Beyond Stomach Pain

Trace how different causes produce similar digestive symptoms

HAP.13.7 "Research and analyze the causes and effects of various pathological conditions (e.g., GERD/acid reflux, stomach ulcers, lactose intolerance, irritable bowel syndrome, gallstones, appendicitis, and hormonal imbalances and obesity)."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline each condition's cause and circle its effects or symptoms. Number one cause and its related effect with the same number so you can trace how they connect.

Same Symptom, Different Cause

(1) A cafeteria lunch can lead to very different kinds of digestive trouble. In gastroesophageal reflux disease, or GERD, the muscle ring between the esophagus and stomach does not keep stomach contents down. Acid moving upward irritates the esophagus, often causing burning behind the breastbone, especially after eating or lying down. A stomach ulcer is different: a sore develops in the stomach lining when its protective barrier is damaged. Infection with Helicobacter pylori or frequent use of certain pain relievers, such as ibuprofen, can contribute. Ulcers may cause upper abdominal pain or bleeding, so similar burning sensations do not prove the same cause.

(2) Milk and cheese present another clue. People with lactose intolerance make too little lactase, the enzyme that breaks down milk sugar in the small intestine. Undigested lactose reaches the colon, where bacteria ferment it, producing gas, bloating, and diarrhea. Irritable bowel syndrome, or IBS, can also involve abdominal pain, bloating, and changes in bowel movements, but it is not caused by a lactase shortage. IBS involves altered gut sensitivity and bowel function; its triggers can differ among people. A symptom shared by two conditions does not identify the cause. Patterns, such as symptoms after dairy, can guide further investigation.

(3) Gallstones form when substances in bile harden in the gallbladder. A stone blocking a bile duct can cause sudden upper right abdominal pain, often after a fatty meal; a blockage can also lead to inflammation or infection. Appendicitis begins when the appendix becomes blocked and inflamed, causing pain that may move to the lower right abdomen, often with fever. It needs prompt medical assessment because the appendix can rupture. Hormones matter too: low thyroid hormone can slow energy use and contribute to modest weight gain. Obesity has many causes, not just hormones, and can raise the risk of gallstones.

2 ANSWER WITH EVIDENCE

Use the passage

1. GERD and a stomach ulcer can both cause a burning sensation. How does the cause of that sensation differ between them?

2. Why might symptoms after dairy suggest lactose intolerance rather than IBS? Why is that pattern not enough to prove the cause?

3. Compare how a blockage can lead to symptoms in gallstones and appendicitis. Which condition does the passage say needs prompt assessment, and why?

4. Trace a possible path from low thyroid hormone to a higher risk of gallstones. Why would this path not apply to every person with obesity?

3 YOUR TURN

Your own words

A classmate says, "All stomach pain comes from too much acid, so an antacid will help everyone." Write one paragraph that challenges this claim using three conditions from the passage, including appendicitis. For each condition, connect a cause to an effect, and explain why the same response is not right for everyone.

Beyond Stomach Pain

PART 1 · READ AND MARK

Underline each condition's cause and circle its effects or symptoms. Number one cause and its related effect with the same number so you can trace how they connect. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	GERD and a stomach ulcer can both cause a burning sensation. How does the cause of that sensation differ between them?	**In GERD, stomach acid moves upward and irritates the esophagus. An ulcer is a sore in the stomach lining that develops when its protective barrier is damaged.**
2	Why might symptoms after dairy suggest lactose intolerance rather than IBS? Why is that pattern not enough to prove the cause?	**Lactose intolerance can cause gas, bloating, and diarrhea when undigested lactose is fermented in the colon. IBS can share symptoms, and a symptom pattern only guides further investigation.**
3	Compare how a blockage can lead to symptoms in gallstones and appendicitis. Which condition does the passage say needs prompt assessment, and why?	**A gallstone blocking a bile duct can cause upper right abdominal pain and may lead to inflammation or infection. A blocked, inflamed appendix can cause pain that moves to the lower right abdomen; appendicitis needs prompt assessment because the appendix can rupture.**
4	Trace a possible path from low thyroid hormone to a higher risk of gallstones. Why would this path not apply to every person with obesity?	**Low thyroid hormone can slow energy use and contribute to weight gain; obesity can raise gallstone risk. Obesity has many causes, and increased risk does not mean gallstones are certain.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Stomach pain can have causes that an antacid does not address. In lactose intolerance, too little lactase leaves milk sugar undigested, and bacteria ferment it, causing gas and bloating. A gallstone can block a bile duct and cause sudden upper right abdominal pain. In appendicitis, a blocked appendix becomes inflamed, causing pain that may move to the lower right abdomen. Appendicitis needs prompt medical assessment because the appendix can rupture. These different causes call for investigation, not the same response for everyone.

Accept accurate cause-and-effect links stated in the passage. Students should distinguish a possible clue or increased risk from proof of a condition.