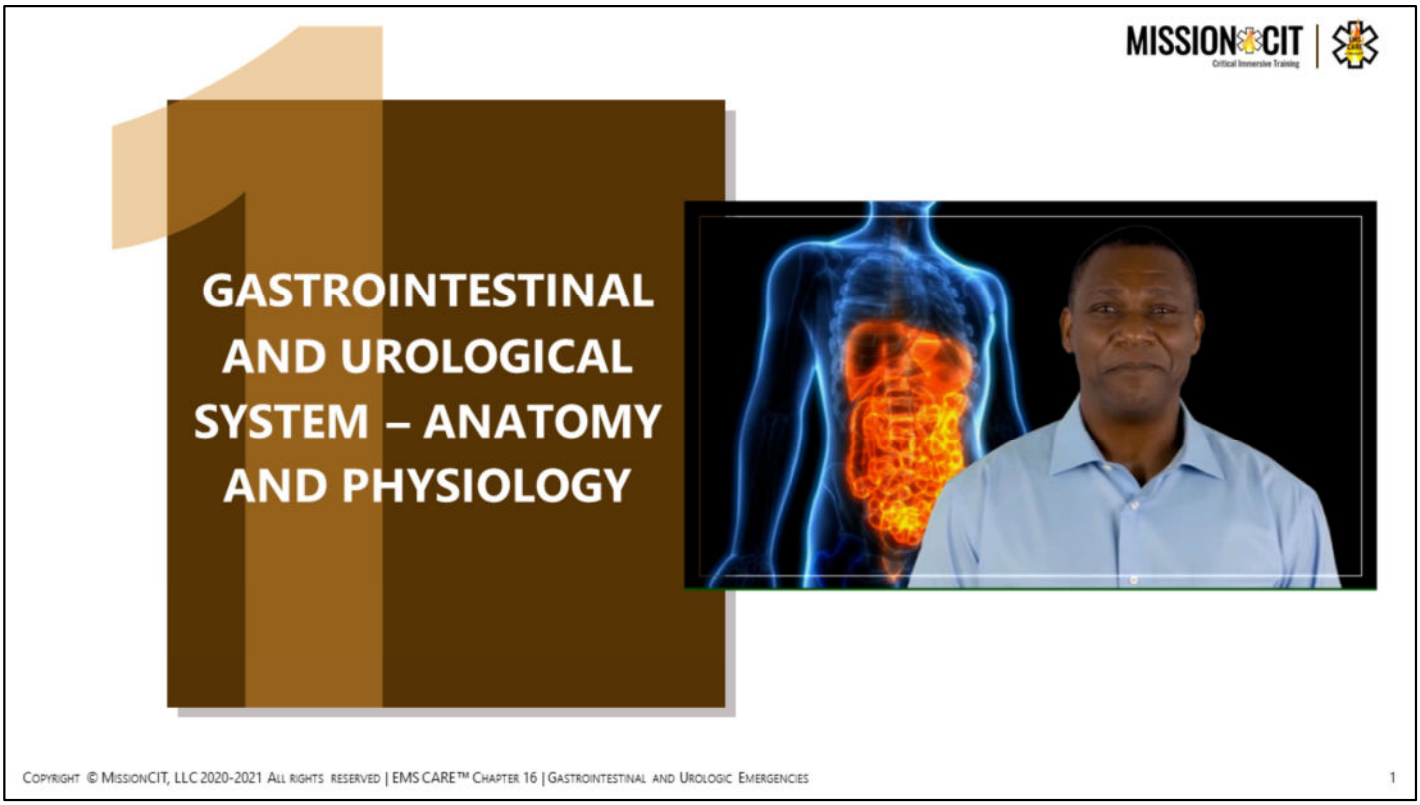
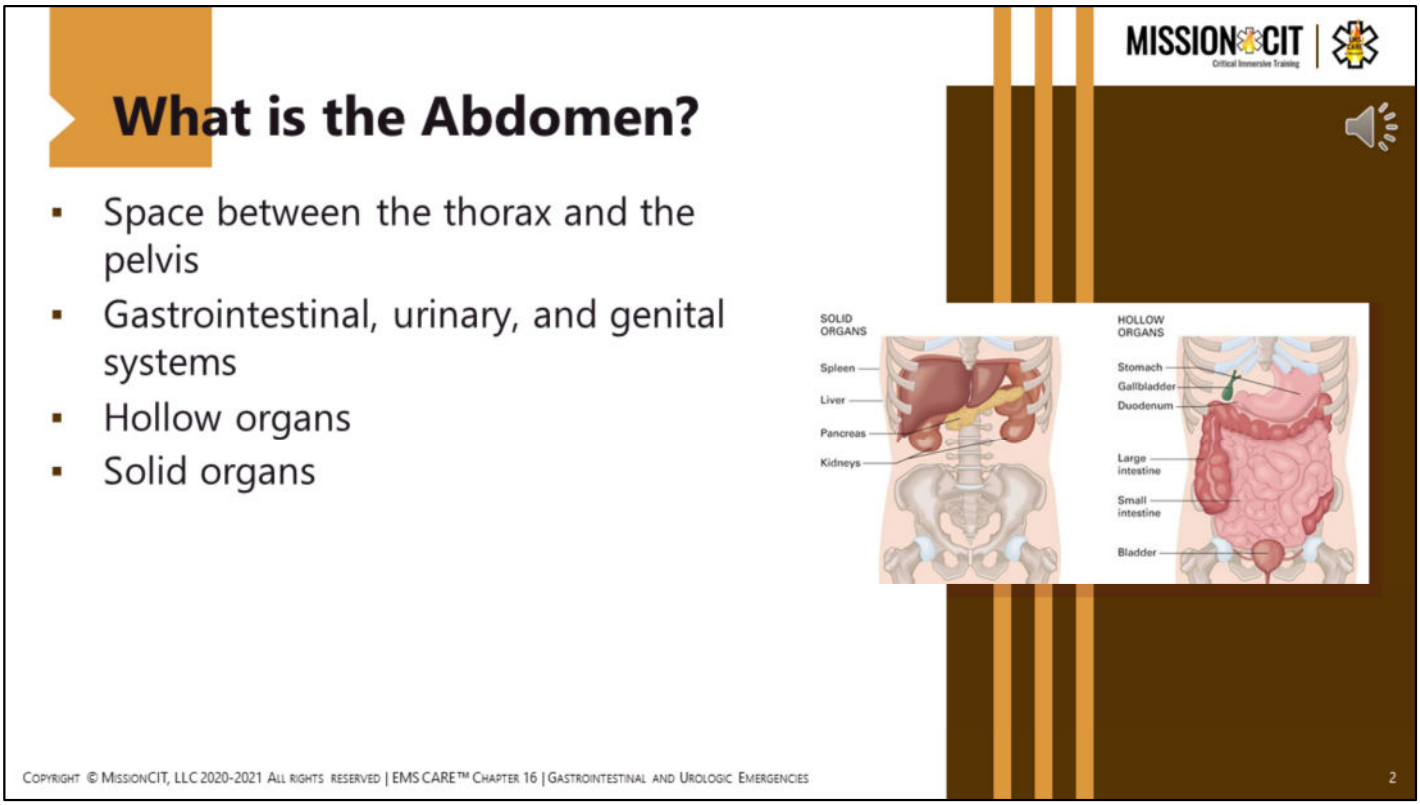


Hello everyone! Welcome to the first lesson where we briefly talk about the anatomy and physiology of the gastrointestinal and urological systems.



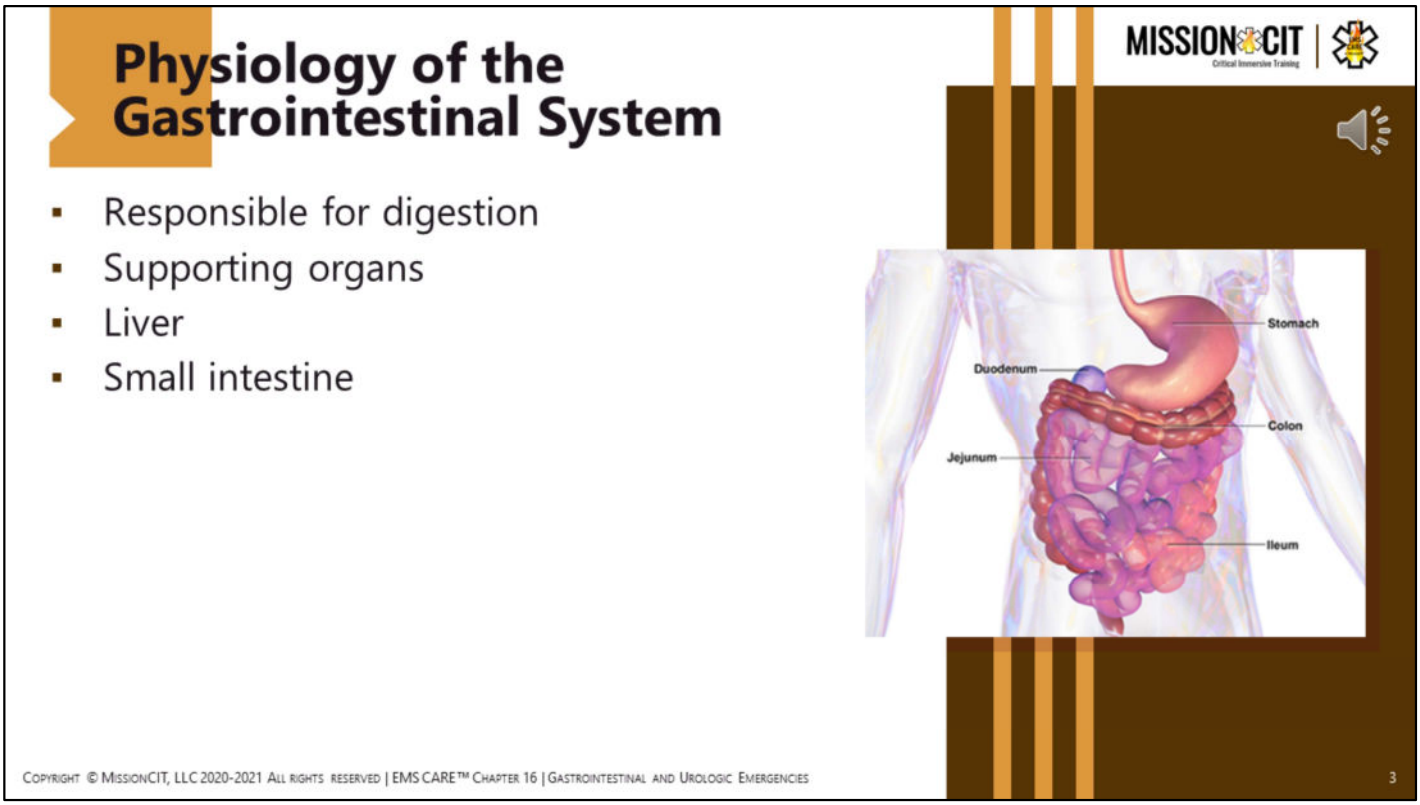
The abdomen is the space between the thoracic cavity and the pelvis, and it encompasses the gastrointestinal, urinary, and genital systems.

The organs that it contains can be divided into hollow and solid organs. As the name suggests, hollow organs are those that contain other substances like food, waste, and urine, so any injury to these organs can cause their contents to spill out. In turn, this can contaminate the abdominal cavity.

Some examples of hollow organs are the stomach, small intestine, urinary bladder, uterus, ureter, and large intestine.

Solid organs, on the other hand, do not contain any food, urine, or waste. But an injury to these organs can lead to shock and bleeding.

Some examples of solid organs are the kidney, pancreas, liver, spleen, and ovaries.



The gastrointestinal system is responsible for the digestion process that begins from the time we pop any food into our mouth. The teeth grind down the food into small particles and the saliva breaks it down completely.

This food travels down the esophagus and enters the stomach. The gastric juices present in the stomach break it down further and sends it to the small intestine, where the nutrients from the food are absorbed by tiny hair-like structures present in it.

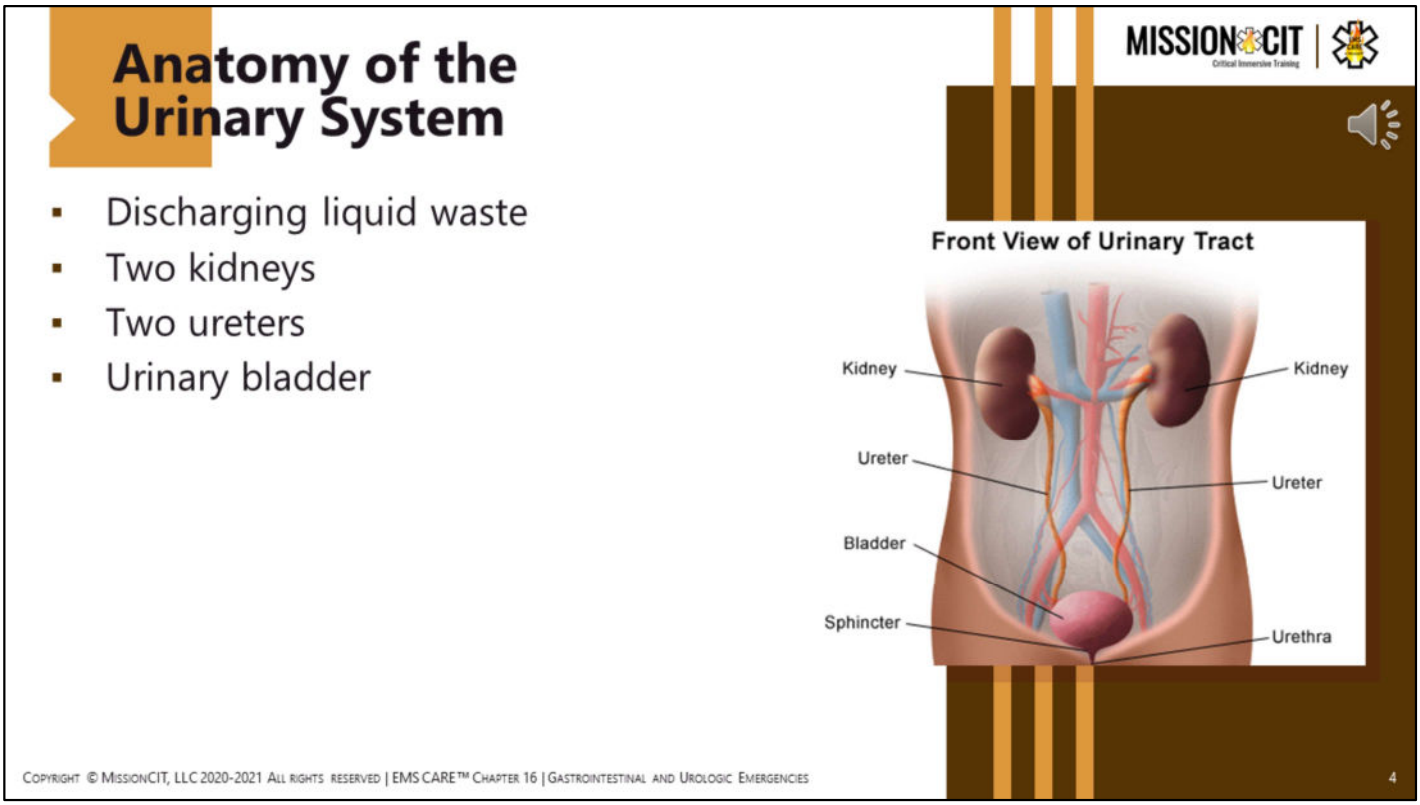
Next, the food travels to the large intestine that absorbs all the water from it, and eventually sends it out in the form of feces.

There are many supporting organs in this digestive system that play a critical role in the digestion of food.

The liver secretes a substance called bile that helps in breaking the food down into a form that can be absorbed by the small intestine. It is also responsible for filtering toxic substances and creating glucose stores that the body can tap into when needed for energy. The gallbladder is the reservoir for bile.

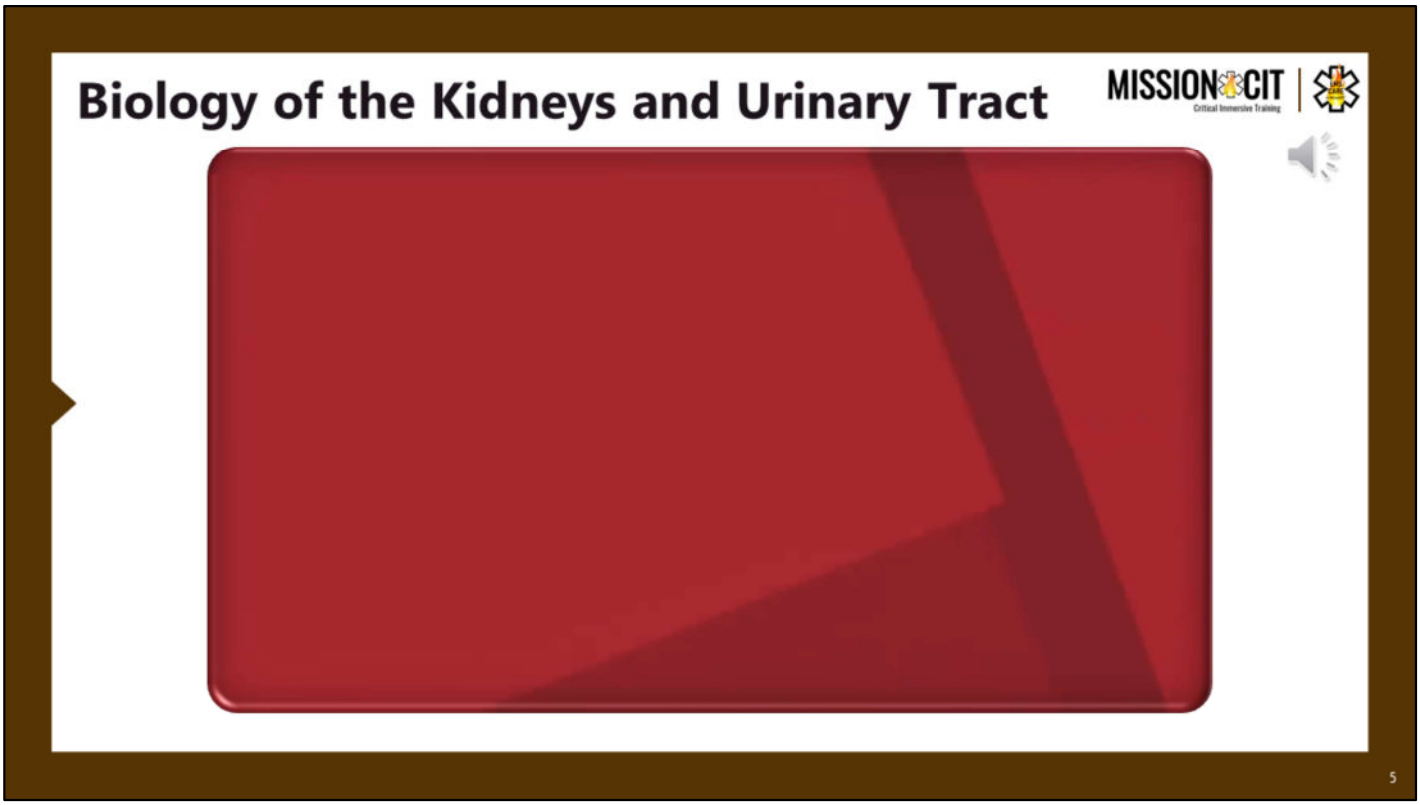
The small intestine is another critical organ of the digestive system, and it can be divided into three parts or regions. The first part, called the duodenum, connects to the stomach. The middle part is the jejunum. The third part, called the ileum, attaches to the colon. The duodenum is where the chemical digestion takes place using enzymes while the jejunum is where most of the absorption happens. The ileum absorbs the remaining nutrients and is

responsible for sending the waste food into the large intestine.



The urinary system is responsible for discharging liquid waste materials from the body in the form of urine.

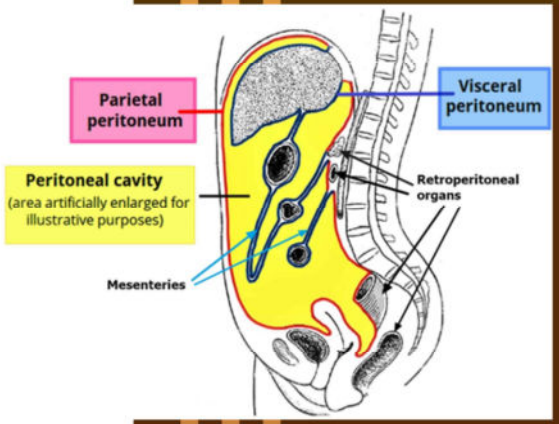
It consists of two kidneys, one on each side of the body, and ureters join these kidneys to the urinary bladder that is located behind the pubic symphysis bone. Once the bladder is full, it empties the urine through the urethra.



The kidneys are bean-shaped organs located in the flanks. They regulate blood pressure and the body's amount of water and minerals. Blood from the aorta reaches the kidneys by passing through the kidney's (renal) arteries. From there, the blood begins to be filtered as fluids, minerals, and waste products pass through the glomerulus and Bowman's capsule to tubules. The filtered solution passes into collecting ducts, then into the ureter and bladder, and then out through the urethra. Among the disorders that can affect the kidney and urinary tract, stones, usually made mostly of calcium, can cause pain, bleeding, and infection.

Pathophysiology of the Abdomen

- Lined with peritoneum
- Parietal peritoneum
- Visceral peritoneum



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The abdominal cavity and its organs are lined with the peritoneum. The parietal peritoneum lines the walls of the abdominal cavity while the visceral peritoneum covers the organs. Hence, the presence of any foreign substance such as pus, bile, or blood can irritate this lining. This often happens due to injuries and blunt trauma to the hollow organs.

It also results in many disorders and pains that Missah will talk about in the next lesson.