

Role of Integrative Health in Pediatric IBD

IBD EDUCATION DAY

February, 2022

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Disclosures

- None pertinent to this presentation

AGENDA

- Brief Introduction to Integrative Health (IH) and CHOP IH Center
- Highlight Clinical Care for Pediatric IBD
- Share IH Research
- Experience!
- Q/A (please use the Q&A feature to submit)

What is Integrative Health?



- “Relationship-centered care that focuses on the **whole person**, is informed by **evidence**, and makes use of **all appropriate therapeutic approaches**, healthcare professionals and disciplines to achieve **optimal health and healing.**”
- Focus on holistic care



Integrative Medicine Definitions: what's in a name?

- If a non-mainstream practice is used **together with** conventional medicine, it is considered “**complementary.**”
- If a non-mainstream practice is used **in place of** conventional medicine, it is considered “**alternative.**”
- “**Integrative**” health care involves bringing conventional and complementary approaches together in a coordinated way.

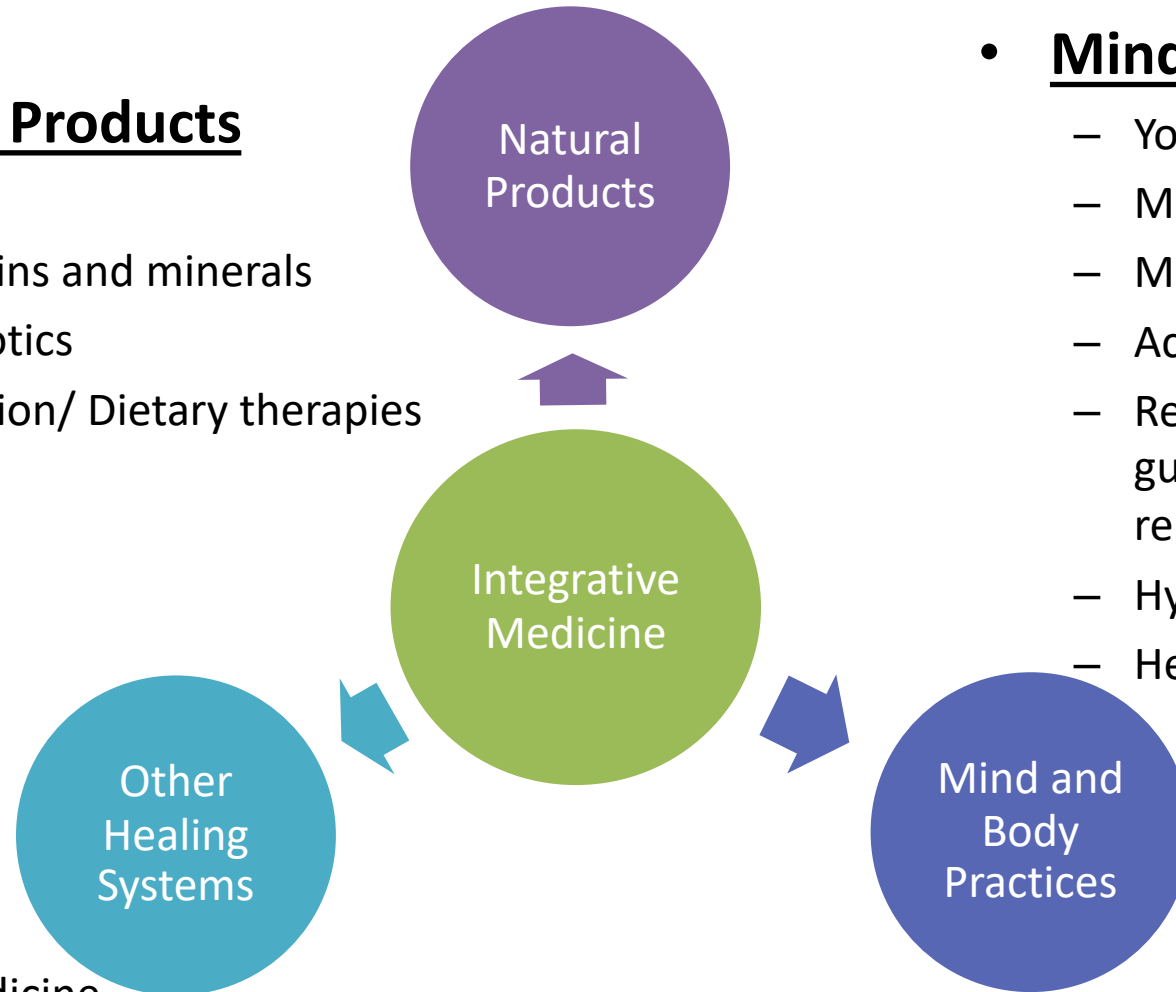
Components of Integrative Health

- **Natural Products**

- Herbs
- Vitamins and minerals
- Probiotics
- Nutrition/ Dietary therapies

- **Healing Systems:**

- Traditional healers
- Ayurveda
- Traditional Chinese Medicine
- Homeopathy and Naturopathy

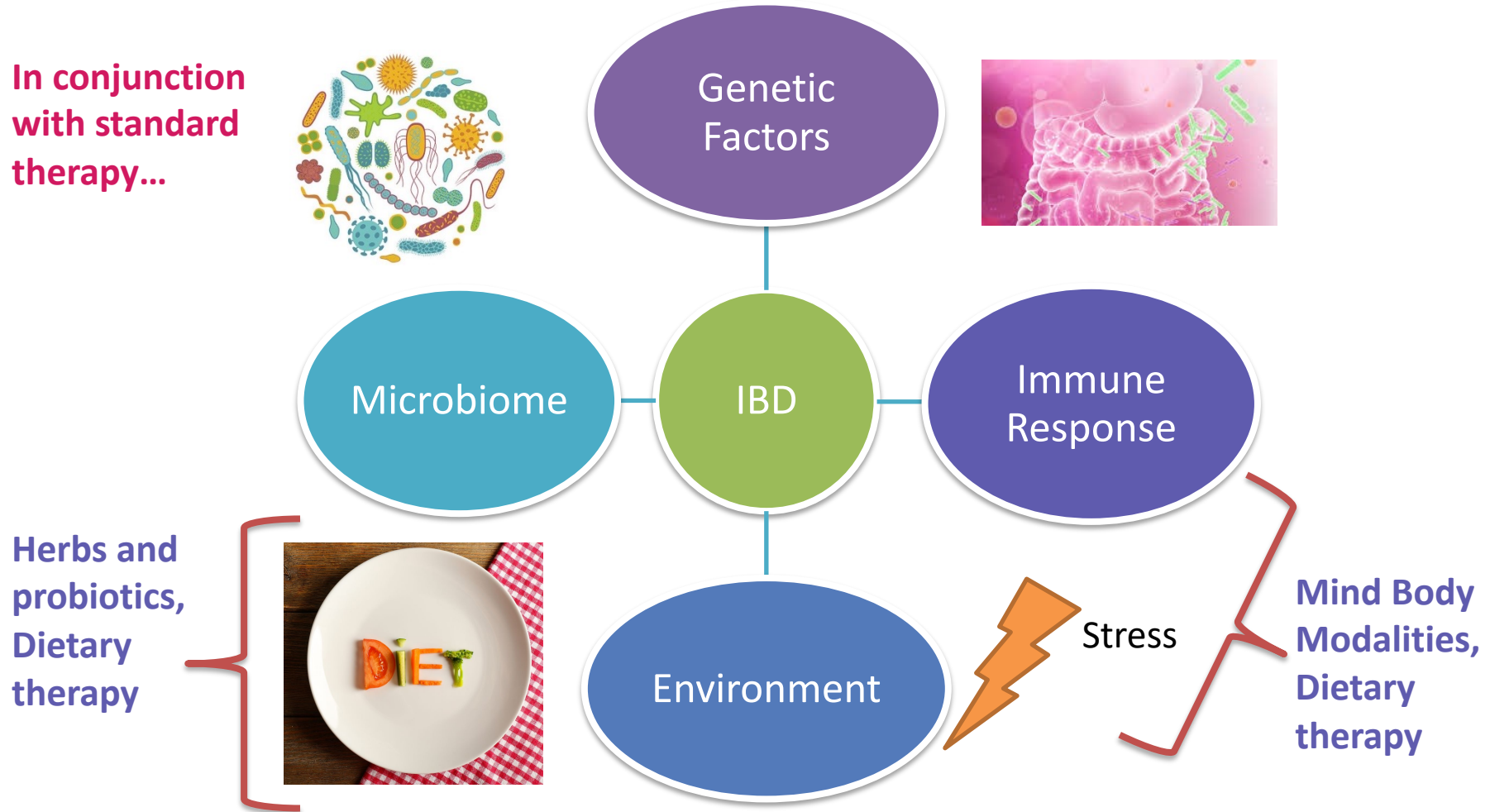


- **Mind-body Therapies**

- Yoga
- Meditation/mindfulness
- Massage therapy
- Acupuncture
- Relaxation techniques (breath work, guided imagery, progressive muscle relaxation)
- Hypnotherapy
- Healing touch, Reiki

How can IH help with IBD?

In conjunction with standard therapy...



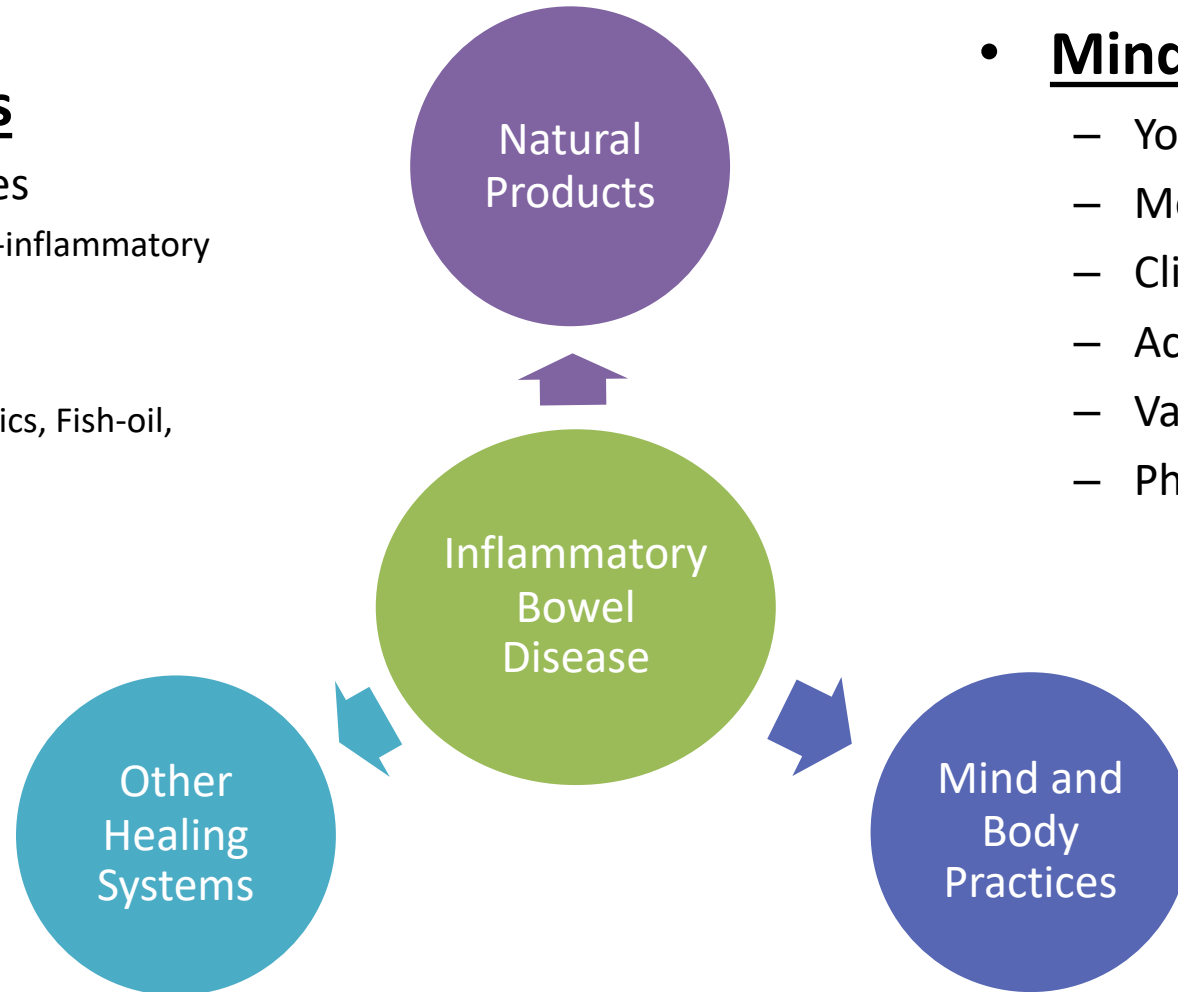
Integrative Approach to IBD

- **Natural Products**

- Dietary approaches
 - Plant-based, Anti-inflammatory
 - Exclusion Diets
- Supplements
 - Turmeric, Probiotics, Fish-oil, Cannabis

- **Healing Systems:**

- No evidence



- **Mind-body Therapies**

- Yoga
- Meditation/mindfulness
- Clinical Hypnosis
- Acupuncture
- Vagal Nerve Stimulator
- Physical activity and exercise

INTEGRATIVE HEALTH PROGRAM AT CHOP

Mission: To promote *optimal wellness* of our patients, their families, our staff and the community by providing holistic health care through an integrated approach.

Vision: We will *facilitate and promote healing and holistic wellness* to the CHOP community through clinical services, research, innovation and education.

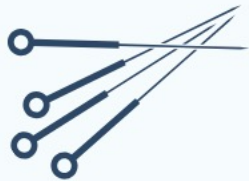


Medical Director: Dr. Maria Mascarenhas

PATIENT CARE

INPATIENT

HOSPITAL TV CHANNEL 54



ACUPUNCTURE



MASSAGE
THERAPY



YOGA
THERAPY



IH CONSULT
PILOT

OUTPATIENT CLINICS



IH NUTRITION



FOOD REACTIONS



IH GASTRO



ACUPUNCTURE



INTEGRATIVE
ONCOLOGY

EDUCATION & RESOURCES

STAFF



BREATHWORK



AROMATHERAPY



RESILIENCY



CARING TOUCH

ANNUAL IH
SYMPOSIUM



MONTHLY
IH NUTRITION
SEMINAR



TAILORED CLASSES
COVERING A VARIETY OF
IH PRACTICES



PEDIATRIC INTEGRATIVE
MEDICINE TRAINING

COMMUNITY



PATIENT FAMILY
EDUCATION, RESOURCES
& GROUP CLASSES



CULINARY
MEDICINE



BE-WEHL
PROJECT
WELLNESS EQUITY FOR A
HEALTHY LIFE
WELLNESS CLASSES

KEY: LOCATION | HOW TO ACCESS

- MAIN HOSPITAL | EPIC ORDER
- KOP & VNJ SCC | REFER ONCO & HEM PTS
- PHILADELPHIA CAMPUS | 215-590-5043
- MAIN HOSPITAL & HOME CARE | NURSE DISPENSES

- VIRTUAL | CHOP LEARNING
- VIRTUAL & IN-PERSON | EMAIL US!
- VISIT CHOP.EDU/INTEGRATIVE HEALTH & PFES
- VIRTUAL CLASSES | EPIC ORDER
BEHAVIORAL HEALTH OR PRIMARY CARE SITES IN UNDERSERVED COMMUNITIES

Reach out to us about receiving dedicated patient care resources for your area. We can also offer staff support, & patient or family group classes for your patients.
integrativehealth@chop.edu

FY21 IMPACT REPORT



251 PATIENTS RECEIVED ACUPUNCTURE

Average of 4 visits per patient.

Across the enterprise (Philadelphia Campus, KOP SCC, VNJ SCC). 57 of those patients were also seen in outpatient acupuncture clinic. Acupressure is used as an alternative treatment to acupuncture.

1.0 FTE Acupuncturist



676 PATIENTS RECEIVED YOGA THERAPY

Average of 3 visits per patient.

Across the enterprise (Philadelphia Campus, KOP SCC, VNJ SCC).

Yoga Therapy involves individualized one-on-one therapy for patients. Yoga includes the regular practice of postures and poses (asana), breathing exercises, relaxation and meditation.

1.7 FTE Yoga Therapist



382 STAFF COMPLETED IH EDUCATION MODULES

Most users were Nurses and Child Life Specialists. 164 aromatherapy, 38 breathwork, 187 caring touch modules were completed



27 UNITS DISPENSED AROMATHERAPY

569 lavender and mandarin aromatherapy sniffers were ordered. Most active units were ED, EDECU, 5S, & Oncology.

20 INPATIENT UNITS ORDERED IH THERAPIES

Units most frequently served at Main Hospital were Oncology, Adolescent, 5S, & EDECU

29 HOURS OF DIRECT STAFF SUPPORT

Group mindfulness classes, yoga classes, massage, reiki, acupressure experiential



105 HOURS OF COMMUNITY OUTREACH

Includes BE-WEHL wellness education: classes for underserved patients with Behavioral Health challenges

171 PATIENTS RECEIVED A GENERAL IH CONSULT



Our Holistic Nurse offers many practices based on the patient's needs including mindfulness, breathwork, acupressure, and caring touch

.9 FTE Holistic Nurse Coordinator

131 PATIENTS RECEIVED MASSAGE THERAPY



Average of 3 visits per patient.

Across the enterprise (Philadelphia Campus, KOP SCC, VNJ SCC).

.5 FTE Massage Therapist

266 PATIENTS SEEN IN OUTPATIENT INTEGRATIVE HEALTH CLINICS



Four CHOP doctors use an integrative approach to treatment in IH Gastro Clinic, IH Nutrition Clinic, Food Reactions Clinic, and Acupuncture Clinic



161

PROFESSIONALS ATTENDED FOURTH ANNUAL IH SYMPOSIUM ON BRAIN HEALTH

How to Access our Services

Outpatient

- Food Reactions Clinic, IH Gastroenterology Clinic, IH Nutrition Clinic
 - Call Access Center 215-590-3630
- Acupuncture Clinic
 - Call 215-590-5043, Option 2

Inpatient

- Integrative Health Offerings: yoga, acupuncture, massage (oncology and GI only), aromatherapy, healing touch/ Reiki, physician consult (GI only)

Questions: Integrativehealth@chop.edu

INTEGRATIVE HEALTH CLINICAL CARE (CASE PRESENTATION)

Case Presentation

14-year-old girl diagnosed with Crohn disease in 2019

Presented to pediatrician with malnutrition, decreased height velocity.

Blood work showed elevated inflammatory markers: ESR or sed rate 35 (normal 0-32) and C-reactive Protein or CRP 15 (normal 0-7).

Referred to GI. The patient reported abdominal pain in the morning before school that she assumed as related to anxiety.

Given abdominal pain and abnormal inflammatory markers, gastroenterologist ordered stool calprotectin which was 1,219.



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Case Presentation Continued

Patient underwent upper endoscopy, colonoscopy, and MRE (MR enterography) which confirmed a diagnosis of Crohn disease.

6 months after starting Remicade, the blood inflammatory markers (sed rate and CRP) returned to normal, weight increased, and calprotectin decreased to 187 (normal range 0-50).

She was started on Remicade.

However, she continued to experience daily abdominal pain as well as increased gas and bloating.

Case Presentation Continued

- Evaluated in Integrative Gastroenterology Clinic
- Medical History reviewed
 - Agreed with diagnosis, treatment with Remicade, confirmed positive improvements in laboratories, calprotectin, and weight gain
- Discussed current symptoms
 - Crampy abdominal pain at night and in the mornings, worsened by stress
 - Increased gas and bloating
 - Fatigue



Nutrition

- Breakfast: Pancakes with **syrup**, Oatmeal with cinnamon and **sugar**, or scrambled eggs with bacon
- Lunch: Cheese sandwich on white bread, chips, and cookies
- Dinner: Family eats together – usually protein (chicken, pork, or beef), a starch (mashed or roasted potatoes or pasta), and a vegetable
- Snacks: **Chips, crackers, or cookies**; occasionally fruit (apple or banana)
- Fast food (McDonald's or Chick-fil-A) **2x per week**
- Beverages: Mostly drinks water, but will have root beer or cherry soda daily
- **Challenges: Picky eating with limited acceptance of fruits and vegetables**

Movement and Exercise

- Gym class 2x per week for 30 minutes
- Dance - 1 hour once per week
- Non-academic screen time – 3 hours per day

Sleep

- Bedtime 9:30, falls asleep to iPad 10:30-12
- Trouble falling asleep (difficulty relaxing), no trouble staying asleep.
- Wakes up to alarm at 6:30, does not feel rested

Mind-Body Connection

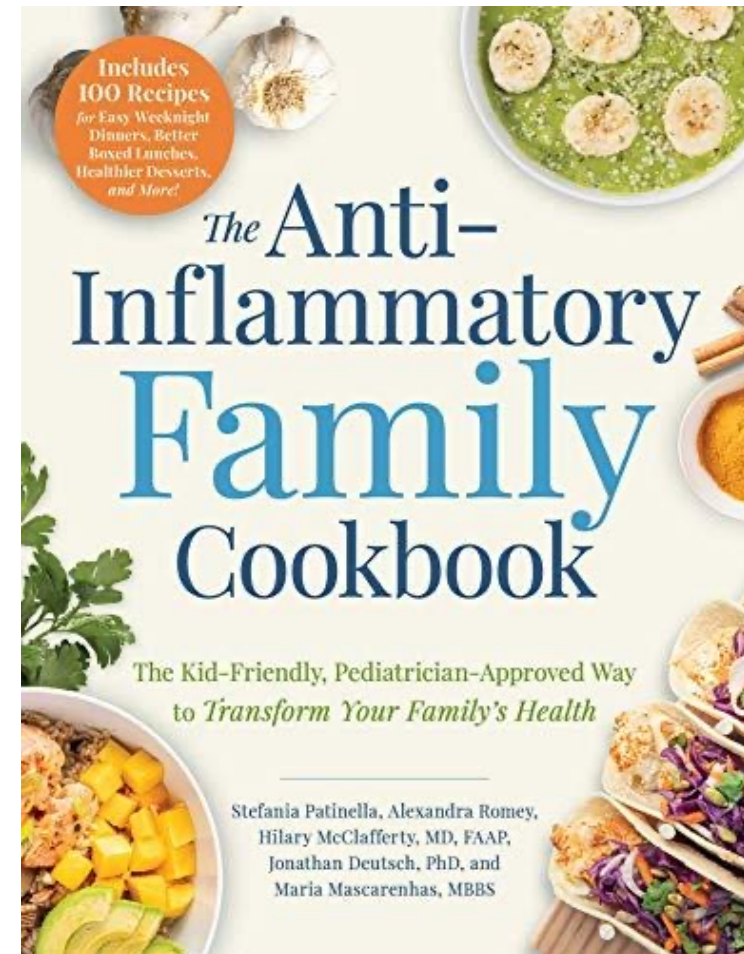
- Stressors:
 - Self-identifies schoolwork and making mistakes as stressors
 - Worries about her Crohn disease getting worse/medication losing effectiveness

Recommendations for abdominal pain, bloating, fatigue in this 14-year-old with Crohn disease



Recommendations

- Increase intake of fruits, vegetables, whole, intact grains, lean protein sources, healthy fats
- Ensure adequate hydration and limit sugar sweetened beverages
- Cook with anti-inflammatory spices: turmeric, ginger, cinnamon
- Reduce fast food to 2x per month

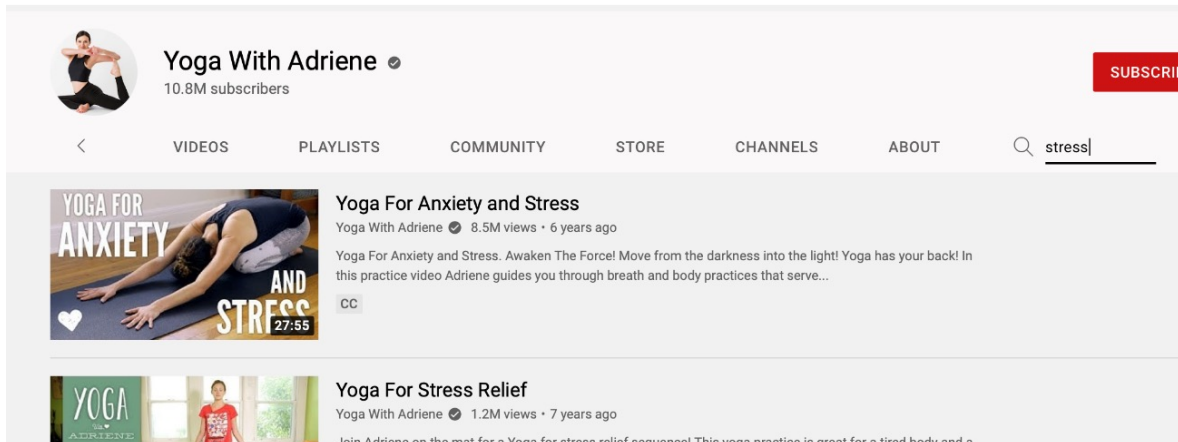


Recommendations

Movement and Exercise

- Try adding 2 sessions of yoga to gym class/dance class routine

YOGA with ADRIENE



Yoga With Adriene 10.8M subscribers

VIDEOS PLAYLISTS COMMUNITY STORE CHANNELS ABOUT stress|

Yoga For Anxiety and Stress
Yoga With Adriene 8.5M views · 6 years ago
Yoga For Anxiety and Stress. Awaken The Force! Move from the darkness into the light! Yoga has your back! In this practice video Adriene guides you through breath and body practices that serve...

Yoga For Stress Relief
Yoga With Adriene 1.2M views · 7 years ago
Join Adriene on the mat for a Yoga for stress relief sequence! This yoga practice is great for a tired body and a

Sleep

- Scheduled bedtime
- Power off devices 30 minutes before bedtime
- Magnesium supplement 30 minutes before bedtime
- Aromatherapy: Lavender or sweet marjoram

Recommendations

- Mind-Body Connection
 - GI psychology referral for coping with illness and school stressors
 - Recommended Mindfulness-Based Stress Reduction study
 - Inner Strength Meditation App

Follow-up Visit 6 months Later

- Stopped drinking soda, reduced added sugar in foods, discovered a new hobby – cooking!
- Added yoga 1x per week
- Participated in MBSR study and enjoyed meeting other teens with IBD. Now finds it easier to “quiet the mind.”

- Abdominal pain is still present, but less frequent and less intense
- Increased gas/bloating now only occurs with certain foods
- Improved energy

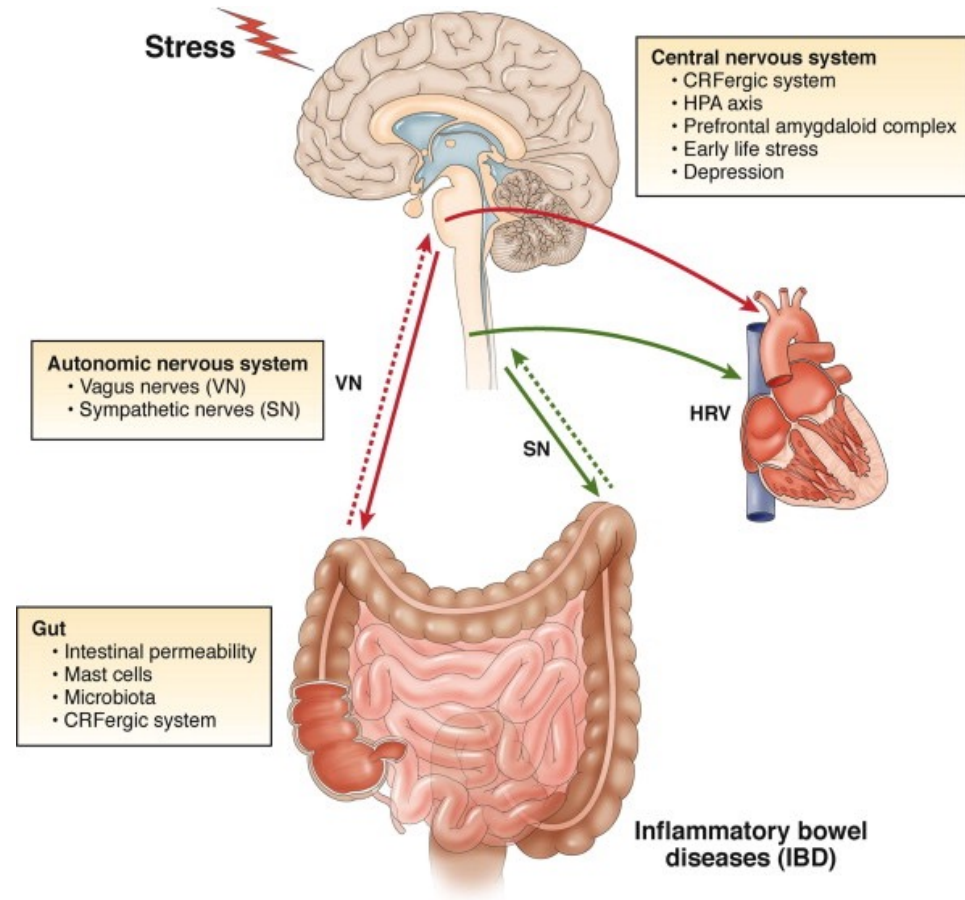
ONLINE MINDFULNESS COURSE FOR PEDIATRIC IBD

INTEGRATIVE HEALTH RESEARCH AT CHOP (PRELIMINARY RESULTS)

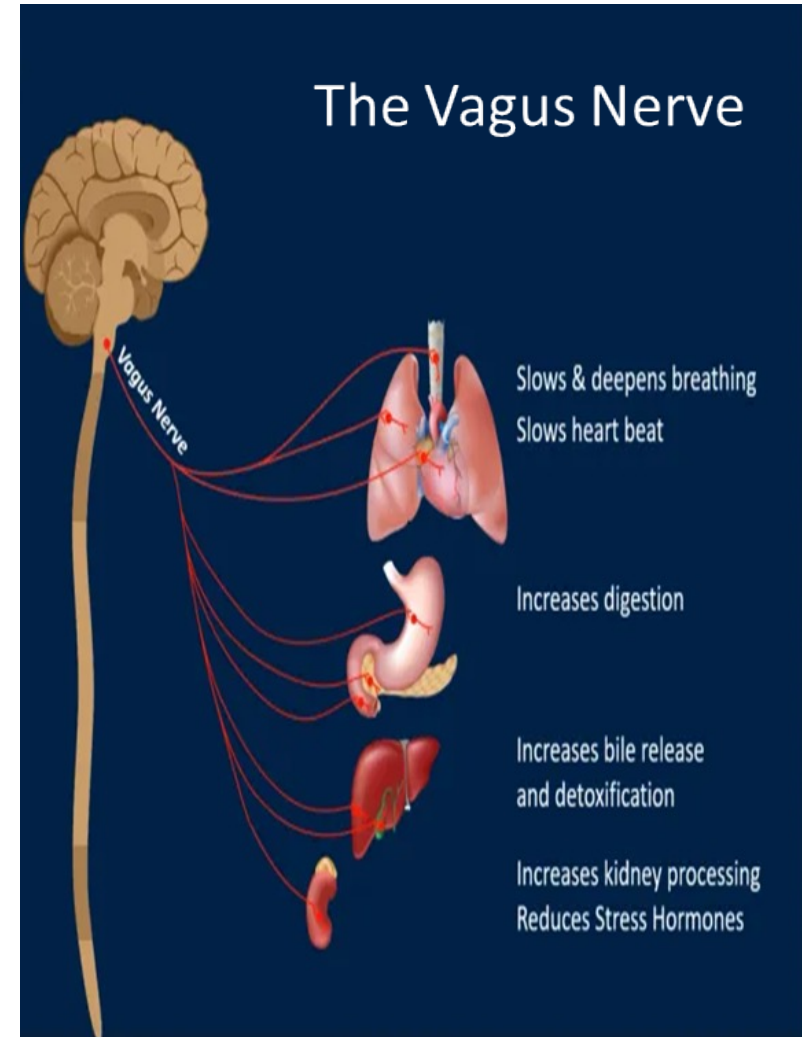
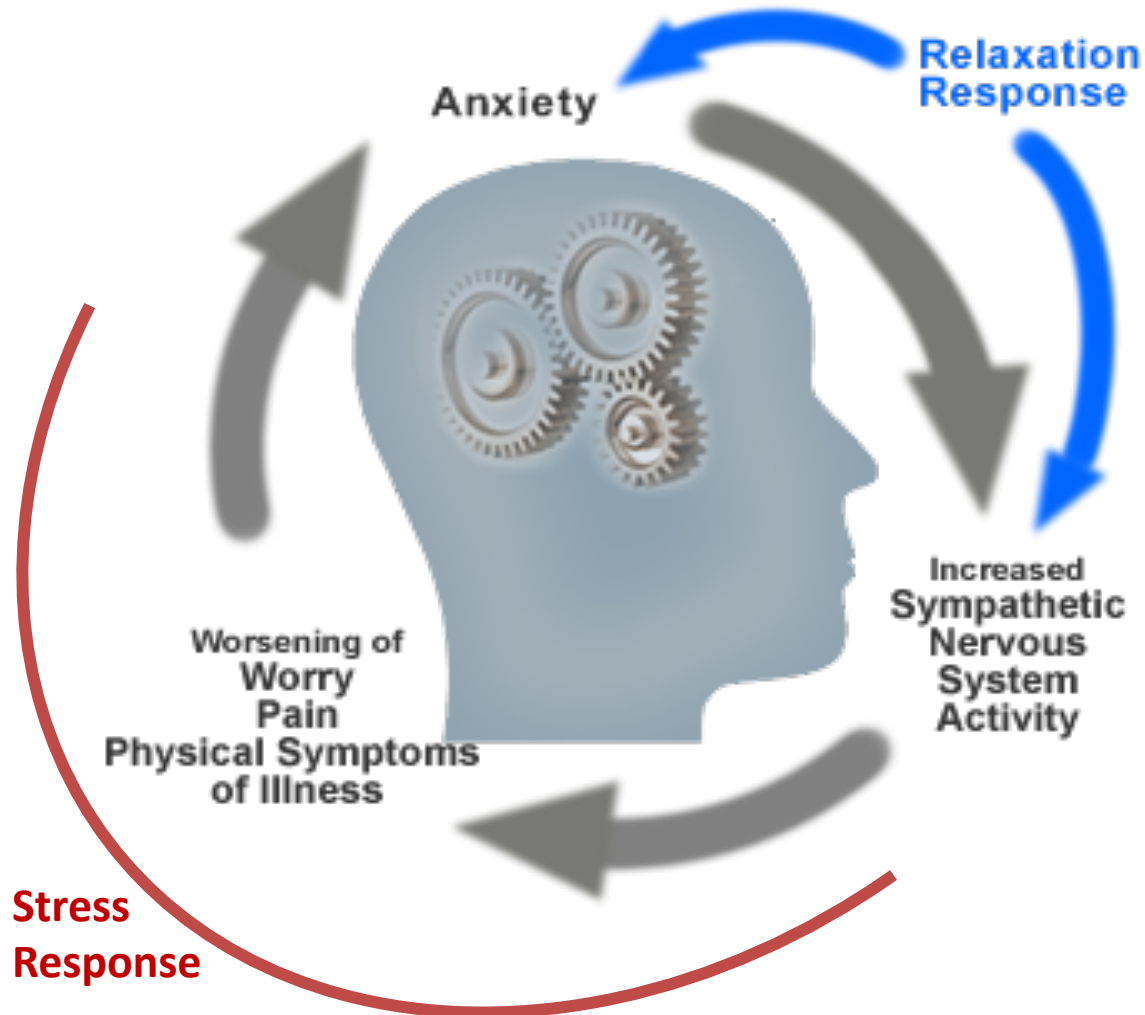
Stress and IBD

Growing evidence that stress promotes IBD flares

- When compared to healthy controls, IBD patients have increased anxiety and depression
- Perceived stress, negative affect, and major life events significantly associated with disease flares



Goal of Mind-Body Interventions



Intervention: Mindfulness-Based Stress Reduction (MBSR)



8 week set curriculum of 2 hr weekly sessions + homework + retreat session



Conceptualized and designed by Dr. John Kabat-Zinn from the University of Massachusetts in the late 1970s.



Combination of meditation, mindful activities, and movement/yoga

Study Design and Outcomes

- Primary Aim: To assess the feasibility and acceptability of live-video mindfulness-based stress reduction (MBSR) among children with IBD.
- Secondary Aim: To determine the impact of live-video MBSR on health-related quality of life and clinical symptoms in youth with IBD.
- Study: Conducted live via a HIPAA-compliant, video-conferencing virtual platform (BlueJeans)

RESULTS FROM CLASSES # 1 -3

Table 1: Demographics, n= 29 (cohort 1-3)

Age in years, median (IQR)	14 years (12.5-15)
Sex	
Female, n (%)	19 (65)
Race, n (%)	
Caucasian/White	20 (69)
Asian	6 (21)
Bi-racial/Multiracial	3 (14)
IBD type, n (%)	
CD	23 (79)
IC/UC	6 (21)
Current School Model, n (%)	
Hybrid	6 (21)
Virtual	11 (37)
In-person (reduced #/classroom)	5 (17)
In-person (full classroom)	7 (24)
Attended all 8 classes, n (%)	19 (66)

Focus Group Themes for Cohort 1-3, n=22 (73% of invited)

Theme 1: IBD-specific benefits of the MBSR course included: (a) mindfulness techniques helped reduce stress, which some identified as an IBD trigger; (b) participants enjoyed connecting with peers with IBD

Reduced stress and increased awareness of connection between stress and IBD

Connecting with others with IBD helped improve feeling of isolation and disease perception

Theme 2: Participants experienced multiple mental health benefits as a result of participating in the MBSR course

Helped reframe attitude and response to stressful situations/ unhelpful cognitions in daily life

Positive change in mood and energy, improved feeling of wellness

Increased productivity after class and allowed time for self-care

Theme 3: The virtual MBSR program was feasible and well-liked, but several challenges were identified as a result of the virtual format.

Virtual format was feasible and therefore contributed to attendance

Class content was interesting and engaging, and mindfulness practices could be incorporated into daily life

Decreased focus as a result of virtual environment fatigue and increased distractions in home environment

Technology difficulties such as poor audio/video connection as well as scheduling conflicts/ competing demands were a barrier to attendance and acceptability

Theme 1

"I would definitely recommend [the class] to others who have IBD, because it helps with stress. And not only that, like if you were first diagnosed, it can help you get to know others who have IBD and not feel like you're alone."

"In terms of the Crohn's, [...] I never actually realized how much of my IBD was triggered by stress, and the only time that I actually came across that idea was through this class. So, I think that was something that really changed the game for me, because I had no clue that there was even that sort of correlation."

IBD-specific benefits of the MBSR course included: (a) mindfulness techniques helped reduce stress, which some identified as an IBD trigger; (b) participants enjoyed connecting with peers with IBD

Theme 2

Participants experienced multiple mental health benefits (e.g., positive change in mood/energy and reframing unhelpful cognitions to stressful situations) as a result of participating in the MBSR course

“I never realized how negative I am. But when I realized that, I was like, [...] ‘why am I like this?’ But then I kind of switched that when [the teacher] gave us that sort of guidance. So, I think the unpleasant effects were just reversed when I actually applied what was in the class.”

“Whenever I would come off of the meeting, I would feel a lot more calm. [The classes] helped me refocus my thoughts and priorities and when [the class] ended, I could get a lot of work done or do things I enjoyed.”

“I noticed that [the class] made me think of [and] look at things differently and was sure it affected other things. [...] I think I [got] stressed just as easily as I always have, but I found it much easier to deal with it. [...] I would [also] seem like a little bit more energetic or in like better moods sometimes.”

Theme 3

“I liked [the class] as well, and I think I would recommend it to other people because it was long enough to where I feel like I got the purpose out of it, but it wasn't too long where I was dying for it to end. And I think that it was -- it was [...] interesting enough that you could focus. And I'd say they [...] helped me. During them I was able to relax [...], so, I did like it a lot.”

The virtual MBSR course was overall feasible and the content was well-liked, but several challenges were identified, including technology issues, increased distractions at home, and virtual environment fatigue leading to decreased focus.

“It was good that [the class] was virtual, because otherwise, it would have been hard to make it to participate, but it would have been a little more helpful [and] engaging if it was in-person, just because of external distractions and I feel like being on online calls in this time is [...] a little annoying.”

Focus Group Participant Identified Solutions to Improving Feasibility/ Acceptability

Identified Challenges	Potential Solutions
2 hours was a long class time	<ul style="list-style-type: none"> • Decrease class time • Hybrid model (in-person and virtual classes) • Split class into two days • Consider weekend classes
Technology related issues	<ul style="list-style-type: none"> • Utilize more familiar online platforms such as Zoom, etc. instead of BlueJeans to facilitate ease of access/ improve technical issues • Email reminders were helpful to increase attendance • Youtube playlist for guided meditations was easily accessible and helpful
Difficulties focusing in virtual environment	<ul style="list-style-type: none"> • Integrate more movement meditations throughout classes to improve focus/ decrease distraction as these practices were overall better accepted by participants • Modify the balance between didactic and interactive content • Increase more GI-specific practices (ex: body scan for the gut)

Conclusions

The virtual MBSR course was safe, feasible (high attendance and retention rate), and well-accepted with several noted benefits including reducing stress, which can be an IBD trigger for some.

Participants acknowledged that despite interesting and enjoyable class content, the nature of the virtual format led to decreased engagement.

In-person MBSR courses are often inaccessible depending on patient location. Therefore, our pilot study suggests that virtual MBSR courses may be a potentially useful adjunct therapy to standard medical care for youth with IBD.

Let's try it!

- Progressive Muscle Relaxation
- Breathing Techniques – Diaphragmatic Breathing
- Mindfulness

Progressive muscle relaxation



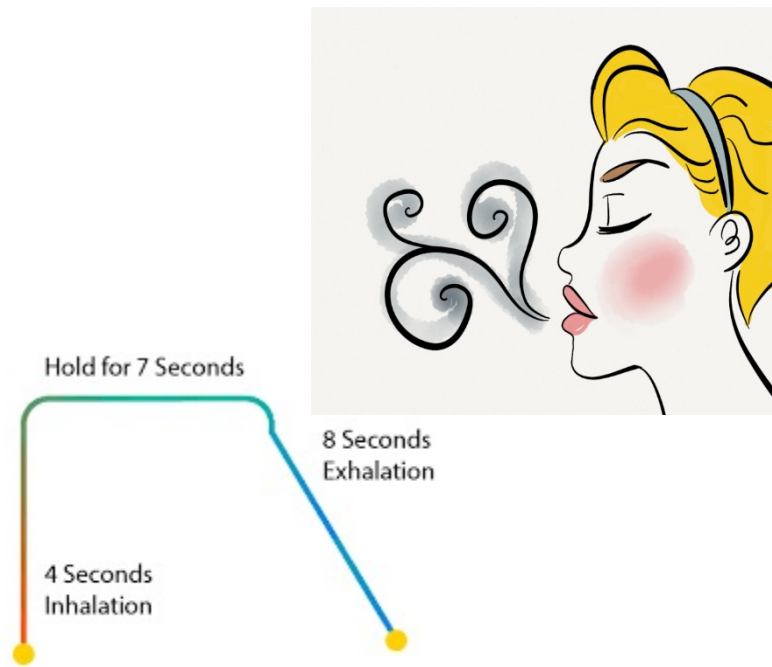
Examples



- Clenching hands
- Bending wrists and elbows
- Shrugging shoulders
- Wrinkling the forehead
- Closing eyes
- Pressing lips together
- Curling and uncurling the toes

- Helps to relieve stress or tension
- As you breathe in, you tighten a group of muscles and as you breathe out, you relax the same group of muscles.
- By working on different muscle groups, you can relax the whole body

Breathwork



4-7-8 Breath

- <https://www.drweil.com/videos-features/videos/breathing-exercises-4-7-8-breath/>

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Loving Kindness Meditation



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- May you be happy
- May you be healthy
- May you be peaceful
- May you be full of loving kindness
- May you be free from suffering

- May I know peace
- May my heart remain open
- May I see the beauty of my own true nature
- May I be healed and may I be a source of healing for others

- May you know peace
- May your heart remain open
- May you see the beauty of your own true nature
- May you be healed and may you be a source of healing for others

QUESTIONS?

THANK YOU!