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The following slides were presented during the *Nancy and Bill Norton Education Series* Event at the University of Michigan Food for Life Kitchen. To view this presentation and the all videos available during this program, please visit <http://bit.ly/NES2020MI>.



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Living your **BEST** IBS Life

Practical Tools to

Beat the Battle with your **Bowels**

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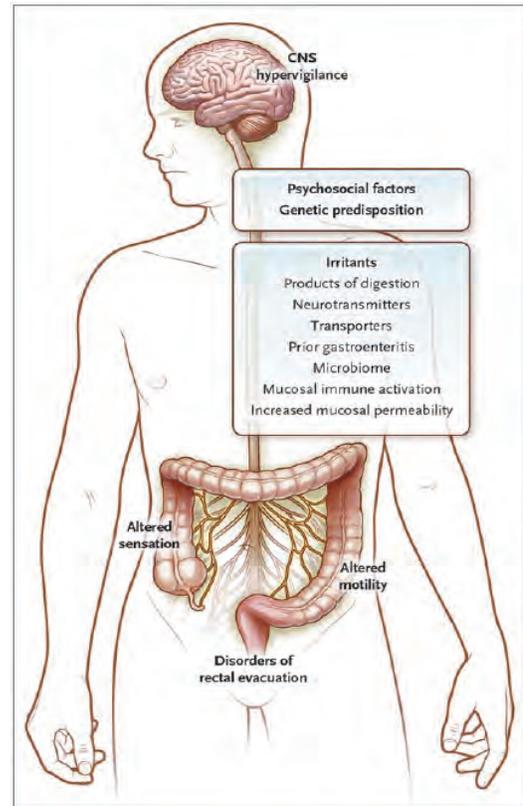
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Roadmap

- **What is IBS?**
- **Tips for making the most of your GI visit**
 - Practical tools for helping us help you
- **Treatments**
 - Placebo and nocebo effect
 - Natural supplements, pre/probiotics, herbals
 - Cannabis
 - Diet
 - Complementary treatments
 - GI Behavioral Health
 - Prescription medications

What IBS is...

- IBS = Irritable Bowel Syndrome
- Abdominal **pain/discomfort** + Abnormal **bowel movements**
- Usually **constipation** or **diarrhea** (but can be *both* or *neither*!)
- Very complex physiology



Camilleri, M. *Peripheral Mechanisms in Irritable Bowel Syndrome*. *N Engl J Med* 2012.

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What IBS is **NOT**...

- **IBD** = Inflammatory Bowel Disease
 - Crohn's disease, ulcerative colitis, microscopic colitis
- **FATAL**
 - Does not affect quantity of life but does affect QUALITY
- **ALL** in your head!
 - Though often the brain **contributes** to the problem
 - Called "Brain-Gut-Microbiome Interaction"

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Making the most of your GI Visit

Organize your thoughts/experiences

- Notebooks can be helpful for self-reflection, discovering triggers
- Notebooks NOT helpful for limited office visits
- One page summary **very** helpful: “**IBS Snapshot**”

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Making the most of your GI Visit

Tests we are looking for (if already done)

Lab work:

- CBC (complete blood count)
- BMP or CMP (chemistry panel)
- Liver function tests (hepatic panel)
- C-reactive protein
- Sedimentation rate
- Celiac testing (tissue transglutaminase, total IgA levels)



Imaging (dates performed):

- CT scans or MRI's of abdomen
- Full reports + images sent most helpful

Stool studies:

- Fecal calprotectin or lactoferrin
- C. diff testing (clostridium difficile)
- Giardia and cryptosporidia testing
- GI PCR (panel for many different infections)



Scopes (upper endoscopy, colonoscopy):

- Full reports most helpful
- Biopsy reports also important (pathology)
- Images *less* important
- EGD = upper endoscopy

<https://www.jing.fm/sclip/drop-of-blood/>
<https://emojiland.com/products/poop-emoji-icon>
<https://www.cleanpng.com/png-x-ray-generator-radiology-detection-5504962/>
<https://www.cleanpng.com/png-colonoscopy-endoscope-endoscopy-colorectal-cancer-6917487/>

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Making the most of your GI Visit

IBS Snapshot Example

My IBS Snapshot

<p>1) Predominant symptoms:</p> <ul style="list-style-type: none"> - Diarrhea, Bristol type 6-7 - Abd. pain better after BM - 3-4 days/week <p>2) Triggers:</p> <ul style="list-style-type: none"> - Garlic, onions, eating out - Stress <p>3) Prior testing (results attached)</p> <ul style="list-style-type: none"> - CBC, CMP, CRP: 10/2019 - Stool studies: C. diff, fecal calpro 11/2019 - Imaging: CT scan 12/2019 - Scopes: EGD + colonoscopy 1/2020 	<p>4) Previous treatments</p> <table border="1"> <thead> <tr> <th>Treatment</th> <th>Duration</th> <th>Reason for stopping</th> </tr> </thead> <tbody> <tr> <td>Gluten free diet</td> <td>4 wks</td> <td>Not effective</td> </tr> <tr> <td>Hyoscyamine 0.375mg</td> <td>1 dose</td> <td>jittery, didnt work</td> </tr> <tr> <td>Augmentin 2x daily</td> <td>14 d</td> <td>Got C. diff</td> </tr> </tbody> </table> <p>5) Goal: leave home w/o worrying about diarrhea</p> <ul style="list-style-type: none"> - <u>Concerns I have:</u> will this be my life forever? - <u>Treatments I'm interested in:</u> dietary options - <u>Treatments I'm NOT interested in:</u> anti-depressants, b/c I don't want depression in my chart and affect my life insurance 	Treatment	Duration	Reason for stopping	Gluten free diet	4 wks	Not effective	Hyoscyamine 0.375mg	1 dose	jittery, didnt work	Augmentin 2x daily	14 d	Got C. diff
Treatment	Duration	Reason for stopping											
Gluten free diet	4 wks	Not effective											
Hyoscyamine 0.375mg	1 dose	jittery, didnt work											
Augmentin 2x daily	14 d	Got C. diff											

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Making the most of your GI Visit

Helpful Resource: ACG's IBS Treatment Checklist

Treatment Names	Currently Using	Have Tried in the Past	Wish to Discuss
General IBS Treatments			
+ Diet Modifications			
Low-FODMAP diet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
+ Lifestyle Modifications			
Exercise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
+ Psychologic and Behavioral Therapies			
Cognitive Behavioral Therapy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hypnosis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Psychodynamic Psychotherapy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
+ Over-the-counter Medicines			
Soluble Fiber (e.g. Psyllium, Ispaghula Husk)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Probiotics (e.g. Align, VSL#3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Peppermint Oil (e.g. IBgard, Colpermin)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
+ Prescription Medicines			
Dicyclomine (Bentyl)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hyoscyamine (Levsin)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tricyclic Antidepressants (e.g. Elavil, Pamelor, Norpramin)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SSRIs (e.g. Celexa, Lexapro, Prozac, Zoloft)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Treatments

Placebo Effect

- **Placebo Effect** =
Patient + **Positive** expectations + Sugar Pill = **Positive** Effect
- Average placebo response in IBS clinical trials?

40%

Patel, et al. Neurogastro and Motility, 2005.

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Treatments

Placebo Effect and IBS

If placebo effect can help **4 out of 10** patients with IBS, why bother with \$ medications that can have side effects?



6 out of 10 patients **NOT** helped by placebo

+

Approved IBS treatments = **SUPERIOR** to placebo

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Treatments

Placebo & Nocebo Effects

- **Placebo Effect =**

Patient + **Positive** expectations + Sugar Pill = **Positive** Effect

- **Nocebo Effect =**

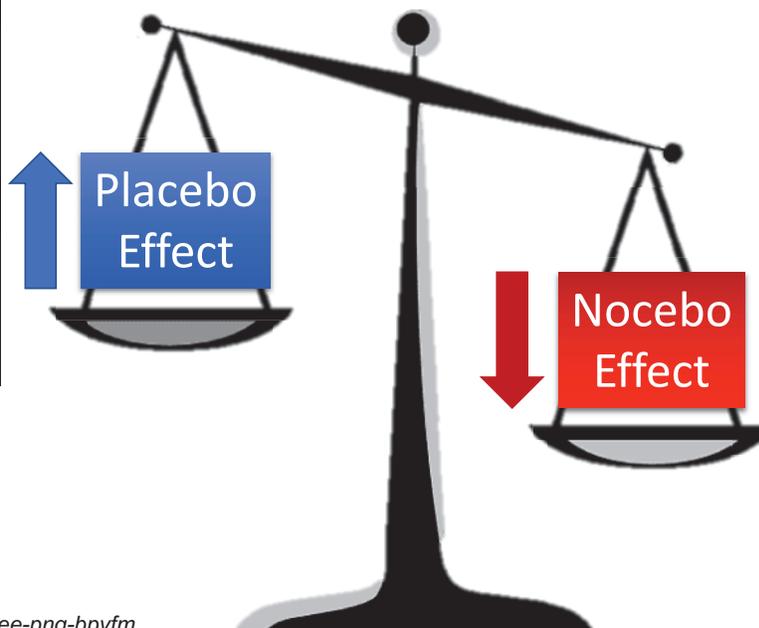
Patient + **Negative** expectations + Sugar Pill = **Negative** Effect

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Ideal Treatment Approach

Setting ourselves up for success!

Provider
<ul style="list-style-type: none"> - Share (+) prior stories with treatment - Set timeframe for effect - Touch base re: results
Patient
<ul style="list-style-type: none"> - Be hopeful for benefit - Patience = a virtue - Play active role in treatment process



Provider
<ul style="list-style-type: none"> - Share difference between side effect rates: <i>treatment % - placebo %</i> - Explore patient expectations
Patient
<ul style="list-style-type: none"> - Honest self-reflection: <i>Am I expecting side effects?</i> - New med = new experience - Pessimism = ↑ nocebo effect

Treatments

Natural supplements, pre/probiotics

IBS-Diarrhea

Soluble fiber (dissolves in water)

- **Powder** better than capsules/gummies
- Helps you feel **less hungry**, ↓ cholesterol, maintain blood sugar
- Examples: psyllium based (Metamucil): most studied
- ? Less bloating: wheat dextrin (Benefiber), methylcellulose (Citrucel)



Prebiotics

- high-fiber foods that feed gut bacteria to maintain healthy balance
- minimally studied in IBS, not better than placebo

Probiotics

- LOTS of various strains/preparations, makes studies hard to interpret
- Not specifically recommended for IBS, very controversial
- Most studied strains in IBS: *Lactobacillus*, *Bifidobacterium*
- Visbiome (VSL#3, prescription), Align, Culturelle, Activia® yogurt



Deutsch JK, Levitt J, Hass DJ. Am J Gastro 2020.

<https://www.metamucil.com/en-us/products/metamucil-fiber-supplement/orange-smooth>, <https://www.kroger.com/p/benefiber-sugar-free-fiber-supplement-powder/0088679021830>, <https://www.cvs.com/shop/citrucel-powder-orange-flavor-fiber-therapy-for-occasional-constipation-relief-30-oz-prodid-347054>, <https://www.shutterstock.com/search/probiotics+cartoon>

Treatments

Herbals

IBS-Diarrhea

Iberogast (STW5)

- decently studied, ↓ symptoms from IBS and functional dyspepsia
- caution if liver disease, bleeding risk, on anti-anxiety meds



Peppermint oil

- well studied, ↓ symptoms from IBS and functional dyspepsia
- IBgard popular brand, generics also available

Turmeric/Curcumin/Xanthofen

- fairly studied in IBS, ? anti-inflammatory effects, possible role in mild Crohn's
- possible role in constipation as well, ? prebiotic

Glutamine

- fairly studied, possible role in post-infectious IBS
- ? restore intestinal permeability or "leaky gut"



Berberine

- fairly studied, ↓ diarrhea frequency, abdominal pain frequency, urgency
- relatively safe

Deutsch JK, Levitt J, Hass DJ. Am J Gastro 2020.

<https://www.shop-apotheke.com/arzneimittel/514644/iberogast.htm>, <https://www.amazon.com/IBgard-IBgard-48-capsules/dp/B00Z70IKXS>, <http://blogs.oregonstate.edu/moore/herbal-supplements/>

Treatments

Natural supplements, pre/probiotics

IBS-Constipation

Soluble fiber (dissolves in water)

- aim for **more** water
- all previous statements apply

Aloe vera

- Anti-inflammatory and pain relief effect
- Can affect absorption of many drugs including blood thinners

Pre/Probiotics

- Previous statements apply
- Would not recommend if a lot of bloating
- Most studied strain in IBS-C: *Bifidobacterium animalis*

Deutsch JK, Levitt J, Hass DJ. *Am J Gastro* 2020.

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Treatments

Cannabis



- Almost NO preparations are created equal
 - THC = affects receptors in gut **AND** brain → euphoria, etc.
 - CBD = affects receptors in gut but **NOT** brain
 - Often supplements have combo %'s of THC + CBD
- Generally ↓ GI motility especially stomach
- Promising randomized trial in IBS for ↓ abdominal pain
- STAY TUNED: many more studies to come

Maselli DB, Camilleri M. *CGH* 2020.

Dothel G, et al. *Neurogastro Motil* 2019.

<https://www.pharmaceutical-journal.com/news-and-analysis/opinion/blogs/big-dope-why-we-shouldnt-rush-to-legalise-medical-cannabis/20205183.blog>

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Treatments

Diet

IBS-Diarrhea

Low FODMAP diet

- F = Fermentable, O D M = Oligo-, Di-, Mono-saccharides and P = polyols
- very well studied
- NOT A FOREVER DIET!
- **restriction phase** to see response (2-6 weeks) → **re-introduction** → **personalization**

Gluten free diet (if celiac disease ruled out)

- not recommended for IBS: ↓ whole grains important for health
- BUT...some patients without celiac disease may be sensitive to gluten
- the culprit may not be gluten but actually fructan and/or wheat allergy

Low

Restrictiveness of Diet

HIGH

Whole Grains

Wheat Free

Fructan Free

Gluten Free

Low FODMAP

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Treatments

Diet

IBS-Constipation

“HIGH” FODMAP diet = natural laxatives

- Prunes
- Summer fruits: peaches, watermelon, cherries
- Aloe
- Rhubarb



Low FODMAP

- Kiwi



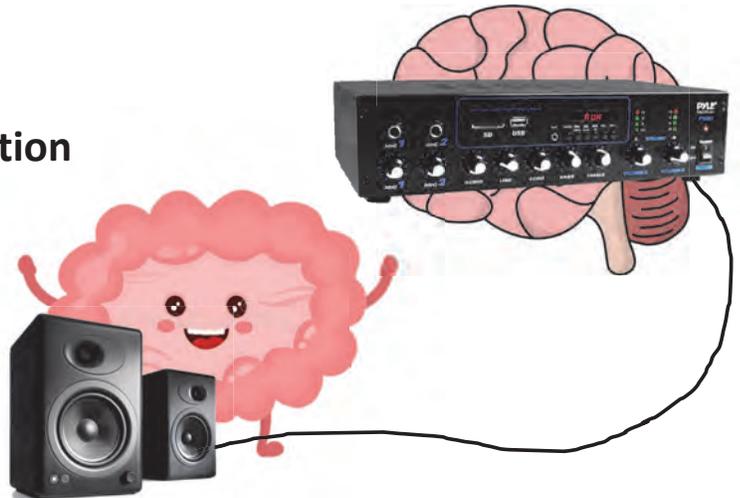
Treatments

GI Behavioral Health

- Possibly our **most effective non-medication** option for IBS treatment

- Addresses the **Brain-Gut Connection**

- Brain = Amplifier
- Gut = Speaker



<https://www.pinterest.com/pin/851602610772758467/>

<https://www.dreamstime.com/strong-healthy-happy-intestine-character-strong-healthy-happy-intestine-characte-vector-flat-cartoon-illustration-icon-design-image101776352>

<https://jayso.com/collections/bluetooth-pa-systems-amplifiers/products/600-watts-stereo-power-amplifier-bluetooth-receiver-w-microphone-inputs-mp3-usb-sd-aux-playback-pt506bt>

<https://audioengineusa.com/shop/poweredspeakers/a5-plus-classic-speakers/>

Treatments

GI Behavioral Health

Cognitive Behavioral Therapy (CBT)

- Number Needed to Treat (NNT) = # patients needed to treat to see benefit
- want *low* # (like golf)
- anything <10 is GOOD

NNT = 3!!!

Treatments

GI Behavioral Health

Gut Directed Hypnotherapy

- Not hypnosis like at the state fair
- Tunes down the “amplifier”

NNT = 4!!!

Ford AC, et al. Am J Gastro 2019.

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Treatments

GI Behavioral Health

- Early adverse life events are associated with IBS
- Include childhood/adult physical and sexual abuse

Bradford et al. CGH 2012

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Treatments Summary

IBS-Diarrhea

Go for it! (if your provider approves)

Promising but more data needed

Likely not worth your time/\$

Natural Supplements					
Soluble fiber		Prebiotics		Probiotics	
Herbals					
Iberogast	Peppermint oil	Cannabis	Turmeric/Curcumin	Glutamine	Berberine
Diet					
Low FODMAP	Wheat free		Fructan free	Gluten free	
Complementary					
Exercise	Yoga			Acupuncture	
GI Behavioral Health					
Cognitive Behavioral Health			Gut directed hypnotherapy		

Treatments Summary

IBS-Constipation

Go for it! (if your provider approves)

Promising but more data needed

Likely not worth your time/\$

Natural Supplements					
Soluble fiber		Prebiotics		Probiotics	
Herbals					
Iberogast	Peppermint oil	Aloe vera	Cannabis		
Diet					
"High" FODMAP: prunes, peaches, cherries, rhubarb, watermelon			Kiwi	Gluten Free	
Complementary					
Exercise	Yoga		Acupuncture		
GI Behavioral Health					
Cognitive Behavioral Health		Gut directed hypnotherapy			

Treatments- IBS-D Medications

Hitting the brakes

- loperamide
- diphenoxylate + atropine
- bile acid binders
- 5-HT3 antagonists
- eluxadoline

Cramping Calmers

- hyoscyamine
- dicyclomine

Command Center Control

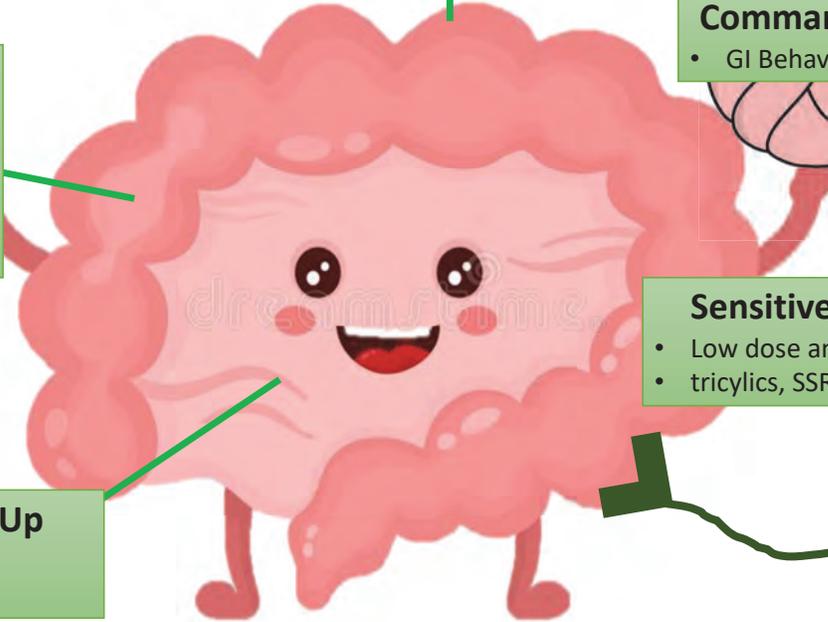
- GI Behavioral health

Sensitive Nerve Settlers

- Low dose anti-depressants
- tricyclics, SSRI's, SNRI's

↓ Bacterial Build-Up

- Rifaximin
- Various other antibiotics



<https://www.dreamstime.com/strong-healthy-happy-intestine-character-strong-healthy-happy-intestine-characte-vector-flat-cartoon-illustration-icon-design-image101776352>
<https://www.pinterest.com/pin/851602610772758467/>

Treatments- IBS-C

Low cost laxatives

- PEG (Miralax)
- Mag citrate
- Milk of mag

Poop Propulsion

- prucalopride
- tegaserod*

Command Center Control

- GI Behavioral health

Step on the gas

Stimulant laxatives

- senna
- bisacodyl

Stool secretors

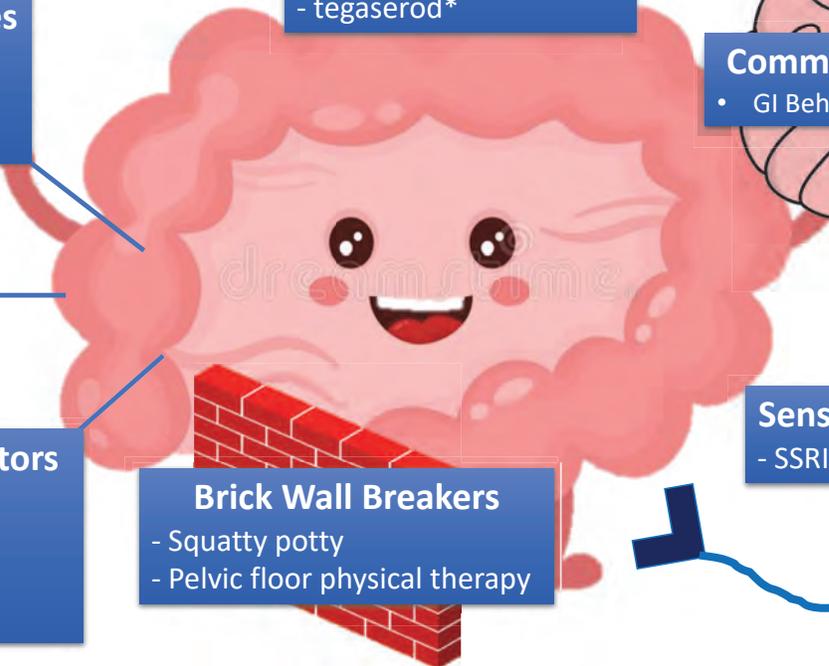
- linaclotide
- lubiprostone
- plecanatide
- tenapanor

Brick Wall Breakers

- Squatty potty
- Pelvic floor physical therapy

Sensitive Nerve Settlers

- SSRI's



<https://www.dreamstime.com/strong-healthy-happy-intestine-character-strong-healthy-happy-intestine-characte-vector-flat-cartoon-illustration-icon-design-image101776352>
<https://www.pinterest.com/pin/851602610772758467/>
<https://www.cleanpng.com/png-stone-wall-brick-clip-art-brick-645115/preview.html>

Summary

Tools for Living your **BEST** IBS Life

- **IBS** is a problem along **Gut-Brain-Microbiome Axis**
- Prepare your **IBS Snapshot** before visit
- Numerous **effective** treatments
 - Work with your provider to tip the scales in your favor:
 ↑ **Placebo** + ↓ **Nocebo** Effects
 - Many natural supplements, herbals, diet options worth trying
 - GI behavioral health is safe and very effective
 - Many prescription meds targeting various mechanisms

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Thank you for listening!



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