BLS-2013-Abdominal Pain

Print Version

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Abdominal Pain

Introduction

The abdomen has many organs and complex structures. Determining the cause of an abdominal complaint is challenging even for experienced health professionals.

Your goal in assessment of abdominal pain is to determine if a patient is SICK or NOT SICK and initiate care. You do not have to spend a lot of time trying to figure out the cause. If time is available, assess the quality and location of the pain and note any abnormalities in the abdomen.

This is a continuing education and recertification course for EMTs. It covers fundamental EMT-Basic concepts and terminology as well as advanced material. We highly recommend completing the case studies and practice exam before completing the exam.

We also recommend that you review an EMT textbook chapter covering stroke as a refresher before taking the exam.

Practical Skills and Course Objectives

To receive OTEP credit for this course a trained skills evaluator must evaluate your ability to perform the following hands-on practical skills.

- Abdominal exam
- Postural vital signs exam
- Focused history

Instructor Downloads - 2013 Courses - Skills Checklists

BLS-2013 Abdominal is an EMT continuing education and recertification course. After completing this course you will be able to:

1. Identify the location of anatomical structures in the abdomen.
2. Identify the types of pain that the human body experiences.
3. Describe some common causes of abdominal pain.
4. Describe how to examine the abdomen and inspect and palpate signs and symptoms of injury.
5. Identify the correct steps in performing a postural vital signs check.
6. Identify the proper emergency medical care for a patient with abdominal pain.

Terminology

Terms You Should Know

acute abdomen — A sudden onset of severe abdominal pain.

colic — A severe intermittent, cramping pain.

colon
Another term for large intestine.

fallopian tube — Hollow tube that transports the ovum (female egg) from the ovary to the uterus.

guarding — A spasm of the muscles to minimize motion and agitation of pain.

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NOT SICK — A patient who appears physiologically stable as indicated by adequate respirations, pulse, mental status, skin signs and an appropriate body position. Other terms that mean NOT SICK include non-critical, non-urgent or stable patient.

peritoneum — A membranous sac that lines the abdominal cavity.

SICK — A patient who appears physiologically unstable as indicated by respirations, pulse, mental status, skin signs and body position. Other terms that mean SICK include critical, urgent or unstable.

sustained tachycardia — A persistent heart rate of 100 or greater caused by a clinical condition such as hypoxia or shock. It is an ominous sign of impending shock.

syncope — Fainting.

tachypnea — A rapid breathing rate.

New Terms

cholecystitis — Inflammation of the gall bladder.

etiology — The cause or origin of a disease or disorder.

epigastrium — The upper central region of the abdomen. It is located between the costal margins and the subcostal plane. It is one of the nine anatomical regions of the abdomen.

hematemesis — Vomiting of blood (hema = blood + emesis = vomit).

hematochezia — The passage of bloody stools.

hernia — Protrusion of an organ or tissue through an opening in its surrounding walls, especially in the abdominal or groin region.

melena — Abnormal, black, tarry stools caused by gastrointestinal (GI) bleeding. Melena is usually caused by upper GI bleeding since digested blood is dark and tarry in character.

orthostatic hypotension — A sudden fall in blood pressure that occurs when a person sits or stands up.

retroperitoneum — This is the area directly behind the peritoneum.

vagus nerve — The primary nerve of the parasympathetic nervous system that supplies nerve fibers to the pharynx, larynx, trachea, diaphragm, lungs, heart, esophagus and the intestines — also called the tenth cranial nerve.

varices — Dilated veins.

Anatomy & Etiology

Anatomy

The abdomen is the largest cavity in the body. The diaphragm separates the abdominal cavity from the chest cavity. Most of the abdominal organs are enclosed within a membrane called the peritoneum. Those organs behind and outside the peritoneum include the kidneys, pancreas and the abdominal aorta.

The Four Abdominal Quadrants

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The abdomen is divided into four regions or quadrants, with the umbilicus being the point where the two lines intersect.

- **Right upper quadrant** (RUQ) contains the liver, gallbladder and part of the large intestine.
- **Left upper quadrant** (LUQ) contains the stomach, spleen, pancreas and part of the large intestine.
- **Right lower quadrant** (RLQ) contains the appendix, small intestine, large intestine, fallopian tube and ovary.
- **Left lower quadrant** (LLQ) contains the small and large intestine, fallopian tube and ovary.

Types of Pain

Abdominal pain can have different qualities due to the different types of nerves that are supplied to the abdomen. It is helpful for the EMS provider to describe a patient's pain in detail to assist in later diagnosis. The three categories of pain commonly associated with abdominal pain are visceral, somatic and referred.

Visceral pain is caused by stimulation of nerve fibers of organs. This pain is described as crampy, colicky (comes and goes) or gassy. It tends to be diffuse and difficult for a patient to pinpoint. This pain is commonly seen with other signs and symptoms such as sweats, vomiting, nausea and tachycardia.

Vagus Nerve

Stimulation of the visceral pain pathways often stimulates the vagus nerve causing a vagal reaction (parasympathetic) with vasodilatation, decreased BP, bradycardia, sweating, nausea and vomiting. Sometimes vagal responses result in profound hypotension with syncope. The vagus nerve also is called the tenth cranial nerve.

In general, you may be able to reverse a vagal response through a combination of supine position and elevation of the legs. If this BLS level of care does not alleviate the symptoms request a paramedic unit.

View more information on the vagus nerve
MedicineNet (external Web site) http://www.medterms.com/script/main/art.asp?articlekey=7632

Somatic pain is a focal pain that occurs when nerve fibers within the peritoneum are irritated by chemical or bacterial inflammation. Somatic pain is more localized and is usually described as sharp and knifelike. It is constant and made worse by coughing or movement.

Referred pain is a radiating pain that is felt at a location away from the point of origin. It is caused by stimulation of nerves connecting the autonomic and somatic nervous systems. For example, the pain associated with kidney stones may be referred to the testicle. In addition, myocardial infarction, pneumonia and musculoskeletal injuries can refer pain to the abdominal area.

View more information on types of pain
Wellcome Trust (external Web site) http://www.wellcome.ac.uk/en/pain/microsite/science3.html

View more information on pain
Wikipedia Trust (external Web site) http://en.wikipedia.org/wiki/Pain

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View more information on the autonomic system
Nuffield Anaesthetics (external Web site) http://www.nda.ox.ac.uk/wfsa/html/u05/u05_010.htm

Etiology

Abdominal pain can be caused by inflammation or stretching of an organ, blockage of a duct, swelling of a body structure or loss of the blood supply to an organ.

Text for interaction

Abdominal Aortic Aneurysm (AAA)
An aneurysm is a weakening and dilation of the wall of an artery. The most common site of AAA is below the renal arteries and above the aortic bifurcation. When the artery becomes weak it can become enlarged, balloon out and rupture resulting in significant blood loss. A ruptured AAA requires immediate surgical intervention.

The "classic" AAA patient complains of severe abdominal pain or lower back pain, sometimes described as ripping or tearing and radiating to the groin. This is an example of referred pain.

Remember that the abdominal aorta travels down the middle of the abdomen, so on a skinny person you may feel pulsations of the aorta which is normal. If a mass is found, and it often isn't, it is usually superior to the umbilicus, left of mid-line. Check femoral pulses and leg temperature for equality if you suspect a AAA.

Appendicitis
The appendix is a small pouch off the cecum of the large intestine. Often the pouch becomes impacted with feces or a small, calcified stone and becomes inflamed. If inflammation continues, the sac may rupture into the peritoneum and cause peritonitis and septic shock.

Classic signs and symptoms include low-grade fever with periumbilical pain (pain around the belly-button) and loss of appetite. It often occurs in younger people and presents as vague abdominal symptoms progressing to well-localized pain and tenderness in the right lower quadrant.

On physical exam, a patient usually complains of severe lower abdominal pain with abdominal guarding. Rupture of an inflamed appendix can cause diffuse pain.

Bowel Obstruction
Intestinal obstruction is a blockage anywhere along the path of the small or large intestines. There are numerous causes such as adhesions (scar tissue), strangulated hernia, impaction, cancer and chronic inflammation.

A person with a bowel obstruction usually complains of abdominal pain with nausea and vomiting. There can be associated dehydration, constipation and abdominal distension. These patients are at risk of perforation and/or bowel strangulation, which quickly lead to peritonitis and septic shock.

Cholecystitis (Gall Bladder)
Cholecystitis is inflammation of the gall bladder. 75% of the time it is associated with gallstones. Remember the "classic" cholecystitis patient with the "Fours Fs": fat or overweight, fertile, female in her forties. The actual age range is from 20 to 70 years.

Often this pain is felt in the epigastrium radiating to the right upper quadrant and sometimes the right shoulder. Ingestion of fatty foods can initiate the symptoms. The patient may also complain of fever and vomit bile (greenish vomit).

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A classic physical finding is called Murphy's sign that is found by placing the patient in a supine position and palpating the right upper quadrant. Murphy's sign is present if the patient's ability to inspire air is restricted by severe pain.

Cystitis (Bladder Infection)
Cystitis is a common cause of abdominal pain particularly in women. It usually affects the lower abdominal quadrants.

Diverticulitis
A diverticulum is a sac that develops in the wall of the large intestine, typically on the left descending colon. Diverticulitis occurs when a sac becomes inflamed and infected. Occasionally, the sac will rupture, bleed or cause obstruction and lead to lower left abdominal pain. Because this is a common source of inflammation, a patient may report a history of flare-ups. Most people over the age of 50 have had a few diverticula.

Ectopic Pregnancy
An ectopic pregnancy is a fetal implantation outside the uterus, most typically in the fallopian tube. In a fallopian implantation, a rupture can occur usually between 2-12 weeks. Always consider the possibility of ectopic pregnancy in females of childbearing age with lower abdominal pain.

Complaints can include severe right or left lower quadrant or unilateral abdominal pain. It may be described as cramping and radiating to the right or left shoulder (an example of referred pain). Ask about missed or irregular menstrual cycles or spotting and history of ectopic pregnancy or pelvic inflammatory disease.

Esophagitis
Esophagitis is inflammation of the lower esophagus usually caused by acid that regurgitates due to a weak cardiac sphincter, the gate between the lower esophagus and stomach. It is often associated with peptic ulcer disease.

Patients with esophagitis may report a history of hiatal hernia or esophageal reflux and often take antacid medications like Pepcid, Zantac, Prilosec and Axid. Symptoms may mimic those of myocardial infarction or angina.

The pain associated with esophagitis is commonly felt as a burning substernal chest pain that increases when the patient lies down and can be relieved with antacids and cool liquids. The patient may also describe a bitter or foul taste in the mouth.

Food Poisoning
Food poisoning can be caused by many different bacteria and toxins. A common form of food poisoning is staphylococcal food poisoning. In this type of illness, the patient usually presents with an abrupt onset of severe nausea, cramps, vomiting and sometimes diarrhea.

Typically the suspect food was ingested up to six hours prior to onset of the symptoms. Ask about the symptoms of others who may have eaten the same food. This ailment is usually self-limiting but the patient may need treatment for nausea, vomiting and dehydration.

Intestinal Flu
"Intestinal flu" is a general term for a self-limiting intestinal problem that usually resolves by itself in a few days. It usually is caused by a virus and occasionally by bacteria. Intestinal flu may cause abdominal pain with cramping, nausea, vomiting, malaise and diarrhea. There may be a recent history of exposure to other people with similar symptoms. Intestinal flu is usually self-limiting but may need treatment for the symptoms of nausea, vomiting, diarrhea and occasional dehydration.

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Kidney Stones
Kidney stones are common in people between the ages of 30 and 50. They are more common in men.

The pain associated with a kidney stone can be exceptionally intense. The patient usually complains of flank pain that initially comes and goes, then progresses to steady misery. The pain can travel to the right or left lower quadrant or groin. It is sometimes associated with low-grade fever, nausea and vomiting. One of the hallmark observations is a patient who is restlessly attempting to find a position of comfort to no avail.

A patient with kidney stones will often show signs of a sympathetic response: pale, cool and diaphoretic. Many have a history of similar episodes.

Pancreatitis
Pancreatitis is inflammation of the pancreas. Patients with a history of alcohol abuse have a high risk of developing this disease. The pain of pancreatitis is often excruciating.

The pain is sometimes felt in the epigastric region or mid-umbilicus radiating to the back or shoulders. Gallstones and alcoholism are often associated with pancreatitis.

Peptic Ulcer
A peptic ulcer is the erosion of the lining of the stomach, duodenum or esophagus. It frequently causes upper abdominal pain.

Peptic ulcer disease typically begins in males between the ages of 34-45. The patient may complain of chronic, vague pain in the epigastrium or upper quadrants. The pain may be described as steady, dull or burning. It is usually relieved with antacids. Symptoms often begin in the early morning when the stomach is empty. Patients with peptic ulcers may use antacids or other acid blocking drugs such as Tagamet, Zantac and Prilosec.

Be alert for signs of shock. If a patient has a slow internal hemorrhage, he or she may show signs of anemia such as pallor and weakness.

Peritonitis
Peritonitis is inflammation of the lining of the abdominal cavity. It can be caused by blood, bile or amniotic fluid or foreign substance that irritates the peritoneum.

Urinary Tract Infections
Inflammation of the urinary tract can occur from the kidneys to the bladder. Urinary tract infections (UTIs) are more common in women due of the short distance between the female urethra and the bladder.

A urinary tract infection can present with pain in the suprapubic region. Other symptoms may include pain on urination, the need to urinate frequently, blood in the urine, fever and chills.

More information

Abdominal aortic aneurysms
eMedicine.com (external Web site) broken link

Abdominal aortic aneurysm repair
RCSED (external Web site) http://www.rcsed.ac.uk/Journal/vol45_3/4530009.htm

Abdominal aortic aneurysm repair
Gensurg (external Web site) broken link

McBurney's point
MedicineNet (external Web site) http://www.medterms.com/script/main/art.asp?articlekey=8346

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Gallstones
NIDDK (external Web site) http://digestive.niddk.nih.gov/ddiseases/pubs/gallstones/index.aspx

Ectopic and tubal pregnancy
Laparoscopy.com (external Web site) http://www.laparoscopy.com/fr_movies.html

Kidney stones
NIDDK (external Web site) http://kidney.niddk.nih.gov/KUDiseases/pubs/stonesadults/index.aspx

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Inflammation

Inflammation associated with abdominal pain is seldom life threatening unless septic shock is involved. Every organ in the abdomen can be the site of inflammation and pain.

Bleeding

Bleeding can accompany abdominal pain. Clues that suggest internal bleeding include a history of:

- Vomiting blood* (hematemesis)
- Passage of bright red blood (hematochezia) or dark-tarry stools (melena)
- Signs of shock

*The blood can be bright red blood or have the appearance of coffee grounds.

Sources of abdominal bleeding include:

- Peptic ulcer disease
- Esophageal varices
- Diverticuli
- Colon cancer
- Ruptured ectopic pregnancy
- Abdominal aortic aneurysm

View more information on abdominal bleeding
NIDDK (external Web site) http://digestive.niddk.nih.gov/ddiseases/pubs/bleeding/index.aspx

View more detailed information on ulcers
Howstuffworks.com (external Web site) http://healthguide.howstuffworks.com/peptic-ulcers-in-depth.htm

Patient Assessment

Goal of Assessment

Your goal in assessing abdominal pain is to decide if a patient is SICK or NOT SICK and begin providing care. You do not have to diagnose the cause. If a patient is NOT SICK, you should try to determine three things:

- Quality of the pain
- Location of the pain
- Abnormalities in the abdomen

Initial Assessment

Start by assessing the key clinical indicators of respirations, pulse, mental status, skin signs and body position. In addition, consider the chief complaint and nature of illness. These will give you enough information to decide SICK or NOT SICK. From this point begin immediate care based on the patient's needs. You may have time to conduct further assessment in the case of a NOT SICK patient.



In the face of vague or confusing signs and symptoms, determine SICK or NOT SICK and begin appropriate care.

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25-Year-Old Female

Your patient is a 25-year-old female with severe LLQ pain, RR = 24, HR = 118 with a thready pulse. The patient experienced an episode of syncope, but now is alert and oriented to person, place and time. Her skin is pale, cool and dry. She states that she is possibly pregnant. You place her in the SICK category based on clinical indicators, the nature of illness and your index of suspicion. You start aggressive BLS care with high flow oxygen via non-rebreathing mask, confirm medic response, treat for shock and prepare for transport. Her BP is 92/palp while supine.

41-Year-Old Male

Your patient is a 41-year-old male, complaining of LLQ pain with history of nausea and vomiting for the last 24 hours, RR = 16, HR = 84. He is alert and oriented to person, place and time. His skin is warm and dry. You choose the NOT SICK category and begin oxygen therapy at 4 LPM by nasal cannula and proceed to get a more detailed focused history. His BP is 126/78.

Physical Exam

As long as the patient's ABC-related needs are met and there are no apparent life threats, you may proceed with assessing the quality and location of the pain and looking for abnormalities in the abdomen itself such as lumps or masses.

Be alert for signs of hypotension due to hemorrhagic or septic shock such as:

- Restlessness
- Rapid pulse *
- Slow capillary refill (greater than 2 seconds) **
- Tachypnea
- Hypotension

* A rapid pulse may not be present in patients taking medications that slow the heart rate such as beta blockers and calcium channel blockers.
** Be sure to check capillary refill when in a warm environment.

In addition, consider checking postural vital signs, blood glucose and pulse ox saturation.

Abdominal Exam

To perform an abdominal exam, you will need to palpate the abdomen after asking the patient the location of the pain. Place the patient in a supine position. Do not do this exam on a sitting patient.

Check the unaffected quadrants first and palpate the affected area last. Palpate gently if the patient is in pain and note guarding.

Once the location of the pain is found, do not continue to "mash down" on the abdomen. Inspect for distension, abdominal surgery scars and skin color. Note the patient's position (e.g., knees drawn up). Do not auscultate the bowels.

Abdominal Appearance

The abdomen can have a variety of appearances including:

- Flat (same as scaphoid)
- Scaphoid

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- Rounded
- Indrawn
- Distended

Use these terms when describing the abdomen in your narrative report.

Postural Vital Signs

Orthostatic hypotension is a sudden fall in blood pressure that occurs when a person moves to an upright position. It is generally related to hypovolemia and caused by blood loss, diuretics, vasodilators or dehydration.

A positive finding for postural vital signs = ALS response.

To assess for orthostatic hypotension you should perform a postural vital signs check. Consider performing this check in patients who complain of abdominal pain with associated light-headedness or with the possibility of volume depletion including:

- Suspected GI bleeding or internal hemorrhage
- Generalized weakness
- Dizziness, light-headedness or fainting
- Prolonged vomiting or diarrhea

Perform these steps to check postural vital signs:

1. Record patient's record blood pressure and heart rate while patient has been supine or seated for at least 2 minutes.
2. Move the patient to a standing position for 1 minute and record blood pressure and heart rate.
3. If fainting or light-headedness worsens when standing, immediately return the patient to a supine or seated position.

Positive findings include any one or more of the following:

- Systolic BP decreases 20 mm Hg
- Heart rate increases 20 or more beats per minute
- Systolic BP of less than 90 mm Hg while standing
- Severe light-headedness or syncope during the postural vital signs exam

Contraindications for Postural Vitals

Contraindications for checking postural vitals signs include:

- Hypotension while supine (BP less than 90 mm Hg)
- Third trimester bleeding
- Trauma patients

View more information on orthostatic hypotension
National Institutes of Health (external Web site)
http://www.ninds.nih.gov/disorders/orthostatic_hypotension/orthostatic_hypotension.htm

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OPQRST

The OPQRST method helps you assess a patient's chief complaint in an organized and systematic fashion. You are not expected to determine the cause of a patient's pain. You are expected to describe the character of a patient's pain and report that using the OPQRST format. It includes:

OPQRST	Related Questions
Onset	▪ What were you doing when it started? ▪ Did the pain come suddenly or gradually?
Provocation	▪ Does the pain move around? ▪ Is the pain related to any bodily function such as eating, bowels, position, or exertion? ▪ Does anything lessen the pain?
Quality	▪ Can you describe the pain? ▪ Does it come and go? ▪ Is it constant? ▪ Is it sharp, dull or burning?
Radiation	▪ Where do you feel it and where does it go?
Severity	▪ How severe is the pain on a scale of 1-10 scale?
Time	▪ What time did the pain come on?

SAMPLE History

SAMPLE is a mnemonic for the questions to ask when conducting a focused medical history. It organizes the information you gather from the patient or bystanders in a logical format.

Factor	Questions
Symptoms	▪ Chief complaint ▪ What happened? ▪ Specific circumstances surrounding the chief complaint ▪ MOI/NOI
Allergies	▪ Including those particular to any medications
Medications	▪ Prescription drugs ▪ Over-the-counter drugs ▪ Recreational (illicit) drugs

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Past history	▪ Medical conditions (hemophilia, etc.)
Last oral intake	▪ Food and drink
Events leading up to the incident	▪ Precipitating factors (e.g. eating, activity)

When collecting information about past medical history consider asking about hematemesis and hematochezia. Remember, it only takes 60cc (4 tablespoons) of blood to produce melena—a relatively small amount, but this finding by itself does not automatically mean that a patient is SICK.

Blood in Vomit

Vomiting red blood indicates that the bleeding is recent. Black or dark brown vomit that has the texture of old coffee grounds means blood has been in the stomach for a longer time.

You may find blood in a patient's vomit for various reasons including: swallowing blood (e.g., nosebleed), prolonged or vigorous vomiting that can cause a tear in the small blood vessels of the throat or lower esophagus, peptic ulcers where the blood appears red or dark. Inflamed tissue in the esophagus, stomach (gastritis) or upper part of the small intestine may cause bleeding. Various types of cancer may cause blood in the vomitus, including cancers of the stomach and esophagus.

PATIENT CARE

Treatment — Not SICK

Treatment for abdominal pain follows three principles: protect the airway, appropriate position and treat for shock. If a patient is NOT SICK and shows no signs of shock and vitals signs are stable, consider the following steps:

- Position of comfort (e.g., knee or knees drawn up)
- Low to moderate flow oxygen
- Prepare for suctioning
- Monitor vital signs

BSI Precautions with Vomitus

Vomitus can contain bacteria and viruses so be sure to take BSI precautions and don PPE to include eye protection and gloves. Consider the need for a gown and mask if there is "explosive" vomiting or splattering. Contain the vomitus in a red biohazard bag if possible.

Treatment — SICK

It is difficult to determine the cause of abdominal pain. You must frequently reassess the NOT SICK patient in case the underlying problem develops into a life threat. Remember these patients can quickly change from NOT SICK to SICK.

If you decide a patient is SICK based on clinical indicators, then your treatment may include:

- Ensure ABCs

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- High-flow oxygen
- Shock position
- Prepare to suction
- Monitor vital signs
- Confirm ALS
- Initiate immediate transport

Caution
The cause of abdominal pain is often very difficult to define. For patients with abdominal pain who are "SICK", the transport destination is clear. These patients need hospital evaluation and often, depending on how "SICK" they are, paramedic care may be needed. For patients with abdominal pain who appear "NOT SICK", the transport destination is far more challenging. Many of these "NOT SICK" patients may need hospital evaluation and/or they may program to "SICK" in a few hours. It is always good to give "NOT SICK" patients the option of further evaluation in the clinic or hospital. If the patient choses to remain at home or if you feel the patient is so stable it is safe to remain at home, ALWAYS leave "stay at home" instructions and document that they were told to seek medical care of call 911 if symptoms do not improve.

RESOURCES

Recommended Reading

Chapter 14 — Abdominal and Genitourinary Injuries — Emergency Care and Transportation of the SICK and Injured, 9th ed. (AAOS)

Websites

Vagus nerve
MedicineNet (external Web site) http://www.medterms.com/script/main/art.asp?articlekey=7632

Autonomic nervous system
World Federation of Societies of Anesthesiologists (external Web site)
http://www.nda.ox.ac.uk/wfsa/html/u05/u05_010.htm

Photos of surgical removal of gall bladder
Laparoscopy.com (external Web site) http://www.laparoscopy.com/www/pictures01/lapchol_09.php

AAA
eMedicine.com (external Web site) http://emedicine.medscape.com/article/416397-overview

Abdominal aortic aneurysms
Royal College of Surgeons of Edinburgh (external Web site)
http://www.rcsed.ac.uk/Journal/vol45_3/4530009.htm

Gallstones
National Kidney and Urologic Diseases Information Clearinghouse (external Web site)
http://digestive.niddk.nih.gov/ddiseases/pubs/gallstones/index.aspx

Ectopic pregnancy and tubal pregnancy links
Laparoscopy.com (external Web site) http://www.laparoscopy.com/fr_movies.html

Kidney stones
National Kidney and Urologic Diseases Information Clearinghouse (external Web site)
http://kidney.niddk.nih.gov/KUDiseases/pubs/stonesadults/index.aspx

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Abdominal bleeding
National Kidney and Urologic Diseases Information Clearinghouse (external Web site)
http://digestive.niddk.nih.gov/ddiseases/pubs/bleeding/index.aspx

Orthostatic hypotension
National Institutes of Health (external Web site)
http://www.ninds.nih.gov/disorders/orthostatic_hypotension/orthostatic_hypotension.htm

SUMMARY

Abdominal regions:

- **Right upper quadrant:** liver, gallbladder and part of the large intestine
- **Left upper quadrant:** stomach, spleen, pancreas and part of the large intestine
- **Right lower quadrant:** appendix, small intestine, large intestine, fallopian tube and ovary
- **Left lower quadrant:** small and large intestine, fallopian tube and ovary

The three categories of pain associated with abdominal pain are **visceral**, **somatic** and **referred**.

Causes of abdominal pain:

- Abdominal aortic aneurysm (AAA)
- Appendicitis
- Bowel obstruction
- Cholecystitis
- Cystitis
- Diverticulitis
- Ectopic pregnancy
- Esophagitis
- Food poisoning
- Intestinal flu
- Kidney stones
- Peptic ulcer
- Peritonitis
- Urinary tract infections

Abdominal Exam:

- Observe abdomen
- Place the patient in a supine position
- Check the unaffected quadrants first and palpate the affected area last
- Palpate gently if the patient is in pain
- Note guarding

Postural Vital Signs:

1. Record patient's blood pressure and heart rate while patient has been supine or seated for at least 2 minutes.
2. Move the patient to a standing position for 1 minute and record blood pressure and heart rate.
3. If fainting or light-headedness worsens when standing, immediately return the patient to a supine or seated position.

Treatment for a NOT SICK patient with abdominal pain may include:

- Position of comfort (e.g. knee or knees drawn up)
- Low to moderate flow oxygen

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- Prepare for suctioning
- Monitor vital signs
- ALS evaluation if indicated

Treatment for a SICK patient with abdominal pain may include:

- Ensure ABCs
- High-flow oxygen
- Shock position
- Prepare to suction
- Monitor vital signs
- Confirm ALS
- Initiate immediate transport

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