



## Disorders of Gut-Brain Interaction (DGBI)

are a group of gastrointestinal disorders with normal findings on bloodwork, imaging or endoscopy but share a common set of symptoms. Functional Abdominal Pain is a type of DGBI.

Other DGBI subtypes include:

- Irritable bowel syndrome
- Functional dyspepsia
- Functional constipation
- Abdominal migraine

## TYPICAL FEATURES OF DGBI

### Abdominal pain

- Localized around umbilicus
- Worsen with emotional stressors

### Nonspecific somatic symptoms

- Headaches
- Arthralgias, myalgias
- Nausea or vomiting
- Constipation or diarrhea

### Physical exam

- Abdominal tenderness
- Distractible/transient physical examination findings
- Normal perianal examination
- No systemic findings on exam

**DGBIs are the most common cause of chronic abdominal pain** and may explain >25% of abdominal pain in children!

## DIAGNOSIS

- DGBIs are **clinical diagnoses**. Refer to the *Rome IV criteria* for each subtype.
- **Rule out pathological causes of abdominal pain** in children including inflammatory bowel disease, gastroesophageal reflux disease, infectious colitis, food allergies, celiac disease by screening for **red flags** or abnormal findings on history, physical, or bloodwork!
- Investigations should only be performed as appropriate.

Red flags on history: failure to thrive, delayed puberty, fever, hemochezia, hematemesis, vomiting



Red flags on physical exam: Uveitis, skin rashes, organomegaly, arthritis, costovertebral angle tenderness, abdominal mass



## PATHOPHYSIOLOGY

Genetic predisposition



Vulnerability to biopsychosocial factors



Early life trauma  
Antibiotic use



Inflammation  
Psychological stress



Motility disorders  
Coping style



**Disordered microbiota gut brain axis**

Hypersensitivity to physiological processes occurring within the gut + altered neural signaling of pain



## MANAGEMENT

**Reassure** the patient that their pain experience is real

**Discuss** potential life stressors and work on building insight into pain experience

**Nutrition** counselling to remove triggering foods from diet (track with a food diary)

**Therapy** to cope with stressors and change thinking (CBT)

**Medications** may include laxatives, antispasmodics, antihistamines, antacids, antidepressants, probiotics\*

\*mixed evidence

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