

# Functional Abdominal Pain

## FAST FACTS

# up to 50%

of pediatric gastroenterology visits are due to FAPD, which affect 25% of children worldwide

# \$6,104

annual healthcare cost per patient with FAPD

# \$20 billion/year

cost of FAPDs in adults, although total cost for pediatric patients is unknown

## WHEN TO REFER

If red flags are present (see right column) at HPE, or if abdominal pain does not improve after initial treatment, refer to Cincinnati Children's Gastroenterology.

If you have clinical questions about a patient with an FAPD, call the Physician Priority Link® at 513-636-7997 or 1-888-987-7997.

Functional abdominal pain disorders (FAPDs) are a subset of Disorders of Gut-Brain Interaction (DGBI) that stem from complex interactions of various biopsychosocial factors affecting the gut-brain axis. They vary in susceptible individuals and are associated with functional disability, impaired quality of life, psychological comorbidities such as anxiety and depression, and social and academic difficulties. These disorders also pose a significant healthcare cost burden.

## ASSESSMENT

Perform a detailed, thorough history and physical exam (HPE) with limited, purposeful evaluation. Pay close attention to duration, location, character and timing of pain, aggravating/alleviating factors, and stooling patterns. The presence of red flags (below) help determine the need for a more comprehensive workup. Strive to make a positive diagnosis (versus one of exclusion) to prepare your patient for diagnostic and therapeutic success.

## HPE (HISTORY AND PHYSICAL EXAM) RED FLAGS

- Unintentional weight loss
- Slowed growth
- Pain that awakens
- Persistent vomiting
- Persistent focal pain
- Unexplained fever
- Dysphagia or odynophagia
- Nocturnal diarrhea
- GI blood loss
- Arthritis
- Mouth sores
- Delayed puberty
- Inflamed perianal skin tags or fissures
- Pain or bleeding with urination
- Menstrual irregularities
- Bradycardia, orthostatic instability
- Family history of inflammatory bowel disease, celiac disease, autoimmune disorders, or peptic ulcer disease
- Elevated C-reactive protein, sedimentation rate, fecal calprotectin, TTG IgA, lipase, anemia

## MANAGEMENT/TREATMENT

Follow a personalized, interdisciplinary approach and focus on improving functioning.

### Pharmacologic

- Avoid multiple neuromodulators—consider psychiatry referral as needed for behavioral issues
- Consider a one-month trial for any medication prescribed, in order to evaluate for response
- Amitriptyline 10–50 mg daily (confirm no suicidal ideation and consider EKG before starting)—begin with 10 mg qHS, increase by 10 mg qweek for every 10 kg up to 50 mg. Use lowest effective dose. Ramp up or wean slowly.
- Cyproheptadine 2–4mg BID-TID
- Hyoscymamine 0.125 mg–0.25 mg QID PRN
- Dicyclomine 10–20 mg TID PRN

### Non-pharmacologic

- Behavioral: cognitive behavioral therapy, gut-directed hypnotherapy, pain coping skills, mindfulness, biofeedback
- Probiotics
- Neuromodulation
- Integrative medicine: yoga, acupuncture, massage therapy, energy therapy, aromatherapy
- Osteopathic medicine
- Physical therapy

### Dietary

- Low FODMAP diet (For low FODMAP diet details, go to [gi.org/topics/low-fodmap-diet](http://gi.org/topics/low-fodmap-diet))
- Avoid simple sugars, artificial sweeteners
- Avoid specific food triggers—identify through a food diary

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.

# Functional Abdominal Pain

## Inclusion Criteria

Patients between the ages of 4–21 years experiencing chronic abdominal pain conditions include: irritable bowel syndrome (IBS), functional dyspepsia and its subtypes (epigastric pain syndrome and postprandial distress syndrome), abdominal migraine, and functional abdominal pain-not otherwise specified

## Patient Presents

## Standard Workup

- Developmental and Behavioral History
- Family History
- Physical Exam
- Dietary History

## HPE (HISTORY AND PHYSICAL EXAM) RED FLAGS

- Unintentional weight loss or slowed growth
- Pain that awakens the child
- Persistent vomiting, constipation, or bloating
- Persistent focal pain
- Unexplained fever
- Dysphagia or odynophagia
- Chronic or Nocturnal diarrhea
- GI blood loss
- Mouth sores, arthritis
- Delayed puberty
- Inflamed perianal skin tags or fissures
- Pain or bleeding with urination
- Menstrual irregularities
- Bradycardia, orthostatic instability
- Family h/o of inflammatory bowel disease, celiac disease, or autoimmune disorders
- Elevated C- Reactive Protein, sedimentation rate, fecal calprotectin, tissue transglutaminase IgA, anemia, lipase

## Any Red Flags?

Evaluate Further

Yes

No

Make a positive diagnosis and Initiate therapy

## Pharmacologic

- Amitriptyline 10–50 mg daily (confirm no suicidal ideation and consider EKG before starting)—begin with 10 mg qHS, increase by 10 mg qweek for every 10 kg up to 50 mg. Use lowest effective dose. Ramp up or wean slowly.
- Cyproheptadine 2–4 mg BID-TID
- Hyoscyamine 0.125–0.25 mg QID PRN
- Dicyclomine 10–20 mg TID PRN

## Non Pharmacologic

- Behavioral Medicine (CBT, Hypnotherapy, Pain coping skills, Mindfulness, Biofeedback)
- Refer for Neuromodulation
- Integrative Medicine (Yoga, Acupuncture, Massage Therapy, Energy Therapy, Aromatherapy)
- Physical Therapy
- Osteopathic Manipulation

## Dietary

- Low FODMAP Diet (For low FODMAP diet details, go to [gi.org/topics/low-fodmap-diet](http://gi.org/topics/low-fodmap-diet))
- Limit simple sugars or artificial sweeteners
- Avoidance of specific food triggers (identify through a food diary)
- Probiotics (Lactobacillus)

## Office follow-up 1–2 months

Follow-up every 3–6 months

Yes

Improved Functioning and/or Symptom Reduction

No

Consider using PPL for advice or referral to GI if treatment is not effective

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