# Abdominal and Genitourinary

By Victoria Siegel, RN, MSN, EdD  
Sharon Niggemeier RN, MSN  
Myung-Hee Pak, RN, MSN, CCRN

## Abdominal Anatomy & Physiology

<table>
<thead>
<tr>
<th>Right Upper Quadrant (RUQ):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liver, Gallbladder</td>
</tr>
<tr>
<td>Duodenum</td>
</tr>
<tr>
<td>Head of the Pancreas</td>
</tr>
<tr>
<td>Right kidney and Adrenal</td>
</tr>
<tr>
<td>Hepatic flexure of colon</td>
</tr>
<tr>
<td>Part of ascending and transverse colon</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Left Upper Quadrant (LUQ):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stomach</td>
</tr>
<tr>
<td>Spleen</td>
</tr>
<tr>
<td>Left lobe of liver</td>
</tr>
<tr>
<td>Body of Pancreas</td>
</tr>
<tr>
<td>Left kidney and adrenal</td>
</tr>
<tr>
<td>Splenic flexure of colon</td>
</tr>
<tr>
<td>Part of transverse and descending colon</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Right Lower Quadrant (RLQ):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cecum</td>
</tr>
<tr>
<td>Appendix</td>
</tr>
<tr>
<td>Right ovary and tube</td>
</tr>
<tr>
<td>Right ureter</td>
</tr>
<tr>
<td>Right spermatic cord</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Left Lower Quadrant (LLQ):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part of descending colon</td>
</tr>
<tr>
<td>Sigmoid colon</td>
</tr>
<tr>
<td>Left ovary and tube</td>
</tr>
<tr>
<td>Left ureter</td>
</tr>
<tr>
<td>Left spermatic cord</td>
</tr>
</tbody>
</table>
Abdominal Anatomy & Physiology

- Midline:
  - Aorta
  - Uterus
  - Bladder

Regions of the Abdomen

- Epigastric: area between costal margins
- Umbilical: area around umbilicus
- Suprapubic or hypogastric: area above pubic bone.
  or
  
  RUQ   LUQ
  RLQ   LLQ

Abdominal Assessment

- Subjective Data: (Health history questions)
  - Change in appetite
  - Usual weight
  - Difficulty swallowing
  - Are there any foods you have difficulty tolerating?
  - Have you felt nauseated? Have you vomited (emesis)?

Abdominal Assessment

- Experience indigestion?
- Heart burn (pyrosis) or Belching (eructation)
- Use antacids, if so, how often
- Abdomen feel bloated after eating (distension)
- Abdominal pain? Associated with eating? SLIDA
  - Hx of abdominal surgery

Abdominal Assessment

- Bowel habits:
  - Frequency
  - Usual color and consistency
  - Any diarrhea/constipation
  - Any recent change
  - Use of laxatives… Frequency
  - If over 50, recommend colonoscopy

Abdominal Assessment

- Past abdominal history:
  - GI problems: ulcer, GB, hepatitis, jaundice, appendicitis, colitis, hernia
  - Surgical history of abdomen
  - Surgical problems in the past
  - Abdominal x-rays, sonograms, CT results, colonoscopy results, etc..
Abdominal Assessment

• Additional Hx. Infants and children:
  • Breast or bottle fed… How is formula tolerated?
  • Table foods introduced… How tolerated?
  • Eating patterns/intervals
  • Eating non-foods, i.e., grass, dirt, etc.
  • 24 hr. diet recall, amount of fluids
  • For overweight child: onset, Family Hx, Diet

• Additional history for adolescents:
  • Regular meals…Snacks…Breakfast
  • Exercise
  • If weight less than body requirements: How much lost? How-diet, exercise? Feel tired? Hungry? How do you think your body looks? Is loss of weight associated with other changes, such as menstrual irregularities? What do parents say about eating, friends?

• Additional history for aging adult:
  • How do you get groceries…Prepare meals
  • Eat alone, or share meals with others? 24 hr. diet recall?
  • Difficulty swallowing, chewing, dentures
  • Bowel frequency…Constipation…Fiber… Fluids…Laxatives…Other drugs that have GI effects?

Physical Exam

• Preparation for physical exam:
  • Good lighting, warm room, empty bladder
  • Supine, head on pillow or raised, knees flexed or on pillow, arms at side
  • Expose abdomen so it is fully visible
  • Enhance relaxation through breathing exercises, imagery, use of a low/soothing voice and ask pt. to tell about abd. Hx.

Physical Exam: Inspection

• Contour: Normal ranges from flat to round.
• Symmetry: should be symmetric, note bulging, masses or asymmetry.
• Umbilicus: normal is midline, inverted and no discoloration.
• Skin: surface normally smooth and even color.

• Pulsations or movements- pulsation of aorta may be seen in epigastric area of thin patients.
• Demeanor
• Restlessness
• Absolute stillness
• Knees flexed
### Physical Exam: Auscultation

- Performed after inspection and before percussion and palpation
- Use diaphragm and hold stethoscope lightly against skin
- Listen for bowel sounds in each quadrant
- Hyperactive or hypoactive

### Physical Exam: Percussion

- Percussion- locates organs, assesses density, screen for fluids/masses
- Percuss lightly in all 4 quadrants
- Normal: tympany because air in intestines rises to surface when pt. is supine
- Percuss liver span – normal adult liver span is 6-12 cm.
- Spleen and kidney

### Physical Exam: Palpation

- Palpation: to judge size, location, consistency of certain organs and to screen for abnormal mass or tenderness.
- Light palpation: first four fingers close together, depress skin about 1 cm. Make gentle, rotary motion sliding fingers and skin together.
- Deep palpation: 5-8 cm (2-3 inches).

### Physical Exam: Abdomen

- Blumberg’s sign: assess rebound tenderness
- Iliopsoas muscle test: positive for inflammation of iliopsoas muscle
- Obturator test: positive for pain indicates possible perforated appendix
Summary: Abdominal Assessment

- Abdomen is divided into regions
- Assessment technique varies in order: Inspection, Auscultation, Percussion & Palpation
- Specific tests can be used if appendicitis is suspected

Male Genitourinary

By
Victoria Siegal RN MSN EdD
Sharon Niggemeier RN MSN

Male Genitalia: Anatomy & Physiology

- Externally:
  - Penis
  - Scrotum
- Internally:
  - Testes
  - Epididymis
  - Vas deferens

Genitourinary Assessment

- Subjective data: Frequency, urgency, nocturia, hesitancy and/or straining.
- Urine: Color, cloudy, hematuria?
- Penis: pain, lesions, discharge, STD?
- Scrotum: pain, lumps, TSE, sexual activity and contraceptive use.

Genitourinary Assessment

- Self-Care: Testicular self-exam (TSE)
  - Teach males 14 and older
  - Testicle feels, smooth & rubbery (like a hard boiled egg)
  - T = timing, once a month
  - S = shower, warm water relaxes scrotal sac.
  - E = examine, report changes immediately.

Genitourinary Assessment

- Infant and children – urine stream look straight?
- Over age 2- 2 and ½ toilet training?
- Hernia, hydrocele?
- Screen for sexual abuse: has anyone ever touched your penis and you did not want them to?
Genitourinary Assessment

- **Preadolescents and adolescents:**
  - Ask direct, age appropriate, matter of fact questions, avoid sounding judgmental.
  - Ex. - often boys your age experience…
  - Who can you talk to about body changes and sex information?
  - Nocturnal emissions, screen for sex abuse.

Genitourinary Assessment

- **Considerations for aging adult:** early s/s of enlarged prostate (hesitancy, dribbling) may be ignored.
- Hematuria- late s/s
- Nocturia- may be due to diuretics, take them in AM and no fluids 3 hrs. prior to bed.
- Depressants to sexual desire and function: antihypertensives, estrogens, sedatives, tranquilizers, ETOH.

Physical Examination: Genitourinary

- **Inspection:**
  - Inflammation
  - Foreskin problems
  - Lice
  - Hernias
  - Discharge

Physical Examination: Genitourinary

- **Palpation:**
  - Lymph nodes
  - Testicular masses
  - Hernias

Summary: Genitourinary

- Includes only Inspection & Palpation
- Developmental considerations are necessary
- Teaching must include TSE