

Irritable Bowel Syndrome Demystified

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Functional Gastroenterology Webinar
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The Rome III criteria adult categories of functional gastrointestinal disorders

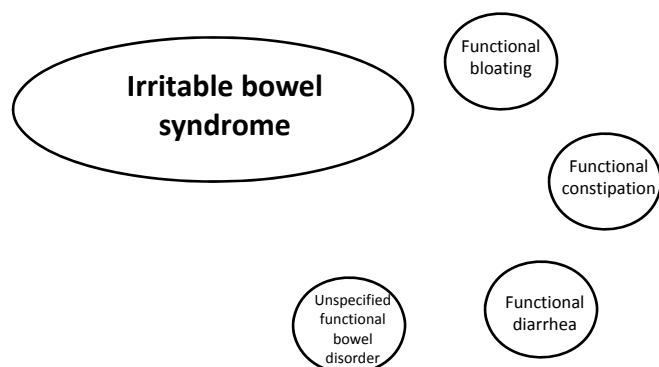
- Functional esophageal disorders
- Functional gastroduodenal disorders
- **Functional Bowel disorders**
 - **IBS – 10-15% of Americans** (Grundmann O, 2010)
- Functional abdominal pain
- Functional biliary disorders
- Functional anorectal disorders

IBS prevalence

- Up to 28% US population has IBS (U.S. military)
 - up to 40% of visits to gastroenterologists are for functional GI disorders

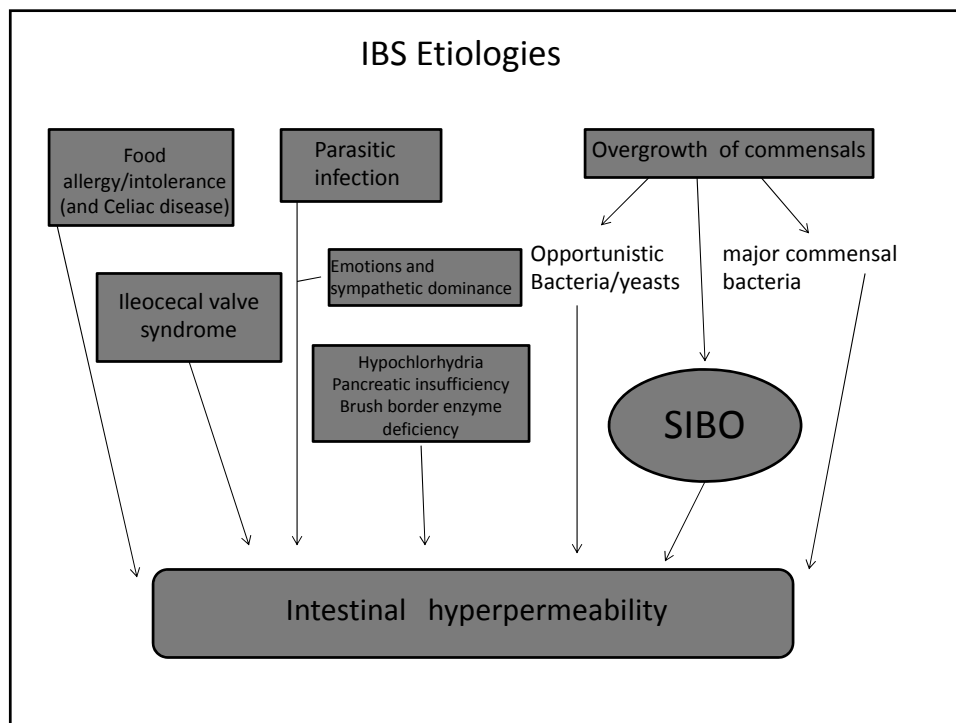
Porter CK The Incidence and gastrointestinal infectious risk of functional gastrointestinal disorders in a healthy US adult population. Am J Gastroenterol. 2011 Jan;106(1):130-8.

Functional Bowel Disorders



Typical Symptoms of IBS (Rome III criteria)

- At least 3 months, with onset at least 6 months previously of recurrent abdominal pain or discomfort* associated with 2 or more of the following:
 - **improvement with defecation**; *and/or*
 - onset associated with a change in **frequency of stool**; *and/or*
 - onset associated with a change in **form of stool**
- *Discomfort means an uncomfortable sensation not described as pain.



Treat infection

- Bacterial –
 - C. difficile
 - Saccharomyces boulardii – 3-6 B TID x 14 d or
 - Nutritional /brewer's yeast – 1 teaspoon BID x 14d
 - Cinnamon- 1000-1500 mg per day
 - Metronidazole -500 mg orally every six to eight hours for 10 to 14 days or alternatively: 250 mg every six hours for 10 to 14 days
 - Vancomycin – 125 to 500 mg orally every six hours for 10 to 14 days (cost is an issue- \$1700)
 - Fecal microbiota transplantation x 5 days

Treat infection

- Giardia lamblia
 - Probiotics (L. casei)
 - Garlic or allicin
 - 5 ml crude garlic in divided doses qd x 3 days or 180 mg allicin extract BID for 3-5 days
 - Pippali rasayana - Butea monosperma (palash) and Piper longum (pippali) – 1 gm TID x 15 days
 - Berberine-containing herbs

Treat infection - giardiasis

- “a whole-food based, high-fiber, diet that is low in fat, lactose, and refined sugars. Additionally, ingestion of probiotics and wheat germ assists in parasite clearance. Avoid vitamin A supplementation during infection

Hawrelak J, Altern Med Rev. 2003 May;8(2):129-42.

- Beet diet?

- Metronidazole-Usual Adult Dose for Giardiasis
 - 250 mg orally every 8 hours
 - Treatment should be continued for 7 days, depending on the nature and severity of the infection.

Treat infection

- Cryptosporidium – in the immunocompetent pt.
 - Chyawanprash – many forms of this Ayurvedic herbal combo may be found which are based around amla fruit (*Emblica officinalis*.) It is in a base of ghee. It may or may not contain silver, honey or sugar. It is purported to raise SIgA levels
 - ½ tsp BID for 30-60 days
 - Cryptosporidium 30X nosode – 15 gtts TID for a month or more.

Treat infection

- Blastocystis hominis
 - Broad spectrum antiparasitic formula – 2 TID ic on alternating weeks for 10 weeks
 - B. hominus 30X nosode 15 gtts TID x 10 weeks
 - Colloidal silver
 - Oregano oil
 - Probiotic
 - Metronidazole or tinidazole or bactrim or iodoquinol

Blastocystis hominus

- Iodoquinol - 650 mg orally 3 times a day for 20 days
- Metronidazole – 250 -750 mg TID for 7 days

Treat infection

- *Dientamoeba fragilis* and *E. histolytica*
 - Garlic
 - Broad spectrum antiparasitic 2 TID ic on alternate weeks for 10 weeks plus
 - *E. histolytica* 30X or *D. fragilis* 30X – 15 gtts TID x 60 days
 - Metronidazole for 10 days followed by iodoquinol for 20 days

Treat infection

- *Ascaris lumbricoides*
 - Carica papaya (air dried) – 20 ml of seed blended in honey – single dose for children.
 - 1% solution of *Artemesia santonica* daily for 40 days.
 - *Chenopodium ambrosioides* (American wormseed)
 - This Peruvian herb was 50% effective for *Ascaris lumbricoides*.

Giove Nakazawa RA, Rev Gastroenterol Peru.1996 Sep-Dec;16(3):197-202.

A 1985 study showed no effectiveness of *C. ambrosioides* on these nematodes.

Ascaris lumbricoides Rx

- Mebendazole - **Adults and Children** PO 100 mg tablet AM and PM on 3 consecutive days

Small Intestine Bacterial Overgrowth

SIBO Definition

- A condition in which abnormally large numbers of bacteria are present in the SI, leading to impairment of digestion and absorption
- SIBO= $>10^5$ bacteria/mL SI contents

SIBO Symptoms

- Bloating/ abdominal Gas
 - Belching, flatulence
 - Abdominal Pain, Cramps
 - Constipation, Diarrhea, both
 - Heartburn
 - Nausea
 - Leaky Gut Sx- food sensitivities, h/a, joint pain, respiratory sx, skin sx, brain sx...
 - Malabsorption Sx- steatorrhea, anemia
- Rome II IBS

SIBO- Bacteria

- What kinds of Bacteria are overgrown?
 - Opportunistic
 - Beneficial
 - normal SI bact, oropharyngeal & colonic
 - Not pathogenic
- Issue= location, location, location

Bacterial Counts- SI vs LI

- SI = low counts vs LI = high counts
- SI = 10^5 bacteria/mL or less (*100 thousand*)
 - HCl, bile, enzymes, GALT, MMC keep #'s low
- LI = 10^{10-11} bact/mL (*10-100 billion*)

SIBO=IBS

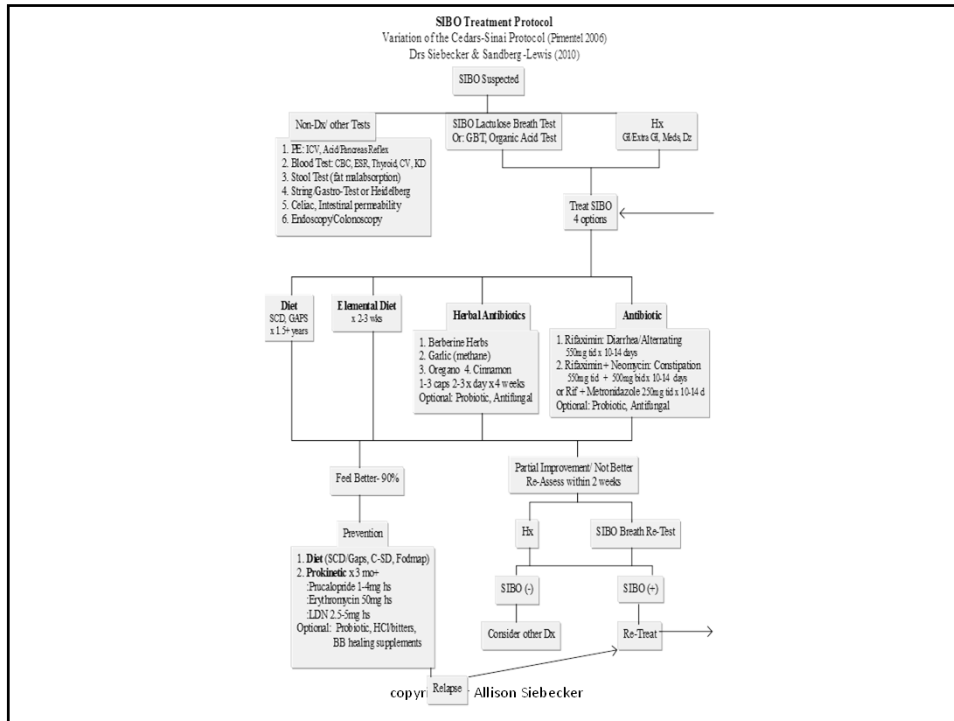


- Dr Mark Pimentel
- Tx'ed thousands of IBS pt's successfully with his SIBO protocol
- 84% IBS test+ SIBO
- 75% of those whose breath tests normalized after tx, had improvement in sx's (Am J Gastroenterology 2003)

Treat bacterial overgrowth

- If SIBO is present, consider the following:
 - Specific carbohydrate diet (SCD)
 - Gut and psychology diet (GAPS)
 - Elemental diet (Vivonex or homemade) x 2 (3) wks
 - Low FODMAPs diet
 - Prescription antibiotics
 - Botanical antibiotics

Functional GI Webinar Series
Part 3: IBS Demystified



SCD

- Elaine Gottschall, *Breaking the Vicious Cycle* 1987
- Eliminates grains & most polysaccharides, oligosaccharides and disaccharides
- Allows monosaccharides

SCD

Elaine Gottschall

- Allows
 - Meat, Fat, non-starchy Veggies, ripe Fruit, Nuts/Seeds, some Beans, lactose-free Dairy
 - Monosaccharides: honey (fructose, glucose)
- Progressive- no beans or raw food until sx improve

SCD

- 75% success rate in relieving sx (with rigid adherence)
 - Often symptomatic improvement in 1-2 days

GAPS

Dr Natasha Campbell-McBride

- *The GAPS Guide*
- Program: SCD-like diet, supplements, detox
- Better for more **sensitive pt's**
- Stricter Diet
- Emphasis on fat, broth, juicing, cultured veggies
- Slower defined **Introductory diet**
- Allows Bifidus/strains

FODMAPs

- The Low FODMAP Diet™ is an IBS treatment diet that eliminates fermentable carbohydrate foods and has a success rate of 76% in IBS.
(Staudacher HM, 2011.)

<http://www.ibsgroup.org/brochures/fodmap-intolerances.pdf>

FODMAPs stands for:

- F – fructans
- O – oligosaccharides
- D – disaccharides
- M – monosaccharides
- A – and
- P - polyols

Replace enzymes/acid

- If hypochlorhydric
 - Vinegar 1-2 teaspoons in water before meals
 - Bitters (see hypochlorhydria lecture)
 - Betaine HCl – up to 3120 mg (48 grains) per meal

Improve Ileocecal valve function

- assessed functionally or via colonoscopy
- “closed” vs. “open”
- ICV dysfunction may allow cecoileal reflux thereby fueling SIBO
- Visceral and spinal techniques
 - Right lower quadrant soft tissue
 - C5/L1 or C3/L3 spinal work
 - Diet and supplements

Cedars-Sinai Diet

Mark Pimentel, MD

- **A diet to prevent relapse of SIBO follows a 14 day course of antibiotics**
- From *A New IBS Solution*, M. Pimentel
- His version of a “Low Residue Diet”
- Foods absorbed proximally, leaving less carbohydrate residue at distal small intestine where SIBO is more prevalent
- Lower fiber
- **3-5 hrs between meals to stimulate the MMC**
- **12 hr fast at night**

Cedar Sinai Diet

- Lactose-free diet (allows lactaid milk*)
- Sweeteners allowed – glucose, sucrose, aspartame
- Sweeteners to avoid – corn syrup, mannitol, sorbitol, sucralose, lactose, lactulose, fruit juice
- Fiber from fruits and non-starchy vegetables mostly – limit to 2 servings of fresh fruit per day
- limit or eliminate beans, lentils, peas, soy, *dairy
- Adequate water intake – 8 glasses

Cedar Sinai Diet

- Potato, pasta, rice, bread and cereals – limit to ½-1 cup of these carbohydrates at each meal. Use white, not whole grain products.

Candidiasis/Rhodotorula/saprophytic fungi

- *Antifungal* –
 - Caprylic acid (800-1200 mg TID cc) or undecylenic acid or
 - Nystatin (500,000 units 1-4 times/day for extended periods (up to 1 year) or
 - Fluconazole
- or alternate oregano extract (100 mg TID) and garlic (whole herb) or allicin 180 mg QD to TID)
- *Probiotics* – 10-15+ billion BID cc
- Treat hypo/achlorhydria if present

Treat pancreatic insufficiency

- Dr. Failor's pancreatic maneuver before meals
- Enzyme replacement
 - Plant enzymes ic
 - Pancreatin after meals
 - Papain cc
 - Bromelain cc
- Pancreatinum 4CH – 15 gtts TID x 3 months (use this 3 weeks per month)
- Nervinum vagum – 15 gtts TID x 3 months (use this 3 weeks per month)

Gluten intolerance

- Many naturopathic physicians believe that there is a range of reactions to gluten that begins as problems with the digestion of gluten and ends with frank celiac disease

Incomplete digestion of prolamines

Wheat or gluten/gliadin allergy or intolerance

Celiac disease

Gluten intolerance

- Associated diseases

Diabetes mellitus

Thyroiditis

Osteopenia/porosis

Sjogrens dz

Primary biliary cirrhosis

Adrenocortical deficiency

IgA nephrosis

Rheumatoid arthritis

Down syndrome

Seizure disorders

Fibrosing alveolitis

Idiopathic pulm. hemosiderosis

Recurrent pericarditis

Myocarditis

Dilated cardiomyopathy

Splenic atrophy

Dementia/schizophrenia

Dermatitis herpetiformis

Maltoma

Gluten intolerance

- Other suggestive labs:
 - Hypocalcemia
 - Vitamin D deficiency
 - Hypoproteinemia
 - Iron deficiency anemia
 - Folate/B12 deficiency anemia
 - Thrombocytosis
 - Prolonged prothrombin time
 - Elevated transaminases or alk phos

Gluten intolerance

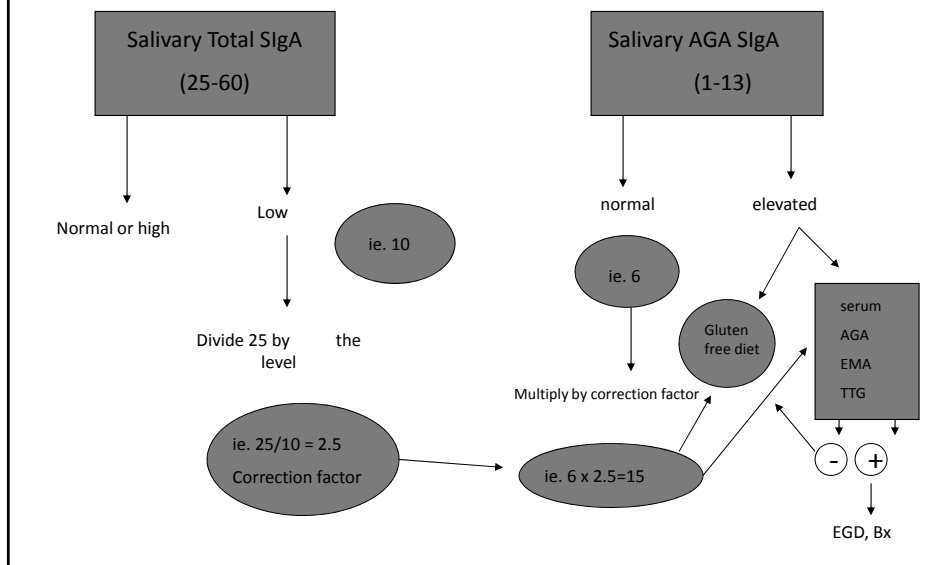
- History

Short stature	Amenorrhea
Anxiety, irritability	Infertility
Chronic fatigue	Recurrent abortion
Muscle cramping	Night blindness
Tetany	Chronic anemia
Bone/joint/muscle pain	Chronic bruising
Ataxia	Recurrent oral apthae
Neuropathy	Dental enamel defects
Paraesthesia	Skin pigment changes
Migraine/headpain	Follicular hyperkeratosis
Generalized itching	Vesicular pruritic rash
Delayed menarche/puberty	

Gluten intolerance

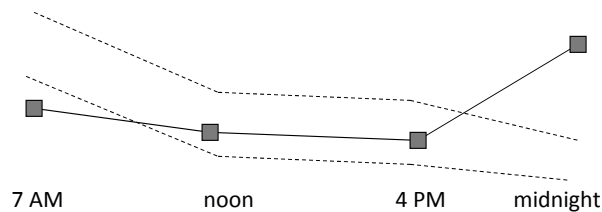
- Other lab tests:
 - Salivary total SIgA
 - Serum/stool antigliadin IgA/IgG
 - Serum antiendomysial ab by IgA
 - Serum/stool tissue transglutaminase IgA, IgG
 - Esophagogastroduodenoscopy with biopsy of the 3rd/4th segment of the duodenum
 - histopathology - revised Marsh criteria employed)

Salivary Gluten Intolerance Screening



Gluten intolerance

- Typical ASI findings
 - Depressed morning cortisol
 - Elevated midnight cortisol



- Depressed total SIgA – salivary or serum

SIBO training series

- 1) Pathophysiology of commensal overgrowth: organisms, risk factors, key sx/signs and patterns, associated conditions and diseases, the vicious cycles
- 2) Diagnosis – prep diet, test procedures, breath test interpretation, test patterns seen during treatment courses; cases
- 3) Treatment – Diets; SCD, GAPS, FODMAPs, C-S

SIBO training series

- 4) Treatment – prescription antibiotics with illustrative cases
- 5) Treatment and prevention – botanical, probiotic, prokinetic, relapse, brush border healing