

# SIBO Updates 2022

The latest recommendations for testing, D.R.E.S.S.  
& relapse prevention for your SIBO clients



*Bella Lindemann*

THE FUNCTIONAL GUT HEALTH CLINIC

# Outline of learnings, from me to you

- About me & the work I love to do
- Defining the 3 types of SIBO: SIBO-H, IMO & SIBO-H2S
- Where does SIBO fit in our eradication hierarchy
- SIBO testing updates
- Revised D.R.E.S.S. protocol recommendations for SIBO
- SIBO retest timing
- Updates on SIBO relapse prevention
- SIBO troubleshooting for chronic relapsing clients

# About me



# My own healing journey with SIBO



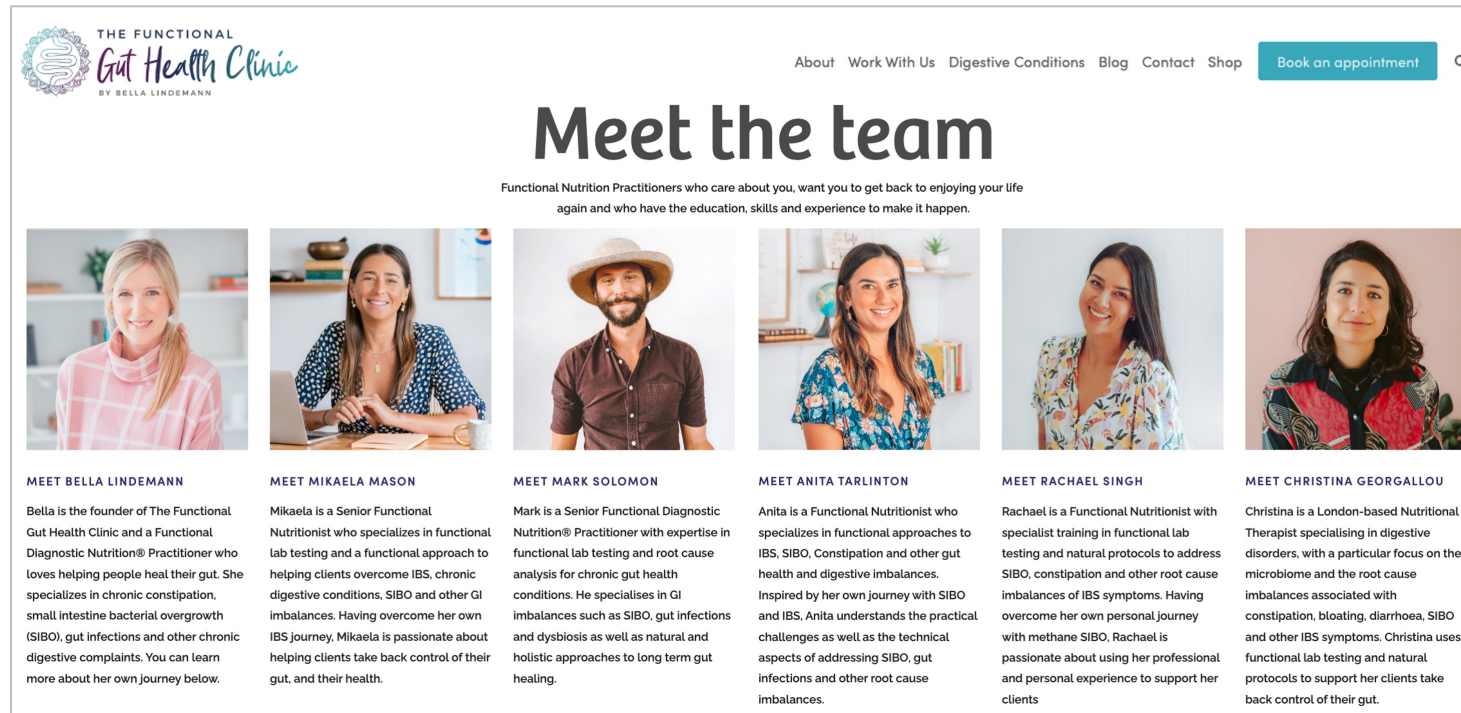
2015: 'Dead Woman's Pass' Inca Trail, six months into relapsing SIBO with no end in sight...



2019: Six months pregnant, recording The Constipation Masterclass. SIBO free!

# The Functional Gut Health Clinic

- TFGHC – online service, attract lots of SIBO clients
- 5 practitioners working online across USA, CAN, AUS, NZ, UK & EU
- Root cause healing for people who have “IBS” – a “BS” label!



The screenshot shows the 'Meet the team' page of The Functional Gut Health Clinic. The page features a navigation bar with links for 'About', 'Work With Us', 'Digestive Conditions', 'Blog', 'Contact', 'Shop', and a 'Book an appointment' button. The main heading is 'Meet the team', followed by a sub-heading: 'Functional Nutrition Practitioners who care about you, want you to get back to enjoying your life again and who have the education, skills and experience to make it happen.' Below this, there are six portraits of practitioners, each with a name and a short bio.

**MEET BELLA LINDEMANN**  
Bella is the founder of The Functional Gut Health Clinic and a Functional Diagnostic Nutrition® Practitioner who loves helping people heal their gut. She specializes in chronic constipation, small intestine bacterial overgrowth (SIBO), gut infections and other chronic digestive complaints. You can learn more about her own journey below.

**MEET MIKAELA MASON**  
Mikaela is a Senior Functional Nutritionist who specializes in functional lab testing and a functional approach to helping clients overcome IBS, chronic digestive conditions, SIBO and other GI imbalances. Having overcome her own IBS journey, Mikaela is passionate about helping clients take back control of their gut, and their health.

**MEET MARK SOLOMON**  
Mark is a Senior Functional Diagnostic Nutrition® Practitioner with expertise in functional lab testing and root cause analysis for chronic gut health conditions. He specialises in GI imbalances such as SIBO, gut infections and dysbiosis as well as natural and holistic approaches to long term gut healing.

**MEET ANITA TARLINTON**  
Anita is a Functional Nutritionist who specializes in functional approaches to IBS, SIBO, Constipation and other gut health and digestive imbalances. Inspired by her own journey with SIBO and IBS, Anita understands the practical challenges as well as the technical aspects of addressing SIBO, gut infections and other root cause imbalances.

**MEET RACHAEL SINGH**  
Rachael is a Functional Nutritionist with specialist training in functional lab testing and natural protocols to address SIBO, constipation and other root cause imbalances of IBS symptoms. Having overcome her own personal journey with methane SIBO, Rachael is passionate about using her professional and personal experience to support her clients

**MEET CHRISTINA GEORGALLOU**  
Christina is a London-based Nutritional Therapist specialising in digestive disorders, with a particular focus on the microbiome and the root cause imbalances associated with constipation, bloating, diarrhoea, SIBO and other IBS symptoms. Christina uses functional lab testing and natural protocols to support her clients take back control of their gut.

# Defining SIBO



# What is the latest definition of SIBO

- 3 types: SIBO-H, IMO & SIBO-H2S
- **1. SIBO-H or hydrogen-dominant SIBO**
  - SIBO-H is an overgrowth of specific bacteria: E.coli, Klebsiella & small amounts of Aeromonas in the SI (small intestine)
  - SIBO-H is not bacterial overgrowth of all bacteria in the SI, but a small intestine dysbiosis
  - Common symptoms: bloating, gas & diarrhea

# What is the latest definition of SIBO

- **2. IMO or intestinal methanogen overgrowth**
  - SIBO-M: name change to IMO because methanogens are archaea, not bacteria, that overgrow in the SI & LI (large intestine)
  - 2 main methane producers: *M.smithii* (90%) & *M.oralis* (10%)
  - Methanogens get hydrogen from Christensenellaceae & Ruminococcaceae bacterial families (not *E.coli* & *Klebsiella*)
  - Common symptoms: constipation, bloating, gas & lowered heart rate via the vagus nerve



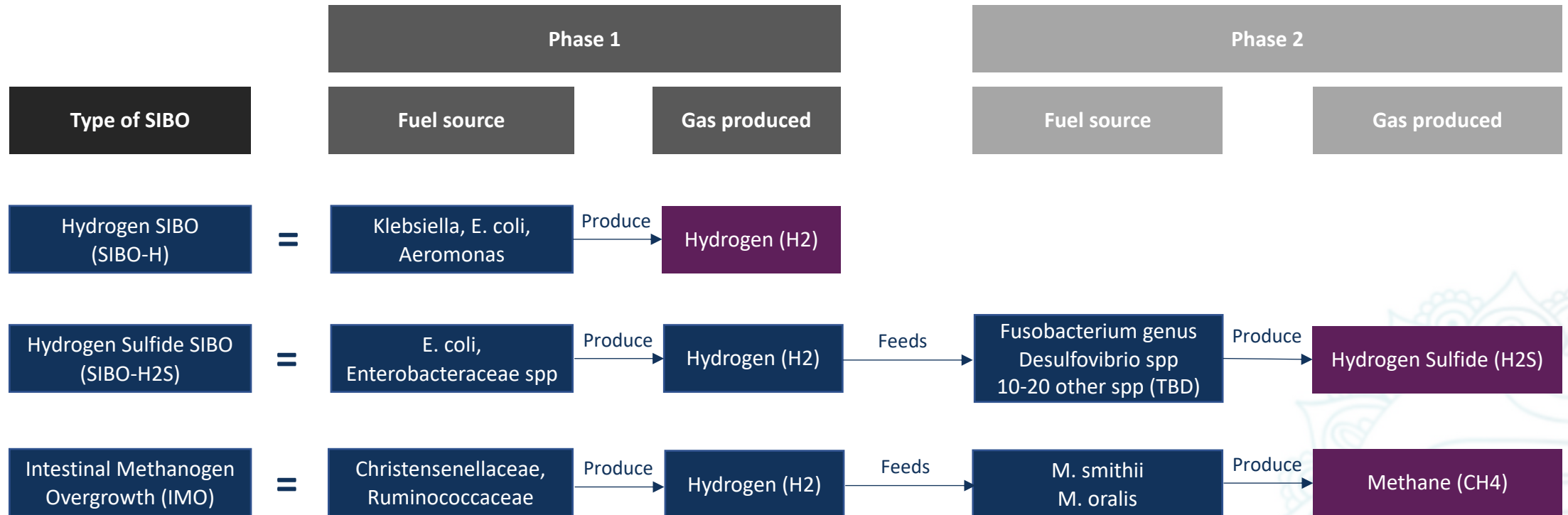
# What is the latest definition of SIBO

- **3. SIBO-H<sub>2</sub>S or hydrogen sulfide SIBO**

- H<sub>2</sub>S-producing bacteria: Fusobacterium genus & multiple Desulfovibrio species, plus 10-20 other unknown species
- H<sub>2</sub>S producing bacteria get hydrogen from E.coli & other Enterobacteraceae species (not Klebsiella like SIBO-H)
- Common symptoms: diarrhea, urgency, visceral hypersensitivity, gas & bloating in the SI. Diarrhea & constipation in the LI. Sulfur smelling gas is not a common SIBO-H<sub>2</sub>S symptom

# What is the latest definition of SIBO

- 3 SIBO types & their fuel sources:



# SIBO & the eradication hierarchy



# Eradication hierarchy: SIBO added



- Address SIBO after mold, H. pylori & parasites – can all block SIBO eradication
- When to address SIBO earlier: when SIBO numbers are very high & gas is causing clients lots of discomfort

# SIBO testing updates



# Testing for SIBO-H<sub>2</sub>S

- **Gemelli Labs, Trio-Smart SIBO test (USA only)**
  - Measures hydrogen, methane & hydrogen sulfide gas levels using lactulose or glucose test substrate (lactulose is preferred)
  - Trio-Smart lab interpretation: >3ppm of hydrogen sulfide gas is considered positive for hydrogen-sulfide SIBO
- **All standard SIBO breath tests**
  - Measure hydrogen & methane gas levels using lactulose, glucose or fructose test substrate
  - Lab interpretation: flatline of 0-3ppm (hydrogen & methane) for the whole 3hrs on lactulose/glucose/fructose testing is positive for hydrogen-sulfide SIBO

# Testing for SIBO-H2S

- **Trio-Smart SIBO test for H2S gas (H2S levels >3ppm are positive):**

Gases	Expected	Observed	Normal/Abnormal
H <sub>2</sub> †	<23.47 ppm	10.68	Normal
CH <sub>4</sub>	<10.00 ppm	1.54	Normal
H <sub>2</sub> S	<3.00 ppm	10.00	Abnormal

†Note: The "observed" peak for H<sub>2</sub> is within the first 90 minutes.

Interpretation
Indicative of Excess Hydrogen Sulfide

Results									
Samples	T1	T2	T3	T4	T5	T6	T7	T8	T9
Interval (hr:min)	0	13	31	46	63	80	96	113	132
<b>Gases</b>									
H <sub>2</sub> (ppm)	3.47	7.97	10.68	8.98	2.22	2.07	0.00	4.83	13.43
CH <sub>4</sub> (ppm)	0.78	0.67	0.26	0.09	1.31	0.00	0.88	1.54	0.68
H <sub>2</sub> S (ppm)	9.69	8.65	10.00	10.00	10.00	9.61	10.00	10.00	7.01

# Testing for SIBO-H2S

- **Flatline (0-3ppm) on standard SIBO test, indicating SIBO-H2S:**

**Sample Analysis Chart**

Sample #	Sample	ppm H <sub>2</sub>	ppm CH <sub>4</sub>	Combined	CO <sub>2</sub> %	Time
1	Baseline	0	1	1	4.1	7:28
2	20 MIN	0	0	0	4.0	7:48
3	40 MIN	0	1	1	4.3	8:09
4	60 MIN	0	1	1	4.6	8:29
5	80 MIN	0	1	1	4.5	8:49
6	100 MIN	0	1	1	4.6	9:09
7	120 MIN	2	1	3	4.6	9:29
8	140 MIN	3	1	4	4.8	9:49
9	160 MIN	3	1	4	3.9	10:09
10	180 MIN	3	3	6	4.1	10:29



# Breath sampling timeframes for SIBO testing

- I recommend either a Lactulose 3-hour, 10 sample test, or Trio-Smart using lactulose if you suspect H<sub>2</sub>S is a problem for your client
- **Ideal breath sampling timeframes:** collect breath samples every 15-20 mins so we can get as much information as we can around the transition from SI to LI
- SI to LI transition occurs around 90 mins
  - Can be 60 mins if diarrhea on day of testing
  - Can be 120 mins if client is very constipated
- Labs taking breath samples every 30 mins to 1 hr can miss SI to LI transition

# Gas level reporting for SIBO breath testing

- Avoid labs who have upper limits on gas levels (e.g., methane gas):

Hydrogen (H <sub>2</sub> ), Methane (CH <sub>4</sub> ) and Carbon Dioxide (CO <sub>2</sub> ) (ppm)								
	Baseline 0 min (S1)	20 min (S2)	40 min (S3)	60 min (S4)	90 min (S5)	120 min (S6)	150 min (S7)	180 min (S8)
H <sub>2</sub>	2	3	5	4	5	3	3	3
CH <sub>4</sub>	33	56	79	>81	>81	>81	>81	>81
H <sub>2</sub> + CH <sub>4</sub>	35	59	84	NR	NR	NR	NR	NR
CO <sub>2</sub> **	✓	✓	✓	✓	✓	✓	✓	✓
Actual Collection Times								
Actual Time	8:35	8:57	9:17	9:37	10:06	10:36	11:06	11:36
Actual Interval	0 min	22 min	42 min	62 min	91 min	121 min	151 min	181 min
**CO <sub>2</sub> is measured for quality assurance. ✓ indicates the CO <sub>2</sub> level is acceptable. ✗ indicates room air contamination exceeding acceptable limits.								

Evaluation for Hydrogen (H <sub>2</sub> )		
<i>Hydrogen increase over baseline by 90 minutes</i>		
	Result	Expected Value
Change in H <sub>2</sub>	3	<20 ppm
A rise of ≥ 20 ppm from baseline in hydrogen by 90 min should be considered a positive test to suggest the presence of SIBO.		

Evaluation for Methane (CH <sub>4</sub> )		
<i>Peak methane level at any point</i>		
	Result	Expected Value
CH <sub>4</sub> Peak	>81	H <10 ppm
A peak methane level ≥ 10 ppm at any point is indicative of a methane-positive result.		

# Best labs for SIBO testing:

- **USA:** Life Extension, SIBO lactulose breath test or Gemelli Labs, Trio-Smart lactulose test
- **Canada:** SIBO Clinic Canada, SIBO lactulose breath test
- **Australia:** SIBOTest offer all 3 testing substates - lactulose, glucose & fructose
- **NZ:** House of Health, Hydrogen-Methane breath testing using all 3 testing substates - lactulose, glucose & fructose
- **UK, Europe & most other international locations:** Nordic Labs, SIBO Lactulose breath test

# Which SIBO test substrates are best?

- **2021 view: Lactulose is the best choice for a single substrate**
  - **Lactulose** is available for fermentation the entire length of the SI & LI
  - Better than glucose which is absorbed within the first 3 feet of the SI
  - **Glucose** provides less information about the back end of the SI & LI so not a good choice for methane or hydrogen sulfide gases
- BUT, there is a third substrate that may be superior: **FRUCTOSE**

# Fructose, the new 'best choice' for detecting SIBO?

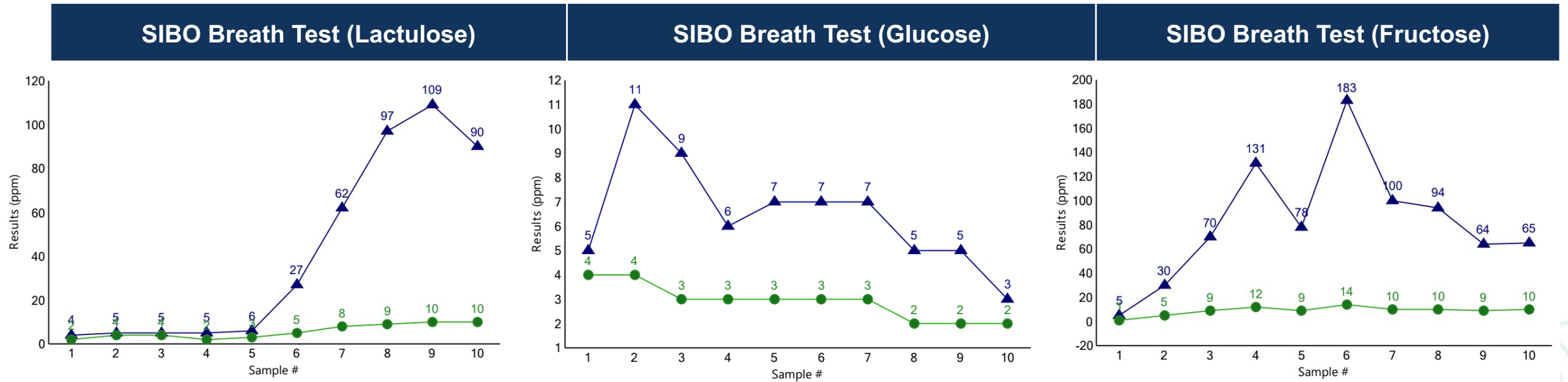
- **Dr Jason Hawrelak completed SIBO breath testing on 130 consecutive clients using all 3 test substrates:**
  - SIBO was detected in 88% of clients tested (115 people). Of those clients, he looked at the accuracy of each substrate in picking up SIBO/IMO:
    - Lactulose only: 73%
    - Glucose only: 67%
    - Fructose only: **85%**
    - Lactulose & Glucose: 76%
    - Glucose & Fructose: 93%
    - Lactulose & Fructose: **96.5%**
    - All 3 substrates: 100%

# Fructose & lactulose are best for detecting SIBO

- **Testing substrate guidelines from TFGHC:**
  - IMO: lactulose
  - SIBO-H: lactulose & fructose
  - SIBO-H2S: lactulose
  - Unsure: lactulose & fructose
- **Fructose:** universally consumed by bacteria, very slowly absorbed by the SI so it is there in the beginning, middle & slightly towards the end of the SI. Very little makes it into the LI so lactulose will be better for IMO & SIBO-H2S detection

# SIBO labs using 3 different substrates

- Lactulose, Glucose & Fructose:



- Blue: hydrogen gas / Green: methane gas
- Client is testing positive for SIBO-H with fructose. SIBO not detected using glucose & lactulose (lactulose rise occurs in the LI, after 90 mins)

# SIBO breath test interpretation

- **North American Consensus & most SIBO experts use the following:**
  - **Hydrogen:** 20ppm or greater within the first 90 mins, after baseline
  - **Methane:** 10ppm or greater within the entire 3 hours of the test, including baseline
  - **Hydrogen sulfide:** hydrogen of 0-3/4ppm, & methane of 0-3ppm, all 3 hours of the test, with no rise of gases in the third hour (when hydrogen sulfide is not being directly tested).
    - Trio-Smart tests hydrogen sulfide directly, so use the lab's interpretation for hydrogen sulfide, being 3ppm or greater (previously it was 5ppm).



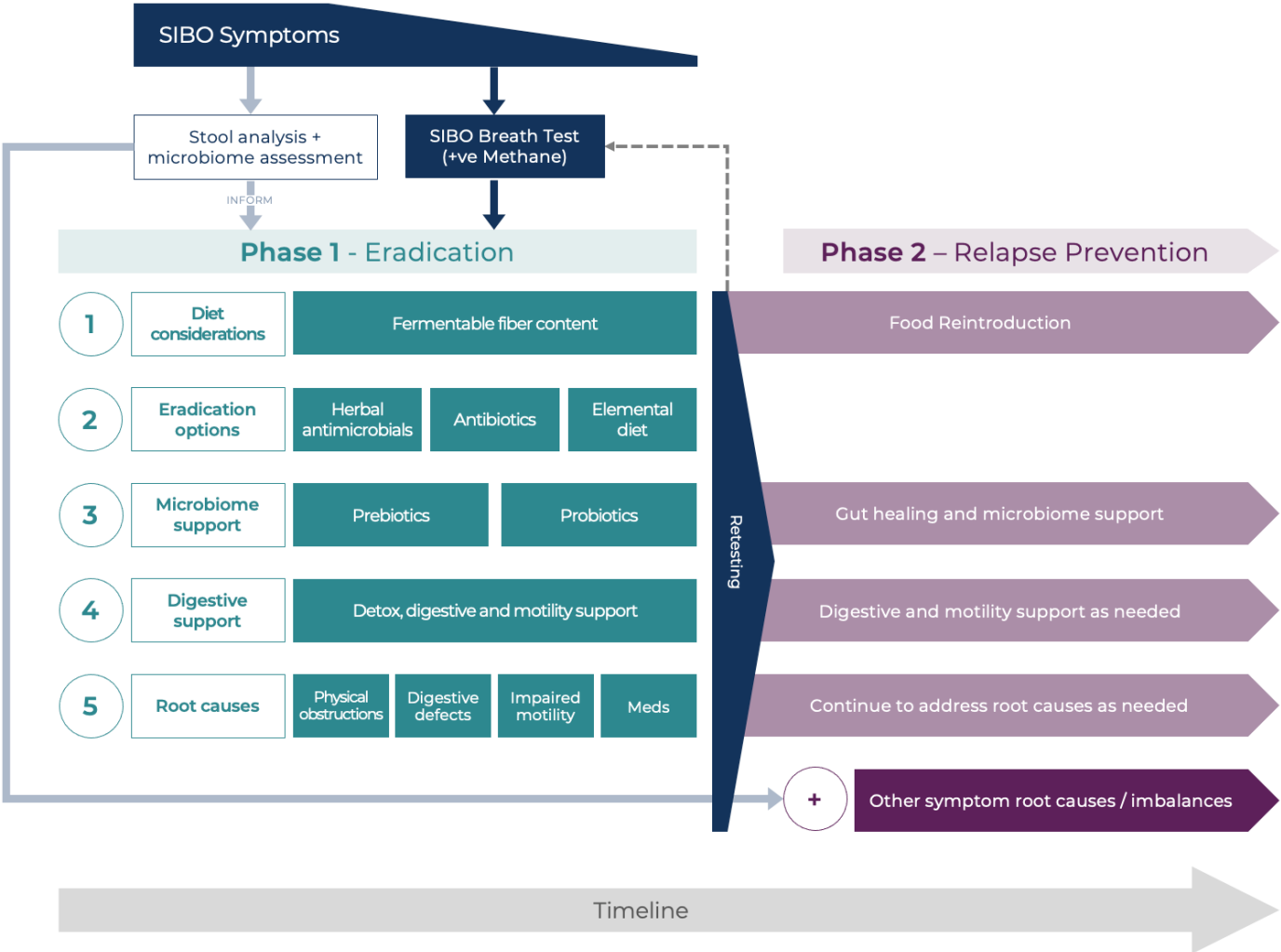
# Lab considerations for detecting SIBO

- **Small intestine aspirate & fluid culture** is gold standard for SIBO detection
  - Problems: testing is difficult to access & invasive
- **SIBO breath testing** results correlate with fluid culture in the literature
  - Benefits: testing is easy to access & less invasive
- **Stool testing:** bacterial composition of the LI & SI are completely different. Can't use stool testing to detect SIBO, but can get clues about SIBO root causes
- **OAT testing:** urine samples can't be used to detect SIBO. OAT can be used to provide clues about SIBO root causes & help suggest the need for SIBO breath testing

# Revised D.R.E.S.S. recommendations for SIBO



# My SIBO approach – methane example



# SIBO diets – how they help our clients

- **Diet can't eradicate SIBO itself, but we can use it for:**
  - Symptom relief before, during or after eradication (most common)
  - Preventing relapse after eradication
  - Reducing die-off before eradication
  - Improving other symptoms or health goals
  - Supporting SIBO eradication antimicrobial recommendations
- Diet changes can be used anywhere along the SIBO journey. Most common is to begin a SIBO diet after positive testing & continue through eradication
- Use a SIBO diet for the shortest time period possible to preserve the gut microbiome

# What is a SIBO diet?

- **A SIBO diet is a restricted carb diet**
  - Bacteria/archaea ferment carbs into gas & gas causes symptoms
  - Bacteria/archaea are creating carbohydrate malabsorption
  - Bacteria/archaea cause damage to the absorption surface of the SI
  - Bacteria/archaea ferment food before it can be absorbed by the host
- **A SIBO diet reduces symptoms**
  - SIBO diets are 60-90% effective for symptom reduction, depending on the diet you choose
  - Can be more effective with customization

# SIBO diet options

- **SIBO BiPhasic Diet or SIBO Specific Food Guide:** most restrictive, best for SIBO with average symptom reduction of 75-90%
- **Specific Carbohydrate Diet (SCD) / Gut & Psychology Syndrome Diet (GAPS):** best for IBD, Celiac or ASD in the presence of SIBO
- **Low-FODMAP:** best for 'IBS', not SIBO
- **AI Paleo/Paleo:** for AI clients, or those who want less restriction (Paleo)
- **Fast Tract Diet:** can be used for IBS & SIBO (haven't used often)
- **Cedars-Sinai Low-Fermentation diet:** for relapse prevention if clients are transitioning off a more restricted diet like SIBO BiPhasic
- ALL OF THESE NEED TO BE CUSTOMIZED!

# SIBO diet considerations

- **Protein & fats** are better tolerated than carbohydrates
- **Carbs:** which carbs are tolerated varies greatly between SIBO clients & this is likely related to the types of bacteria/archaea they have in excess
- **Portion sizes of carbs matter:** clients may be able to tolerate  $\frac{1}{4}$  cup sweet potato but not  $\frac{1}{2}$  cup. Or they may be able to tolerate  $\frac{1}{4}$  cup today but not yesterday when they ate more carbs in general throughout the day
- **Sulfur intolerance** is not always present with SIBO-H<sub>2</sub>S clients. Some can tolerate sulfur-containing foods & herbs. The most problematic foods for SIBO-H<sub>2</sub>S: onion, garlic, kale & eggs

# SIBO supplement updates

- **SIBO eradication tools:** antimicrobials, elemental diet, antibiotics
- **Gas conversion guides which tools we use:**
  - H<sub>2</sub> is converted into CH<sub>4</sub> &/or H<sub>2</sub>S by methanogens or hydrogen-sulfide microbes
  - 4x H<sub>2</sub> are converted to 1x CH<sub>4</sub> by methanogens
  - 5x H<sub>2</sub> are converted to 1x H<sub>2</sub>S by hydrogen sulfide microbes
  - Use different antimicrobials, depending on the type/s of SIBO your client has



# SIBO supplement updates - antimicrobials

- **Hydrogen & methane:** 2 antimicrobials for 4-6 weeks (there is no added benefit to using 3+)
- General guide: 30 days should reduce gas levels by 30ppm
- Hydrogen & methane above 40ppm: increase to 6 weeks from 4 weeks
- Minimal added benefit of an antimicrobial combination after 6 weeks. Need to change to another combination for the next round of 4-6 weeks
- Multiple antimicrobial rounds are required for high gas levels
- **Hydrogen-sulfide:** single antimicrobials seem to be effective
- General guide: 30 days only, seems to be effective regardless of gas levels
- **SIBO eradication hierarchy:** SIBO-H<sub>2</sub>S, IMO then SIBO-H

# Antimicrobials for SIBO-H2S

- **Bismuth:** antimicrobial & binds to hydrogen-sulfide gas (reduces symptoms)
- **Oregano:** antimicrobial
  
- **Bismuth**
  - Bismuth subnitrate: 200mg 2x daily
  - Product: Priority One, Biofilm Phase 2 Advanced: 2 caps 2x daily
  - Bismuth salicylate (contains salicylates): 524mg 4x daily
  - Products: Pepto Bismol Original Liquid or Original Caplets (preferred):  
30mL or 2 caplets 4x daily

# Antimicrobials for SIBO-H2S

- **High-dose Oregano**

- Oregano: 250mg 3x daily for 7 days then drop back to 150mg 3x daily for 3 weeks. Use a dried product, not an oil
- Product: Biotics Research, ADP Oregano: 5 caps 3x daily for 7 days then drop back to 3 caps 3x daily for 3 weeks. This product is not available everywhere so sometimes you will need to use Bismuth
- Note: Bismuth & oregano can be used together. I typically combine ADP Oregano with Biofilm Phase 2 Advanced

# Antimicrobials for IMO

- **Allicin with Oregano, Neem or Berberine**
- **Allicin & Oregano**
  - Allicin: 900mg 3x daily
  - Oregano: 100mg 3x daily of dried product (best option) or 250-300mg 3x daily of liquid caps
  - Products: Allimax Pro or Allimed: 2 caps 3x daily, ADP Oregano (best option): 2 caps 3x daily, Gaia Herbs or Zane Hellas Oregano Oil: 2 caps 3x daily

# Antimicrobials for IMO

- **Allicin & Neem**

- Allicin: 900mg 3x daily
- Neem: 600mg 3x daily
- Products: Allimax Pro or Allimed: 2 caps 3x daily, Ayush Herbs, Neem Plus: 2 caps 3x daily

- **Allicin & Berberine**

- Allicin: 900mg 3x daily
- Berberine: 1000-1500mg 3x daily
- Products: Allimax Pro or Allimed: 2 caps 3x daily, Integrative Therapeutics, Berberine Complex or Thorne, Berberine-500: 2-3 caps 3x daily

# Antimicrobials for IMO

- Avoid whole garlic or garlic oil due to FOS content
- **Atrantil**
  - Works well for IMO symptoms because it blocks methane
  - Isn't an effective antimicrobial but can be used for clients who have issues with garlic & you can't use allicin
  - Can be added to Oregano, Neem or Berberine
  - Atrantil: 550mg 3x daily
  - Product: Atrantil: 2 caps 3x daily

# Antimicrobials for SIBO-H

- **Berberine, Oregano & Neem**
- **Berberine & Oregano**
  - Berberine: 1000-1500mg 3x daily
  - Oregano: 100mg 3x daily of dried product (best option) or 250-300mg 3x daily of liquid caps
  - Products: Integrative Therapeutics, Berberine Complex or Thorne, Berberine-500: 2-3 caps 3x daily, Biotics Research, ADP Oregano (best option): 2 caps 3x daily, Gaia Herbs or Zane Hellas Oregano Oil: 2 caps 3x daily

# Antimicrobials for SIBO-H

- **Berberine & Neem**

- Berberine: 1000-1500mg 3x daily
- Neem: 600mg 3x daily
- Products: Integrative Therapeutics, Berberine Complex or Thorne, Berberine-500: 2-3 caps 3x daily, Ayush Herbs, Neem Plus: 2 caps 3x daily

- **Neem & Oregano**

- Neem: 600mg 3x daily
- Oregano: 100mg 3x daily dried product (best) or 250-300mg 3x daily liquid cap
- Products: Ayush Herbs, Neem Plus: 2 caps 3x daily, Biotics Research, ADP  
Oregano: 2 caps 3x daily, Gaia Herbs or Zane Hellas Oregano Oil: 2 caps 3x daily



# Antimicrobials for SIBO – less effective

- **Megatenics, Candibactin BR & AR**
  - Candibactin BR: not enough berberine, swap to other product if you use this combo (Berberine Complex or Berberine-500)
- **Biotics, FC Cidal & Dysbiocide/BiomeBalance**
  - Hit & miss for SIBO clients, typically doesn't reduce symptoms or gas levels
  - Works well for parasites & SIBO
- **Priority One, SIBOTic & other blends**
  - Don't have the right quantities of antimicrobials to be highly effective
  - Can be used as a 'clean-up' product or to hold a client over until retesting

# Elemental Diet for SIBO

- **Elemental Diet pre-made formulas:** effective for all 3 gas types. Methane slightly less responsive than hydrogen or hydrogen-sulfide
- Gas levels typically reduce by 70ppm per 2 weeks of ED. If gas levels are higher than 70ppm, start with 3 weeks of ED (maximum time period)
- **ED process:**
  - No solid food or drinks, just water & ED for 2-3 weeks
  - Retest on the morning of day 15 or 22 after 2-3 weeks are finished. The last day of ED is the client's test prep diet
  - If gas levels are still elevated, consider another SIBO eradication tool for 1-2 months to allow time for the microbiome to recover before trying ED again

# SIBO retest timing



# SIBO retest timing updates

- **Old approach:** SIBO retest after finishing SIBO, LI bacteria & yeast eradication
  - Problems when SIBO was still detected: hard to know whether gas levels were addressed & relapsed, or whether gas levels hadn't decreased
- **New approach:** SIBO retest within 3-5 days after finishing antimicrobials or the following day after finishing the ED
  - Clients can relapse as quickly as 5 days after finishing an intervention & we want to know whether the work we have done is helping or needs to be re-evaluated

# Updates on SIBO relapse prevention



# SIBO isn't a root cause, it has root causes

- SIBO is not a root cause, but the result of something else out of balance in the body
- **4 groups of SIBO root causes to consider:**
  - Impaired motility
  - Impaired digestion
  - Impaired outflow
  - Medications

# 1. Impaired motility

- This category covers the most common root causes for SIBO that we see in our clinic:
  - Autoimmune/MMC damage: Impaired MMC function from food poisoning (estimated 50-60%)
  - Traumatic brain injury
  - Hypothyroidism
  - Diabetes
  - Mold
  - Chronic infections like parasites & Lyme
  - Scleroderma
  - Ehlers Danlos Syndrome

## 2. Impaired digestion

- Alone these are not likely a SIBO root cause, but they all contribute & are often the result of impaired motility or medications:
  - Hypochlorhydria
  - Reduced output of pancreatic enzymes (if Elastase-1 is below 100-200 on GI MAP)
  - Damage to brush border enzymes
  - Poor bile flow
  - Decreased sIgA



# 3. Impaired outflow

- 2<sup>nd</sup> most common root cause category. Bacteria & archaea are allowed to remain in small intestine due to:
  - Abdominal surgery resulting in scar formation & adhesions: caesarean, hysterectomy, appendectomy, removal of gallbladder, laparoscopy
  - Endometriosis: causing scar tissue & adhesions
  - Pelvic inflammatory disease: pelvic or abdominal surgery or radiation treatment (e.g., prostate cancer treatment) causing adhesions
  - History of perforated appendix: common cause of adhesions
  - Internal hemorrhage such as ruptured ovarian cyst: adhesions
  - Blind loops, diverticuli, & other anatomical abnormalities
  - ICV dysfunction: backflow of bacteria/archaea from LI to SI

## 4. Medications

- Medications can directly impact motility & the microbiome of the small intestine:
  - Opiates/narcotics
  - Antispasmodics
  - Tricyclic antidepressants
  - Alosetron, Lomotil, Imodium or other products for diarrhea that alter motility in the small intestine
  - Proton pump inhibitors
  - Cholestyramine
- **Bottom line:** take a thorough health history from your clients & review all of the possible reasons why they may have SIBO & address these

# Impaired motility prevention

- Two-thirds of SIBO cases relapse
- Average relapse time in studies is 2 - 2.5 months
- One of the best tools we have to support motility in the small intestine & reduce relapse is **prokinetics**
- Prokinetics work to stimulate the migrating motor complex (MMC), which sweeps bacteria & archaea out of the small intestine
- Prokinetics work to turn up the strength or effectiveness of the vinculin motor proteins in the MMC

# Impaired motility prevention: antibody testing

- If there is lots of damage to the MMC & vinculin proteins from very bad food poisoning there may be little/no vinculin to work with & prokinetics won't be effective as a prevention tool. Outside of this situation prokinetics are very helpful
- If your client has had a very bad bout of food poisoning & believe this led to the onset of their symptoms, consider antibody testing to work out the extent of damage to the MMC
- **Antibody testing:** Gemelli Labs, IBS-Smart or other lab that measure anti-vinculin & anti-CdtB antibodies via blood

# Impaired motility prevention - prokinetics

- Start a prokinetic during SIBO eradication
- Take a prokinetic for a minimum 3 months (high-risk relapse period)
- **Prokinetic product options** to consider:
  - Iberogast: 30-60 drops at bedtime (doesn't contain ginger)
  - Ginger root: 1000mg at bedtime (pregnancy safe)
  - Vita Aid, Prokine: 1-3 caps at bedtime
  - Pure Encapsulations, MotilPro: 2-3 caps at bedtime
  - Integrative Therapeutics, Motility Activator: 2 caps at bedtime
  - Enzyme Science, GI Motility Complex: 2-3 caps at bedtime
  - Priority One, SIBO-MMC: 3 caps at bedtime
  - Invivo UK, Bio.Me.Kinetic: 2-3 caps at bedtime

SIBO

troubleshooting



# SIBO troubleshooting

- Chronic, relapsing SIBO where you have addressed all of the SIBO root causes is most likely the result of one or more of the following:
  - No motility in the SI from severe damage to vinculin
  - MCAS
  - Lyme & co-infections
  - Mold (most common we see through our clinic)
- Other conditions to consider: Ehlers Danlos Syndrome or Endometriosis

# Final thoughts...

- Reducing gas numbers is easy, working out why a client has SIBO & addressing root causes is harder. This is how we help clients heal
- SIBO is a dysbiosis that needs a different approach to what we do in the LI. Just like H.pylori, parasites, LI bacteria & yeast, we need to understand SIBO & be able to support clients with this imbalance
- **Learn more about my approach to supporting clients who have SIBO/IMO: [LINK](#)**
- **Questions, thoughts or feedback?**





THE FUNCTIONAL

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