The Bi-Phasic SIBO Protocol
Module 2 “Reduce and Repair”

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Medical Director, The SIBO Doctor and host of TheSIBODoctor Podcast
Module 2- “Reduce and Repair”

1. Considering SIBO Causes- a model for targeted treatment strategies to prevent relapse

2. Phase 1 of the Bi-phasic protocol
   • Diet
   • Digestive aids
   • Healing leaky gut

3. Phase 2 of the Bi-phasic protocol
   • Diet
   • Antimicrobials covered in Module 3
The SIBO Matrix

“The Bucket”
- Environmental toxins
- Detox impairments
- Genomics
- Microbiome
- Hormonal
- Oxidative
- Stress/Mitochondrial
- Immunological/inflammation

SIBO Causes

Treatment

Maintenance

Contributing Factors
- Stress
- Sleep
- Dehydration
- Diet Habits/nutrition
- Lack of movement
Comprehensive SIBO treatment aims to address the CAUSE

1. Impaired Motility
   • Autoimmune/MMC
   • TBI
   • Hypothyroidism
   • Chronic infection
   • Diabetes
   • Mould toxicity
   • EDS
   • Scleroderma

2. Impaired Digestion
   • Hypochlorhydria
   • Poor Bile flow
   • Pancreatic enzyme
   • Brush border enzymes
   • Secretory IgA deficiency
   • Chronic Fight or Flight
   • Microbiome dysfunction

3. Impaired flow through intestines
   • Abdominal surgery
   • Endometriosis
   • EDS
   • Ileoceleal valve dysfunction

4. Medication
   • Opiates/Narcotics
   • Antispasmodics
   • Tricyclic antidepressants
   • Proton pump inhibitors
   • cholestyramine
New Patient Questionnaire coming soon

➢ To find the cause
➢ Up to 2/3 of patients will relapse if the cause is not treated
➢ Based on the 4 categories of causes
  • Impaired Motility
  • Impaired Digestion
  • Impaired Outflow
  • Medications
1. Impaired Motility

- Autoimmune/MMC - Case of gastroenteritis/food poisoning/traveler’s diarrhea lasting for longer than 24h
- Traumatic Brain Injury - “shaken brain” e.g., football injury, heading the ball in soccer, “I fell but didn’t hit my head” such as horseback riding or bike accident, or a shock wave such as an explosion whether or not anything struck the head, falling hard on the coccyx
- Hypothyroidism
- Diabetes - vagal autonomic neuropathy
Impaired Motility cont’d

- Mould toxicity – lack of VIP (vasoactive intestinal peptide)
- Stealth infection – eg Lyme (affecting antral accommodation/vagus nerve)
- Scleroderma - thickening of the intestinal wall alters motility
- Ehler’s Danlos Syndrome – or other connective tissue condition. (Beighton score as an in office screening test)
2. Impaired Digestion

This affects the digestive defense – bacteria are NOT KILLED in the Small intestine

• Hypochlorhydria
• Reduced output of
  • Pancreatic enzymes
  • Brush border enzymes
  • Bile
• Decreased sIgA
Impaired Digestion - symptoms

- Belching or gas within one hour after eating
- Heartburn or acid reflux
- Bloating within one hour after eating
- Halitosis
- Loss of taste for meat
- Sense of excess fullness after meals
- Stomach pains or cramps
- Undigested foods in
- Greasy stools/toilet water after stool
3. Impaired Outflow – Bacteria are allowed to remain in SI due to:

- Abdominal surgery: cesarean, hysterectomy, appendectomy, removal of gallbladder, laparoscopy
- Endometriosis – a major source of relapsing SIBO
- Pelvic inflammatory disease, – pelvic or abdominal surgery or radiation treatment All of these can cause thickening of the bowel or adhesions which alter motility.
- History of perforated appendix - common cause of adhesions.
- Internal hemorrhage such as ruptured ovarian cyst – another adhesion cause.
- Blind loops, diverticuli, and other anatomical abnormalities – (bacteria “hide out” and are not be flushed out by the migrating motor complex).
- Superior mesenteric artery syndrome – a rare but important cause of partial duodenal obstruction.
4. Medications and SIBO

- Opiates/narcotics
- Antispasmodics (e.g., dicyclomine/bentyl, hyosyamine/levsin, cimetropium)
- Tricyclic antidepressants (e.g., amitriptyline)
- Alosetron (lotronex)
- Lomotil (diphenoxylate/atropine)
- Imodium (loperamide)
- Proton pump inhibitors
- Cholestyramine (cholestipol, questran)

List Credit Dr Steven Sandberg-Lewis
Treating SIBO

Step 1 – treat SIBO, which is the RESULT of the underlying CAUSE. Many practitioners only do this step and many of their patients will relapse

Step 2 – Treat the CAUSE

Step 3 – Microbiome restoration
The Naturopathic Therapeutic Order

Surgery

Pharmaceuticals or synthetics

Address pathology - use specific natural substances or interventions

Correct structure

Address weakened systems/organs: strengthen immune system, decrease toxicity, decrease inflammation, optimize metabolic function, balance regulatory function, enhance regeneration, harmonize with your life force

Stimulate the *Vis Medicatrix Naturae* – the healing power of nature. Stimulate self healing processes

Establish conditions for health. Identify and remove disturbing factors

Credit: Drs Jared Zeff and Pamela Snyder, Bastyr University. Textbook of Natural Medicine
Impaired Motility

- Prevent further food poisoning
- Vagal exercises, Neuro-feedback, Homeopathy, acupuncture
- Address alignment
- Nutritional support: eg ALA, Lion’s Mane, Phospholipids, Brain support
- Ongoing prokinetics
Impaired Digestion

- Remove stressors, increase Parasympathetic tone
- Gut centered Hypnotherapy, homeopathy
- Vagal exercises, Breathing, Mindful eating
- HCL, bitters, enzymes, ox bile
- Address alignment
- PPI, etc
Impaired Outflow

Adhesion removal

Address alignment

Connective tissue support: Pancreatic enzymes, Gotu Kola

Visceral Manipulation, Acupuncture, Cold Laser, hydrotherapy

Remove stressors, prevent further adhesion formation
Medication

Continue with Medication

Address alignment, herbal alternatives

Specific Tissue Support

Hydrotherapy, Sauna, Exercise

Assess reason for medication and treat - e.g. stress, social isolation, mental health
The SIBO Bi-Phasic Diet

• Available for download
• General SIBO diet plans can be confusing and highly variable
• Patients often need customized approaches
  - Leaky gut, digestive deficits
  - Other intolerances: histamine, salicylates, oxalates etc
  - Malnutrition
The Bi-Phasic diet allows for a sequential treatment approach

Phase 1: “Reduce and Repair” (4-6 weeks)
- Reduce: fermentable starches and fibers and therefore bacterial fermentation
- Repair: intestinal inflammation, brush border enzymes, other digestive support
- Starts out with very restricted food plan, patients move into “semi-restricted” as soon as symptoms improve

Phase 2: Remove and Restore (4-6 weeks)
- Removing bacteria (and fungi) with antimicrobials
- Restore Motility
Phase 1: “Reduce and Repair” (4-6 weeks)

<table>
<thead>
<tr>
<th></th>
<th>Restricted Diet</th>
<th>Semi-Restricted</th>
<th>Avoid</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Protein</strong></td>
<td>Meat/Fish/Poultry/Eggs</td>
<td>Meat/Fish/Poultry/Eggs</td>
<td>All legumes</td>
</tr>
<tr>
<td><strong>Dairy Products</strong></td>
<td>Avoid</td>
<td>Avoid</td>
<td>Avoid</td>
</tr>
<tr>
<td><strong>Vegetables unlimited</strong></td>
<td>Alfalfa sprouts, Bamboo shoots, Bak choy, Capsicum, Carrot, Chives, Cucumber, Eggplant, Ginger, Kale, Lettuce, Olives, Radicchio, Radish, Rocket, Spring onion (green part only), Sunflower sprouts, Tomatoes/sundried, Witlof</td>
<td>Parsnip</td>
<td>Canned vegetables, Garlic, Mushrooms, Onions, Potato (sweet), Potato (white), Starch powder (arrowroot, corn, rice, tapioca)</td>
</tr>
</tbody>
</table>

All listed quantities are per meal.
Phase 1: “Reduce and Repair” (4-6 weeks)

**Phase 1: Reduce and Repair (4–6 Weeks)**

<table>
<thead>
<tr>
<th>RESTRICTED DIET</th>
<th>SEMI-RESTRICTED</th>
<th>AVOID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asparagus – 1 spear</td>
<td>Asparagus – 2-3 spears</td>
<td>From the Restricted Diet</td>
</tr>
<tr>
<td>Artichoke hearts – 1/8 cup</td>
<td>Brussels sprouts – ½ cup</td>
<td>until further notice</td>
</tr>
<tr>
<td>Beetroot – 2 slices</td>
<td>Pumpkin – ½ cup</td>
<td></td>
</tr>
<tr>
<td>Broccoli – ½ cup</td>
<td>Leek – ½ ea</td>
<td></td>
</tr>
<tr>
<td>Brussels sprouts – 2 ea</td>
<td>Spinach – &gt;15 leaves/150g (5oz)</td>
<td></td>
</tr>
<tr>
<td>Cabbage – ½ cup</td>
<td>Zucchini – 1 cup</td>
<td></td>
</tr>
<tr>
<td>Cabbage, savoy – ¾ cup</td>
<td>(wombok)</td>
<td></td>
</tr>
<tr>
<td>Celery – 1 stick</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Celery root – ½ cup</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chili – 11cm/28g (4.25in/1oz)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fennel bulb – ½ cup</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green beans – 10 ea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peas (green) – ¼ cup</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pumpkin – ¼ cup</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Snow peas – 5 pods</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spinach – 15 leaves</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zucchini – ¾ cup</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Vegetables**

- All listed quantities are per meal
- One per meal
Phase 1: “Reduce and Repair” (4-6 weeks)

**RESTRICTED DIET**
- Lemons, Limes

**SEMI-RESTRICTED**
- Avocado – ¼
- Banana – ½
- Berries (all varieties) – ½ cup
- Cherries – 3
- Citrus – 1 piece
- Grapes – 10
- Honeydew – ¼ cup
- Kiwi – 1 piece
- Lychee – 5
- Passion fruit – 1 piece
- Paw paw – ¼ cup
- Pineapple – ¼ cup
- Pomegranate – ½ small or ¼ cup of seeds
- Rhubarb – 1 stalk
- Rockmelon – ¼ cup

**AVOID**
- Apple, Apricot, Blackberries, Canned fruit in fruit juice, Custard apple, Fig, Jam, Mango, Nashi, Nectarine, Peach, Pear, Persimmon, Plum, Watermelon – allowed after Phase 2 at discretion of practitioner

All listed quantities are per meal.
## Phase 1: “Reduce and Repair” (4-6 weeks)

### PHASE 1 REDUCE AND REPAIR (4–6 WEEKS)

<table>
<thead>
<tr>
<th>RESTRICTED DIET</th>
<th>SEMI-RESTRICTED</th>
<th>AVOID</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SOUPS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Homemade broths: beef or lamb bone broths, chicken meat broths</td>
<td>Add (or increase) these foods from the Restricted Diet</td>
<td>Canned soups and soup bouillons, broths made from chicken frames</td>
</tr>
<tr>
<td><strong>BEVERAGES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coffee (black) – 1 cup per day, Tea (black), Tea (herbal), Water</td>
<td>Alcohol (clear spirits) – no more than 30ml twice weekly, Coffee (black) – 1 cup per day, Tea (black), Tea (herbal), Water</td>
<td>Beer, Energy drinks, Fruit juices, Liqueurs and spirits (dark), Soft drinks, Wine</td>
</tr>
</tbody>
</table>

All listed quantities are per meal.
**Phase 1: “Reduce and Repair” (4-6 weeks)**

<table>
<thead>
<tr>
<th>PHASE 1</th>
<th>REDUCE AND REPAIR (4–6 WEEKS)</th>
<th>AVOID</th>
<th>All listed quantities are per meal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RESTRICTED DIET</strong></td>
<td><strong>SEMI-RESTRICTED</strong></td>
<td><strong>AVOID</strong></td>
<td></td>
</tr>
<tr>
<td>Stevia (100% pure, no inulin)</td>
<td>Dextrose, Glucose, Organic honey (clear) — no more than 2 tbsp per day</td>
<td>Agave nectar, Artificial sweeteners, Maple syrup, Xylitol</td>
<td></td>
</tr>
</tbody>
</table>
# Phase 1: “Reduce and Repair” (4-6 weeks)

## Phase 1: Reduce and Repair (4–6 Weeks)

<table>
<thead>
<tr>
<th>RESTRICTED DIET</th>
<th>SEMI-RESTRICTED</th>
<th>AVOID</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CONDIMENTS</strong></td>
<td>Bragg's liquid aminos, Coconut aminos, Fish sauce – 2 tbsp</td>
<td>Spice sachets or pre-mixes, READ LABELS! No Maltodextrin, Starches, Sugar etc.</td>
</tr>
<tr>
<td>Mayonnaise (sugarless), Mustard (without garlic), Tabasco, Vinegar (apple cider, distilled, white/red), Wasabi, All fresh and dried herbs and spices but not the spice blends. Turmeric and ginger are particularly beneficial as they are anti-inflammatory.</td>
<td>All fresh and dried herbs and spices but not the blends</td>
<td>Asafoetida, Balsamic vinegar, Chicory root, Garlic, Gums/ carrageenans/thickeners, Onions, Soy sauce/tamari</td>
</tr>
<tr>
<td><strong>FATS/OILS</strong></td>
<td>Butter</td>
<td>Palm, Soyabean</td>
</tr>
<tr>
<td>Coconut, Infused (ie. garlic, chilli), Flax (low lignin), Ghee, Grapeseed, MCT, Olive, Polyunsaturated vegetable, Pumpkin seed, Sesame, Sunflower, Walnut</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

All listed quantities are per meal.
Phase 2: “Remove and Restore” (4-6 weeks)

<table>
<thead>
<tr>
<th>PHASE 2 DIET</th>
<th>AVOID until further notice</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LEGUMES cooked</strong></td>
<td>All other legumes and beans</td>
</tr>
<tr>
<td>Lentils (brown) – ½ cup,</td>
<td></td>
</tr>
<tr>
<td>Lentils (green and red) – ¼ cup</td>
<td></td>
</tr>
<tr>
<td>Lima beans – ¼ cup</td>
<td></td>
</tr>
<tr>
<td><strong>SOUPS organic</strong></td>
<td>Canned soups and soup bouillons, broths made from chicken frames</td>
</tr>
<tr>
<td>Homemade broths: beef or lamb</td>
<td></td>
</tr>
<tr>
<td>bone broths, chicken meat broths</td>
<td></td>
</tr>
<tr>
<td><strong>BEVERAGES</strong></td>
<td>Deer, Energy drinks, Fruit juices, Liqueurs and spirits (dark), Soft drinks, Wine</td>
</tr>
<tr>
<td>Alcohol (clear spirits) – no more than 30ml every other day, Coffee (black) – 1 cup per day, Tea (black), Tea (herbal), Water</td>
<td></td>
</tr>
<tr>
<td><strong>SWEETENERS</strong></td>
<td>Agave nectar, Artificial sweeteners, Maple syrup, Xylitol</td>
</tr>
<tr>
<td>Cacao (raw) – 1 tsp per day, Dextrose, Glucose, Organic honey (clear) – no more than 2 tbsp per day, Stevia</td>
<td></td>
</tr>
</tbody>
</table>
## Phase 2: “Remove and Restore” (4-6 weeks)

### Phase 2 Diet

<table>
<thead>
<tr>
<th>Nuts and Seeds</th>
<th>PHASE 2 DIET</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Almonds – 10 ea OR</td>
</tr>
<tr>
<td></td>
<td>Almond flour/meal – 2 tbsp OR</td>
</tr>
<tr>
<td></td>
<td>Almond milk (without added thickeners) – 1 cup</td>
</tr>
<tr>
<td></td>
<td>Coconut (flour/shredded) – ¼ cup OR</td>
</tr>
<tr>
<td></td>
<td>Coconut milk (without thickeners or gums) – ¼ cup OR</td>
</tr>
<tr>
<td></td>
<td>Coconut cream – 2-3 tbsp</td>
</tr>
<tr>
<td></td>
<td>Hazelnuts – 10 ea</td>
</tr>
<tr>
<td></td>
<td>Macadamias – 20 ea</td>
</tr>
<tr>
<td></td>
<td>Pecans – 40 ea</td>
</tr>
<tr>
<td></td>
<td>Pine nuts – 1 tbsp</td>
</tr>
<tr>
<td></td>
<td>Pumpkin seeds – 2 tbsp</td>
</tr>
<tr>
<td></td>
<td>Sesame seeds – 1 tbsp</td>
</tr>
<tr>
<td></td>
<td>Sunflower seeds – 2 tsp</td>
</tr>
<tr>
<td></td>
<td>Walnuts – 10 ea</td>
</tr>
</tbody>
</table>

### Avoid (until further notice)

- Chia seeds
- Flaxseed
- Peanuts
## Phase 2: “Remove and Restore” (4-6 weeks)

### PHASE 2 REMOVE AND RESTORE (4–6 WEEKS)

<table>
<thead>
<tr>
<th>PHASE 2 DIET</th>
<th>AVOID (until further notice)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CONDIMENTS</strong></td>
<td>Spice sachets or pre-mixes. READ LABELS! No Maltodextrin, Starches, Sugar etc. Asafoetida, Balsamic vinegar, Chicory root, Garlic, Gums/carrageenans/thickeners, Onions, Soy sauce.</td>
</tr>
<tr>
<td>Fish sauce, Mayonnaise (sugarless), Miso, Mustard (without garlic), Tabasco, Tamari (fresh, not powdered) Vinegar (apple cider, distilled, white/red), Wasabi</td>
<td>All fresh and dried herbs and spices but not the spice blends. Turmeric and ginger are particularly beneficial.</td>
</tr>
<tr>
<td>Coconuts, Infused (ie. garlic, chili), Flax (low lignin), Ghee, Grapeseed, MCT, Olive, Polyunsaturated vegetable, Pumpkin seed, Sesame, Sunflower, Walnut</td>
<td>Palm, Soyabean</td>
</tr>
</tbody>
</table>

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*All foods from Phase 1 allowed. Foods listed in bold are new in Phase 2.*
SIBO Cookbooks
Phase 1

Patient to follow Phase 1 diet. Start with restrictive, move to semi-restrictive when patient feels at least 50-60% improved)

**RESTRICTED:** No grains, dairy, honey, legumes, fruit. Basically protein and vegetables. Rapid sx relief with this

For underweight patients – use white rice, more pumpkin, more butter and macadamia butter if tolerated

**SEMI-RESTRICTED:** builds on restricted diet, plus white rice and fruit, always as tolerated
Supportive Treatment for Phase 1

• Digestive Support
• Healing Leaky Gut
• Nutritional repletion - especially
  - B12
  - Magnesium
  - Trace minerals
  - Careful with B complexes
  - Iron
Digestive Support

• Hydrochloric acid- start with 1 capsule with meals, increase by 1 capsule daily until at 2 caps 3x daily with meals
  - Betaine HCL, pepsin- not with gastritis
  - No need to feel the “burn”

• Herbal Bitters

• Pancreatic Enzymes 1-2 caps with meals

• Brush border enzymes
  - Eg Maltase, isomaltase, alpha galactosidase, Dipeptidyl Dipeptide 4 (DPP4)

• Bile – ox bile, cholagogues
Layers of Lumen to Basement membrane

- Lumen
- Outer, less dense Mucus
- Inner protected mucous
- Glycocalyx
- Mucin strands on epithelial cells
- Epithelial cell
- Basement membrane
Mucous, Glycocalyx, and Tight Junctions

1. Mucous: loosely adherent mucus layer provides lubrication and protection. Provides antimicrobial and immune proteins. Mucous provides habitat for local microbiome.

2. The dense inner layer protects epithelial cells. Major component of mucous is mucin, secreted by goblet cells, composed of glycoproteins. These are peptide backbone linked to oligosaccharide chain.


4. Epithelial cells – dependent on luminal nutrients, require a large amount of energy. Dietary amino acids are their major fuel.

5. Tight junctions: seal adjacent cells.

6. Basement membrane – layer of ECM. Provides structural support, acts as additional barrier, regulates epithelial proliferation.
Support for Phase 1 and 2: Mucosal repair

N-acetyl glucosamine – glycocalyx support

Amino acids

- Threonine, proline, serine - Mucin support
- Glycine- important in basement membrane, GSH production
- L-Glutamine – next slide

Probiotics

- S.boulardii – increases slgA, anti-inflammatory, villous repair
- Nissle strain E.Coli- motility, anti-inflammatory, abdominal hypersensitivity
- L. rhamnosus GG: motility, abdominal hypersensitivity, anti-inflammatory

Lactoferrin/Colostrum - immune support, antiinflammatory
Support for Phase 1 and 2: Mucosal repair

- Tight junction repair
  - Vit D – facilitates mucosal barrier homeostasis, decreases inflammatory cytokines
  - Vitamin A – 20,000-50,000 IU for a few weeks, then reduce
  - Quercetin 500mg TID or more

- Epithelial cell repair
  - zinc carnosine 75mg BID
  - L-Glutamine 5g-10g/d
    - increases production of GSH
    - Major fuel source for enterocytes/epithelial cells
    - Supports tight junctions
    - Reduces IL-6 and IL-8, increases IL-10
Herbal mucosal support

• DGL – deglycerrhinated licorice
• Curcumin (careful with salicylates)
• though high in polysaccharides and/or fiber, these seem to be well tolerated by most
  - Aloe gel/juice ½ cup 2-3 x daily
  - Slippery Elm powder
  - Arabinogalactans
  - PHGG
Problematic ingredients in Gut Healing Formulas

- Prebiotics
  - Inulin
  - FOS
- Xylitol and other sugar alcohol sweeteners
- Cane juice and other sugars
- Resistant starch
- Psyllium fiber
Other support

GOAL: increase circulation (blood and lymph), reduce sympathetic tone and increase parasympathetic tone in ENS

• Relaxation! Especially before eating
• Meditation, apps, inner balance
• Breathing exercises (Buteyko)
• Constitutional Hydrotherapy
• Acupuncture
• Gut Centered Hypnotherapy
Phase 2

- Patient to move to Phase 2 diet, paying attention with introduction of dairy, honey)
  - More generous than phase 1
- Antimicrobials and Prokinetics (Module 3)
- May need to continue with Phase 1 digestive or mucosal support
- Die-off support
Die-off

• “Hercksheimer reaction” – massive increase in LPS and other bacterial and fungal toxins as these organisms die
• Patients often react to this, especially when their “bucket is full”, and especially if constipated
• Noticed after a few days of initiating antimicrobial treatment
• Pt often thinks they are “reacting to the product” and discontinue it
Die-off Support

General:
• Stop the antimicrobial for a few days until sx subside, then start again at a much lower dose
• Increase water intake to 3 Litres/quarts daily
• Vitamin C 1000mg 3x daily if tolerated

Increasing systemic circulation:
• Sauna
• Exercise
• Hydrotherapy
Die-off support

Binders:
• Activated Charcoal 2 caps 3 x daily
• Bentonite clay (can be constipating)
• Zeolite/clinolyptite
Treatment Flow

Step 1:
Start with Phase 1 restricted diet. As soon as patient’s sx improve, move to Phase 1 semi-restricted diet.
This phase typically lasts 1 month

Don’t start antimicrobials until phase 2.
• This helps to reduce die-off and addresses the issue of “feeding whilst killing”
Treatment Flow

Step 2

After 1 month, and test results indicate SIBO+, start with Phase 2 diet and antimicrobials

Customise this as per your patient’s needs
- Food allergies (dairy, eggs, almonds)
- Food intolerances (histamine, salicylates, etc)
- Raw vs cooked foods
Treatment flow

How long on phase 2?

Once you’ve started Antimicrobials, typically methane gas will reduce by 20-30ppm with each 4-6 week course. Hydrogen gas is less predictable

So if someone has high levels of methane and/or hydrogen you can expect them to be on antimicrobials for a good 2-3 months.
Treatment flow

**Step 3**
If symptoms are not 80%-90% resolved: **Retest!**
(to ensure all the bacteria are gone)
If levels are still high, keep going with antimicrobials or change herbs.

**Step 4**
once the test is clear, start with Prokinetics another 3-6 months and begin reintroducing some fermentable carbohydrates (increasing amounts of vegetables etc).
Typical Treatment Flow

1st patient visit
• You suspect SIBO – patient orders breath test
• Start with Phase 1 of Diet, gut healing nutrients if indicated, bitters

2nd patient visit 3-4 weeks
• SIBO breath test positive
• Initiate appropriate antimicrobials
• Move to phase 2 of diet

3rd patient visit 4-6 weeks
Consider another round of antimicrobials
Consider prokinetics
Consider re-testing
Re-testing

SIBO suspected

Lactulose and/or Glucose Breath test

- Elemental Diet
- Herbal Antimicrobials, Bi-Phasic Diet
- Antibiotics, Bi-Phasic Diet

90% improvement

- Prokinetic, Biphasic Diet, Prevention

Partial improvement

- Test positive
  - Change herbal antimicrobials, repeat rifaximin, consider elemental diet

- Test negative
  - Retest
  - Consider other Dx

Credit to Drs Allison Siebecker and Steven Sandberg-Lewis
Special Bi-phasic Diet Adjustments
Vegetarians/Vegans

Replace existing protein category with
• Plain firm tofu 2/3 cup (160g)
• Plain tempeh 100g
• Increase eggs if vegetarian
• Pea protein (less than 1g fiber) - 1 serve twice daily in unsweetened almond or rice milk
• Sprouted Mung beans 2/3 cup
• Canned lentils ½ cup (drain and rinse)
Special Bi-phasic Diet Adjustments
IBS-C positive Methane

• High baseline methane on test, stays high throughout the test (LI methane contribution)
• A diet high in protein and low in fiber can worsen constipation
• Replace some animal proteins with the vegetarian protein choices (especially tofu and tempeh)
• Increase fibers if tolerated: flax seeds or PHGG (usually fairly well tolerated - start with \( \frac{1}{4} \) scoop and work up to 1 scoop)
Elemental Diet

• Complete meal replacement for 2-3 weeks
• Specifically formulated free form amino acid powder (NOT whey, pea or other types of protein powder), mixed with rapidly absorbing glucose, MCT or other oil.
• Used instead of herbal or conventional antimicrobials – absorbed within the first 60cm of the SI. Starves bacteria but feeds the patient
• We see the most dramatic gas reduction with elemental diet (150ppm in some cases)
Elemental Diet

• Vivonex is commercial brand – expensive
• PED - Expensive but tasty. (May need to use an antifungal)
• Patient can order ingredients and make at home.
  • Get the handout from siboinfo.com
  • Dr Siebecker also has made 3 videos – available for free
• Tips: listen to podcast with Dr Lela Altman
Considerations on the SIBO Diet

• There is no “one size fits all” to dietary SIBO treatment
• Consider working with a nutritionist or holistic dietician
• Do not use the low FODMAP diet or Bi-Phasic diet indefinitely
Thank You

Module 3 – Antimicrobials, Prokinetic and Biofilm treatments

Join the closed Facebook Group:
The SIBO Doctor Practitioner Forum