Session Objectives

- Identify and describe the components of a history for a common gastrointestinal complaint.
- Describe the components and sequence of the abdominal physical exam.
- Isolate and describe normal abdominal exam findings.
- Define, describe, and identify the different types of bowel sounds and their clinical significance
- Correlate abdominal exam findings with likely etiologies

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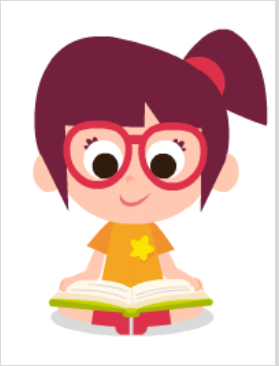

Case Presentation

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- 44-year-old female with complaint of constipation which has been worsening over the past 3 to 4 months.
- What questions should you ask this patient?
- Any questions pertaining to osteopathic principles and practice?
- During your history taking consider the patient's discomfort in reporting certain complaints

Definitions - Constipation

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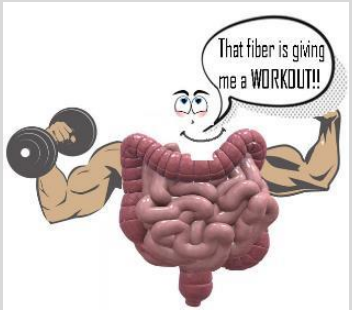
- Physicians:
  - Fewer than 3 bowel movements per week
- Patients:
  - Hard stools
  - Feeling of incomplete evacuation
  - Excessive straining
  - Sense of anorectal blockage during defecation
  - Need for manual maneuvers to defecate



Source: American Gastroenterological Association Medical Position Statement on Constipation. Gastroenterology 2013; 144:211-217

Constipation - HPI

HPI Components	What should you ask patient?
Onset	When did it start? Older patient new-onset → cancer
Palliation/ Provocation	What makes it better/worse, What have they tried?
Quality	Lumpy or hard stools, incomplete evacuation, excessive straining. Which of these is most distressing to the patient?
Severity	Frequency, intervals between bowel movements Prolonged straining, digital evacuation → Pelvic floor dysfunction Need laxative to produce loose stools, how often and what dosage Sensation of incomplete evacuation
Timing	Constant, intermittently occurring How many bowel movements per week?

Source: Jonathan Gotfried, etal. Constipation. Merck Manual Professional, Updated April 2025 https://www.merckmanuals.com/professional/gastrointestinal-disorders/symptoms-of-gastrointestinal-disorders/constipation?query=constipation

Constipation - HPI

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HPI Components	What should you ask patient?
Associated symptoms	Fever, nausea, abdominal pain Alternates with diarrhea → Irritable bowel syndrome Paradoxical diarrhea in elderly → fecal impaction Bloating and cramping → Irritable bowel syndrome Hematochezia → Colon cancer, diverticulosis, inflammatory bowel disease Weight loss ≥ 10 lbs → colon cancer
Other	Pain on DRE → Anal fissure, hemorrhoids Leakage of stool on DRE → Fecal impaction, rectal prolapse Medications → opioids, calcium channel blockers, iron supplements PMHX: Parkinson's, hypothyroidism, dementia

Source: Jonathan Gotfried, etal. Constipation. Merck Manual Professional, Updated April 2025
https://www.merckmanuals.com/professional/gastrointestinal-disorders/symptoms-of-gastrointestinal-disorders/constipation?query=constipation

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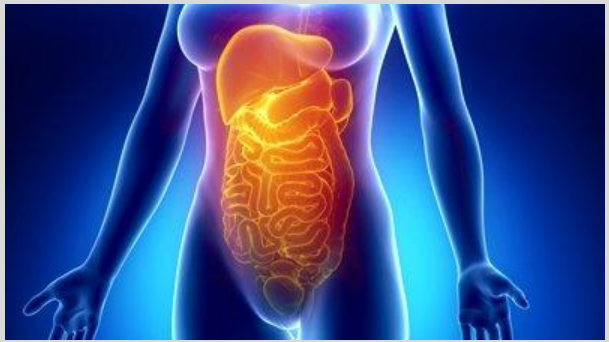
Anatomy



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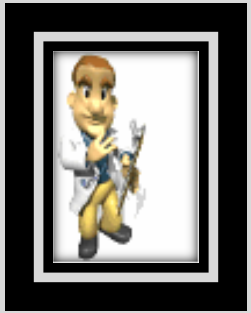
Examination Techniques



Abdominal Exam - Preparation

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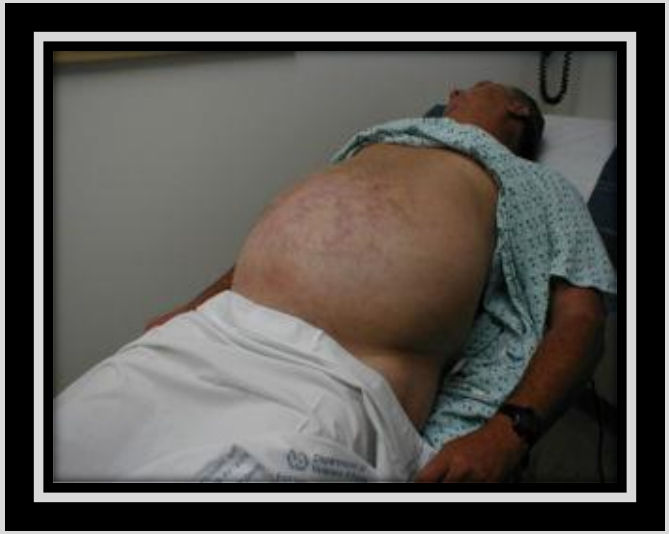
- Good Light
- Warm Room, hands, instruments
- Relaxed Patient:
  - Pillow or folded sheets under head and knees.
  - Patients arms at his/her sides
- Exposure – position drapes appropriately
- Empty Bladder
- Examine Area of Pain Last



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Inspection

Inspect the Abdomen

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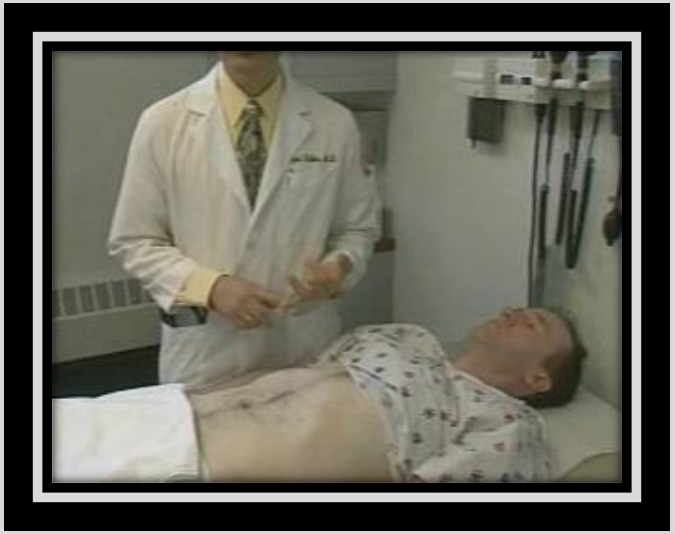
- With the patient lying supine, the abdomen should be:
  - Completely exposed
  - Revealing all 4 quadrants
- Tell your patient that you are inspecting their abdomen.



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Inspect Abdominal Wall

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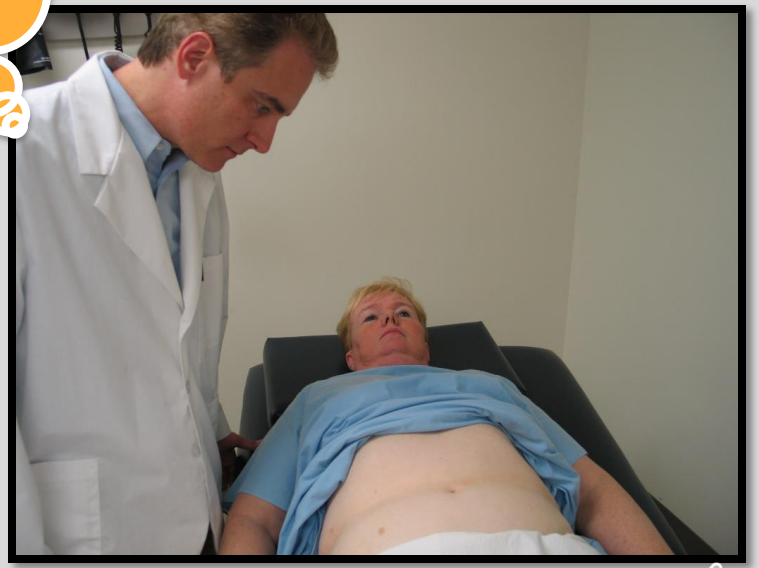
- Contour
  - Symmetry, Masses
- Skin
  - Scars, striae
  - Dilated Veins, Discoloration
  - Rash or lesions
- Umbilicus
- Motion
- Pulsations

Remember to observe from the right side!



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Inspect Abdominal Wall Contour

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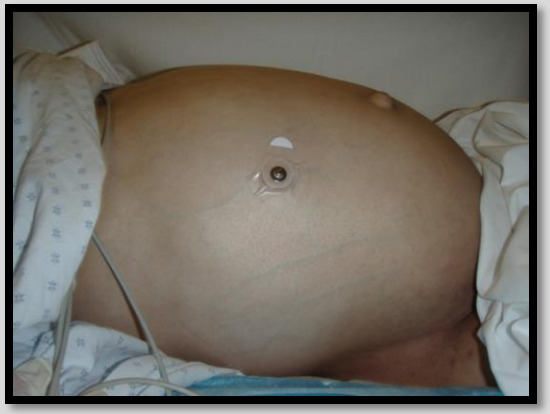

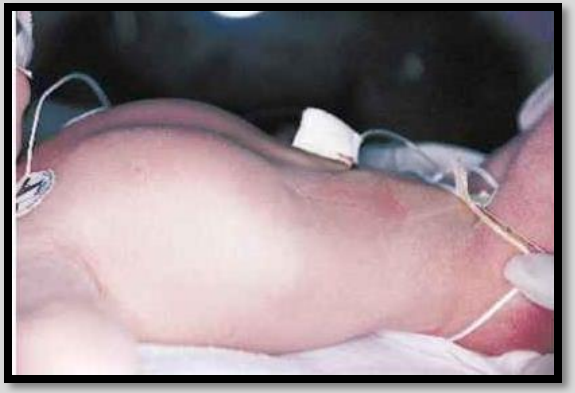

- Distention
  - Generalized
  - Localized
- Protuberant
- Scaphoid
- Flat

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Inspect Abdomen for Scars

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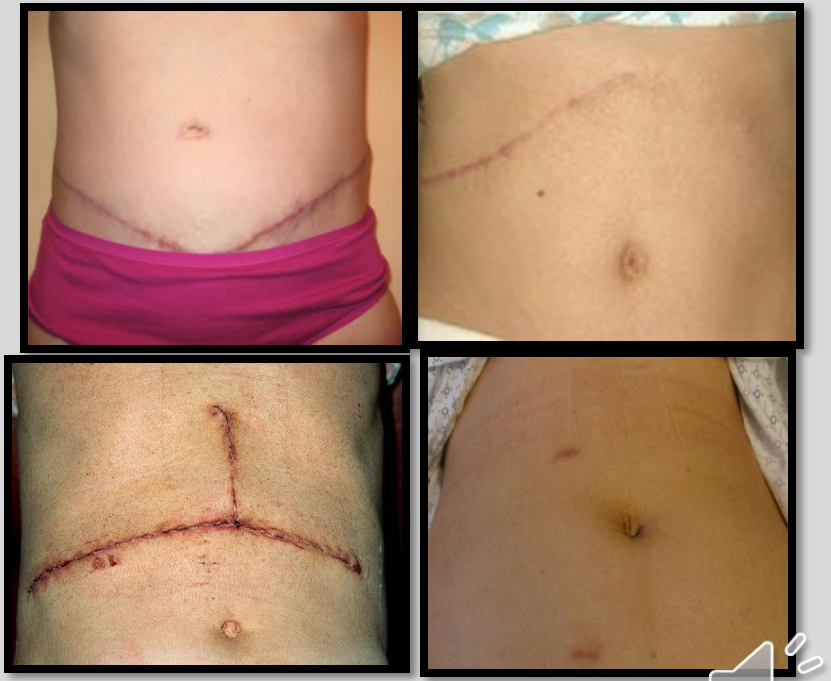
- Describe or diagram
- Include in the description:
  - Location
  - Size & Shape
  - Type (surgical/injury)
  - Healing stage
- Correlate with patient's history



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Inspect Abdomen for Dilated Veins

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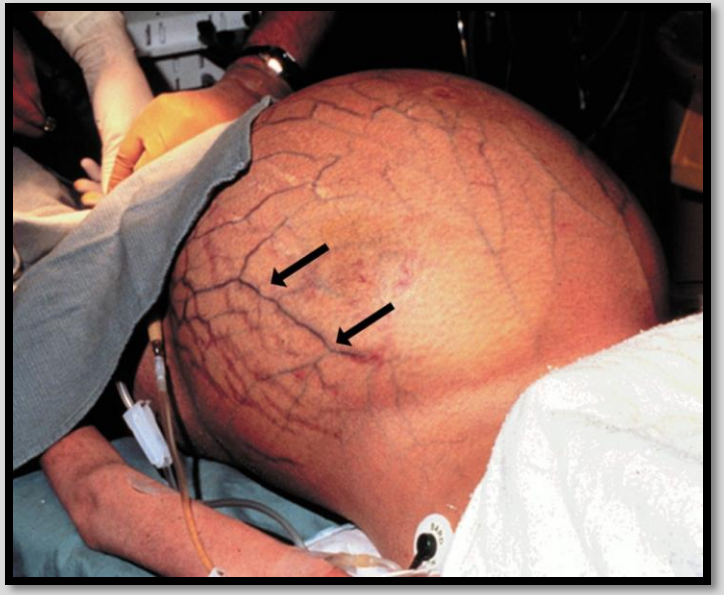
- A few small visible veins may be normal.
- Abnormal dilation seen in:
  - Portal hypertension
  - Emaciation
  - IVC obstruction



Patient with caput medusa and ascites

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Inspect Abdomen for Jaundice

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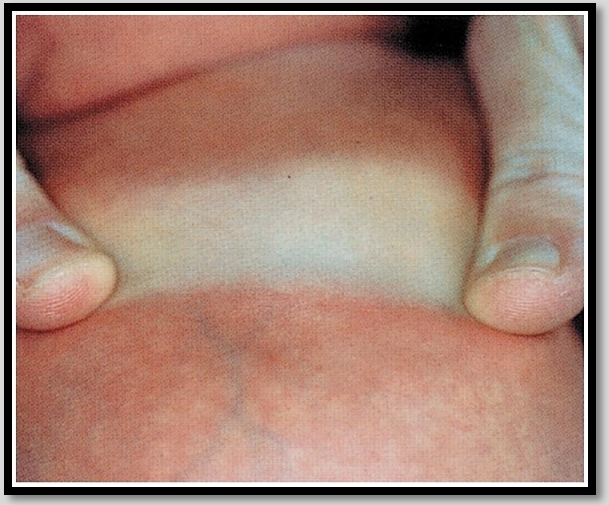
- Pre-hepatic
  - Red blood cells rupture faster than the liver can conjugate bilirubin
- Hepatic
  - Liver's inability to conjugate or excrete bilirubin
- Post-hepatic
  - Flow of bile into the intestine is blocked



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Inspect Abdominal Umbilicus

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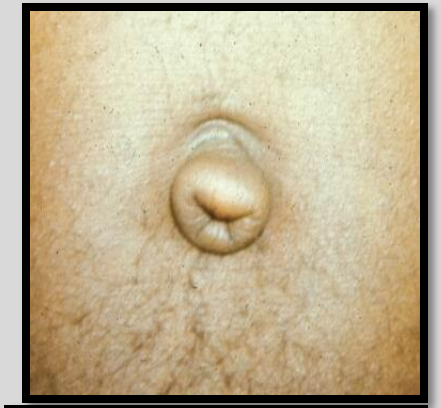
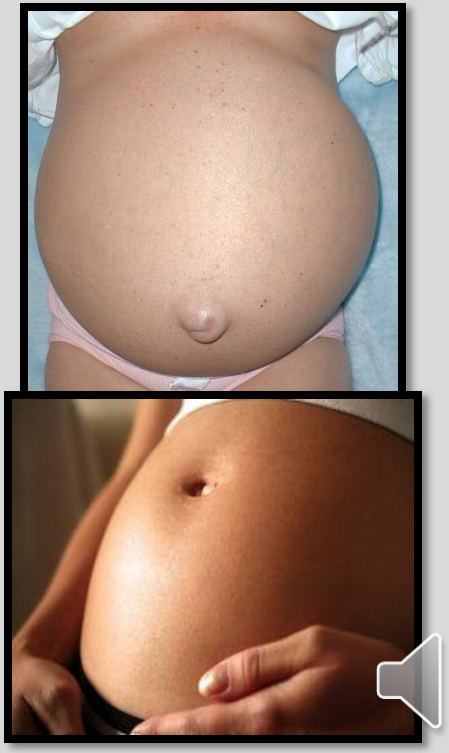
- Observe:
  - Contour
  - Location
  - Inflammation
  - Bulges





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Inspect Abdomen for Pulsations and Peristalsis

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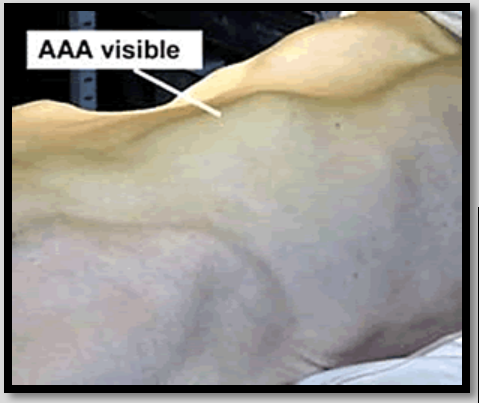
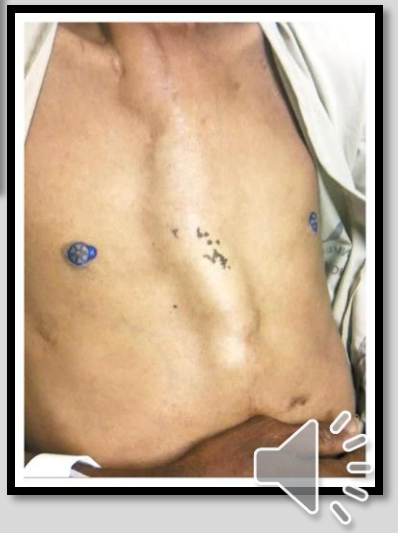
- Abdominal aortic aneurysm may be visible as a pulsatile mass
- Visible persistalsis is usually the result of intestinal obstruction





Visible persistalsis video:
http://www.nejm.org/doi/full/10.1056/NEJMicm0910079

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Auscultation

Auscultation of the Abdomen

- Auscultate the abdomen **BEFORE** percussing or palpation as these maneuvers may alter frequency of bowel sounds.
- Place the diaphragm of your stethoscope gently on the abdomen
- Listen for bowel sounds: Note their frequency and character
- Listen for vascular bruits
- Auscultate the abdomen in **ALL 4 quadrants**

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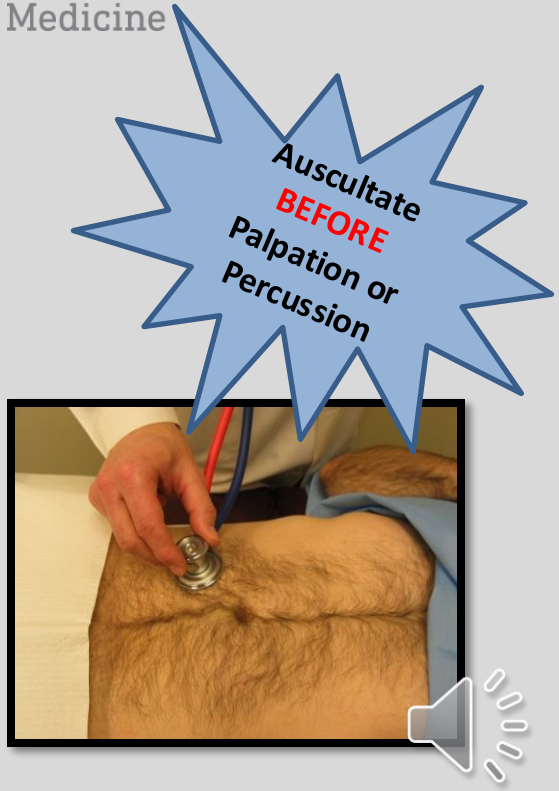

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Auscultation of Abdomen for Other Bowel Sounds

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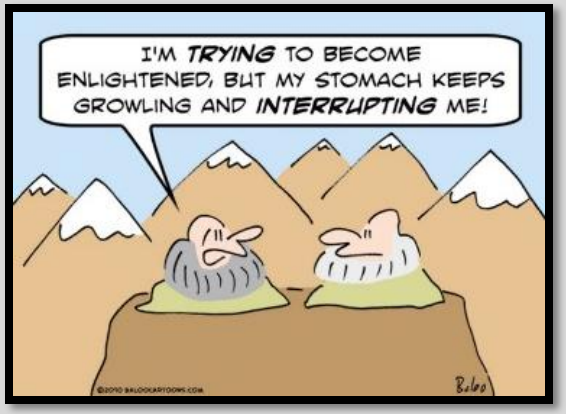
- Borborygmi: Prolonged gurgles of hyperperistalsis; stomach "growling“ or “rumbling”.
- High-pitched tinkling sounds: Suggestive of dilated bowel due to the presence of air and fluid under tension
- Rushes of high-pitched sounds that coincide with abdominal cramps: Suggestive of intestinal obstruction



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Percussion

Percuss and Measure the Liver: Mid-clavicular Line

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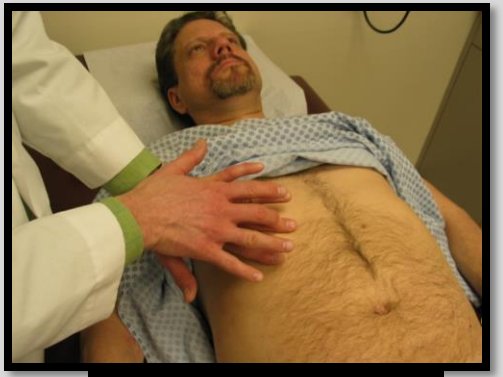
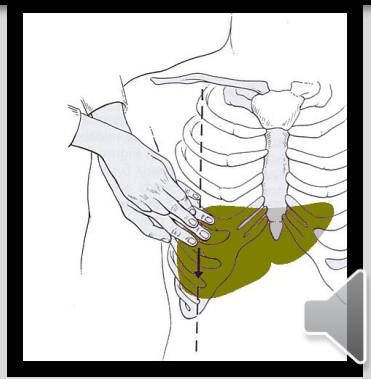
- Percuss the liver in a downward or upward direction.
- Start at an area below the umbilicus (midclavicular line) and percuss up from abdominal tympany until dullness is appreciated (lower border of the liver)
- Next, starting at the nipple line percuss from lung resonance down toward liver dullness (upper border of the liver)
- When dealing with a patient with large breasts, ask her or him to displace the breast as necessary.





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Percuss the Spleen

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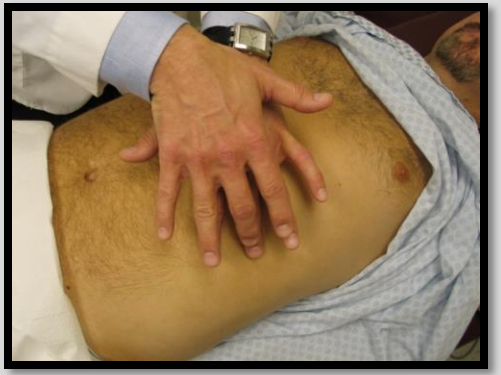
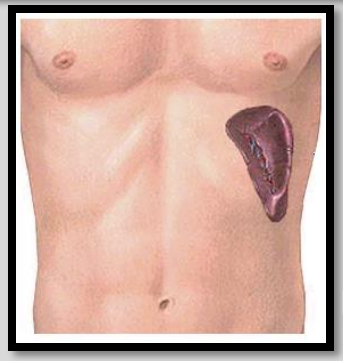
- Percuss the spleen on the anterior lateral, not directly on the front of the abdomen.
- Percuss the lowest interspace in the left anterior axillary line (tympanitic).
- Ask the patient to take a deep breath, and percuss again
- Should stay tympanitic
- If becomes dull upon inspiration suggests splenic enlargement





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Palpation

Palpate the Abdomen

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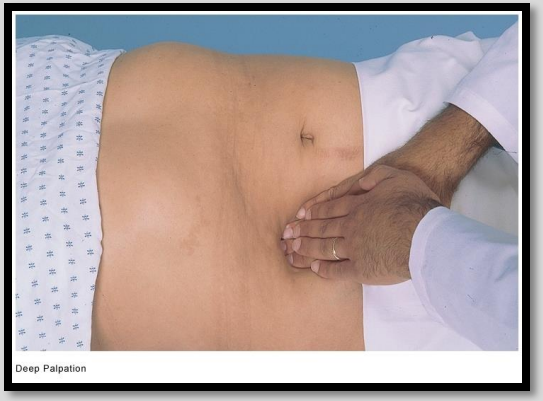
- First, palpate the abdomen lightly.
  - To indentify tenderness, muscular resistance and superficial organs and masses.
- Then palpate deeply using finger pads, not finger tips.
  - To delineate masses (pregnant uterus, abdominal aortic aneurysm, or a distended bladder).
- Note: If patient complaint is “abdominal pain” make sure you examine the painful area last.


Deep Palpation

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Palpate the Liver: *Bi-manual Compression*

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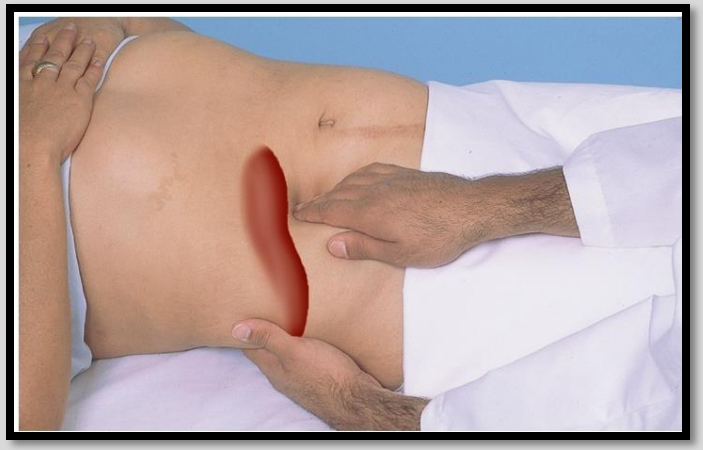
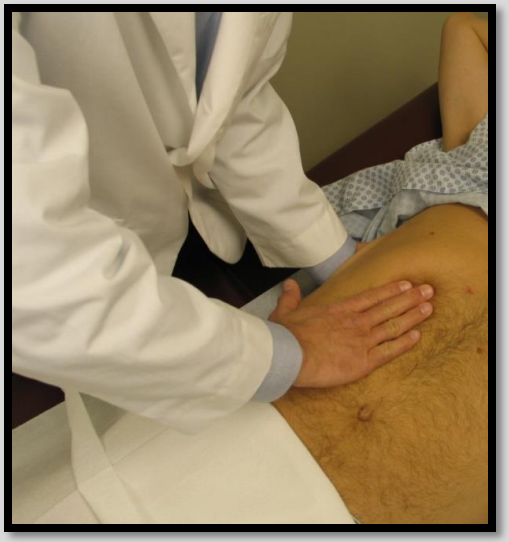
- The left hand is placed under the right posterior ribs, and the right hand palpates the liver deeply





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Palpate the Spleen

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- Brace the posterior ribs with the left hand and palpate with the right hand
- Ask the patient to take a deep breath as the spleen is palpated

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Palpation of Kidney

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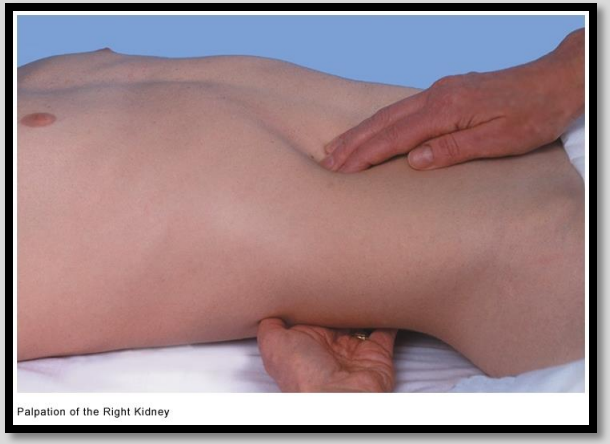
- Bimanual technique. Place one hand on patients back parallel to the 12th rib.
- Lift patients back.
- Place the other hand below the costal margin lateral and parallel to the rectus abdominus muscle.
- Ask patient to take a deep breath.
- At peak of inspiration attempt to capture patients kidney between your hands.



Palpation of the Right Kidney

Examiner stands on same side of kidney being palpated.

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Palpation of Aortic Pulsations

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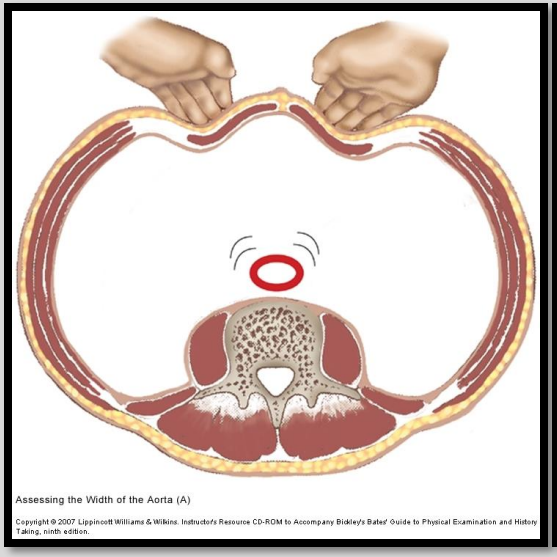
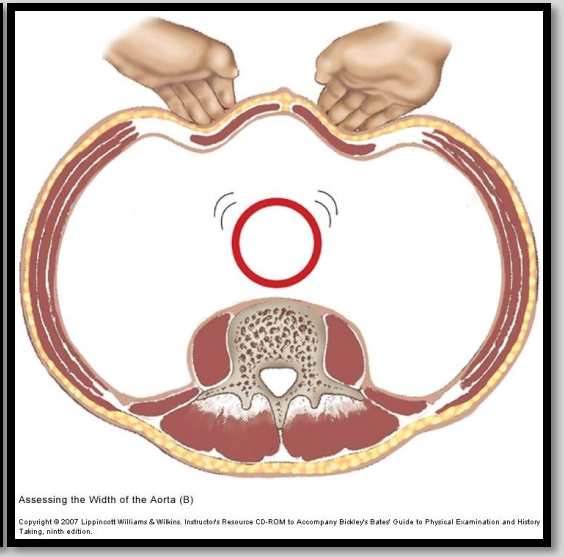


Assessing the Width of the Aorta (A)



Assessing the Width of the Aorta (B)

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Summary Slide

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- Points:
  - Consider patient's discomfort with discussing their problems
  - Observe from the patient from the right side of the patient
  - Explain to the patient what you are doing
  - Observe the patient for signs of pain, don't rely solely on verbal cues

Lecture Feedback Form: Link Below

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https://comresearchdata.nyit.edu/redcap/surveys/?s=HRCY448FWYXREL4R