Mental Health and Emotional Literacy Program

Dr. Martin Gauthier - last update Sept 2024

Functional Abdominal Pain Disorders

If you want to access the digital version of this handout on our website, scan this QR code and scroll down to the handout section. All the links will be active and you can learn more about the services we offer at Pinecone and other mental health challenges that can happen alongside Functional Abdominal Pain Disorders.

Understanding Chronic Abdominal Pain in Children

Chronic abdominal pain is common among children and teens and is often referred to as Functional Abdominal Pain Disorders (FAPDs, or more recently "Disorders of Brain Gut Interaction" or DGBI). Medically, we think of functional abdominal disorders as disorders that are causing real symptoms and distress, but for which further testing is unlikely to shed light on the cause or specific, targeted treatments. These conditions involve how the nervous systems in the gut and brain work together. Children with FAPD might feel pain more intensely or have unusual responses to things like eating or stretching their bowels. Kids with FAPD may experience even normal bowel sensations as unpleasant or distressing. DGBIs are common in children, affecting about 10 to 20 percent of kids.

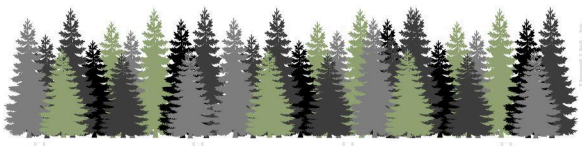
Types of DBGIs

There are different types of Disorders of Brain Gut Interaction, and they are classified based on their predominant features. Some examples include:

- Functional dyspepsia
- Irritable bowel syndrome (IBS)
- Abdominal migraines

in brief

- Functional abdominal pain disorders are common, affecting up to 20% of children.
- There is no blood or xray test to diagnose functional abdominal pain.
- FAPDs are a cause of distress and dysfunction.
- Medication and diets have little role to play in managing FAPDs, despite online trends.
- Normalization of function, teaching of coping strategies and behavioral modification are most likely to provide sustained improvement and wellness.



Pineconepediatrics.ca/youth-psychology-services

- If there is pain but the pattern doesn't clearly fit with one of the above, doctors will use simply "Functional Abdominal Pain"

Functional constipation, although a separate entity, is often found alongside other functional abdominal pain disorders. Constipation is a frequent trigger for pain, a frequent contributor to distress and should be treated aggressively if identified.

Diagnosing DBGIs

Doctors diagnose DBGIs in children who:

- Have had abdominal pain for at least 2 months
- Show no signs of specific illness during exams
- Have normal BASIC investigations which can include (depending on the symptoms) bloodwork, urine testing, stool testing or imaging like x-ray or ultrasound. Not all children will need testing, and perseverating on testing can be harmful (see below). Common disorders such as Celiac can be screened for but more invasive testing such as CT/MRI/Endoscopy is unlikely to add any new information.

Managing DGBIs

The goal of treating DBGIs is to help children get back to their normal activities and reduce distress. In some cases, it is not possible to stop the pain completely.

We often see children and families become intensely focused on symptoms, distress, and finding a discrete medical cause, losing sight of goals like function, growth, and resilience.

Examples of "*adopting a patient mindset*" in the context of Functional Abdominal Pain Disorder (FAPD) include routinely missing school due to mild symptoms, asking to be excused from activities without attempting them first, seeking reassurance or medical attention for typical discomfort, relying on others to complete tasks they can do themselves, using their condition to avoid responsibilities or gain attention, resting

excessively without symptom relief, and letting the condition dominate family discussions and decisions. Over time, these behaviors lead to a loss of function and agency.

Based on experience, we expect most children with FAPD to improve gradually, even without specific treatments. Maximizing function in the interim is essential.

Doctors use a combination of methods to help manage DGBIs:

- **Building a Relationship**: It's important for one doctor to be aware and in charge of the plan to manage your child's abdominal pain. Multiple providers lead to increased testing, which has been shown to cause harm in the long run. Education and understanding of the medical process around DGBIs are essential.
- **Behavior Changes**: Teach your child to handle pain better and avoid things that trigger it (like certain foods). Psychologists & dieticians can be helpful with this part.
- **Medications:** Although there is limited evidence to support the use of any one medication in the context of DGBIs, medications are sometimes used in situations of high distress or to manage specific symptoms.
- **Noninvasive Therapies**: Sometimes, treatments like hypnotherapy might be suggested if the pain continues despite other efforts.

Returning to School

Getting back to school is **key** for kids with FAPD, even though pain can make it hard. Parents can work with schools to create a plan that helps their child attend regularly. Starting with shorter days can build confidence and success.

Changing Behaviors

Parents can help by:

- Rewarding positive behaviors, like going to school regularly. We suggest non-monetary rewards and non-food-based rewards. Some examples could include:
    1. **Activity of Choice**: Offering the child the chance to choose an enjoyable activity, like playing a board game or doing a puzzle

2. **Special Outing**: Planning a special outing, such as visiting a local zoo, museum, or playground.
3. **Art or Craft Supplies**: Providing new art supplies or materials for a creative project the child enjoys.
4. **Sticker Chart or token economy**: Using a sticker chart or tokens where accumulated stickers lead to a larger reward, such as choosing a movie for family movie night or a small toy.
5. **Extra Reading Time**: Allowing extra time for reading books of the child's choice before bedtime.
6. **Outdoor Adventure**: Planning a nature walk, a bike ride, or a visit to a nearby park.
7. **Quality Time**: Spending dedicated one-on-one time with the child engaged in an activity they enjoy.
8. **Extra Screen Time**: If all else fails, allowing additional screen time, such as watching a favorite show or playing a game (particularly if mom and dad are involved!).

- Encouraging hobbies and activities that distract from pain.
- Avoiding actions that might unintentionally make pain worse, like allowing too much time off or focusing too much on symptoms.

Improving Coping Skills

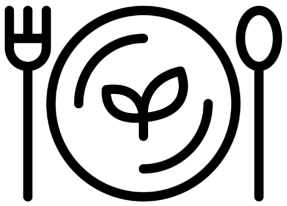
What is Coping? Coping means using strategies to manage feelings and reactions to stress. For kids with chronic abdominal pain, learning effective coping skills can help them feel better and get back to normal activities. For older children.

- **Relaxation Techniques**: These include deep breathing and progressive muscle relaxation, which can calm the body during pain episodes.
- **Distraction**: Keeping kids occupied with activities like games or guided imagery can shift their focus away from pain.
- **Guided Imagery/Hypnotherapy**: This technique uses relaxation and mental imagery to reduce pain intensity and frequency.
- **Cognitive Behavioral Therapy (CBT)**: CBT helps kids change how they think and behave in response to pain, improving their ability to manage symptoms.

- **Biofeedback**: This method shows kids how their body responds to stress, helping them learn to control physical reactions. Biofeedback is generally accessed through private psychology services.

Practical Tips for Parents

- **Daily Practice**: Encourage your child to practice relaxation techniques daily, especially during stressful times. In school-aged children, encourage them to journal their pain.
- **Communication**: Talk openly with your child about their pain and encourage them to share their feelings.
- **Tracking Symptoms**: Keep a diary of when your child feels pain, what they eat, and any activities or stressors before the pain starts.
- **Healthy Habits**: Encourage and model regular meals, plenty of water, and enough sleep. Avoid skipping meals, which can trigger pain in some children. Eat meals together as a family, at the dinner table, as much as possible.
- The Webmap **Mobile App** (available only on Apple) is a free app to help teens cope with chronic pain and teaches cognitive behavioural therapy. More information is here: https://www.megfoundationforpain.org/2022/07/22/webmap-mobile/



Managing Triggers of Abdominal Pain

Identifying Triggers

Avoiding triggers can help manage abdominal pain in children with disorders of brain gut interaction (DGBIs). Triggers can be found by asking about what makes the pain worse or better, or by keeping a pain diary.

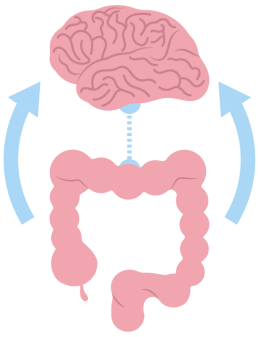
Dietary Triggers

- **General Eating**: For some children, eating itself can bring on pain, leading them to skip meals. This can sometimes be linked to eating disorders if weight loss and constipation are also present. This can be helped by breaking down meals into smaller chunks, more frequently.

- **Specific Triggers**: It's not usually recommended to restrict a child's diet unless certain foods seem to clearly make the pain worse. Restricting diets without a clear reason can cause nutritional problems. However, in some cases, trying to cut out suspected triggers like citrus, caffeine, sorbitol (found in sugar-free candy), or gas-producing foods (like beans and onions) might be helpful.

Specific Dietary Considerations

- True dietary elimination trials require 6 weeks of strict withdrawal of any suspected agent with deliberate (and preferably unknown to the child) reintroduction at the end of the 6 weeks to see if symptoms are triggered.
- **Lactose**: If symptoms suggest lactose intolerance (like cramping or bloating after milk products), trying a lactose-free diet could help. Full compliance is essential.
- **Gluten/Wheat**: Gluten-free diets are popular, but true gluten or wheat issues are rare causes of ongoing belly pain in kids. It's good to talk to a doctor before cutting out gluten completely, as it can interfere with future confirmatory testing.
- **FODMAPs**: These are carbs that can cause gas and bloating. Some kids might feel better on a low-FODMAP diet, but it's important to do this under a dietitian's guidance to avoid missing important nutrients. FODMAP diets have some evidence in the management of IBS. https://www.roryrd.com/ is a dietician who we like for guidance.



Managing Anxiety

Anxiety is commonly found in children with FAPDs. The mind-gut connection refers to the communication between the brain and the gastrointestinal system, which influences emotions, behaviors, and physical symptoms.

1. Heightened Sensitivity: Anxiety can amplify the perception of pain in the gut, leading to increased sensitivity to normal gut sensations or minor changes in the digestive system.
2. Altered Gut Motility: Anxiety can disrupt normal gut motility, causing spasms or changes in bowel habits, which may exacerbate abdominal discomfort and pain.

3. Stress Response: Stress and anxiety trigger the release of stress hormones like cortisol, which can affect gut function, inflammation levels, and pain perception.
4. Cognitive Factors: Anxiety can lead to catastrophic thinking about symptoms, worsening fear of illness or pain, and avoidance of activities that could exacerbate symptoms, contributing to functional disability.
5. Behavioral Responses: Anxiety-driven behaviors such as hypervigilance to symptoms, frequent medical consultations, or excessive avoidance of certain foods or activities can perpetuate a cycle of distress and dysfunction.

If anxiety is occurring in the context of DGBIs, it is critical to aggressively manage, following evidence-based recommendations that will usually include a combination of lifestyle changes, counselling and medications.

Management of Symptoms

- **Abdominal Pain**: Medical interventions such as probiotics (e.g., Lactobacillus reuteri DSM 17938), water-soluble fiber (e.g., psyllium), and peppermint oil (e.g FD guard) can be considered. Iberogast is a commonly available over the counter herbal product with some evidence to support effectiveness in relieving symptoms. Probiotics may help restore gut microbiota balance, while fiber supplements and peppermint oil may alleviate symptoms through various mechanisms like improving gut motility and reducing smooth muscle spasms. For more: http://www.probioticchart.ca/PBCPediatricHealth.html?utm_source=pediatric_ind&utm_medium=civ&utm_campaign=CDN_CHART
- **Dyspepsia (feeling full or indigestion)**: Non-medication approaches like small, frequent meals and avoiding aggravating foods are recommended. Pharmacologic therapies like H2 blockers or proton pump inhibitors can be considered for severe symptoms not responsive to non-pharmacologic measures.
- **Diarrhea**: Generally, diet restriction is not recommended unless specific food triggers are identified. Antimotility agents are not routinely recommended due to the self-limiting nature of diarrhea associated with FAPDs.
- **Constipation**: Identification and treatment of underlying constipation is crucial.

The Role of the Microbiome in Functional Abdominal Pain Disorder (FAPD)

Our gut bacteria (“microbiome”) play a significant role in the development and management of Functional Abdominal Pain Disorders. The microbiome, consisting of trillions of different microorganisms (“the microbiota”) in the gastrointestinal tract, has been found to influence gut health in various ways. Studies have shown that children with FAPD often have altered microbiomes compared to healthy peers, indicating a potential link between microbial imbalance and abdominal pain. The evidence is still evolving and further high-quality studies are needed. Key findings from peer-reviewed research include:

- Altered composition and diversity of gut microorganisms are common in individuals with FAPD, suggesting a possible connection to abdominal pain.
- Diet and Microbiota: Specific microbial profiles in the gut influence the effectiveness of dietary interventions, such as low FODMAP diets, in managing symptoms.
- Microbiota-Gut-Brain Axis: The microbiota-gut-brain axis plays a crucial role in the disease process of FAPD. Microbial metabolites can affect gut motility, sensitivity, and central nervous system function, contributing to pain and other symptoms.
- Targeting the gut microbiome through probiotics, prebiotics, dietary interventions, and fecal microbiota transplantation shows promise in managing Functional Abdominal Pain Disorder (FAPD), though more research is needed to confirm their effectiveness and establish standardized treatment protocols.

Local resources for the management of DGBIs

In some cases, there may be some benefit in discussing symptoms with a psychologist. The Alberta Children's Gastroenterologists recommend psychologists who used to work in the peds GI clinic but have since moved on (and provide services via Zoom):

- Brooke Fletcher (548-880-3191, www.popple.ca, info@popple.ca) is now in Ontario but still licensed in Alberta.

DGBIs are generally managed by primary care practitioners, like GPs, Pediatricians, and NPs.

Unproven Interventions

Various treatments used in functional gastrointestinal disorders, such as rifaximin, antifungals, herbal therapies, and specific medications, lack clear evidence of benefit in children with DGBIs. Be wary regarding any treatment that claims guaranteed success, “no risk”, “all-natural”, that generates gain ($) for the person recommending it or celebrity endorsements. Unfortunately, misinformation is common online, particularly on social media.

To vet an online source's credibility, check for domains such as .gov, .edu, or established medical institutions like Alberta Children’s, Stollery or Sick Kids. Verify the author's credentials, ensuring they have expertise in the field. Look for **peer-reviewed** references and recent publication dates. Verify if the website or author discloses funding sources or conflicts of interest. Cross-check the information with other reputable sources to ensure accuracy and reliability before considering it credible. You can also ask your doctor.

1. **Dietary Fads**: While some individuals may report symptom improvement with certain diets (e.g., low FODMAP), the evidence supporting widespread dietary restrictions like gluten-free or dairy-free diets for DGBIs is limited and inconsistent.
2. **Supplements and Herbal Remedies**: Research on the efficacy of supplements or herbal remedies for DGBIs is sparse and often lacks rigorous clinical trials. Examples include probiotics, peppermint oil, and various herbal preparations. Your physician may still recommend a trial of these approaches based on a discussion of risks vs. benefits.
3. **Alternative or Complementary Therapies**: Alternative therapies such as acupuncture and aromatherapy may offer symptomatic relief for some individuals, but conclusive evidence supporting their use as primary treatments for DGBIs is lacking.

Parenting strategies

Parenting strategies for children with Functional Abdominal Pain Disorder (FAPD) should be focused on providing support, managing symptoms, and promoting overall well-being. Avoid accidentally rewarding your child for withdrawing from activities like school. Focus on reinforcing positive behaviors - there is no role for punishment.

1. **Education and Understanding:**
    - **Explain DGBIs:** Help your child understand what DGBIs are in simple terms, emphasizing that it's not caused by infection or other disease. The videos below can help.
    - **Normalize Symptoms:** Assure them that many children experience similar symptoms and that they can learn to manage them.
    - **Open Dialogue:** Encourage your child to talk about their feelings and symptoms without judgment. Listen actively and validate their experiences.
2. **Establishing Routines:**
    - **Going to school:** School absenteeism is a common consequence of DGBIs. Work with the school to develop strategies to facilitate reintegration as soon and as much as possible. Inform teachers and school staff about your child's condition. Discuss accommodations if needed, such as bathroom access or breaks.
    - **Regular Meals:** Encourage regular, balanced meals to avoid hunger-related discomfort. Ensure they eat at consistent times.
    - **Bedtime Routine:** Maintain a regular bedtime routine to promote good sleep, which can help manage stress and pain.
3. **Stress Management:**
    - **Identify Triggers:** Help your child identify situations or events that may trigger their abdominal pain. Discuss strategies to manage stress and anxiety.
    - **Relaxation Techniques:** Teach and practice relaxation techniques together, such as deep breathing or progressive muscle relaxation.
4. **Encouraging Physical Activity:**
    - **Gentle Exercise:** Encourage and join activities like walking, yoga, or swimming that promote physical well-being without exacerbating symptoms.
    - **Outdoor Time:** Spending time outdoors with your child can be soothing and distract from pain.
5. **Healthy Habits:**
    - **Hydration and Diet:** Ensure your child drinks plenty of water and eats a balanced diet rich in fruits, vegetables, and fiber to support digestive health. Eat meals as a family, at the dinner table, as much as possible.
    - **Avoid Trigger Foods:** Identify and minimize foods that trigger symptoms, such as high processed sugar, high fat, high salt, spicy foods or caffeine.

6. **Monitoring and Encouragement:**
    - **Track Symptoms:** Keep a symptom diary to identify patterns and triggers. Use this information to adjust strategies as needed.
    - **Celebrate Progress:** Recognize and celebrate improvements in symptoms or coping strategies to boost your child's confidence.

Dealing with nighttime wakings

The night is a frequent time for distressing symptoms with FAPD.

1. **Avoiding Inadvertent Reinforcement**:
    - **Consistent Responses**: Ensure that responses to nighttime pain episodes are consistent and supportive. Avoid inadvertently reinforcing pain behaviors by providing excessive attention or rewards.
    - **Encouraging Independence**: Encourage the child to self-soothe and manage mild discomfort independently when appropriate, promoting self-management skills.
2. **Dealing with Nighttime Wakings**:
    - **Calming Environment**: Keep the bedroom environment calm and quiet during nighttime awakenings. Minimize bright lights and noise to support relaxation.
    - **Comfort Measures**: Offer gentle back rubs, warm-water bottles, reassurance, or provide a favorite stuffed animal or blanket.
    - **Communication**: Use clear, reassuring communication to acknowledge the child's discomfort without overly focusing on the pain. Redirect attention to relaxation techniques or comforting activities.
    - **Medication Timing**: If pain medication is prescribed, ensure it is administered according to the healthcare provider's instructions to maintain pain relief throughout the night. If typical pain events last over an hour, it can be reasonable to try over-the-counter analgesics like Tylenol or Advil.
3. **Behavioral Strategies**:
    - **Positive Reinforcement**: Use non-monetary, non-food-based rewards for coping well with nighttime pain episodes. For example, praise the child for using relaxation techniques or managing discomfort independently.

- **Distraction Techniques**: Have calming activities ready to distract the child from pain sensations, such as listening to soothing music or practicing deep breathing exercises.
- **Consistent Bedtime Routine**: Maintain a consistent bedtime routine that includes relaxation techniques and positive bedtime associations to promote better sleep continuity and reduce nighttime awakenings.

School accommodations

See https://docs.google.com/document/d/15jpBEpxYfEZ37o90jlcVSLFv3l0rehn6OMGQP1abhu0/ for school accommodations.

Potentially harmful approaches

In managing Functional Abdominal Pain Disorders (FAPD), it's crucial to adopt strategies that support rather than hinder your child's well-being and overall function. Avoiding excessive focus on medical tests helps prevent reinforcing anxiety and unnecessary interventions. Over-reliance on medications may offer short-term hope and maybe relief but can lead to perceived dependency and can be difficult to stop. It is critical to not avoid addressing underlying psychological, behavioral and family context issues. Allowing isolation to develop is likely to delay recovery.

Online Resources

1. **AHS** has some pathways that are targeted at physicians but can provide some good ideas on the next steps
   - https://www.albertahealthservices.ca/assets/about/scn/ahs-scn-dh-pathway-chronic-abdominal-pain.pdf (also links to IBS and functional dyspepsia)
2. **YouTube videos from Sick Kids** (Toronto, for parents and providers) and **UNC Children's Division of Pediatric Gastroenterology** (North Carolina - for watching with your kid!)
   - https://www.youtube.com/watch?v=i3YoviYtPts&t=4s
   - https://www.youtube.com/watch?v=65PeQyvQBHE&t=2s
3. **ERIC** is a British non-profit with EXCELLENT information about various bowel and bladder symptoms in children.
   - https://eric.org.uk/childrens-bowels/

4. **KidsHealth** - A comprehensive resource for parents, kids, and teens, offering articles on a wide range of health topics, including FAPD.
    - URL: https://kidshealth.org/en/parents/functional-abdominal-pain.html
5. **International Foundation for Gastrointestinal Disorders (IFFGD)** - Provides educational resources and support for patients with gastrointestinal disorders, including functional gastrointestinal disorders like FAPD.
    - URL: https://iffgd.org/functional-gi-disorders/
6. **Rome Foundation** - Offers educational resources and guidelines on functional gastrointestinal disorders, including Rome IV criteria used for diagnosing FAPD.
    - URL: https://theromefoundation.org/q-a-pediatric-functional-abdominal-pain
    - https://theromefoundation.org/disorders-of-gut-brain-interaction-definitions/
7. **Abdominal migraines**
   https://americanmigrainefoundation.org/resource-library/abdominal-migraine/
8. 2 links recommended by GI at the Alberta Children's Hospital:
    - https://gikids.org/digestive-topics/functional-abdominal-pain/
    - https://cdhf.ca/en/digestive-conditions/irritable-bowel-syndrome-ibs/

Particular thank you to Dr. Sidney Nesbitt for sharing some of the above resources & Dr. Rabin Persaud for the critical review. As always, if any of the links are broken, let us know!