

## 20 Questions: Abdominal Pain

1. What are the main areas we typically divide up the abdomen into for purposes of palpation and general organ location.
2. What portions of the history are important?
3. How often does a patient who comes to the ED with abdominal pain leave with a clear diagnosis?
4. You were just dispatched to 20 y/o female who initially had abdominal pain and while en route, the CAD shows she just had a syncopal episode. What is the Dx until proven otherwise?
5. What types of abdominal issues will make a person nauseated / vomit?
6. You and your partner are dispatched to the home of 68 y/o male with abdominal pain. When you walk in the smell of stale smoke is overwhelming. You find he's dropping his BP and he tells you that his low back hurts as well. What is the Dx until proven otherwise?
7. How important is the history of smoking for possibility of AAA?
8. Wait, did question #4 mention anaphylaxis as a cause of abdominal pain?
9. You are called to 50 y/o male with abdominal pain and vomiting. On exam, you notice a large midline scar from a prior surgery (reports he was stabbed). How does this change your differential?
10. You're at a high school football game when a player is down after what appears to be a routine tackle. Once at his side, you see he's quite pale and tells you the only thing different lately has been a sore throat. What is your concern?
11. What organs do we think about being in the left lower quadrant (LLQ)?
12. Your patient is a 24 y/o female who reports pain the right lower quadrant (RLQ), what things should you be thinking about?
13. You go pick up a 34 y/o male who was shot in the LLQ. He's vitally stable so far but in a lot of pain. What are his next few hours going to look like?
14. Why is abdominal pain so hard to diagnose?
15. Your patient winces in pain with every bump in the road on the way to the hospital. Why is this worrisome?
16. What kind of issues cause an acute abdomen?
17. You're called to an 11 y/o male who had sudden onset lower abdominal pain. Earlier in the day, he felt fine and even played soccer all afternoon. What are you worried about?
18. You're transferring an 85 y/o female with A-fib who looks like she feels terrible, but the exam just isn't that impressive. It doesn't seem to matter if you're mashing on her belly or not touching it at all. What's the concern?
19. What are the risk factors for gastritis or ulcers?
20. My partner just took some Pepto Bismol and now has a black tongue... Are they going to die?

## 20 Answers: Abdominal Pain

1. First, the borders of the abdomen are the areas between the lower border of the ribs and the upper border of the pelvis. We divide the abdominal area into four main quadrants. Left upper, Right upper, Left lower and right lower. Afterwards, we tend to refer to the upper upper central abdomen (just below the xiphoid process) as the epigastric area. The lower central area (just above the pubic symphysis) as the suprapubic area.
2. This is a great time to use the AMPLE history and either PQRST or OLDCART frameworks. AMPLE = Allergies, Medications, PMHx, Last meal, and Event. PQRST = Precipitating/Alleviating factors, Quality, Radiation, Site/Severity, Timing/Treatment. OLDCART = Onset, Location, Duration, Character, Associated Sx's, Radiation and Timing/Treatment.
3. Only about 50% of the time do we have a clear idea of what's causing a patient's abdominal pain from the initial ED visit.
4. You have to be thinking ruptured ectopic. Given the patient's demographic and progression this is going to be ruptured ectopic until proven otherwise. This is a surgical emergency. In these cases, the fertilized egg will implant in an inappropriate place and when the implanted gestational sac ruptures there will be uncontrolled internal bleeding.

5. The body's typical response to a hollow viscus injury or obstruction is to vomit. For example, if you have a bowel obstruction, kidney stone, gall stone or any time that there is a hollow tube within the body that is blocked. This is in addition to medications, anaphylaxis, etc.
6. This guy you have to be thinking ruptured AAA. The aorta is retroperitoneal and therefore people experience back pain as well. As a group, these patients don't do well and if you're worried about ruptured AAA they should be taken to hospital that can perform immediate surgical repair.
7. The biggest and most important risk factor of developing a AAA is a smoking history. When you have a patient in this decade of life (60's) it should be considered because it may be a new diagnosis.
8. Yes, the well-known signs of anaphylaxis are difficulty breathing, throat swelling, and hives. However, patients with anaphylaxis may also develop other signs of diffuse histamine release such as: wheezes on lung exam, stridor, syncope, hypotension, and abdominal pain.
9. This would make the possibility of spontaneous bowel obstruction (SBO) rise on the list. The symptoms of SBO are abdominal distension, vomiting, and decreased or absence of flatulence. About 85% of SBO's are cause from internal scarring from prior surgeries.
10. You have to think something's not right after a routine hit. His sore throat might have been caused by Mono. Those children can get enlarged spleens. If this is known they are taken out of contact sports but if it's not they could experience blunt trauma to spleen causing a splenic rupture or laceration. He may need emergent surgery.
11. We typically think of the colon as the main one. Often people with diverticulitis or inflamed/infected colon can have pain here. In a reproductive age female we think about the left ovary. Otherwise, there isn't typically much else there of immediate concern.
12. Just about anything. We think of the appendix being in the RLQ pretty commonly. However, she could have ovarian pathology. She might have other colon issues (less likely without a history) as well. In young female, pain the RLQ really keeps all the abdominal and pelvic causes of pain as possibilities.
13. Penetrating trauma that violates the peritoneum (anything that truly gets into the abdominal cavity) is always going to go to the OR. These people will have to undergo at least an exploratory surgery to see if bowel was injured, fix any bleeding issues, and assess damages. Sometimes they'll get a CT first but you can bet their going to the OR before they get settled into their hospital bed.
14. Our bodies are really good at identifying the location of pain when it is external. However, when pain is coming from an internal organ our bodies aren't necessarily great at identifying the location. The nerve fibers carrying information about internal pain typically run with the sympathetic nerve fibers (fight or flight response). We'll get a general area of pain but it can difficult to localize. It becomes even harder when people age, the exam is even less reliable.
15. This is concerning for an "acute surgical abdomen." This is essentially the finding of "rebound." When one part of the abdomen is moved, it causes irritation and pain in the offending part. For example, if a patient with an acute appendicitis were to laugh they would likely feel pain in their RLQ. It is a sign of an inflamed peritoneum (abdominal wall lining) and a high likelihood that they will need a surgery.
16. Anything that irritates the peritoneum. Commonly we think of infection or bleeding. This is why abdominal pain after blunt trauma is really worrisome. If they have rebound there's a high chance they need a surgery because they're likely bleeding.
17. This is going to be testicular torsion until proven otherwise. Patients have lower abdominal pain that goes into their groin. In this case, the testicle has twisted and kinked off the arterial blood supply causing ischemia and pain. This again is a surgical emergency. Without an intervention, they can lose the testicle.
18. Pain out of proportion in this setting is extremely worrisome for ischemic bowel. You can have mesenteric ischemia, in her case possibly from an embolic cause due to her A-fib. These patients look unwell, have elevated lactates and require immediate surgical or IR intervention. The risk of mortality is high.
19. Risk of gastric or duodenal ulcers increase with heavy etOH use. Additionally, heavy use of NSAIDs (i.e. ASA, Ibuprofen, Naproxen) or steroids. Also, people can have an infection (more common in Latin America) with an organism called H. Pylori that causes significant gastric irritation and increases the risk of ulcers.
20. This is actually quite common, but somehow many people don't know about it. You will also hear patients tell you that they have black stools (maybe from GI bleed but maybe from this

as well). The bismuth part of the medication combines with trace amounts of sulfur in your saliva and GI tract. This can lead to a black tongue or stool. It can last for days, but will eventually go away and is not dangerous.