The Brains in Your Guts: Why Psychosocial Health Matters so Much in IBD

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Why a Psychologist in GI?

- You’re more than “an IBD patient”
- You didn’t ask for IBD
- It’s not your fault that you have IBD
- Psychological issues like stress and sadness can affect medical conditions – so let’s help your medical condition!
The Brain-Gut Relationship is REAL

Sympathetic nervous system $\rightarrow$

Enteric nervous system of gut $\rightarrow$

Regulates GI functions including motility, secretion, and intestinal permeability

(Furness, 2012; Mayer, Labus, Tillisch, Cole, & Baldi, 2015).
Intrinsic nerve plexuses
- Myenteric nerve plexus
- Submucosal nerve plexus

Glands in submucosa

Mucosa
- Epithelium
- Lamina propria
- Muscularis mucosae

Submucosa
- Longitudinal muscle
- Circular muscle

Muscularis externa

Serosa
- Epithelium (mesothelium)
- Connective tissue
- Lumen
- Mucosa-associated lymphoid tissue

Mesentery

Nerve
Artery
Vein
Lymphatic vessel
Gland in mucosa
Duct of gland outside alimentary canal

https://online.science.psu.edu/biol141_wc/node/7603
Illustration by Benjamin Arthur for NPR
IBD and Stress Response System

- HPA Axis
- Autonomic Nervous System activation
- Stress may initiate OR re activate GI inflammation, leading to worsening symptoms.
- GI tract motility can be affected by impact of stress on enteric nervous system
  - Abdominal pain, changes in bowel function
IBD and the Microbiome

• Intestinal microbiota can alter brain (central nervous system) function and behavior via endocrine and neuroendocrine pathways

• The BRAIN can alter microbial composition!
  – Alters gut permeability, motility, visceral sensation, inflammation, and secretion through activation of multiple systems.

(Ringel & Ringel-Kulka, 2015; Mangiola et al, 2016)
Psychosocial Stressors

• Being a kid is hard
• Being a kid with a chronic medical illness is harder
• Being a kid with an invisible, embarrassing, chronic medical illness is even harder.
Having a Chronic Illness Means…

- Missed school for MD appointments
- Medications
- Invasive procedures
- Dietary changes
- Social interactions impacted, delayed or disrupted social milestones
- Body image, disordered eating patterns
What’s unique about IBD?

- Invisible illness
- Embarrassment about side effects, body image concerns
- Fatigue
- Pain
- Nutrition, physical activity, is essential
- Psychosocial distress can exacerbate inflammation
IBD and Invisible Illness

- “But you look fine!”
- “Why are you so tired all the time?”
- “You were absent again?!?”
- “What’s wrong with you that you get to hand that in late?”
- “What do you mean you can’t eat pizza?”
- “Why are you so sad?”
Pain and IBD

• Even kids with “inactive” or “quiet” IBD can have lower visceral perception thresholds.
  – “The scope looks great!” does not mean that the pain is not real!
  – BUT… the answer may not be adding or increasing medical intervention.

• Important to know that psychological strategies may actually be MORE helpful than medical interventions when disease is “well-controlled.”

This does not mean that the pain is a “psychological problem”
Taking a “biopsychosocial approach”

Biological
- Genetics
- Nerve Hypersensitivities
- Inflammation
- HPA Axis Reactivity
- Puberty

Social
- School
- Family Interactions
- Peer Network
- Medical Teams
- Community

Psychological
- Mood & Anxiety
- Sleep Patterns
- Developmental changes
- Cognitive Appraisal
- Coping Skills

Adolescent Chronic Pain
So, why a psychologist?

• Many maintenance factors of GI conditions are ripe for psychological intervention!
• Anxiety, depression, and stress influence symptom perception through pain modulation, inflammation, and changes to microbiome.
Other Valuable Resources

http://www.gikids.org

http://www.crohnscolitisfoundation.org

http://colitisninja.com/

http://justlikemeibd.org

http://www.ibdu.org

http://effectivechildtherapy.org

http://www.abct.org/
Mission, Vision and Values

MISSION

Connecticut Children's Medical Center is dedicated to improving the physical and emotional health of children through family-centered care, research, education and advocacy. We embrace discovery, teamwork, integrity and excellence in all that we do.

VISION

We are making children in Connecticut the healthiest in the country.

CORE VALUES

Family-Centered Care • Discovery • Integrity • Teamwork • Quality • Respect
Thank You!

About Connecticut Children’s Medical Center
Connecticut Children’s Medical Center is the only hospital in Connecticut dedicated exclusively to the care of children. Connecticut Children’s is a nationally recognized not-for-profit with a medical staff of more than 1,000 providing comprehensive, world-class health care in more than 30 pediatric specialties and subspecialties. Connecticut Children’s Medical Center is the primary pediatric teaching hospital for the UConn School of Medicine, has a teaching partnership with the Frank H. Netter MD School of Medicine at Quinnipiac University and is a research partner of Jackson Laboratory. Connecticut Children’s Office for Community Child Health is a national leader in community-based prevention and wellness programs.