Abdominal Pain (Acute)

Acute abdominal pain is a common complaint in children. It varies with age, symptoms and location of pain. Causes vary significantly and may require non-surgical or surgical methods to resolve. Most episodes of abdominal pain are brief and benign, but some situations may require urgent intervention.

**ASSESSMENT**
Perform assessment focused on symptom onset, location and character of pain, exacerbating factors (e.g. movement, car ride, eating), and associated symptoms (e.g. nausea, vomiting, anorexia, fever).

**HPE (HISTORY AND PHYSICAL EXAM) RED FLAGS**
- Significant abdominal pain and/or tenderness
- Persistent or progressively worsening pain
- Peritoneal signs (pain with movement/jumping jacks/car ride, + Rovsing/obturator/psoas signs, +Murphy’s sign)
- Persistent or worsening associated symptoms including nausea/vomiting, fever

**WHEN TO REFER**
In the presence of any of the red flags listed above, refer to Cincinnati Children’s Pediatric Surgery for management/treatment as soon as possible.

### FAST FACTS

<table>
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<tr>
<th>Fact</th>
<th>Description</th>
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<td>~75,000</td>
<td>children &lt;18 years in the US have appendicitis annually</td>
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<td>216%</td>
<td>increase in cholecystectomies over past 10 years in children</td>
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<td>Acute cholecystitis</td>
<td>most common gallstone-related complication</td>
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<td>4.9</td>
<td>cases of ovarian torsion per 100K children ≤ 20</td>
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<td>up to 20%</td>
<td>of menarchal adolescents may have ovarian hemorrhagic cysts</td>
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If you have clinical questions about patients with acute abdominal pain, call Physician Priority Link® at 513-636-7997 or 1-888-987-7997.

If you would like additional copies of this tool, or would like more information, please contact the Physician Outreach and Engagement team at Cincinnati Children’s.

Tool developed by Cincinnati Children’s physician-hospital organization (known as Tri-State Child Health Services, Inc.) and staff in the James M. Anderson Center for Health Systems Excellence. Developed using expert consensus and informed by Best Evidence Statements, Care Practice Guidelines, and other evidence-based documents as available. For Evidence-Based Care Guidelines and references, see www.cincinnatichildrens.org/evidence.
Abdominal Pain (Acute)

Patient presents with acute onset abdominal pain

Standard Workup
• Situational History
• Past Medical/Surgical History
• Physical Exam

HPE (HISTORY AND PHYSICAL EXAM) RED FLAGS

- Periumbilical/epigastric pain, progression to RLQ
- Associated nausea, vomiting, anorexia, fever
- Worse with movement, car ride
- RLQ tenderness to palpation
- + Rovsing sign (pain in RLQ with LLQ palpation)
- Pain with movement of bed, jumping jacks
- Female patient
- May also have + obturator or psoas signs

Likely diagnosis: Appendicitis
Work-Up: CBC, U/A, RLQ US (+ pelvic US for females)

- Epigastric/RUQ pain, possible radiation to back
- Post-prandial
- ± Nausea, fever
- ±RUQ or epigastric tenderness to palpation
- ± Murphy's sign

Likely diagnosis: Symptomatic cholelithiasis vs cholecystitis
Work-Up: CBC, LFTs, RUQ US

- Female patient
- Periumbilical pain, may progress to lower abdominal pain
- ± nausea, vomiting, dysuria
- May present with sudden onset of pain
- ± Unilateral lower quadrant or suprapubic tenderness
- ± Pain with movement
- ± Tender pelvic mass on palpation

Likely diagnosis: Ovarian torsion or ovarian hemorrhagic cyst rupture
Work-Up: CBC, U/A, pelvic US, Serum HCG (pregnancy) test

Other potential medical/surgical causes of abdominal pain
- Inflammatory bowel disease
- Omental infarct
- Meckel's diverticulitis/obstruction from omphalomesenteric duct remnant
- Gastroenteritis
- Mesenteric adenitis
- Pyelonephritis/cystitis
- Endometriosis
- Intussusception
- Epiploic appendagitis
- Urolithiasis
- Gastric/duodenal ulcer
- Pelvic inflammatory disease
- Ectopic pregnancy

For urgent issues, or to speak with the specialist on call 24/7, call the Physician Priority Link® at 1-888-987-7997.