

September 2017

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# Naturopathic Approaches to Irritable Bowel Syndrome (IBS)

Guest Lecture

University of Colorado Denver - Anschutz Medical Campus

Strauss-Wisneski Lecture Series

# Outline

- About me
- About naturopathic medicine
- GI focused naturopathy
- Some of our research
- Cases
- Questions





Who Am I?





## Teacher with a focus on:

- Evidence-evaluation
- Critical review of the medical literature
- Evidence-based medicine



*Dr. Journal Club*





## Researcher with a focus on:

- Probiotics
- IBS
- Evidence-based medicine



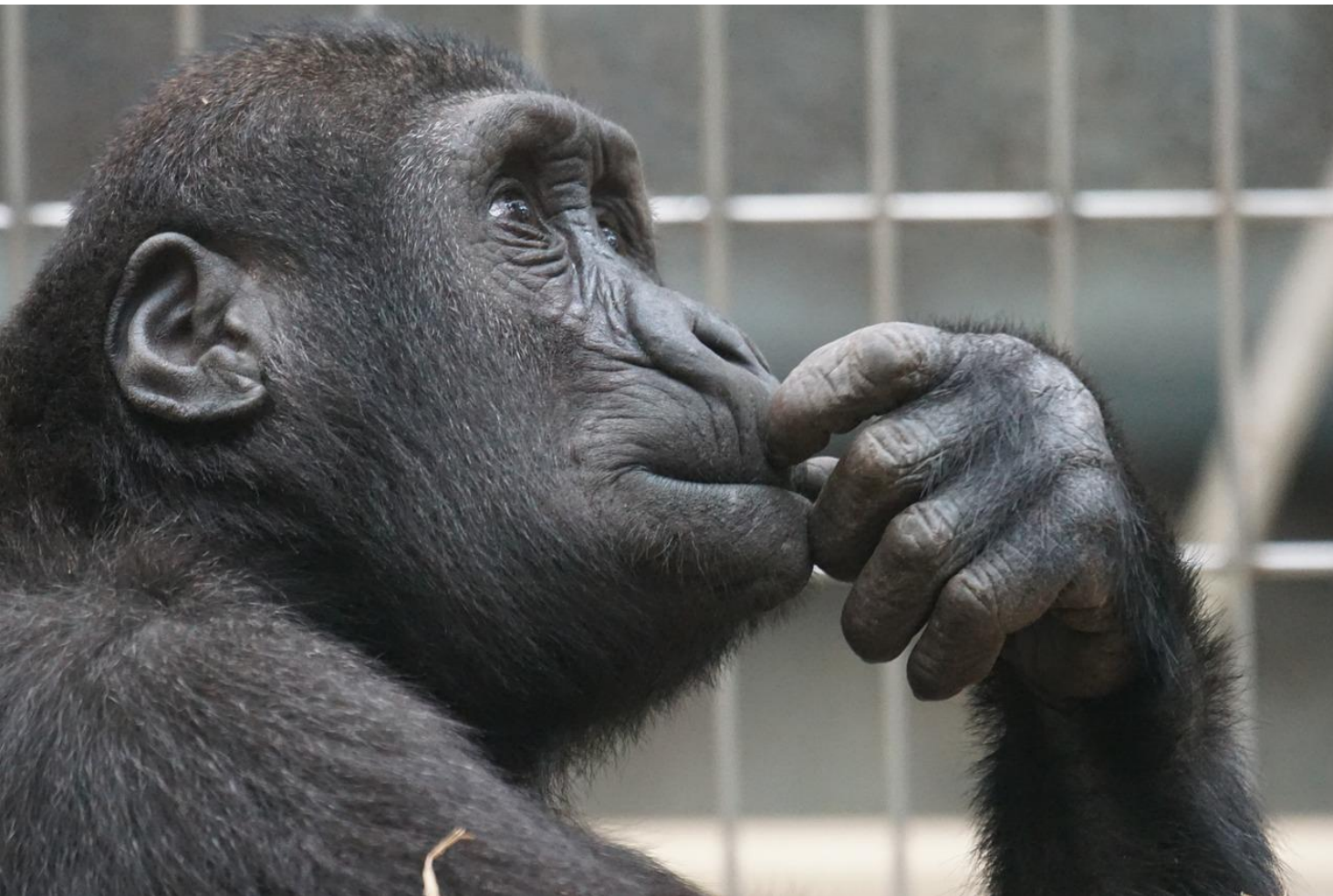


**Clinician with a focus on:**

- IBS, IBD, & SIBO
- President of the Gastroenterology Association of Naturopathic Physicians



What is Naturopathic Medicine and  
What the Heck is a (registered) ND?



Good  
Question!



## OUR PRINCIPLES

1. First Do No Harm - *primum non nocere*
2. The Healing Power of Nature - *vis medicatrix naturae*
3. Discover and Treat the Cause, Not Just the Effect - *tolle causam*
4. Treat the Whole Person - *tolle totum*
5. The Physician is a Teacher - *docere*
6. Prevention is the best "cure" - *praevenire*



## OUR TRAINING

- Pre-Med
- 4 year in-residence naturopathic medical school with clinical internships
- Biomedical sciences
- Many do residencies
- Continuing education requirements etc.



# THE THERAPEUTIC ORDER

## WHAT IS THE THERAPEUTIC ORDER?

*A set of guidelines to help physicians completely resolve the patient's symptoms and address the underlying cause while using the least force safely possible.*





## LEGAL SCOPE

- In CO NDs are registered.
- About 130 of us here
- Scope: physical exam, diagnostic testing/imaging, diagnosis, treatment with herbs, supplements etc.
  - NO pharmaceuticals
  - NO surgery

- Different in every state
- 19 states, the District of Columbia, Puerto Rico and the United States Virgin Islands have licensing/registration laws for naturopathic doctors.
- In these states, naturopathic doctors are required to graduate from an accredited four-year residential naturopathic medical school and pass an extensive postdoctoral board examination (NPLEX) in order to receive a license/registration.

“Find a Doctor” on [www.naturopathic.org](http://www.naturopathic.org)



So What Is Naturopathy for IBS?



“Research is self-reflection. We have to reflect on ourselves. Not everything we’re going to do is going to be perfect, and if you’re not willing to examine yourself do you really deserve to be a doctor?” – Calendula

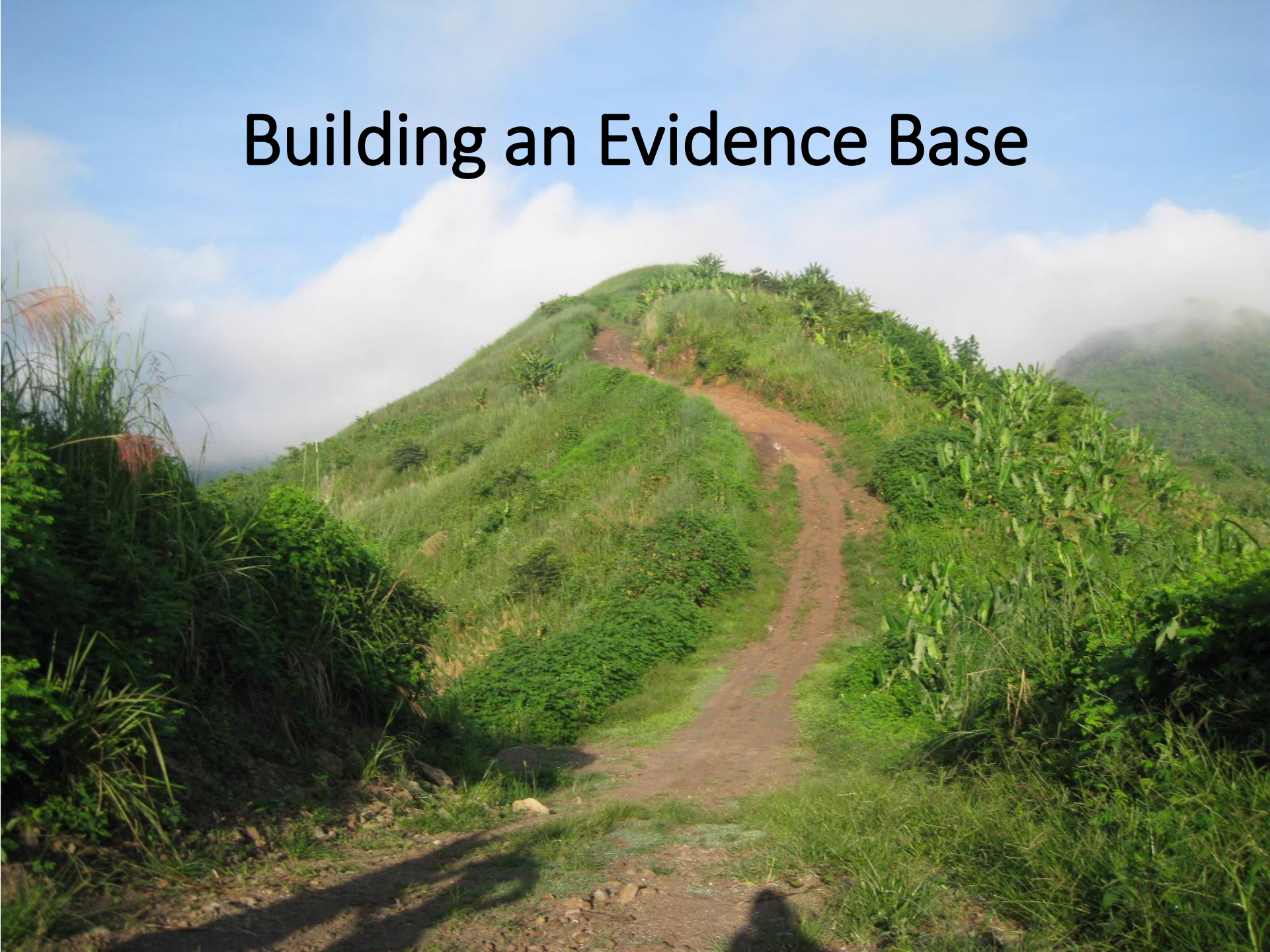


Goldenberg JZ, Burlingham B, Oberg E, Guiltinan J. (2013). Shifting Attitudes towards Research and Evidence-Based Medicine in the Naturopathic Medical Community. *International Journal of Naturopathic Medicine*. 6,1.





# Building an Evidence Base



# Irritable Bowel Syndrome. The What & Why

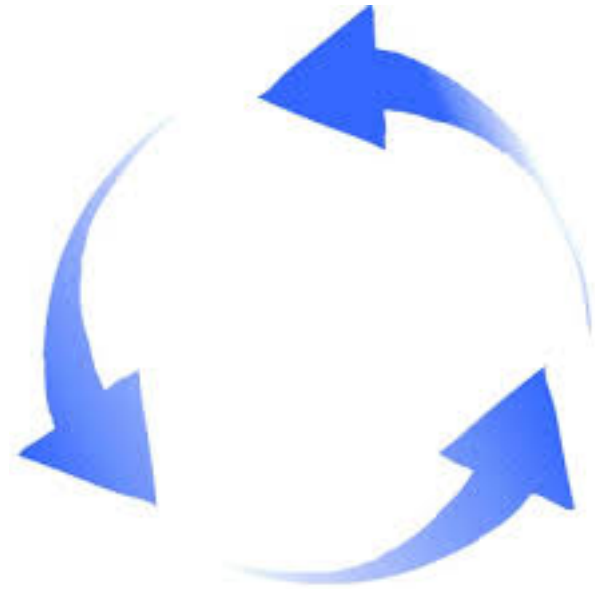
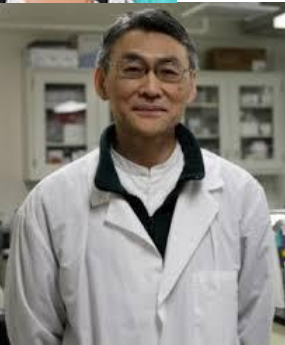
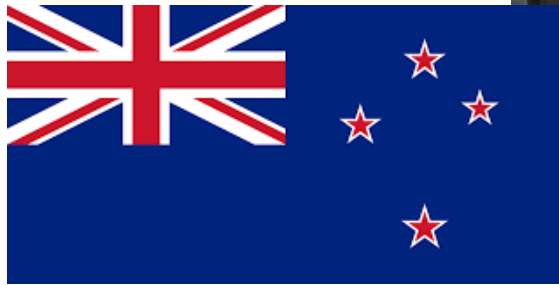
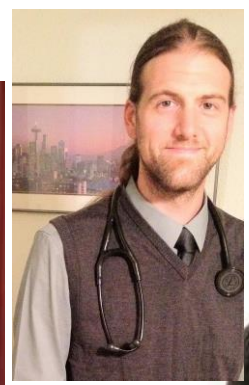
- Rome Criteria (IV)
  - Recurrent abd pn 1day+/wk in past 3 mo w/ 2+ of...
    - Related to defecation
    - Ass w/ change in stool freq
    - Ass w/ change in stool form
- 10-20% of the population has it
- Conventional medicine is not great at it
- Natural medicine is (we think)
- Multimodality



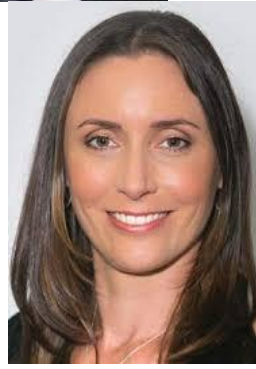


# The Team

- Tucker Winship, ND
- Andrew Day, ND
- Amie Steel, ND, PhD
- Lesley Ward, PhD
- Matt Brignall, ND
- Kieran Cooley, ND MPH
- Paul Amieux, PhD
- Masa Sasagawa, ND
- Brad Lichtenstein, ND
- Mallory Anderson, ND
- Jennifer Beardsley, MLIS
- Michelle Hamilton (ND candidate)
- Christina Yap (ND candidate)

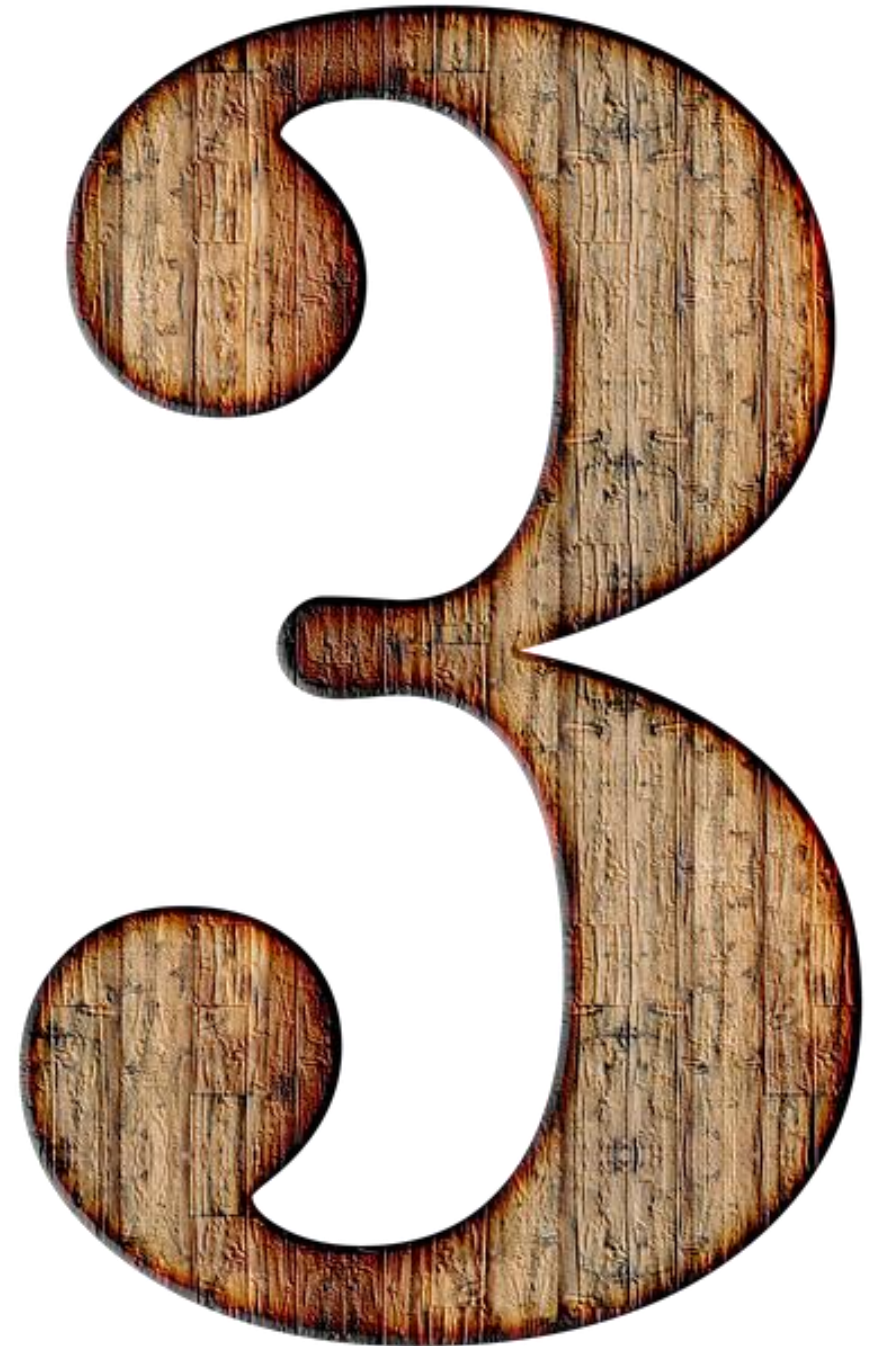


**Training and  
Research  
Engagement**



# Current Research Directions

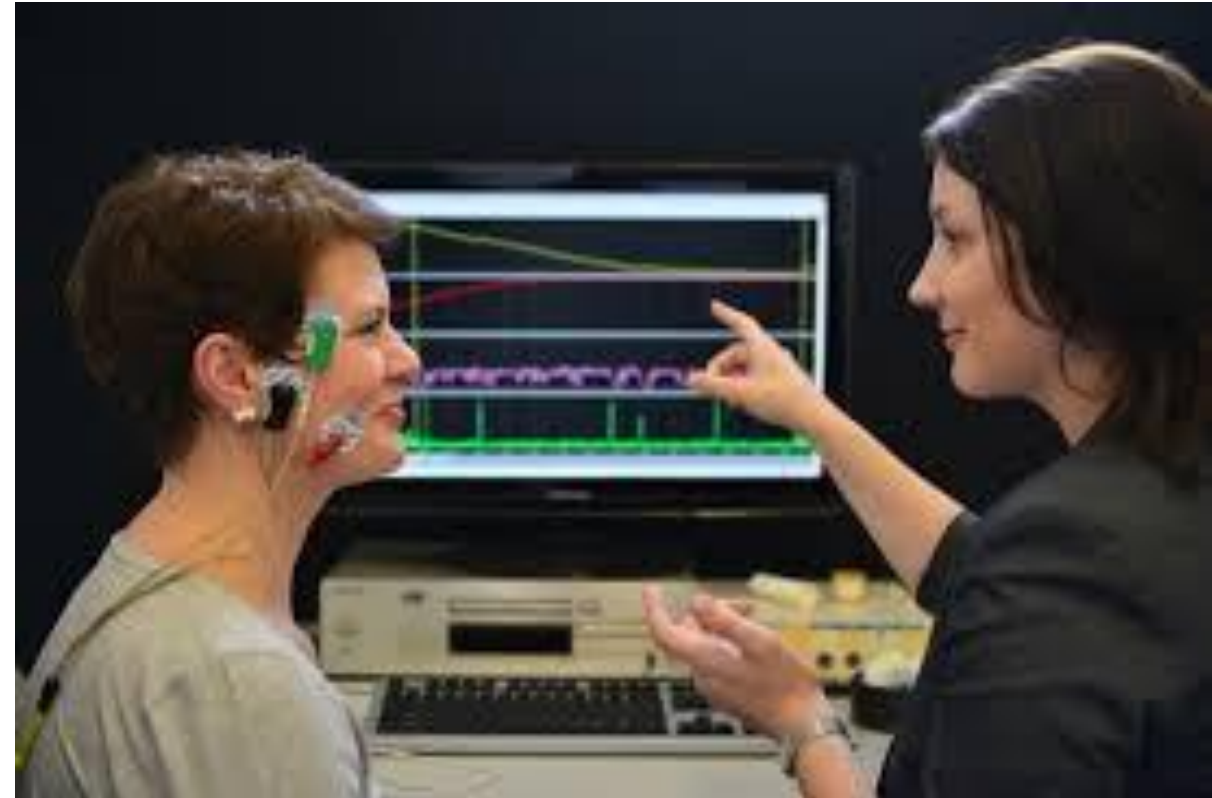
- Systematic Reviews and Meta-analyses of Individual components
  - Biofeedback (Cochrane Review)
  - Probiotics in kids (Individual Patient Level Meta-Analysis)
- Whole Systems – Description/Consensus
  - Delphi (ND IBS experts)
- Effect Size Estimation and Groundwork for RCT
  - Uncontrolled Cohort Study (multi-national/multi-school)





# Biofeedback for IBS

- Systematic Review
- First *de novo* Bastyr Cochrane title
- Extensive main database and grey literature peer reviewed search
- 4056 citations for review (independently and in duplicate)
- 161 for full text review
- At least 5 meet inclusion criteria for the review



# The Studies (all RCTs)

## **Dobbin 2013**

97pts randomized (all female)  
Biofeedback vs. Hypnotherapy  
IBS-SSS

## **Leahy 1997**

21 pts randomized (resistant IBS)  
Biofeedback vs. Counseling  
“symptom scores”

## **Neff 1987**

19 pts randomized  
Multi-treatment with biofeedback  
vs. symptom monitoring  
“composite primary symptom  
reduction”

## **Ryan 2004**

24 pts randomized  
Multi-treatment with  
biofeedback + usual care vs.  
usual care  
Symptom composite

## **Trembach 2009**

30 pts randomized (all female  
and IBS-C)  
Standard care + biofeedback  
vs. standard care vs.  
advanced care  
Bristol, Symptoms, Length  
constipation

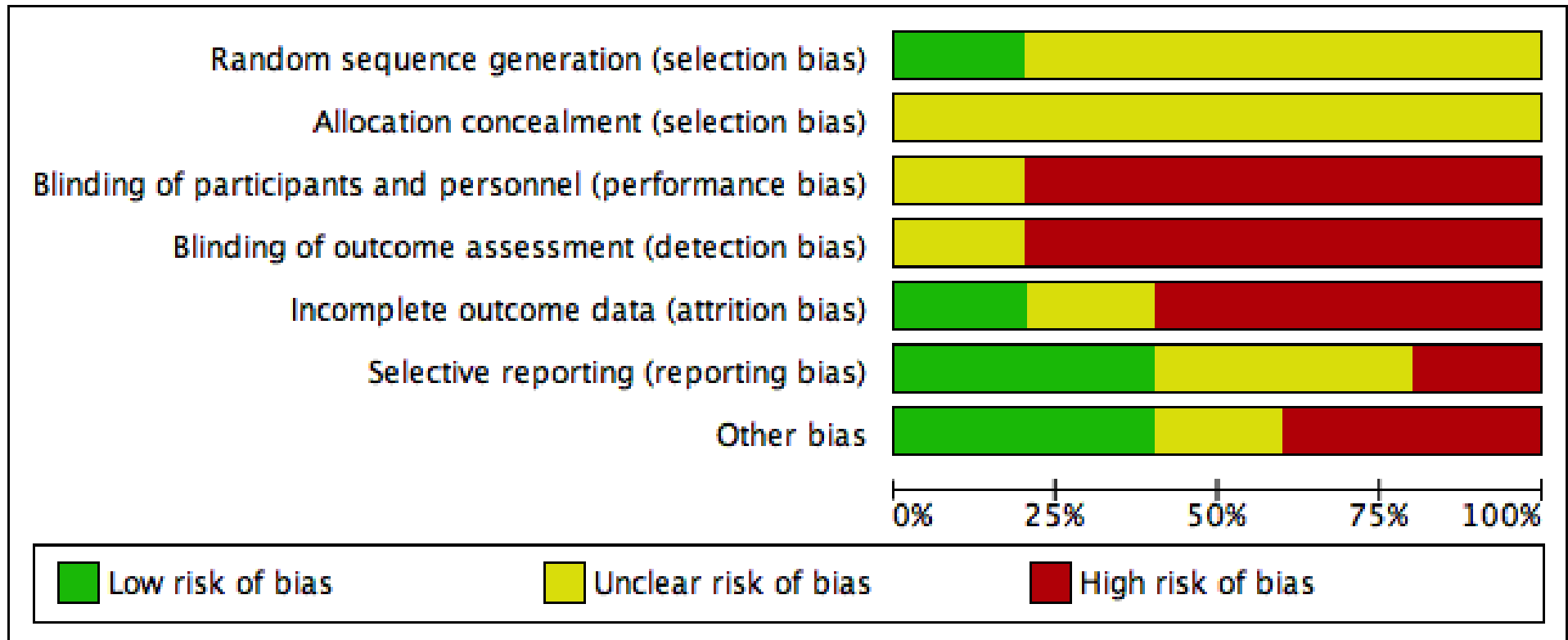




# Risk of Bias

## Overall Risk of Bias

Dobbin 2013 – **High**; Leahy 1997 – **High**; Neff 1987 – **High**;  
Ryan 2004 – **High**; Trembach 2009 – **High**



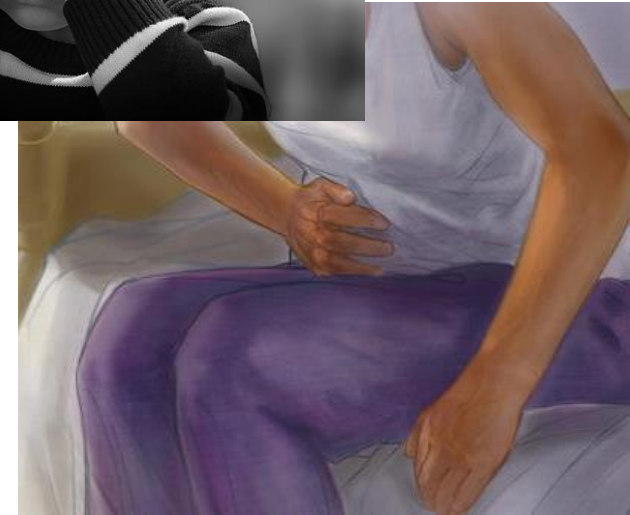
# RESULTS

- **Dobbin 2013:**
  - IBS-SSS difference=-58.8 (95% CI -111.6 to -6.1); p=0.029
- **Leahy 1997:**
  - symptom score over 4 weeks -2.1 (biofeedback responders) and +0.7 (biofeedback non-responders); counseling patients -0.1
- **Neff 1987:**
  - The mean composite score was a 50 point to 15 point improvement favoring intervention; p=0.034
- **Ryan 2004:**
  - Tx group sx scores went from a 8 to 3; p<0.05
- **Trembach 2009:**
  - 0/10 in standard treatment group had significant improvement versus 2/10 in the standard + biofeedback group



# Probiotics for Pediatric IBS - an IPD

- International team (US, Canada, Poland, Italy)
- Will probiotics help kiddos with IBS?
- Individual patient level meta-analysis
- Protocol completed and registered with PROSPERO
- Extensive main database and grey literature peer reviewed search
- 629 citations for review (independently and in duplicate)
- 80 for full text review
- At least 8 meet criteria for the review



# eDelphi

- What is Naturopathic Medicine for IBS?
- Panel of experts (purposive and snowball sampling)
- Anonymous
- Ask, refine, collate... Reach Consensus
- 4 Rounds completed
- Will use this consensus to build a protocol for a whole systems RCT on naturopathic medicine for IBS





# Example Questions

On the sliding scale to your right please rate how much you agree with this statement (from completely disagree to completely agree).

"Granting that certain patient situations may require flexibility, a reasonable naturopathic IBS intervention might include using...

**supplements**

Completely  
Disagree

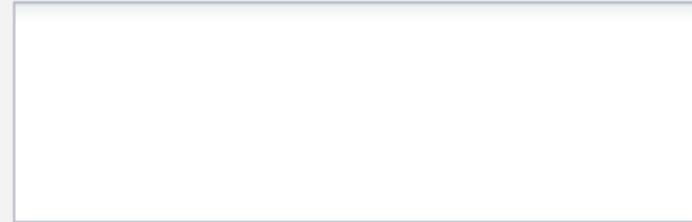
Completely  
Agree



Click bar above and then drag to set response

reset

**Followup question: which supplements do you regularly find yourself using with your IBS patients?**



Expand

**Specifically, please rate the importance of using...**

**probiotics**

Not at all  
important

Very important



Click bar above and then drag to set response

reset

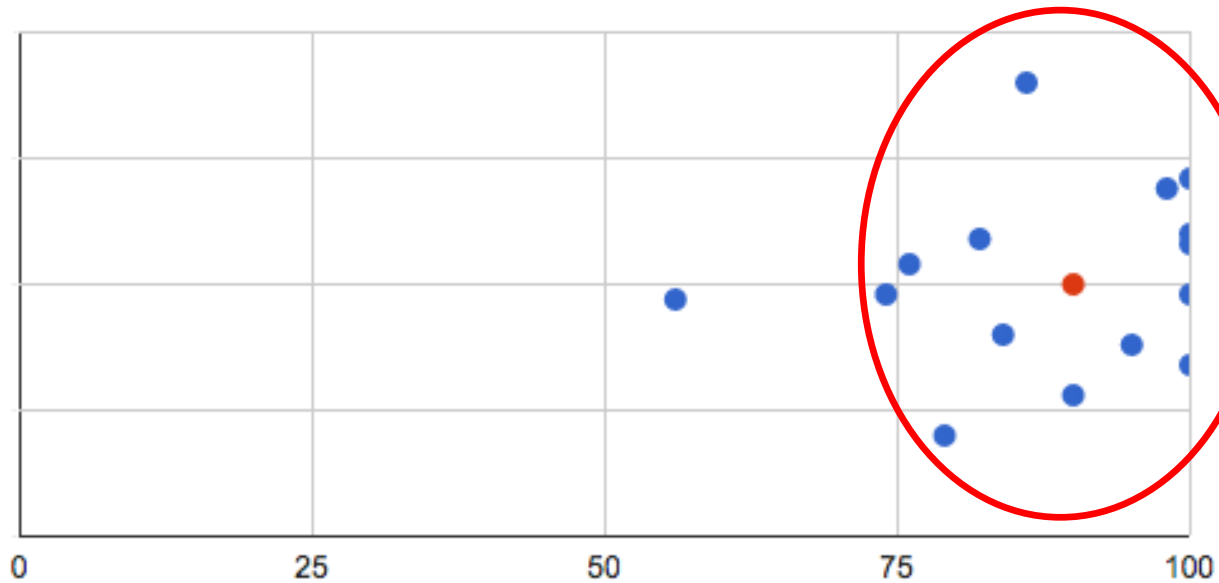
# Example of Consensus

**probiotics** [Refresh Plot](#)

Total Count (N)	Missing	Unique	Min	Max	Mean	StDev	Sum	Percentile						
								0.05	0.10	0.25	0.50 Median	0.75	0.90	0.95
15	0 (0.0%)	11	56.00	100.00	88.00	13.02	1,320.00	68.60	74.80	80.50	90.00	100.00	100.00	100.00

**Lowest values:** 56, 74, 76, 79, 82

**Highest values:** 100, 100, 100, 100, 100



[Download image](#)

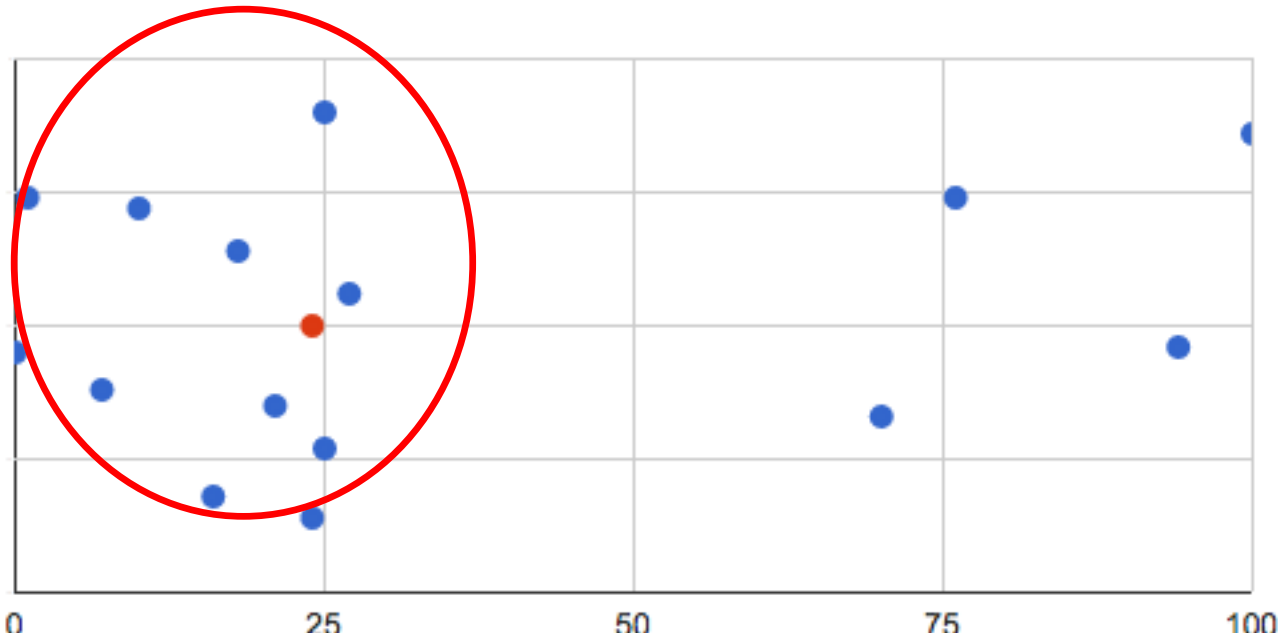
# Example of Exclusion

**1 month** [Refresh Plot](#)

Total Count (N)	Missing	Unique	Min	Max	Mean	StDev	Sum	Percentile						
								0.05	0.10	0.25	0.50 Median	0.75	0.90	0.95
15	0 (0.0%)	14	0.00	100.00	34.27	33.41	514.00	0.70	3.40	13.00	24.00	48.50	86.80	95.80

**Lowest values:** 0, 1, 7, 10, 16

**Highest values:** 27, 70, 76, 94, 100





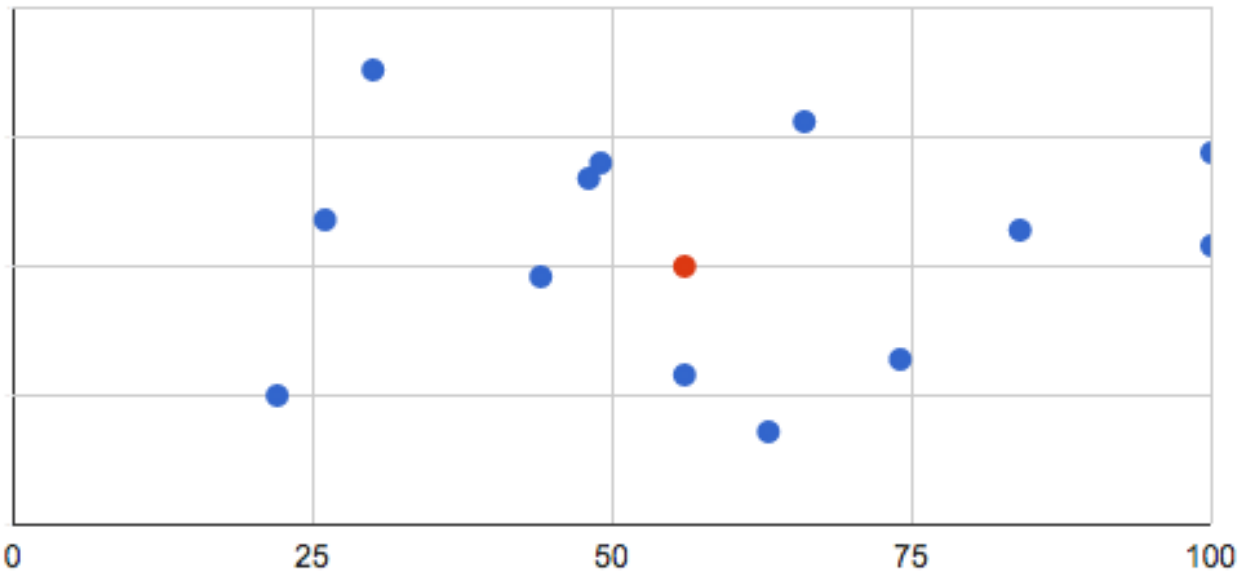
# Example of No Clear Consensus

**reducing caffeine** [Refresh Plot](#)

Total Count (N)	Missing	Unique	Min	Max	Mean	StDev	Sum	Percentile						
								0.05	0.10	0.25	0.50 Median	0.75	0.90	0.95
13	<a href="#">2 (13.3%)</a>	12	22.00	100.00	58.62	25.87	762.00	24.40	26.80	44.00	56.00	74.00	96.80	100.00

**Lowest values:** 22, 26, 30, 44, 48

**Highest values:** 66, 74, 84, 100, 100



[Download image](#)

# Delphi Results - Testing

RESULTS

- “Granting that certain patient situations may require flexibility, reasonable naturopathic IBS testing might include using laboratory based testing specifically IgG, SIBO, and CDSA testing (Round 2: Median 83.5)
- **TESTS**
  - IgG based food sensitivity tests (Round 4: Median 77)
  - SIBO (i.e. lactulose breath testing for methane and hydrogen). (Round 3: Median 93)
  - Stool analysis (e.g. CDSA) results should inform dietary choices in IBS (Round 1: Median 76)



# Delphi Results - Diet

# RESULTS

- "Granting that certain patient situations may require flexibility, a reasonable naturopathic IBS intervention might include using..."
  - **DIET**
    - Low FODMAPs diet (Round 2: Median 77)
    - Therapeutic diets and/or dietary recommendations based on the elimination diet and/or IgG testing results. (Round 2: Median 85.5)
    - Reducing wheat/gluten (Round 2: Median 81)
    - Eating hygiene (chewing food thoroughly, eating mindfully etc) (Round 2: Median 87)
    - A regular meal pattern (frequency and timing of food Completely consumption) (Round 3: Median 79)





# Delphi Results - Products

# RESULTS

- "Granting that certain patient situations may require flexibility, a reasonable naturopathic IBS intervention might include using..."

- **PRODUCTS**

- Supplements (Round 2: Median 87.5)
- Probiotics (Round 2: Median 90)
- Digestive enzymes (Round 2: Median 77)
- Bitters (Round 2: Median 81)
- Carminatives (Round 3: Median 82)
- Tea (Round 3: Median 85.5)
- Tincture (Round 3: Median 76)



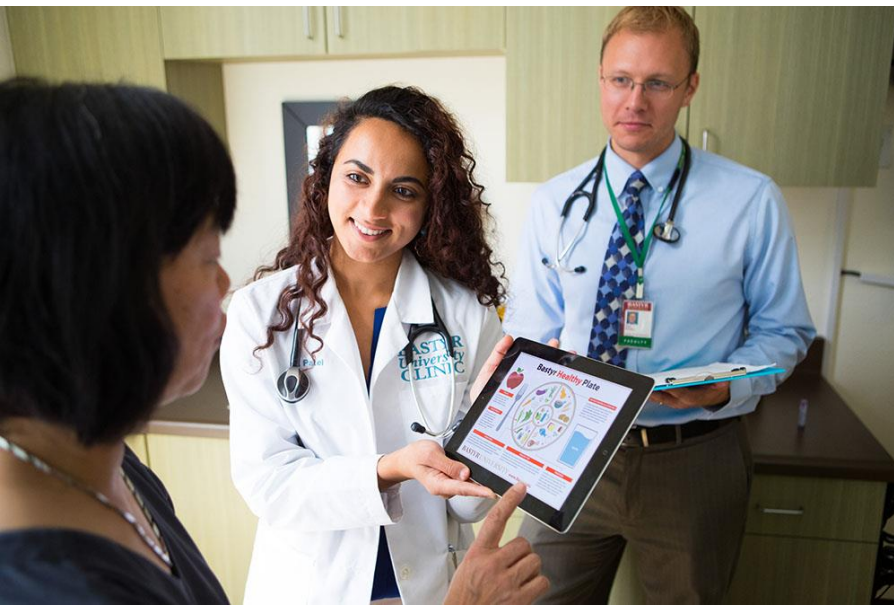
# Delphi Results – Mind/Body

RESULTS

- "Granting that certain patient situations may require flexibility, a reasonable naturopathic IBS intervention might include using..."
  - **MIND/BODY**
    - Mental stress reduction (Round 2: Median 83.5)
    - Exercise (Round 2: Median 77)
    - Meditation (Round 3: Median 75.5)
    - Acupuncture (Round 3: Median 75)
    - Yoga (Round 4: Median 77)



# Prospective Observational Study of Naturopathic Approaches to IBS in Academic Teaching Cl





# Aims

- Our primary aims are descriptive
  - We aim to describe naturopathic approaches to IBS as well as establish pilot data on before and after changes in validated IBS instruments.
- Secondary aims include
  - the feasibility of recruitment and operations across more than 9 sites in 4 countries;
  - the establishment of an international research network of naturopathic teaching clinics;
  - qualitative data gathering around the experience of patients seeking naturopathic care for IBS;
  - and comparing the consensus results of our delphi panel of naturopathic IBS experts to the care received at the teaching clinics.

# Population

## Inclusion Criteria

- Adults ( $\geq 18$  years of age)
- Presenting to
  - one of the participating naturopathic academic teaching clinics (9 sites; 4 countries)
- Presenting with
  - a diagnosis of IBS which was a primary cause of the visit (listed within the top 3 diagnoses for the visit and addressed in the visit plan)

## Exclusion Criteria

- Inability to understand and fill out the assessment forms.
- IBD, celiac disease, mechanical obstruction, and colon cancer.

INTERVENTION

Individualized

Naturopathic

Medicine

CONTROL

Uncontrolled





# Outcomes

## PRIMARY OUTCOME:

- Proportion of IBS-SSS responders ( $\geq 50$  point improvement in IBS-SSS)

## SECONDARY OUTCOMES:

- Before/after changes
  - $\geq 50\%$  improvement in IBS-SSS
  - Proportion who report “adequate relief”
  - Average change in GSRS
  - Average change in IBS-QoL
- Cost
- Safety
- Treatment description
  - Average number of visits; Average length of initial visit and follow-up visits; Frequency of interventions prescribed as broken down by modality categories
- Lived Experience
  - Nested qualitative study within this study

# Case 1

- Female in her mid 20s
- Presents to office to work on her "gut problems"



# Subjective

## History of Present Illness

- In mid 200s during a trip to Central America she got a Camphylobacter infection. Ever since then she has had stomach problems. She took abx for the infection when she returned from Costa Rica. IBS was diagnosed. It would switch off between D and C but now mostly C. Worse: poor sleep. When sleeps well her stomach doesn't bother her much. She can go all day without a BM. Sometimes associated with pain. If she is constipated she will take extra Mg. She complains of bloating and gas. She has never done a breath test. She was Rxed Linzess but doesn't think it works for her.

### ANXIETY

In college she developed anxiety and the worry about the constipation and bloating affects her life.

She is taking Lexapro for anxiety starting this year.

The anxiety affected her sleep.

She has a talk therapist

- 

GOAL: the biggest issue is waking up early and thinking that this is going to affect her all day. She knows she won't feel well all day.

## Review of Systems

- Extensive ROS is negative.



# Foundations of Health

- Diet -> She is a pescatarian with eggs.  
V+F: more than 5 day  
She drinks 3 liters a day.
- Exercise -> 3x a wk 60 minutes each
- Sleep -> wakes with worry
- Mindbody -> none



# Meds/Supps



## **MEDICATIONS**

escitalopram 10 mg oral tablet [Lexapro]

ethinyl estradiol-norgestimate 35 mcg-0.25 mg oral tablet [Sprintec]

## **SUPPLEMENTS**

Align probiotic

Bone up

# Objective

## Vitals

**Height** : 5 ft 3 ins

**Weight** : 121 lbs

**BMI** : 21.43

**Temperature** : 98.3 F

**BP** : 108 / 70 mmHg

**Pulse Rate** : 73 bpm

**Pulse Pattern** : Regular

**Pulse Volume** : Normal

## Physical Examination

**GENERAL APPEARANCE**: The patient is alert, oriented. No acute distress.

**HEART**: Regular rate and rhythm.

**LUNGS**: Normal breath sounds. No crackles or wheezes are heard.

**ABDOMEN**: Soft, nontender, nondistended with good bowel sounds heard. No hepatosplenomegaly.

**NEUROLOGICAL**: DTRs wnl

**Skin**: Warm and dry without any rash.







# Plan

## Remove Barriers to Cure



## Treatment Notes

- Address the stress/worry around the gut problems
  - Treat the gut to rebalance.
1. ACT workbook
  2. Meditation. 10 minutes qd
  3. LBT

## Portal Message

Dr. G,

Thank you so much for checking in .... also, my stomach has been a lot better which is why I wasn't thinking about it.

I never ended up taking the breath test but your advice about changing my mindset around my ibs has made a big difference, and it's feeling very manageable right now.

Thank you so much for your help and support,

XXXXX





# Case 2

- Male in his mid 50s
- Presents to office with cramping pain and diarrhea



# Subjective

## **History of Present Illness**

- Not really bloating. Cramping and burning.  
Will occur within 30 minutes or up to 2 hours.  
Cramping pain will last a few hours.  
5-6/10.
- About 6 years ago it started.  
There is gaseous feeling. It feels uncomfortable.
- Worse with activity, coffee, stress, probiotics
- Better with heat and rest, anti-spasmodics, fasting  
Heather oil's didn't work well.  
SCD diet, FODMAP, paleo diet. It is hard to say if helpful.  
He did travel to Mexico around that time but doesn't recall illness.  
Stress now is low.

## **Review of Systems**

- Extensive ROS is negative.

# Meds/Supps



## **MEDICATIONS**

amLODIPine 5 mg oral tablet [AmLODIPine Besylate]

tamsulosin 0.4 mg oral capsule [Flomax]

## **SUPPLEMENTS**

Vitamin D

Vitamin C

Fish oil



# Objective

## **Physical Examination**

### PHYSICAL EXAMINATION:

GENERAL APPEARANCE: The patient is alert, oriented. No acute distress.

NECK: Supple without lymphadenopathy. No goiter present.

HEART: Regular rate and rhythm. No clicks, rubs or murmurs.

LUNGS: Normal breath sounds. No crackles or wheezes are heard.

ABDOMEN: Bowel sounds are normal. No evidence of scarring or past surgical procedures. Abdomen is nondistended, soft, and nontender, without rebound or guarding. No evidence of masses or organomegaly. There is some firmness/guarding on the right lateral side.

EXTREMITIES: Without cyanosis, clubbing or edema.

NEUROLOGICAL: DTRs wnl

MSK: Muscle strength normal and equal bilaterally

Skin: Warm and dry without any rash.

# Assessment

## Assessment Notes

Meets criteria for IBS-D. Timeline matches with trip to Mexico. Possible PI-IBS. Cramping is main issue. Will run testing to confirm PI-IBS then treat with antimicrobial protocol. May need to consider PT for anti-adhesion work as well as prokinetics, low FODMAP, meal spacing in future. If still need sx relief in future may consider kava. He didn't respond to Heather's oils. Also worse with stress. Work on relaxation response.

## Diagnoses

Irritable bowel syndrome with diarrhea [ K58.0 ]



# Plan



## Treatment Notes

TEST: Anti-vinculin and anti-cdtb

START:

Candibactin-BR by Metagenics

Link: <http://a.co/3pT14CQ> 2 caps twice a day for 30 days.

Candibactin-AR by Metagenics

Link: <http://a.co/6bFCFb0> 2 caps twice a day for 30 days.

G.I Detox by Biocidin Link:

<http://biocidin.com/g-i-detox/> 2 caps twice a day for 14 days.

START: 10 min qd meditation using Headspace app.



# Case 3

- 46 yo F w/ hx of BrCa
- Presents to office to “decrease inflammation”



# Subjective

## History of Present Illness

- She presents to office to work on “decreasing inflammation”
- Dxed with BrCa in 2014. She had a double mastectomy, oophorectomy and chemo. She is now seeing the oncologist q3 months. She is doing well but the overall experience has been terrifying.
- Overall she is extremely overwhelmed with the current approach. She is on a many supplements, she is worried about inflammation. She has been on an elimination diet for over a year. She has no sx at all.
- Upon asking how she will know she is on the right track she reports she wants to be "back in balance" but can't elucidate further because she never felt out of balance.
- She feels like she is in "food jail" and tears up repeatedly in office visit.

## Review of Systems

- Poor concentration, mood swings,
- Otherwise extensive ROS is negative.

# Meds/Supps



**letrozole 2.5 mg oral  
tablet [Femara]**

Omega 3 oil 2000mg

Probiotic

L- Glutamine, 5 gram

Multi Vit

Chlorella

Trace Mineral

B Complex

NAC

Adenosyl/hydroxy B12

Digestive enzymes w/ HCl

Magnesium Glycinate

Vit D3

BroccoMax



# Foundations of Health

- Diet -> relatively clean with 6+ F+V qd
- Exercise -> 30-40 minutes qd aerobic
- Sleep -> 7-8 hrs, wakes refreshed
- Mindbody -> nothing right now



# Objective

## Vitals

**Height** : 5 ft 8 ins

**Weight** : 143 lbs

**BMI** : 21.74

**Temperature** : 97.4 F

**BP** : 110 / 74 mmHg

**Pulse Rate** : 67 bpm

**Pulse Pattern** : Regular

**Pulse Volume** : Normal

## **Physical Examination**

PHYSICAL EXAMINATION:

GENERAL APPEARANCE: The patient is alert, oriented. No acute distress.

HEENT: Head is normocephalic.

NECK: Supple without lymphadenopathy. Thyroid normal.

HEART: Regular rate and rhythm.

LUNGS: Normal breath sounds. No crackles or wheezes are heard.

Skin: Warm and dry without any rash.

Muscle strength normal.

DTR slightly hyporeflexive at patella and biceps.

# Assessment

## **Assessment Notes**

Pt is completely overwhelmed with current approach. It is harming her QoL and I think the stress is suppressing her immune function which is essential to prevent recurrence.

## **Diagnoses**

**Personal history of malignant neoplasm of breast [ Z85.3 ]**





# Plan

## Remove Barriers to Cure



### **Treatment Notes**

We will par down supplements extensively, stop elim diet for now, work on a strong mind body approach. First with meditation and then likely biofeedback or guided visualization both focused on anti-cancer and wellness/discovery.

## Instructions

XXXXX,

It was a pleasure to meet you today.

We will zoom out and work on maximizing immune function for now.

Mindbody approach: start with Headspace 10 min every day you go to the gym. Try to do it in the morning and tag it to something you already have habituated. Input your meditation minutes in Nudge so we can track together.

Download the Nudge app. When it asks for a code use GoldenbergGI this will connect you to me.

Your exercise, diet, and sleep are excellent.

You can decrease your supps to 2000mg omega 3s, your probiotic, and 5g glutamine per day (use the powder).

Stop the elim diet for now. Enjoy dinner with your husband.



# THANK YOU



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