

# Abdominal Complaints

EMD CE

May 2016

Silver Cross EMSS

# Introduction to Abdominal Emergencies

- Abdominopelvic pain has many causes, and can be an indication of serious underlying conditions.
- Abdominal pain results from these mechanisms:
  - Stretching
  - Inflammation
  - Ischemia (insufficient blood supply to an organ)
- Care includes managing life threats, making the patient comfortable, and transport.

# What's Acute Abdomen?



Abdominal pain is a  
common complaint.

# Acute Abdomen

- Caused by irritation of the abdominal wall
- May result from infection or the presence of blood in the abdominal cavity
- Pain can be referred to other parts of the body.
- The abdomen may feel as hard as a board.
- Patients may have nausea and vomiting, fever, and diarrhea as well as pain. Some patients will vomit or pass blood because they are bleeding from the esophagus or stomach.

# Ask about bowel and bladder problems

- Vomiting/diarrhea/constipation
  - Associated with many acute abdominal disorders
  - Can cause abdominal pain
  - Dehydration serious enough to cause shock may occur. Have they been eating and drinking normally?
- Urination problems often accompany kidney or bladder problems.

# Abdominal/Pelvic Pain Considerations:

Onset? *What were they doing when it started?*

Provocation/Palliation? *Anything make it worse or better?  
What have they done for pain relief?*

Quality? (Type of pain) *Ache, cramping or sharp pain?*

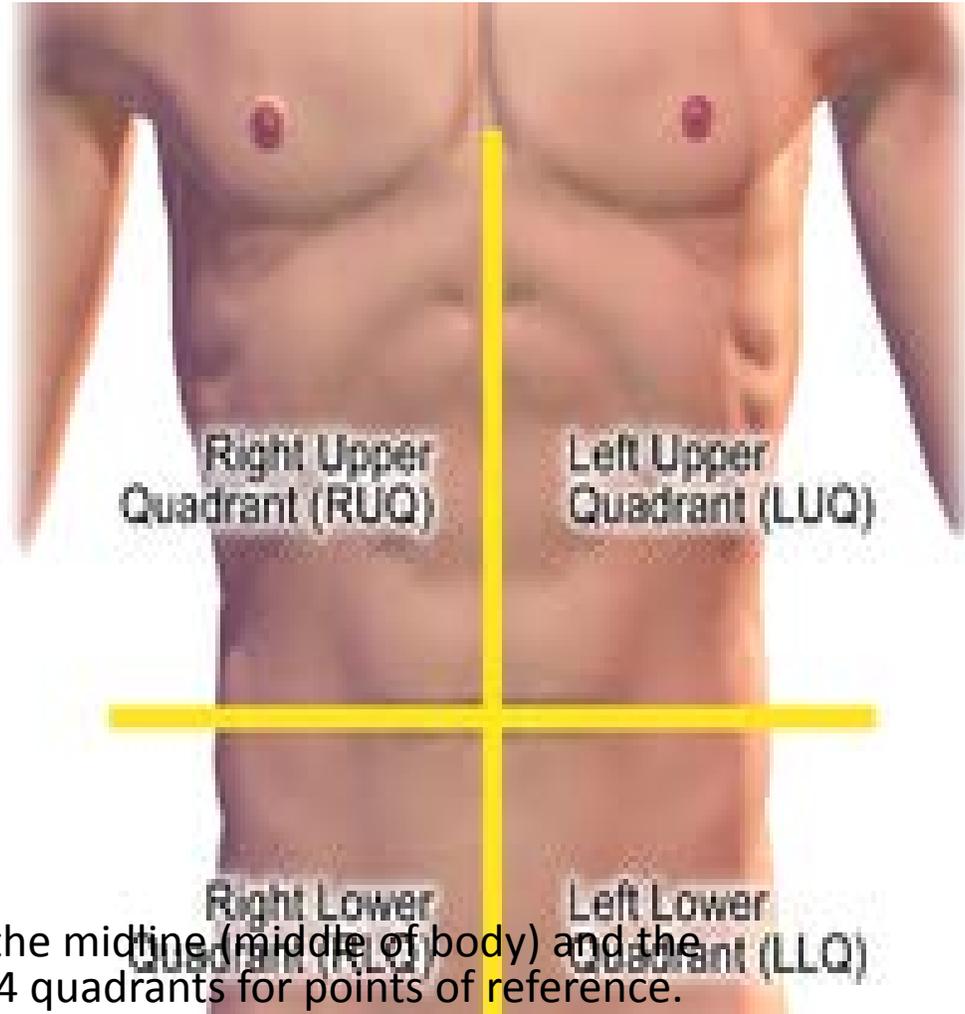
Radiation/Region/Referred? *Where is the pain? Does it  
travel anywhere?*

Severity? *1-10 Scale rating*

Time? *How long has it been going on? Ever happen  
before?*

# Acute Abdomen

- The abdominal cavity extends from the diaphragm to the pelvis and contains organs of digestion, reproduction and excretion.
- The parietal peritoneum lines the abdominal cavity, and the visceral peritoneum is in contact with the organs.
- The abdomen is divided into four quadrants for reference.



## What Goes Whe

Imaginary lines are drawn through the midline (middle of body) and the umbilicus (belly button) to give us 4 quadrants for points of reference.

# What's in each Quadrant?

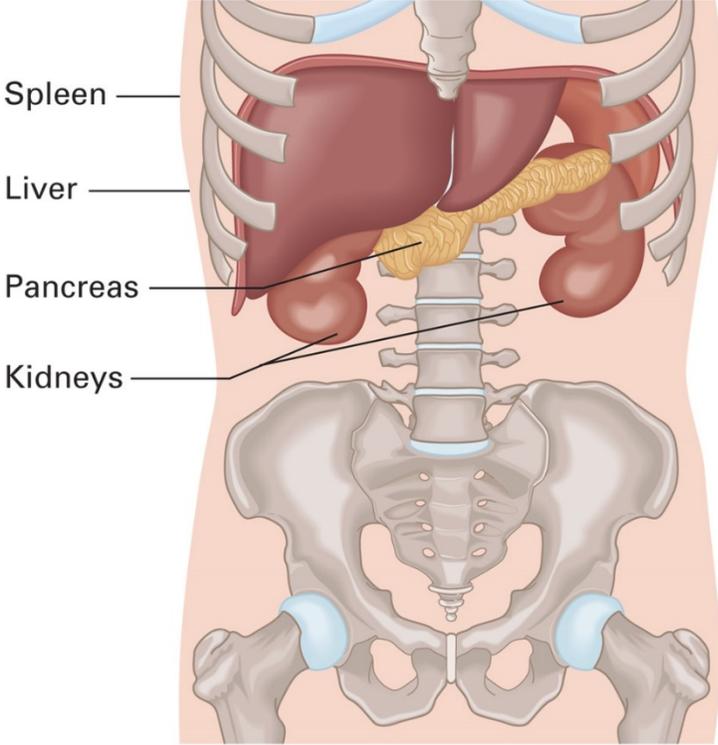
<b>Quadrant</b>	<b>Abbreviation</b>	<b>Major Structures</b>
Right upper	RUQ	Right lobe of liver, gallbladder, part of pancreas, part of small and large intestines
Left upper	LUQ	Left lobe of liver, stomach, spleen, part of pancreas, part of small and large intestines
Right lower	RLQ	Part of small and large intestines, appendix, right ovary, right fallopian tube, right ureter
Left lower	LLQ	Part of small and large intestines, left ovary, left fallopian tube, left ureter

# Solid vs. Hollow, What's the Difference?

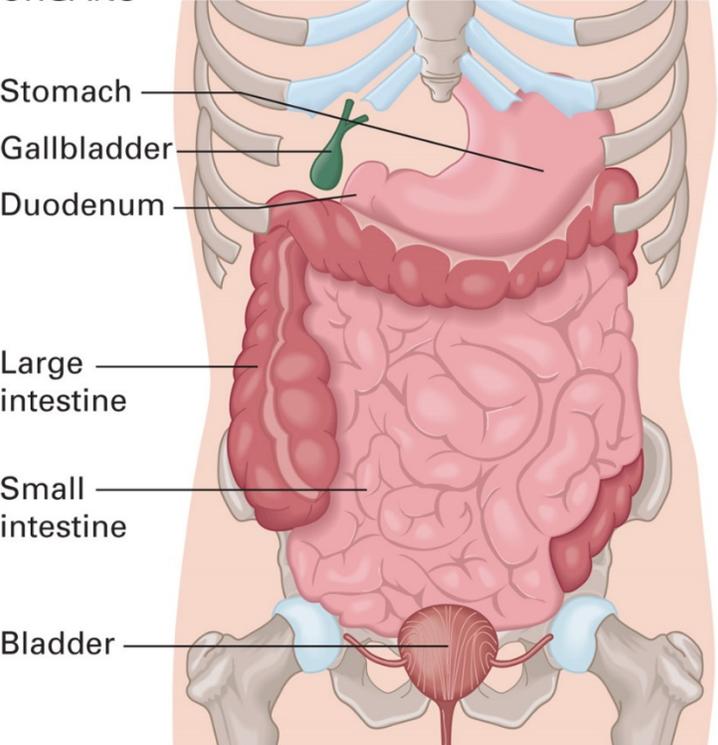
- The contents of the abdomen are divided into hollow and solid structures.
  - Hollow structures are passageways through which contents travel or temporary storage containers.
  - Solid structures produce substances.

# Organs in the Abdomen and Pelvic Cavity

## SOLID ORGANS



## HOLLOW ORGANS



# Where's the Pain?

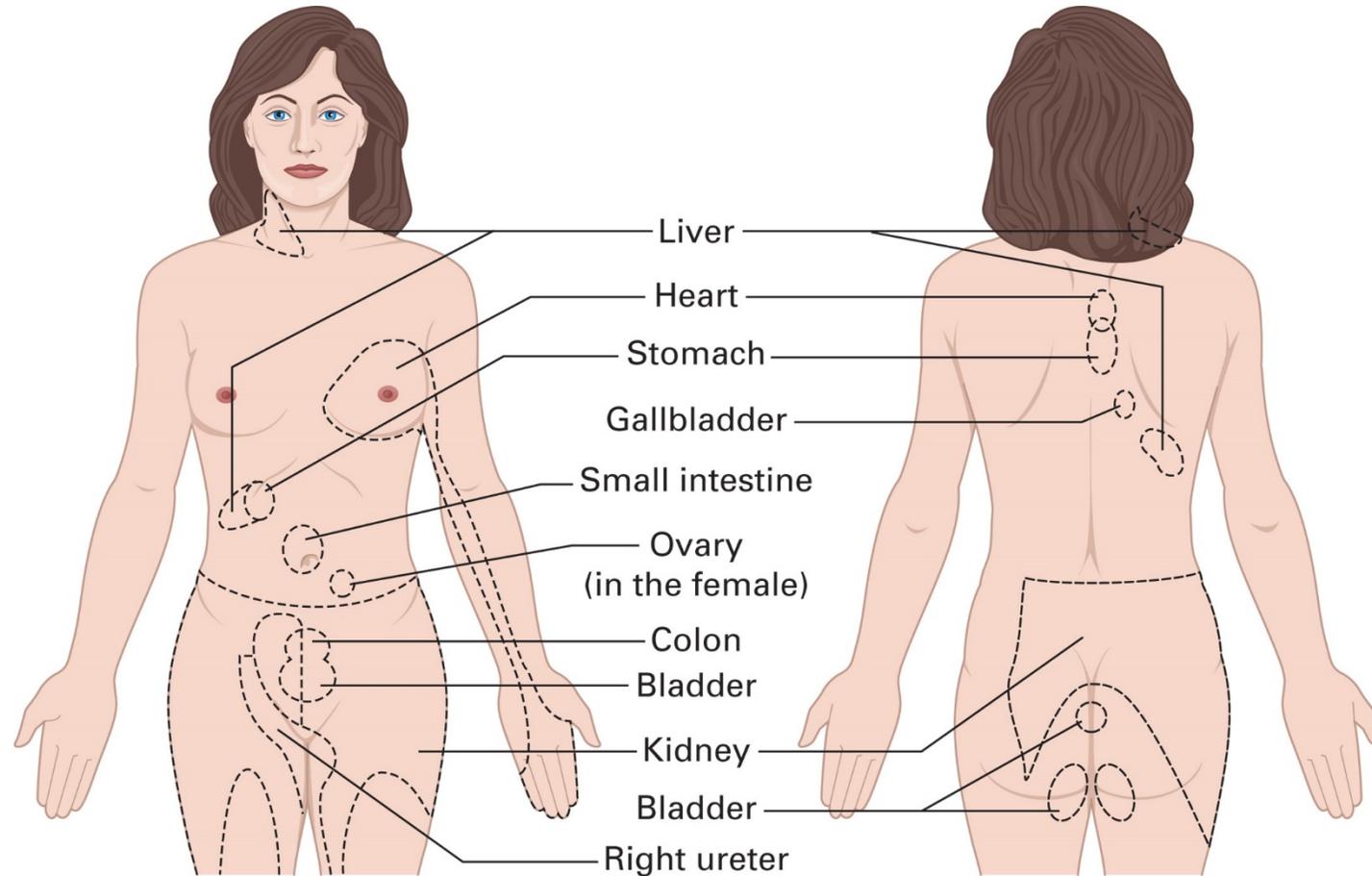
## **Remember those peritoneal layers.....**

- Visceral pain arises from organs.
  - Less severe
  - More generalized
  - Dull or aching
  - Constant or intermittent

## **We mentioned a few slides back?**

- Parietal pain
  - Arises from the peritoneum
  - More severe
  - More localized
  - Sharp
  - Constant

# Referred Pain: Visceral Pain felt somewhere other than where it originates.



# What do all these organs do?

- Stomach – break down of foods.
- Intestines – absorption of nutrients and transport and of wastes for excretion.
- Liver – filters blood, stores glucose, aids in blood clotting and production of bile for digestion among other functions.
- Gallbladder – stores bile for fat digestion.
- Spleen – aids in production, filtering and storage of blood.
- Pancreas – aids in digestion and carb metabolism.
- Kidneys – excrete liquid waste in the form of urine. Helps maintain fluid and electrolyte balance.
- Urinary Bladder – collection pouch for urine.

# Numerous problems in the abdomen can cause pain:

- Peritonitis
- Pancreatitis
- Gallbladder problems (cholecystitis)
- Kidney Stones
- Appendicitis
- Bladder Infection
- Ulcers
- Gastroenteritis
- Bowel Obstruction
- Diverticulitis
- GI Bleeding
- Hernia
- Aneurysm
- Female Reproductive Emergencies

Just to name a few.....

# What do all these things mean?

- Peritonitis is caused by inflammation of the peritoneum (lining of the abdominal cavity).
- Signs and symptoms include:
  - Abdominal pain or tenderness
  - Nausea, vomiting, diarrhea
  - Fever and chills
  - Lack of appetite
- Pancreatitis
  - Can be triggered by alcohol, gallstones or infection
- Signs and symptoms
  - Abdominal pain, tenderness, distention; pain may radiate from the belly button to the back
  - Jaundice (yellowing of skin and eyes)
  - Fever
  - Signs of shock
- Appendicitis
  - Inflammation and infection of appendix
  - Untreated, the tissue can die and rupture.
  - More common in children
- Signs and symptoms include:
  - RLQ pain and tenderness that may radiate to belly button area
  - Pain increases on movement or sudden jarring of body
  - Rebound tenderness (feels better when you put pressure on it and hurts when you let up)
  - Fever, nausea, vomiting and loss of appetite
  - Constipation or diarrhea

# More abdominal problems explained.....

- Cholecystitis (gallbladder)
  - Associated with gallstones
  - Often occurs between ages 30 and 50
  - More common in women
- Signs and symptoms
  - Upper middle to upper right quadrant abdominal pain
  - Tenderness of the right upper quadrant
  - Belching or heartburn
  - Nausea and vomiting
  - Right shoulder referred pain
- Gastrointestinal (GI) bleeding
  - Can occur at any point in the gastrointestinal tract
  - Classified as upper or lower
  - Many causes, including ulcers, esophageal varices, diverticulosis
  - Blood thinner or aspirin use
- Signs and symptoms
  - Abdominal pain or tenderness
  - Hematemesis - vomiting blood or coffee ground looking emesis
  - Hematochezia – passing blood
  - Melena – black tarry stools
  - Signs of shock

# Additional Considerations

- Esophageal varices
  - Engorged, weakened veins in the esophagus
  - Commonly caused by heavy alcohol use or liver disease
  - Usually painless, but bleeding can be profuse
  - Airway management can be challenging.
- Signs and symptoms
  - Large amounts of bright red hematemesis
  - No pain or tenderness in the abdomen
  - Difficulty breathing
  - Signs of shock
  - Jaundice
- Ulcers
  - Open sores in the stomach or beginning of the small intestine
  - May result in bleeding or perforation
- Signs and symptoms
  - Sudden onset of left upper quadrant or epigastric pain with a burning, gnawing sensation
  - Nausea and vomiting
  - Hematemesis, hematochezia, melena
  - Signs of shock
- Gastritis
  - Can be acute or chronic
  - Caused by irritation, inflammation or erosion of the lining of stomach
- Signs and symptoms
  - Nausea, vomiting, pain, bloating, indigestion
  - Gnawing or burning feeling between meals or at night
  - Hiccups
  - Loss of appetite
  - Can lead to GI bleeds

# Intestinal Issues

- Diverticulitis – inflamed or infected pouches that form in the wall of the colon
- Signs and symptoms
  - Abdominal pain - usually in lower left quadrant. May increase with movement.
  - Fever and chills
  - Bloating and gas
  - Diarrhea or constipation
  - Nausea or vomiting
  - Loss of appetite
- Irritable Bowel Syndrome - recurring belly pain, diarrhea or constipation
- Crohn's Disease and colitis – severe chronic inflammation of the intestinal wall
- Signs and symptoms:
  - Diarrhea
  - Abdominal pain
  - Fever
  - Weight loss
- Gastroenteritis (gut infection)
  - May be chronic or acute
  - Often caused by viral or bacterial infection
- Signs and symptoms
  - Abdominal pain, cramping
  - Nausea, vomiting, diarrhea
  - Abdominal tenderness
  - Fever and dehydration
  - Signs of shock in severe cases

# Any problems with the bowels?

- Intestinal obstruction
  - May include small or large intestine
  - May result from tumors, fecal impaction, or adhesions
  - Untreated, may lead to septic shock, perforation or intestinal infarction (death of tissue) and peritonitis
- Signs and symptoms
  - Abdominal pain
  - Nausea and vomiting
  - Constipation
  - Abdominal distention and tenderness

# Any problems Urinating?

- Kidney Infection or stones
  - Flank pain (mid-back and sides) which can radiate to groin area
  - Fever
  - Difficult or painful urination
  - Blood in urine
  - May experience nausea and vomiting
- Bladder Infection or UTI
  - Caused by bacterial infection
- Signs and symptoms:
  - Low abdominal or pelvic pain
  - Difficult or painful urination
  - Fever
  - Frequency or burning when urinating
  - Blood in urine

# Other abdominal issues.....

- Hernia
  - Protrusion of the intestine through an opening or weakness in the abdominal wall
  - Associated with increased pressure in the abdominal cavity
  - May become incarcerated (tissue may die from lack of blood flow)
- Signs and symptoms
  - Sudden onset of abdominal pain, usually with lifting or straining
  - Fever
  - Tender mass or protrusion at site of hernia
  - Signs and symptoms of intestinal obstruction

# Some Problems are Life Threatening!

- Abdominal aortic aneurysm (AAA)
  - Occurs when one or more layers of the aorta become weakened and separate from other layers of the aorta
  - Risk factors: diabetes, high blood pressure, atherosclerosis, and heavy smoking
  - Most common in men over 60
- Signs and symptoms
  - Gradual onset of lumbar, groin, and abdominal pain
  - With rupture, sudden onset of severe, constant pain of the lower back, flank, or pelvis; described as "tearing"
  - Testicular pain
  - Signs of Shock
  - A pulsating mass may be felt; abdomen may be rigid and tender if rupture has occurred.
  - Skin below the waist may be cyanotic, cold, mottled.

# Do you notice a pattern?

## Almost all the problems include.....

- Nausea
- Vomiting
- Diarrhea
- Loss of appetite
  
- Internal bleeding or V/D can lead to shock

## Let's review the signs of shock for the more serious emergencies.....

- Altered mental status, usually starts as restlessness or anxiety
- Signs of poor circulation
  - Pale, cool, clammy skin
  - Mottled or cyanotic (blue) skin
  - Weak or absent pulses in extremities
  - Drop in blood pressure (late)
- Elevated heart rate and breathing

## Don't try to Diagnose!

- We've only scratched the surface of possible problems and reviewed some of the more common concerns.
- It's not important to figure out exactly what the problem is. Recognize that abdominal emergencies can be serious and need further evaluation and intervention.
- Send help and notify responders of any significant information (vomiting or passing blood, altered mental status, signs of shock, etc.)

# Abdominal Pain/Injury Protocol

## KEY QUESTIONS

1. Is the pain above or below the belly button? If above, is there any chest pain?  
Yes, go to CP protocol
2. Has the patient fainted?  
Yes, go to unconscious/fainting protocol
3. How long have they been in pain?  
Intensity (1-10)  
Continuous?
4. If female, possibility of pregnancy or labor?  
Yes, go to Pregnancy/Childbirth protocol

## PRE-ARRIVAL INSTRUCTIONS

1. Let patient assume a position of comfort
2. If vomiting or nausea is present, turn on their side
3. Give nothing by mouth
4. Calm and reassure the patient
5. Loosen any tight or constrictive clothing
6. Call back if the condition worsens prior to the arrival of Medical Personnel

# Abdominal Pain/Injury Protocol Continued

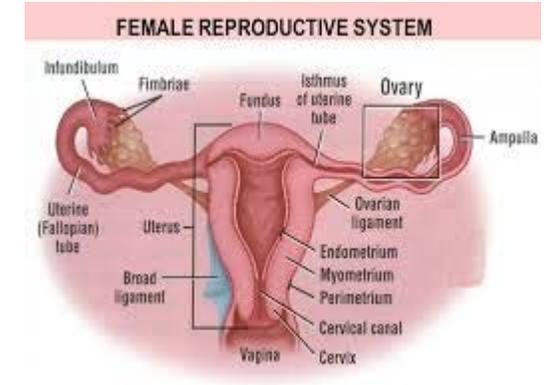
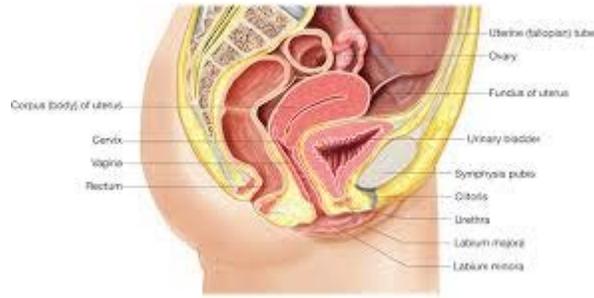
## Inquire of Caller

1. Any recent surgery?  
Yes – Type? When?
2. Vomiting?  
Yes – Frequency? Color?
3. Stools?  
Dark or bloody?
4. Urine?  
Any difficulty or blood?

**FOR SIGNS OF SHOCK REFER TO  
BLEEDING PROTOCOL**

## Useful Information – possible causes

- Gastroenteritis
- Appendicitis
- Pelvic Inflammatory Disease
- Ectopic Pregnancy
- Bowel Obstruction
- Ulcers
- Gastritis
- Kidney Stones
- Abdominal Aortic Aneurysm



# Female Abdominopelvic Pain

## SPECIAL CONSIDERATION

# Gynecological Emergencies

- Gynecology – Dealing with the health of the female reproductive system
- Two most common chief complaints:
  - Vaginal Bleeding
  - Lower Abdominal or Pelvic Pain

# GYN Patient Questioning

## **Vaginal Bleeding Considerations:**

Amount?

When and for how long?

Likelihood of pregnancy?

Last Menstrual Period?

Associated with pain, other functions?

Obstetric history?

Sexual Assault?

# Possible Causes of Abdominopelvic Pain in Females

Pelvic Inflammatory Disease (infection of reproductive organs)

Sexually Transmitted Diseases

Ovarian Cysts

Cystitis (bladder infection)

Endometriosis (abnormal tissue growth)

Ectopic Pregnancy (outside of uterus)

Spontaneous abortion/miscarriage

Urinary Tract Infection

# Pregnancy Protocol

## KEY QUESTIONS

1. How many months pregnant is the mother?  
Previous births?
2. Is there any bleeding or cramping? Any tissue passed?
3. How many minutes apart are the pains?  
Signs of imminent birth:
  - a. Contractions less than 3 min. apart
  - b. Feeling the need to push or move bowels
  - c. Infant's head or other body part present in birth canal
  - d. If any of these conditions present – proceed to Childbirth instructions

## KEY QUESTIONS CONTINUED

4. Has the mother had any pregnancy or childbirth complications?
5. Did the doctor indicate if the infant was in the right position?
6. Has the bag of waters broken?  
Yes – color, odor? (notify responders)
7. If the infant has already been born: go to After the Delivery protocol page

# Pregnancy/Childbirth/Miscarriage Protocol

- Pre-Arrival Instructions for this protocol are geared towards prepping for imminent birth, emergency childbirth and what to do after the child is born.
- Pregnancy concerns, should be screened for signs and symptoms and go to associated protocol.
- Calm and reassure callers with pregnancy or possible miscarriage concerns.
- Any patient feeling faint or showing signs of shock can be put in shock position with legs elevated. (instructions found in **bleeding** protocol)
- Women in the later stages of pregnancy can be placed on their left side to prevent supine hypotension syndrome, a condition where

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Questions, concerns or ideas for future CE topics can be directed to Rhonda at [emsjunkie1@aol.com](mailto:emsjunkie1@aol.com)

➤ HAPPY TELECOMMUNICATORS WEEK, APRIL 10-16

➤ HAPPY EMS WEEK, MAY 15-21

THANKS FOR ALL YOU DO!!!!!!!

# Sources

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