

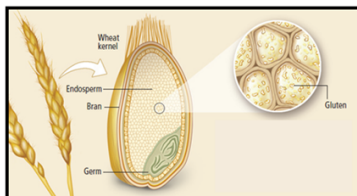
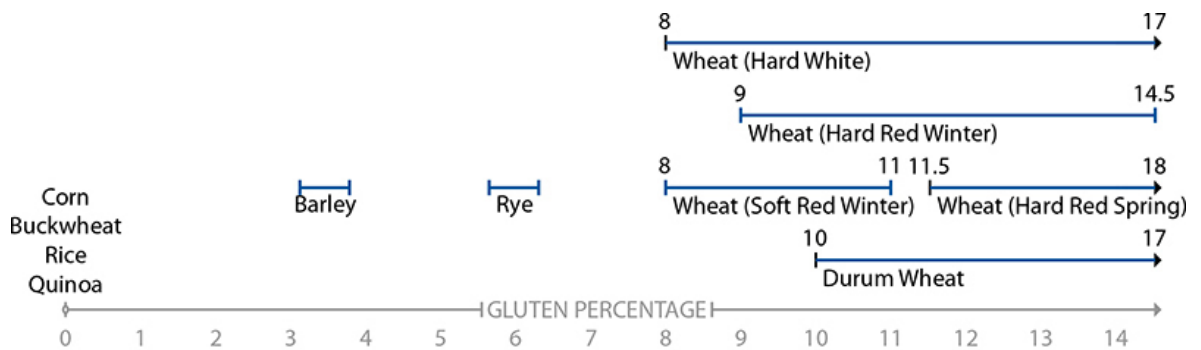


Unit 1

GLUTEN AND CELIAC DISEASE



Not all flours make gluten



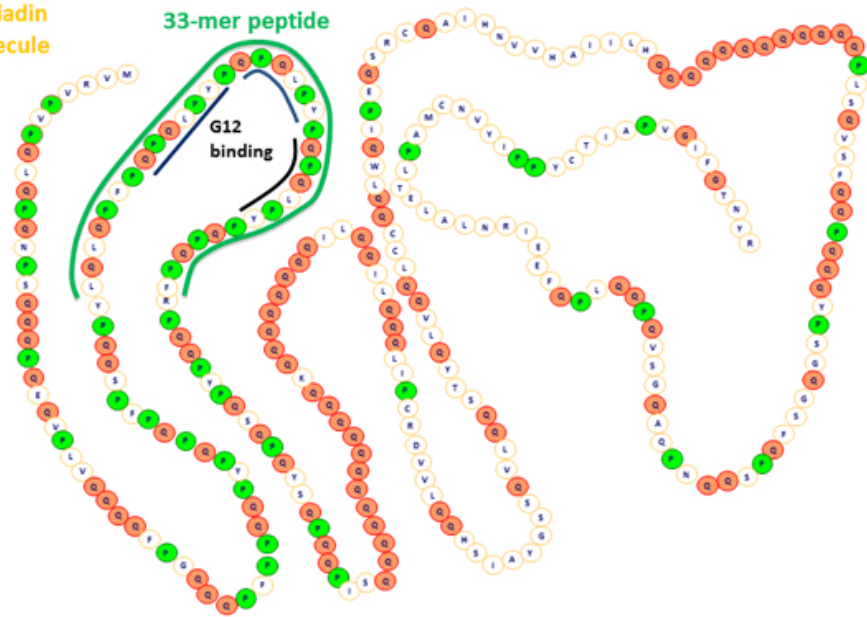
- Cake Flour
 - Cakes
 - Pastry Flour
 - Pastries
 - Gravy and Sauces
 - AP Flour
 - General Baking
 - Cookies
 - Pancakes
 - Bread Flour
 - Yeast Breads
 - Croissants
 - Rolls



Gluten can be a problem

Celiac Disease

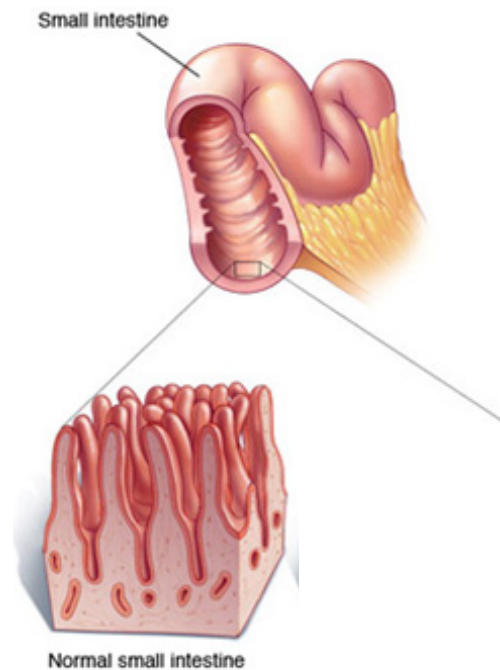
α -gliadin molecule



For a person with Celiac Disease, their bodies react to the broken down pieces of glutenin and gliadin. This 33 amino acid piece of gliadin is particularly problematic.

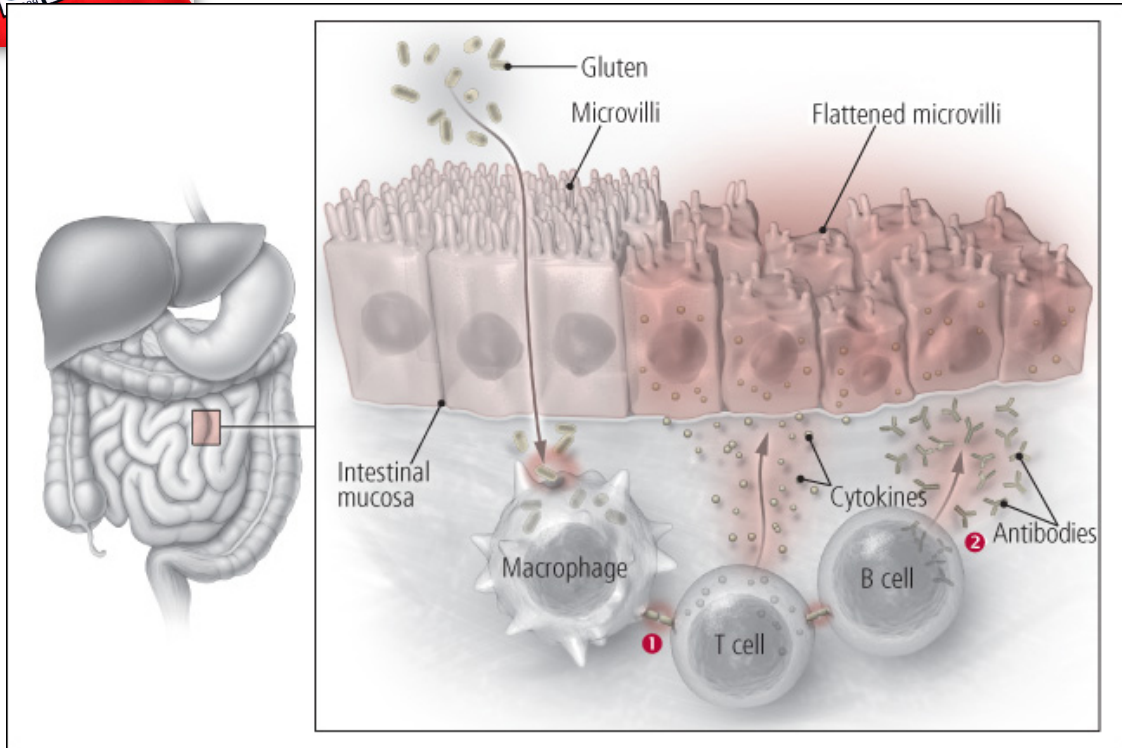


Celiac Disease



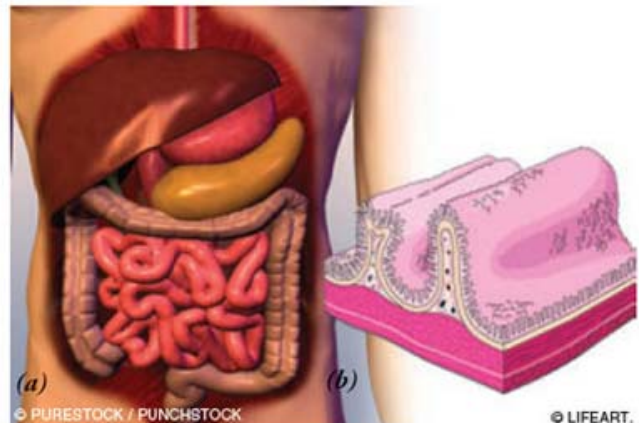


Celiac Disease



Celiac Disease

Figure 1. Pathology of celiac disease.



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When a person with celiac disease consumes foods or uses products that contain gluten, his or her immune system reacts by damaging the small intestine (a), and the minute, fingerlike protrusions that line the small intestine, called villi (b), are damaged or destroyed. Normally, the villi permit nutrients from food to be absorbed into the bloodstream. If the villi are not healthy or have been destroyed, a person becomes malnourished regardless of the quantity of food eaten.



Can you make bread without gluten?

GM wheat with low amounts of gliadins (nearly gliadin-free)

Well...yes...and no.

