The Natural Treatment Protocol for Small Intestine Bacterial Overgrowth (SIBO)

Protocol developed by
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CMO, SIBOtest
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The natural treatment of SIBO is an evolving field. The herbs and nutrients listed are the most current effective treatment strategy discussed at the SIBO Symposium held in Portland, OR USA in January 2014. Dr Jacobi has treated hundreds of patients with SIBO and has found these herbs/nutrients effective. She has no financial interest in any of the companies listed, nor does she mean to discriminate against one company or another.

It is entirely possible that you will find other products as effective as long as you avoid products containing ingredients which feed the bacteria:
- Fibre and polysaccharides (many herbs)
- Prebiotics
- Sugar or excessive fructose
For a more detailed list, see our website.
www.SIBOtest.com

The main focus of the treatment is:
1. Antimicrobial Treatment (Herbs OR “Elemental Formula” - see at the end of this document)
2. Prokinetics – these are herbs/nutrients to promote the migrating motor complex
3. Digestive Aids
4. Diet (see other handout)
5. Restoring depleted nutrients

Herbal Antimicrobials
Use for 6 weeks. If both H2 (hydrogen) and CH4 (methane) are high, it is advisable to rotate herbs every 2-3 weeks.

1. High allicin content garlic especially effective for methane positive SIBO. Beware that not all garlic products contain high allicin. Dr Jacobi uses Biomedica Allimax at a dose of 3 capsules twice daily. This product has the added benefit of containing Goldenseal, a berberine containing herb which is antimicrobial and tonifying for mucous membranes.

2. Berberine containing herbs
- Coptis chinensis (goldthread)
- Phellodendron amurense
- Berberis aquifolium (Oregon grape)
- Berberis vulgaris (Barberry)
- Hydrastis Canadensis (goldenseal)

These herbs are well known for their antimicrobial properties and are effective for high Hydrogen producers. High doses are necessary. Berbercaps from Thorne Research at 3 caps twice daily. There is some evidence that doses as high as 5 grams daily are indicated and well tolerated. It is important to note, however, that research suggests that Goldenseal significantly reduces CYP2D6 (a P450 enzyme). This enzyme also deactivates most SSRIs so caution is advised (Gurley BJ, 2008)
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3. Neem (Azadirachta indica)
Neem is an antibacterial, antifungal and antiviral. It is also an immunomodulator, anti-inflammatory, and antioxidant. It is often used in conjunction with Allimax or Berbercaps to boost the antimicrobial activity.

Ayush Neem at 500mg 3 x Daily

4. Oregano enteric coated works best.
Used not as a stand-alone antimicrobial but as an adjunct to the herbs listed above. Dose is 50mg 3x daily

Biofilm – this is a protective mucus which is secreted by the overgrown bacteria. For effective eradication, adjunctive biofilm treatment can be very effective. There are several biofilm products on the market.

• Serrapeptase (Nutrimedix)
  2-3 capsules 20 minutes before using antimicrobials (on empty stomach)
• N-acetyl-cysteine (Biomedica, Orthoplex)
  500mg 2 x daily

NOTE: it is not recommended to initiate antimicrobial therapy alongside biofilm treatment due to potentially heavy die-off. Consider adding it into your treatment protocol after 2-3 weeks

Natural Prokinetics

1. MotilPro (Pure Encapsulation)
This product contains ginger, 5HTP, acetyl L-carnitine, pyridoxal 5 phosphate, and ascorbyl palmitate (vit C). It is thought to increase serotonin and acetylcholine, 2 gut active neurotransmitters. 2 caps 3 x daily or 3 caps 2 x daily. Because of the high ginger content, some patients experience reflux. Although it is recommended to use this product between meals, having it before meals can alleviate the reflux.

2. Melatonin
1-3mg 1-2 hours before bed

Potential prokinetics

Bifidobacteria
There is some emerging research to suggest Bifidobacterium infantis has prokinetic activity. Dr Jacobi can not yet confirm this.

Herbal bitters
Dr Jacobi uses a combination of bitters extensively. Her formula contains Gentian, Oregon grape, Dandelion, and either Baical Skullcap or Yellow Dock. 3 ml in water 15 minutes before meals

Prokinetics

One of the main causes of SIBO is a dysfunctional cleansing wave of the small intestine. Known as the migrating motor complex (MMC), this wave occurs every 90 minutes on an empty stomach and effectively washes the SI content, including bacteria towards the colon.

Many cases of SIBO relapse are due to not treating a non moving MMC. Prokinetics are substances which aid in the normal propulsion of the digestive tract. Use all throughout treatment as well as after treatment for 3-6 months to prevent relapse.
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Digestive Aids

Years of bacterial overgrowth often leads to damage of the brush border enzymes in the small intestines. The practitioner needs to assess this on a case by case basis.

1. Critical Digestion (Enzymedica)
   An excellent enzyme formula. Contains pancreatic and several brush border enzymes. 1 capsule at the beginning of each meal
2. Thorne Betaine HCL or Pure Encapsulation HCL with Pepsin. Very often, using hydrochloric acid also indicated – HCL has antibacterial action. Use 1-2 capsules mid meal.
3. Herbal Bitters
   see “potential prokinetics”

Restoring depleted nutrients

This often needs to be corrected as years of malabsorption will leave the body depleted of many nutrients. Most commonly depleted nutrients are B12, Folate, Magnesium, and iron (check ferritin before supplementing with iron). Dr Jacobi usually repletes these nutrients once the antimicrobial phase has been completed to reduce total pill count. The practitioner is advised to assess this on a case by case basis.

1. B complex #12 (Thorne research)
2. Citramins II (Thorne research)

Probiotics

Previously, Bifidobacterium was reported to have a theoretical contraindication. This information has now been refuted. Probiotics have a wide spectrum of benefit for the normalization of the GI tract. Bifidobacterium infantis showing promising effects as a prokinetic but requires further study. It is important to note that all probiotic formulas MUST BE FREE FROM PRE-BIOTICS as these feed SIBO. Combination formulas (many different strains) are indicated.

Elemental Formula
(formerly known as the Elemental Diet)

The Elemental Formula is a total meal replacement for 14 days and it is used instead of antimicrobial therapy. It has been formulated by Dr Allison Siebecker to replace the highly costly Vivonex meal replacement. Vivonex has been shown to be as effective as antibiotic therapy in the treatment of SIBO in a study done by Dr Mark Pimentel. The ingredients for the Homemade Elemental Formula are highly specific and can be found on Dr Siebecker’s website- www.siboinfo.com

Other Considerations
Immune Support

Increasing secretory IgA has been shown to be helpful in preventing relapses.
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Sample Protocol week 1-6 Active Antimicrobial Phase

<table>
<thead>
<tr>
<th>Product</th>
<th>Action</th>
<th>Dose</th>
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</thead>
<tbody>
<tr>
<td>Allimax (or Berbercaps)</td>
<td>Antimicrobial</td>
<td>3 caps 2 x daily</td>
</tr>
<tr>
<td>Neem</td>
<td>Adjunct antimicrobial</td>
<td>2 caps 2x daily</td>
</tr>
<tr>
<td>MotilPro</td>
<td>restore migrating motor complex</td>
<td>2 caps 3 x daily on empty stomach (or 3 caps 2 x daily if tolerated)</td>
</tr>
<tr>
<td>Probiotic</td>
<td>restore migrating motor complex, increase sIgA</td>
<td>1 capsule with meals 2 x daily</td>
</tr>
<tr>
<td>Serrapeptase (include after 2 weeks of antimicrobials)</td>
<td>Penetrates biofilm</td>
<td>2 capsules twice daily before Allimax</td>
</tr>
</tbody>
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Sample Protocol week 7-12 Maintenance and Repletion Phase

<table>
<thead>
<tr>
<th>Product</th>
<th>Action</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>MotilPro</td>
<td>restore migrating motor complex</td>
<td>2 caps 3 x daily on empty stomach (or 3 caps 2 x daily if tolerated)</td>
</tr>
<tr>
<td>Probiotic</td>
<td>restore migrating motor complex, increase sIgA</td>
<td>1 capsule with meals 2 x daily</td>
</tr>
<tr>
<td>Lactoferrin</td>
<td>Penetrates biofilm</td>
<td>2 capsules twice daily before Allimax</td>
</tr>
<tr>
<td>Citramins ll</td>
<td>Replete minerals</td>
<td>2 caps 2 x daily with meals</td>
</tr>
<tr>
<td>B complex #12</td>
<td>Replete vitamins</td>
<td>1 capsule morning and lunch</td>
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