lead for the person to see the damage gluten has done to the villi, if that person has celiac.

Capsule endoscopy~ Capsule endoscopy is when you use a wireless camera (which is basically the size of a vitamin capsule) that can take a lot of pictures of the entire small intestine.



Citations!!

Cite I used ~

<https://www.mayoclinic.org/diseases-conditions/celiac-disease/diagnosis-treatment/drc-20352225>

<https://www.massgeneral.org/children/celiac-disease/endoscopy-biopsy-for-celiac-disease-what-to-expect#:~:text=An%20endoscopy%20does%20not%20cause,signs%20of%20disease%20or%20infection.> ~ where I got what endoscopy & biopsy even is

Website publishing ~ © 1998-2024 Mayo Foundation for Medical Education and Research (MFMER). All rights reserved.

Authors/ people who helped during the process of creating the website-<https://www.mayo.edu/research/faculty>

Part I used of the website- I pretty much used majority of the information under diagnosis

Backup cite

<https://www.webmd.com/digestive-disorders/celiac-disease/celiac-disease-diagnosis-tests>

February, 11 2024 ~ 6:10/6:32 (although this took me (henni) all 1 hour to write in a google doc)

How does food move around the digestive system?

Humans eat on average between one and 2.7 kilograms of food a day.

That is 265 kilograms of food a year per person.

And every last scrap makes it through that digestive system.

Comprising 10 organs covering 9 meters and containing over **20 specialized cell types**.

This is one of the most diverse and complicated systems in the body.

Spanning the entire length of your torso, **the digestive system has 4 main components**.

First there is the **gastrointestinal tract**, a twisting channel that transports your food and has an internal surface area between 30 + 40 square meters, enough to cover half a badminton court.

Second there is the **pancreas, gallbladder, & liver**, a trio of organs **that break down foods using an array of special juices**.

Third, the **body's enzymes, hormones, nerves and blood**, which all work together to break down food, modulate the digestive process, and deliver its final products.

Finally there is the **mesentery, a large stretch of tissue** that supports and positions all your digestive organs in the abdomen, enabling them to do their job.

February, 11 2024 ~ 6:10/6:32 (although this took me (henni) all 1 hour to write in a Google Doc.)

How does food move around the digestive system?

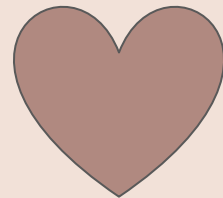
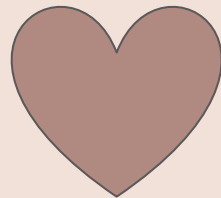
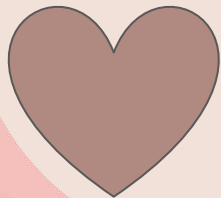
The digestive process begins before food even hits your tongue.

Anticipating a tasty morsel glands in your mouth start to pump out saliva. Once inside your mouth, **chewing combines with the sloshing saliva** to turn food into a moist lump called a **bolus**. Enzymes present in the saliva break down any starch. Then food finds itself at the rim of a **25 cm long tube called the esophagus**, down which it must plunge to reach the stomach. Nerves in the esophageal tissue sense the boluses' presence and trigger the peristalsis, which is a series of defined muscular contractions. That **propels the food into the stomach**, where it's left at the mercy of the muscular stomach walls, which pound the bolus, **breaking it into chunks**. Hormones, secreted by cells in the lining, trigger the release of acids and enzymes-rich juices from the stomach wall that start to **dissolve** the food and break down its proteins. These hormones also alert the pancreas, liver, and gallbladder, to produce digestive juices, and transfer bile, a yellowish-green liquid that digests fat in preparation for the next stage. After 3 hours inside your stomach, the once shapely **bolus is now a frothy liquid called chyme**, and it's ready to move into your small intestine. The liver sends bile to the gallbladder, which secretes it into the first portion of the small intestine called the duodenum. Here it dissolves the fats floating in the slurry of chyme so they can be easily digested by the pancreatic and intestinal juices. These enzyme-rich juices break the fat molecules down into fatty acids and glycerol for easier absorption into the body. The enzymes also carry out the final deconstruction of proteins into amino acids, and carbohydrates into glucoses. This happens in the small intestine in the lower regions, the jejunum and ileum.

February, 11 2024 ~ 6:10/6:32 although this took me (henni) all one hour to write down in a google doc)

How does food move around the digestive system?

Which are coated in millions of tiny projections called the villi. **These create a huge surface area to maximize absorption and transference into the bloodstream.** The blood takes them on the final leg of their journey, to feed the body's organs & tissues. But it's not over quite yet, **leftover water, fiber, and dead cells, sloughed off during digestion** make it into the large intestine, also known as the colon. The body drains most of the remaining fluids through the intestinal wall. What's left is a soft mass called a **stool**. The colon squeezes this byproduct into a pouch called the rectum, where nerves sense it expanding and tell the body when it's time to expel this waste. The byproduct of digestion exit through the anus and the foods long journey typically **lasting 30 to 40 hours is finally complete**



Citations!!

Video I used ~ [How your digestive system works - Emma Bryce](#)

Video publishing ~ Dec 14 2017

Authors/ people who helped during the process of creating the vid~ the lesson was by **Emma bryce**, and the animations is by **Augen blick studio**, Narration by; **Addison Anderson**

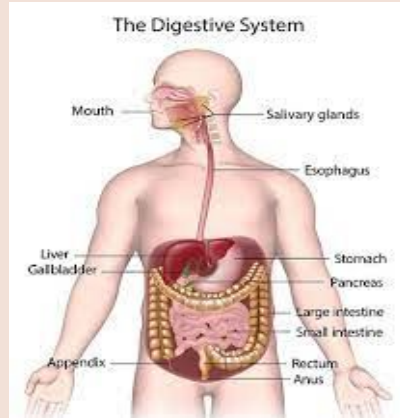
Reference~ the whole video// please keep in mind that henni transcribed the video

February 14th, 2024

What is a GI tract?

The GI tract (also known as the gastrointestinal tract) is the pathway that leads to the digestive system (mouth to anus). The GI tract contains all the major organs in the digestive system, including the esophagus, stomach, and the small + large intestine. The gastrointestinal tract is divided into the upper and lower gastrointestinal tract.

"Gastrointestinal is an adjective meaning of or pertaining to the stomach and intestines."

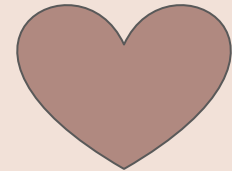


Citations!!

[cite~https://en.wikipedia.org/wiki/Gastrointestinal_tract](https://en.wikipedia.org/wiki/Gastrointestinal_tract)

Reference~ first 3 paragraphs

I did not have access to the publishing or/and the person who created the information



Extra
citations



We did not add the date bc we will keep on adding to this!

<https://www.hopkinsmedicine.org/health/wellness-and-prevention/what-is-gluten-and-what-does-it-d>

<https://my.clevelandclinic.org/health/diseases/21622-gluten-intolerance>

<https://www.eatthis.com/gluten-free-questions/> - we got reference questions from here! we couldn't find info abt it

<https://dinnertonight.tamu.edu/what-is-gluten-free/>

<https://www.health.harvard.edu/staying-healthy/ditch-the-gluten-improve-your-health#:~:text=While%20many%20people%20think%20gluten,than%20regular%20foods%20containing%20gluten.>

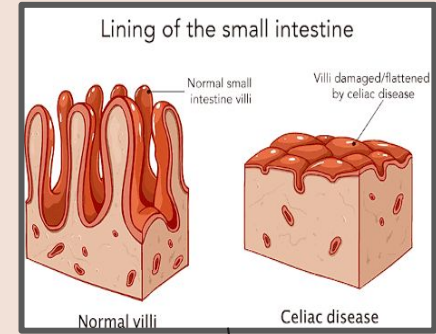
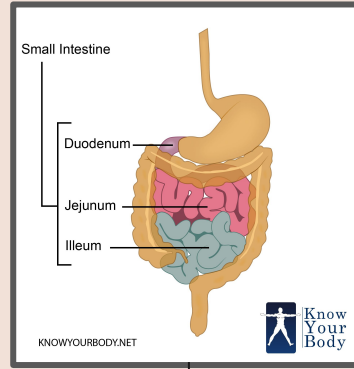
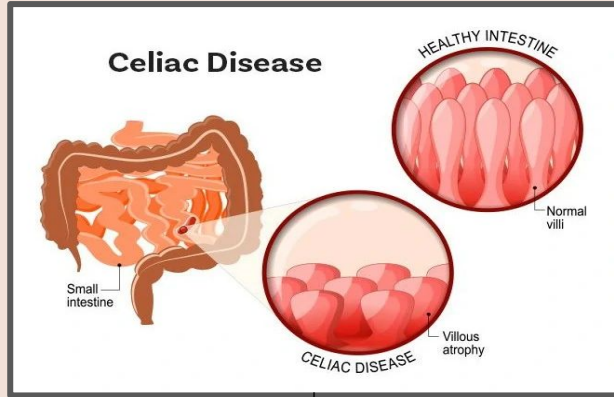
<https://celiac.org/about-celiac-disease/what-is-celiac-disease/#:~:text=Untreated%20celiac%20disease%20can%20lead,c onditions%20like%20epilepsy%20and%20migraines%2C>

<https://www.mayoclinic.org/healthy-lifestyle/nutrition-and-healthy-eating/in-depth/gluten-free-diet/art-20048530>

picture
citations



Image citations//

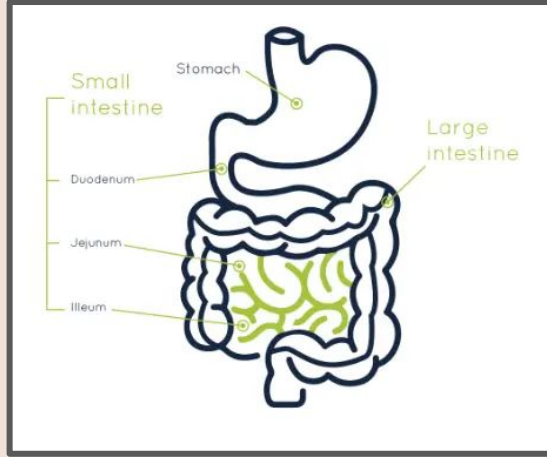


<https://celiac.org/about-celiac-disease/what-is-celiac-disease/#:~:text=Untreated%20celiac%20disease%20can%20lead.conditions%20like%20epilepsy%20and%20migraines%2C>

<https://www.knowyourbody.net/small-intestine.html>

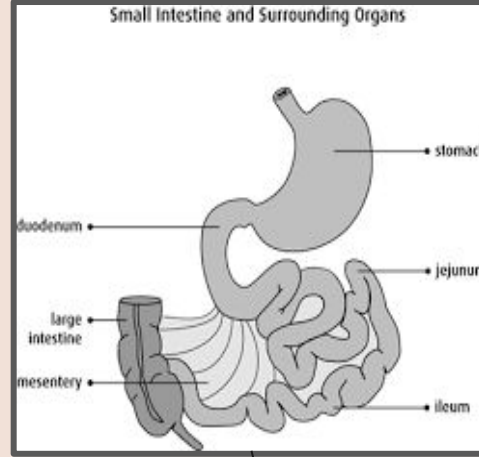
<https://www.beyondceliac.org/celiac-disease/>

Image citations//



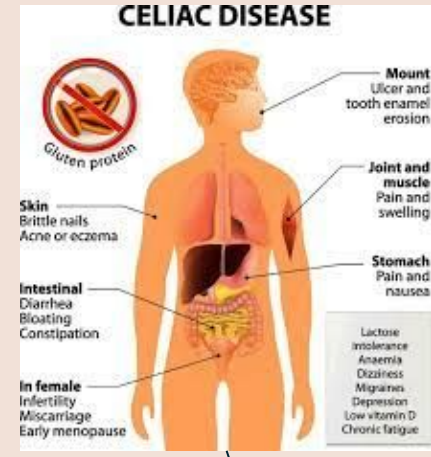
<https://www.careerpower.in/school/biology/small-intestine>

We searched up "stomach , small intestine , large intestine diagram"



<https://cancer.ca/en/cancer-information/cancer-types/small-intestine/what-is-small-intestine-cancer/the-small-intestine>

We searched up "small intestine and surrounding organs."



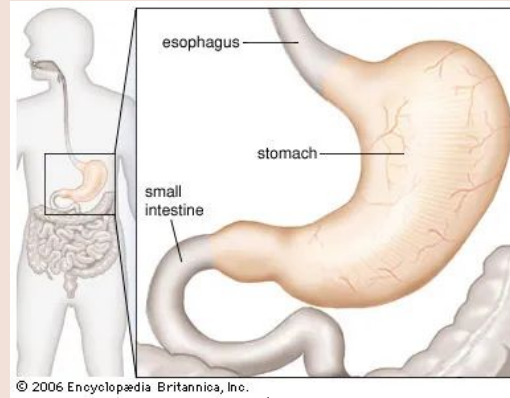
<https://medlineplus.gov/genetics/condition/celiac-disease/>

We searched up "celiac disease"

Image citations//

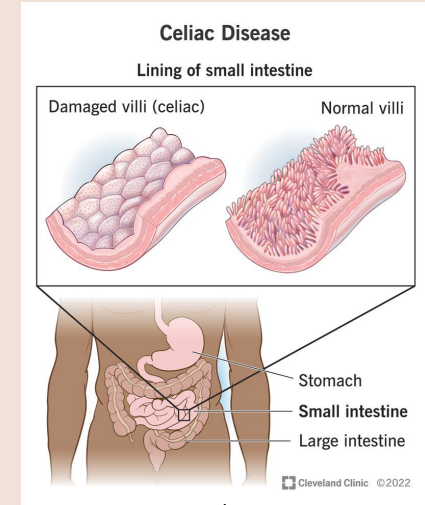


<https://www.niddk.nih.gov/health-information/digestive-diseases/digestive-system-how-it-works>



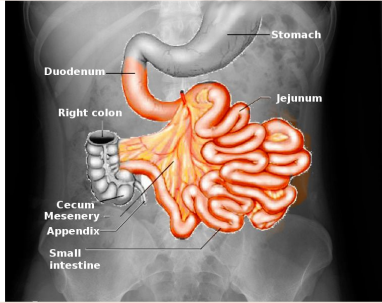
<https://www.britannica.com/science/stomach>

We searched up “how does the esophagus stomach and small intestine connect together”



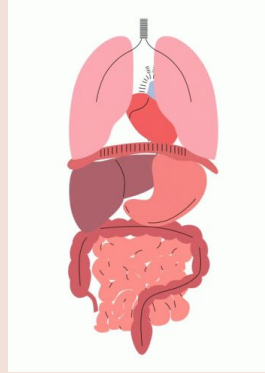
<https://my.clevelandclinic.org/health/diseases/14240-celiac-disease>

Image citations//



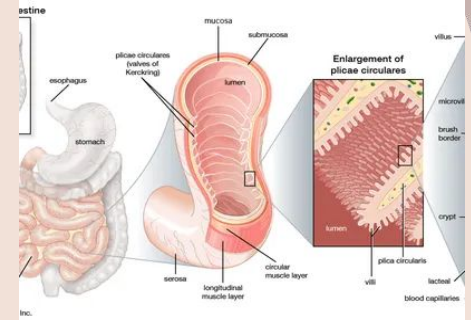
cite/

<https://www.ncbi.nlm.nih.gov/books/NBK459366/#:~:text=The%20primary%20function%20of%20the,go%20on%20to%20be%20recycled>



<https://giphy.com/gifs/body-systems-organs-lckhlaarcBT20CXRDo>

We got this image from google gifs we searched up; "digestive system"

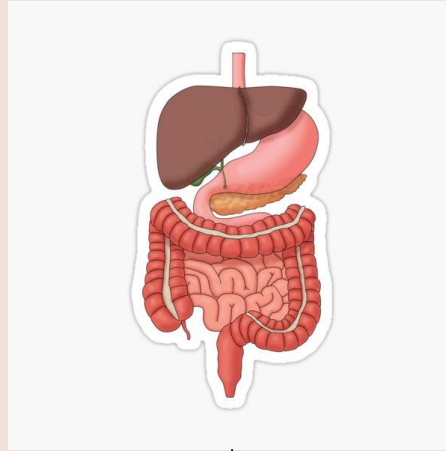


<https://www.britannica.com/science/small-intestine>

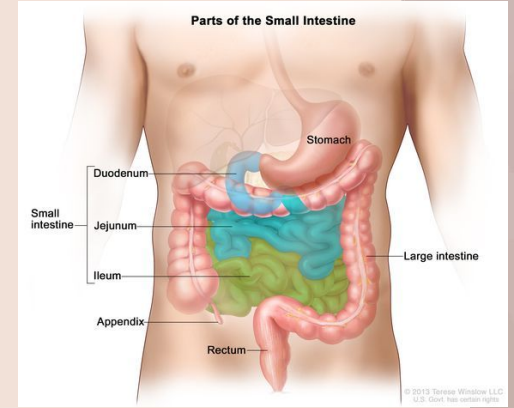


<https://www.pinterest.ca/pin/844143523930755348/>

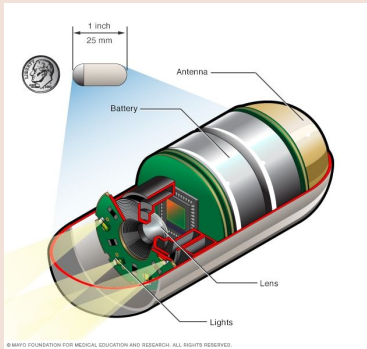
We got this image from google gifs we searched up; "dancing cat"



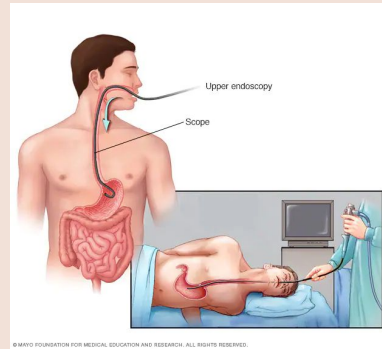
<https://www.redbubble.com/i/sticker/Digestive-System-Organs-Medical-Illustration-by-ScienceSource/61542610.EJUG5j>



<https://www.cancer.gov/publications/dictionaries/cancer-terms/def/small-intestine>



<https://www.mayoclinic.org/diseases-conditions/celiac-disease/diagnosis-treatment/drc-20352225>



<https://www.mayoclinic.org/diseases-conditions/celiac-disease/diagnosis-treatment/drc-20352225>