

SIBO



What is it?

- Small Intestinal Bowel Overgrowth
- A chronic bacterial infection of the small intestine
- Caused by bad bacteria such as E Coli and Clostridium migrating to the small intestine
- There is not enough good bacteria to deal with it in the small intestines (remember the numbers are low)
- The pathogenic bacteria interferes with nutrient absorption as they damage the gut lining
- Also play a role in leaky gut
- Bile acids are deconjugated and this interferes with fat absorption as well as fat soluble vitamins

SIBO and Symptoms

- Food particles and the bacteria itself can enter the bloodstream increasing food allergies and infection
- The bacteria secretes toxins and acids that can cause neurological and cognitive symptoms
- Immune system reactions to the bacteria and endotoxins causes aches and pains, chronic fatigue and stresses the liver
- Other symptoms include gas, bloating, diarrhea or constipation or both, flatulence, and belching – similar symptoms to IBS
- 84% of IBS sufferers have SIBO in one study but in another study, none had SIBO

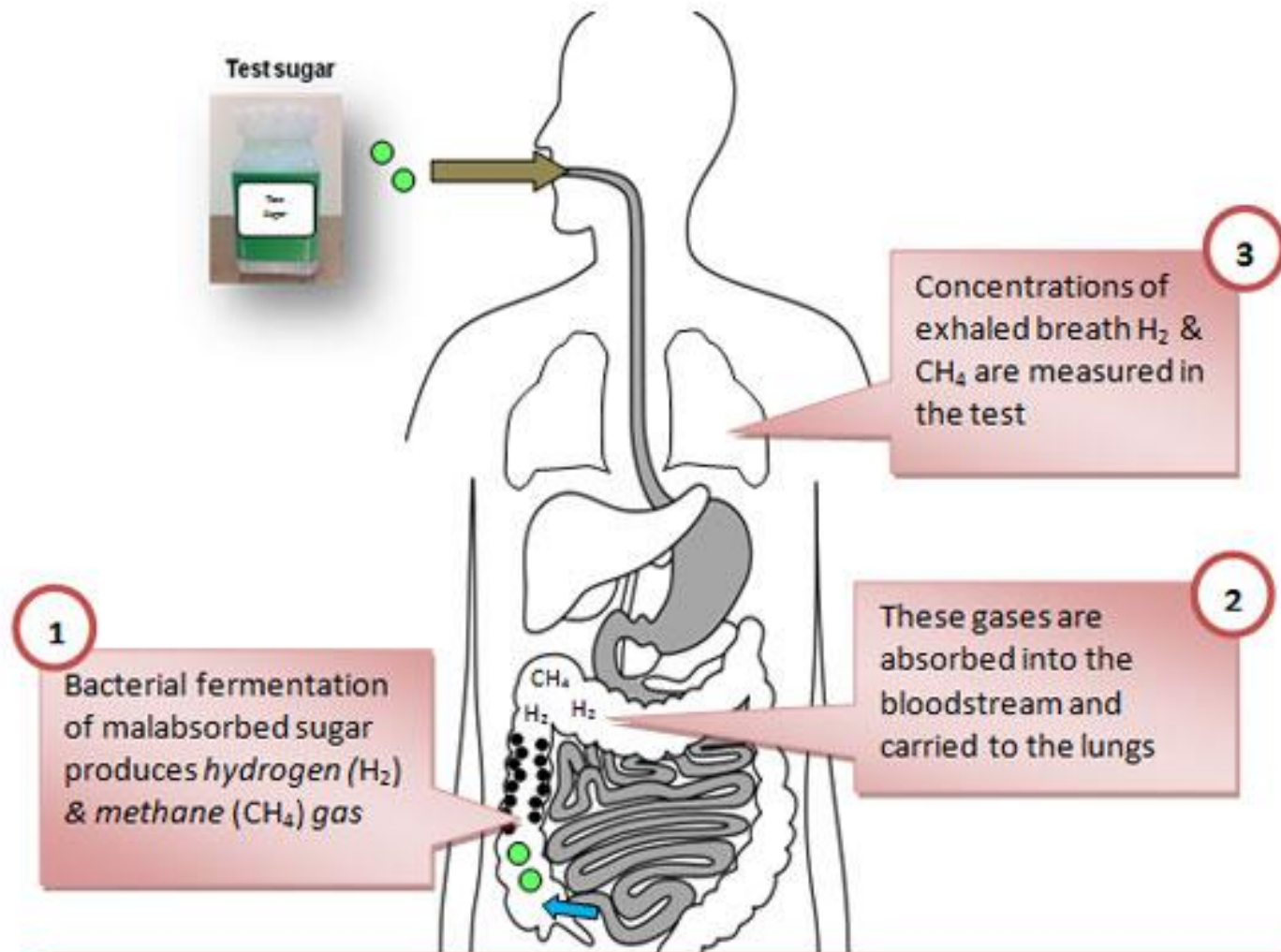
Symptoms

- Food sensitivities, headaches, joint pain, skin issues like eczema, acne or roseacea, heartburn, nausea, mood issues, brain symptoms (as seen in autism) and respiratory issues (such as asthma)
- Anemia (due to iron and B12 deficiency), undigested fat in stools and weight loss
- SIBO has been link to the same conditions like diabetes, gallstones, heart disease and autoimmune similar to dysbiosis and has all the same symptoms as Candidiasis

Testing

- Hydrogen breath test: This test measures the hydrogen (H) & methane (M) gas which SI bacteria produces (food digestion does not)
- It diffuses into the blood and goes to the lungs for expiration.
- Two types of tests may be used: Lactulose or Glucose
- Other test: Determining anaerobic and aerobic colony counts in small intestines
- Intubation and aspiration of fluid involved





Concentrations of breath hydrogen and methane are used to indicate if the test sugar is malabsorbed or if proximal bacterial overgrowth is present.

Is It More Prevalent?

- Better testing methods have been able to help diagnose
- Normal amount in SI is 10^3 organisms/ml, overwhelmingly good bacteria - with SIBO it is 10^5 – 10^6 organisms/mL with a higher percentage of bad bacteria strains
- In one study of 289 healthy adults, young versus older, 5.6% of the young had SIBO versus 15.6 % of older people and a British study found incidence of SIBO in 14.5% of healthy older people
- A Japanese study found no cases of SIBO in a group of elderly people



Cause

- Two common causes are:
- Lower stomach acid allowing more ingested pathogens into the small intestines
- Slow small intestine motility including delayed gastric emptying
- Also involved diverticulitis of the small intestine (low factor) and large intestines
- Ileosecal valve malfunction allowing colon bacteria into the small intestines
- Antibiotics and acid-blocking drugs are also factors



- Structural/Anatomic**

- — Small intestine diverticula
- — Small intestine strictures (radiation, medications, Crohn's disease)
- — Surgically created blind loops
- — Resection of ileocecal valve
- — Fistulas between proximal and distal bowel
- — Gastric resection

- Motility Disorders**

- — Gastroparesis
- — Small bowel dysmotility
- — Celiac disease
- — Chronic intestinal pseudo-obstruction

- Irritable Bowel Syndrome**

- Metabolic Disorders**

- — Diabetes
- — Hypochlorhydria

- Elderly**

- Organ System Dysfunction**

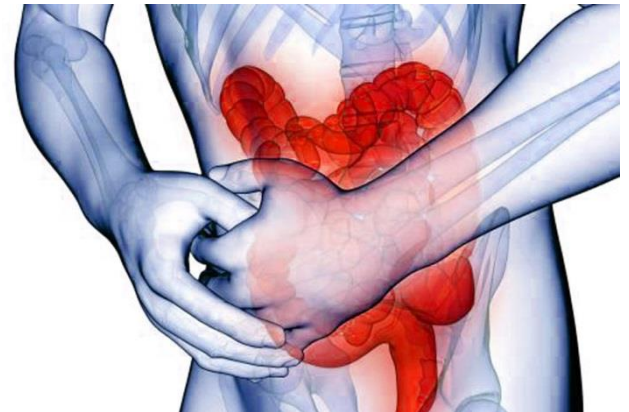
- — Cirrhosis
- — Renal failure
- — Pancreatitis
- — Immunodeficiency states
- — Crohn's disease
- — Celiac disease
- — Malnutrition

- Medications**

- — Recurrent antibiotics
- — Gastric acid suppression

Is SIBO Just Dysbiosis?

- Short Answer : No – although some people think so
- Dybiosis can results from lack of good bacteria only – and does not mean bad bacteria is present in excess in the small intestines
- Dysbiosis does not mean there is low gastric acid or slow motility
- Both require a similar protocol
- If there is an altered bowel anatomy in SIBO, surgery could be an option



Protocol

- Ensure enough vitamins and minerals especially B12 and other B's and fat-soluble vitamins (especially in cases of weight loss)
- Antibiotic therapy may be employed by MDs (not a lot of proof that this works)
- Glutamine/gut health product
- Digestive enzymes with HCL
- Probiotics
- Cranial sacral or osteopath for ileosecal valve issues
- Antimicrobials



And Finally...

- You will not consider SIBO without consultation with MD or ND assessment
- Regular dysbiosis protocol will help with SIBO
- One theory is that fructans (found in fruits and some vegetables) may be an issue
- A food journal can help decide if any foods aggravate
- High nutrient diet will help with nutritional deficiencies
- It takes time for this to correct

