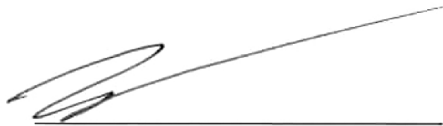


Pilot Study: Investigating a Novel Supplement-based Therapy for the Treatment of Small Intestinal Bacterial Overgrowth



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Study Synopsis

The aim of this pilot study is to determine the efficacy of a supplement protocol combined with a low FODMAP diet for the treatment of small intestinal bacterial overgrowth (SIBO). The study is designed as a prospective, open label investigation, with an estimated sample size of 10 patients.

Patients diagnosed with SIBO by Dr. Nathan Morris at Good Medicine Clinic (Oxford, Ohio) will be offered the opportunity to enroll in this study, if they satisfy the inclusion and exclusion criteria upon initial diagnosis. No control group will be assigned.

The diagnosis of SIBO will be determined via assessment of clinical symptoms and the results of a lactulose breath test. This diagnosis procedure is, currently, the standard-of-care. After administration of the supplement therapy and adherence to a low FODMAP diet (8 weeks), the lactulose breath test will be repeated and symptoms re-assessed by Dr. Morris.

The post-treatment lactulose breath test and all supplements in the protocol will be provided free-of-charge to enrolled patients. In addition, enrolled patients will not be billed for the mid-treatment office visit. Patient and/or patient insurance will be responsible for all other expenses, including but not limited to the initial breath test, all other office visits and travel.

Background

Small intestinal bacterial overgrowth (SIBO) is a category of gastrointestinal infection, characterized by an increased concentration ($>100,000$ CFU/mL proximal jejunal fluid) of bacteria in the small intestine.¹ Symptoms of SIBO commonly afflict the gastrointestinal tract and include but are not limited to: abdominal pain, discomfort, bloating, cramping, flatulence, diarrhea, constipation, eructation, and low serum B12.^{3,4}

SIBO is believed to be severely under diagnosed and is associated with numerous comorbid conditions including irritable bowel syndrome, diabetes mellitus and hypothyroidism.^{4,5} Small-bowel aspiration (SBA) or breath tests are used to aid in the diagnosis of SIBO. Due to the cost and invasive nature of SBA, glucose or lactulose breath tests are more commonly performed.

The treatment of SIBO frequently consists of antibiotic therapy. Rifaximin is a poorly absorbed antibiotic with bacteriocidal activity against enteropathogens and is widely prescribed for the treatment of SIBO.³ Nevertheless, both patients and practitioners frequently turn to complementary and alternative medicine, due to the adverse effects associated with antibiotic use and the recurrent nature of SIBO. In 2014, a retrospective study (Chedid et al.) found that the efficacy of a particular herbal therapy was comparable to Rifaximin treatment.³ However, both treatment

options demonstrated a response rate of less than 50%. This investigation will test a more comprehensive, supplement-based therapy in hopes of achieving a greater response rate.

Objectives

This investigation aims to determine the efficacy of a supplement protocol in combination with a low FODMAP diet for the treatment of small intestinal bacterial overgrowth (SIBO).

Patient Selection

Patients diagnosed with SIBO at Dr. Morris' clinic will be offered the opportunity to enroll in this study as a theoretical treatment option for SIBO. Other treatment options will be discussed with the patient. Enrolled patients must satisfy the following inclusion and exclusion criteria:

Inclusion criteria: A positive diagnosis of SIBO, which will be defined by 1) presentation of the aforementioned symptoms and 2) positive results of a lactulose breath test. Positive breath test results will be defined as an increase in hydrogen of 20 ppm or more and/or an increase in methane of 12 ppm or more compared to baseline by 90 minutes.

Exclusion criteria: 1) Use of prescription antibiotics or antifungals within the past 4 weeks. 2) Younger than 18 or older than 85 years of age 3) Pregnant or breast-feeding 4) Major drug-supplement interactions between essential medication and the proposed supplement therapy. 5) A known allergy to one or more of the ingredients in the supplement therapy. 6) Has been diagnosed and treated for SIBO within the past 6 months. 7) Has undergone a colonoscopy or barium enema within the past 4 weeks. 8) Has an allergy to lactulose. 9) Has diabetes mellitus.

Study Procedures

The supplement protocol is designed to take 8 weeks. Due to the delay in receiving and interpreting test results, the investigation, in its entirety, is estimated to take 12 weeks.

Visit -1 Dr. Morris will assess patient history and symptoms, at his facility in Oxford, Ohio. If suggestive of SIBO, a lactulose breath test will be prescribed. Additional testing may be performed, at the discretion of Dr. Morris, to aid in the initial diagnosis of the patient.

Visit 0 Dr. Morris will assess the results of the breath test and confirm or deny the diagnosis of SIBO. Treatment options for SIBO will be discussed, and the patient will be made aware of this investigation as a theoretical treatment option. Patient eligibility will be determined by Dr. Morris who will complete the Patient Eligibility Checklist (Appendix A) for each patient. All female patients will be asked to complete a urine pregnancy test to confirm pregnancy status. Eligible patients will be asked to review

and sign the Informed Consent document. Carman Clark (Medical Assistant at Good Medicine) will be available to discuss patient consent and confidentiality. Enrolled patients will be asked to complete a baseline Medical Symptom Questionnaire (Appendix B). Afterwards, Ms. Clark will review the supplement therapy (Supplement Overview - Appendix C) and low FODMAP diet (Low FODMAP Handout - Appendix D). Patients will then be provided with all supplements necessary to complete the investigation. Patients will be asked to discontinue all other supplements during the study. However, no wash out period is required. Prescription medications, over-the-counter medications and/or supplements deemed medically necessary by the patient's primary care physician and/or Dr. Morris may be continued, if there are no known contraindications.

Visit 1 Visit 1 will occur approximately 4 weeks after the patient begins the supplement protocol. Patients will be asked to report their compliancy with the supplement protocol and low FODMAP diet and describe adverse effects. Patients will also be asked to complete the Medical Symptom Questionnaire. Patients will be provided with the second lactulose breath test kit and instructed to perform the test within 2 weeks of completing the supplement therapy.

Visit 2 Visit 2 will occur after the results of the post-treatment breath test are available. Dr. Morris will interpret the results of the second breath test, and patients will be asked to complete the Medical Symptom Questionnaire, report compliancy with the supplement protocol and low FODMAP diet, and describe any adverse effects. Further treatment options will be discussed if necessary; follow-up treatment will be outside the scope of this investigation.

Risk/Safety Information

This study presents risk in the form of adverse reactions to ingredients in the supplement therapy. Patient risk will be minimized by excluding patients who may respond poorly to the supplement therapy or testing procedures from the study, i.e., by abiding by the aforementioned patient enrollment exclusion criteria.

Monitoring/Reporting

Patients may report adverse events to Good Medicine during scheduled office visits or by phone during office hours. If serious or life-threatening side effects arise, patients are instructed to call 911. Possible side effects include but are not limited to: diarrhea, constipation, nausea, vomiting, bloating or headache. When necessary, Dr. Morris or Ms. Clark will communicate with patients outside the office by phone and record adverse events in the patient's confidential files. Medical guidance will be provided as necessary.

Study Oversight

This study will be terminated if one-half or more of enrolled patients withdraw due to adverse events. Dr. Morris and Dr. Kelly Heim (Senior Director, Scientific Affairs at Atrium Innovations) will monitor, determine the need for and facilitate the termination of the study. Direct access to study related data will be made available for monitoring, auditing, IRB review and regulatory inspection.

Data Management

Lactulose breath test scores and completed Medical Symptom Questionnaire will be compared pre- and post-treatment to determine the efficacy of the supplement therapy. The significance of the change in breath test scores will be determined if the final sample size permits such analysis.

IRB Review/Ethics/Informed Consent

This study will be conducted in accordance with the ethical principles that have their origin in the Declaration of Helsinki and that are consistent with Good Clinical Practice and applicable regulatory requirements.

Any changes to the protocol will be submitted to the IRB for review and approval before implementation. However, a protocol change intended to eliminate an apparent immediate hazard to patients will be implemented immediately. The reviewing IRB will be notified within 10 working days, if an immediate protocol change is necessitated.

The principle investigator (Dr. Nathan Morris) will provide each patient with full and adequate verbal and written information using the IRB approved informed consent documentation, including the objective and procedures of the study as well as the possible risks involved before inclusion in the study. Informed consent will be obtained prior to performing any study-related procedures, including screening and changes in medications including any washout of medications. A copy of the signed informed consent will be given to the study patient.

Confidentiality

Study-related records identifying the patient will be kept confidential and, to the extent permitted by applicable laws and/or regulations, will not be made publicly available. The IRB and/or other regulatory authorities will have access to study related medical records upon request. Subsequent use of the collected data will exclude patient identifying information.

Intended Use of the Data

The data collected from this investigation will be used to determine the efficacy of the proposed supplement therapy. If efficacious, the results will be distributed in print and digital advertising.

References

1. Bures J, Cyrany J, Kohoutova D, et al. Small intestinal bacterial overgrowth syndrome. *World J Gastroenterol*. 2010;16(24):2978-90.
2. Ford AC, Spiegel BM, Talley NK, Moayyedi P. Small Intestinal bacterial overgrowth in irritable bowel syndrome: systematic review and meta analysis. *Clin Gastroenterol Hepatol*. 2009;7(12):1279-86
3. Chedid V, Dhalla S, Clarke J, et al. Herbal Therapy is Equivalent to Rifaximin for the Treatment of Small Intestinal Bacterial Overgrowth. *Global Advances in Health and Medicine Journal*. 2014; 3(3): 16-22.
4. Reynolds K. Small Intestinal Bacterial Overgrowth: A Case-Based Review. *Journal of Patient-Centered Research and Reviews*. 2015; 2(4): 165-171.
5. Saad R and Chey W. Breath Testing for Small Intestinal Bacterial Overgrowth: Maximizing Test Accuracy. *Perspectives in Clinical Gastroenterology and Hepatology*. 2014; 12:1964-1972.

Appendix A

Patient Eligibility Checklist

This documented is to be complete by Dr. Nathan Morris.

- YES / NO Patient is am between the ages of 18 and 85 years old.
- YES / NO Patient has used oral, prescription antibiotics and/or antifungals within the past 12 weeks.
- YES / NO Patient is pregnant or breast-feeding or plans to become pregnant/breast-feeding within the next 4 months.
- YES / NO Patient is currently taking one or more of the following medications.
- | | |
|--|-----------------------------------|
| Amiodarone (Cordarone, etc.) | Estrogen replacement therapy |
| Anti-diabetes medications | Etoposide (Etopophos, etc.) |
| Artemether (Artenam, etc) | Halofantrine |
| Atorvastatin (Lipitor) | Intravenous nitroglycerin |
| Benzodiazepines | Lovastatin (Mevacor, etc.) |
| Bupirone (BuSpar) | Lactulose |
| Calcium channel blockers | Methylprednisolone (Medrol, etc.) |
| Carbamazepine (Tegretol, etc) | Pravastatin (Pravachol) |
| Carvedilol (Coreg) | Praziquantel (Biltricide) |
| Cisapride (Propulsid) | Quinidine |
| Clomipramine (Anafranil) | Scopolamine |
| Cyclosporine (Neoral, etc) | Sildenafil (Viagra, etc.) |
| Dextromethorphan (Robitussin, etc etc) | Simvastatin (Zocor) |
| | Terfenadine (Seldane) |

YES / NO Patient has a known allergy to one or more of the following ingredients.

Alpha lipoic acid	L-methionine
Artichoke	Milk thistle
Berberine	N-acetyl-l-cysteine
Broccoli	Olive
Chlorella	Pineapple
Clove	Safflower
Coconut	Sunflower
Glycine	Sweet wormwood
Grapefruit	Taurine
Kiwi	Thistle
L-glutamine	Turmeric

YES / NO Patient has a history of one or more of the following conditions.

Bile duct obstruction
Immunodeficiency
Kidney stones
Peptic ulcers

YES / NO Patient has have been diagnosed and treated for SIBO within the past 6 months.

YES / NO Patient has undergone a colonoscopy or barium enema within the past 4 weeks

YES / NO Patient has diabetes mellitus.

Patient Name (Print)

Date

Dr. Nathan Morris (Sign)

Appendix B

The MSQ will be administered online via the Living Matrix platform. The following is a print copy of the questionnaire. Instructions to access the Living Matrix will also be provided to patients. This document was submitted to Schulman as an additional file.

Living Matrix MSQ

Please answer EVERY QUESTION in this section. Select "Zero" if you do not have this symptom.

Rate the Symptom

- Headache
- 0 - Never or almost never have the symptom
 - 1 - Occasionally have it, effect is not severe
 - 2 - Occasionally have it, effect is severe
 - 3 - Frequently have it, effect is not severe
 - 4- Frequently have it, effect is severe

- Faintness
- 0 - Never or almost never have the symptom
 - 1 - Occasionally have it, effect is not severe
 - 2 - Occasionally have it, effect is severe
 - 3 - Frequently have it, effect is not severe
 - 4- Frequently have it, effect is severe

- Dizziness
- 0 - Never or almost never have the symptom
 - 1 - Occasionally have it, effect is not severe
 - 2 - Occasionally have it, effect is severe
 - 3 - Frequently have it, effect is not severe
 - 4- Frequently have it, effect is severe

- Insomnia
- 0 - Never or almost never have the symptom
 - 1 - Occasionally have it, effect is not severe
 - 2 - Occasionally have it, effect is severe
 - 3 - Frequently have it, effect is not severe
 - 4- Frequently have it, effect is severe

Eyes

Rate the Symptom

Rate the Symptom

Watery or itchy eyes

- 0 - Never or almost never have the symptom
- 1 - Occasionally have it, effect is not severe
- 2 - Occasionally have it, effect is severe
- 3 - Frequently have it, effect is not severe
- 4- Frequently have it, effect is severe

Swollen, red or sticky eyelids

- 0 - Never or almost never have the symptom
- 1 - Occasionally have it, effect is not severe
- 2 - Occasionally have it, effect is severe
- 3 - Frequently have it, effect is not severe
- 4- Frequently have it, effect is severe

Bags or dark circles under eyes

- 0 - Never or almost never have the symptom
- 1 - Occasionally have it, effect is not severe
- 2 - Occasionally have it, effect is severe
- 3 - Frequently have it, effect is not severe
- 4- Frequently have it, effect is severe

Blurred or tunnel vision-does not include near or far-sightedness

Ears

Rate the Symptom

Itchy ears

- 0 - Never or almost never have the symptom
- 1 - Occasionally have it, effect is not severe
- 2 - Occasionally have it, effect is severe
- 3 - Frequently have it, effect is not severe
- 4- Frequently have it, effect is severe

- Earaches
- 0 - Never or almost never have the symptom
 - 1 - Occasionally have it, effect is not severe
 - 2 - Occasionally have it, effect is severe
 - 3 - Frequently have it, effect is not severe
 - 4- Frequently have it, effect is severe

- Ear infections
- 0 - Never or almost never have the symptom
 - 1 - Occasionally have it, effect is not severe
 - 2 - Occasionally have it, effect is severe
 - 3 - Frequently have it, effect is not severe
 - 4- Frequently have it, effect is severe

- Drainage from ear
- 0 - Never or almost never have the symptom
 - 1 - Occasionally have it, effect is not severe
 - 2 - Occasionally have it, effect is severe
 - 3 - Frequently have it, effect is not severe
 - 4- Frequently have it, effect is severe

- Ringing in ears
- 0 - Never or almost never have the symptom
 - 1 - Occasionally have it, effect is not severe
 - 2 - Occasionally have it, effect is severe
 - 3 - Frequently have it, effect is not severe
 - 4- Frequently have it, effect is severe

- Hearing loss
- 0 - Never or almost never have the symptom
 - 1 - Occasionally have it, effect is not severe
 - 2 - Occasionally have it, effect is severe
 - 3 - Frequently have it, effect is not severe
 - 4- Frequently have it, effect is severe

Nose

Rate the Symptom

- Stuffy nose
- 0 - Never or almost never have the symptom
 - 1 - Occasionally have it, effect is not severe
 - 2 - Occasionally have it, effect is severe
 - 3 - Frequently have it, effect is not severe
 - 4- Frequently have it, effect is severe

- Sinus problems
- 0 - Never or almost never have the symptom
 - 1 - Occasionally have it, effect is not severe
 - 2 - Occasionally have it, effect is severe
 - 3 - Frequently have it, effect is not severe
 - 4- Frequently have it, effect is severe

- Hay fever
- 0 - Never or almost never have the symptom
 - 1 - Occasionally have it, effect is not severe
 - 2 - Occasionally have it, effect is severe
 - 3 - Frequently have it, effect is not severe
 - 4- Frequently have it, effect is severe

- Sneezing attacks
- 0 - Never or almost never have the symptom
 - 1 - Occasionally have it, effect is not severe
 - 2 - Occasionally have it, effect is severe
 - 3 - Frequently have it, effect is not severe
 - 4- Frequently have it, effect is severe

Excessive mucus formation

Mouth/Throat

Rate the Symptom

- Chronic coughing
- 0 - Never or almost never have the symptom
 - 1 - Occasionally have it, effect is not severe
 - 2 - Occasionally have it, effect is severe

Rate the Symptom

- | | | |
|--|-----------------------|--|
| Gagging | <input type="radio"/> | 3 - Frequently have it, effect is not severe |
| | <input type="radio"/> | 4- Frequently have it, effect is severe |
| | <input type="radio"/> | 0 - Never or almost never have the symptom |
| | <input type="radio"/> | 1 - Occasionally have it, effect is not severe |
| | <input type="radio"/> | 2 - Occasionally have it, effect is severe |
| | <input type="radio"/> | 3 - Frequently have it, effect is not severe |
| Frequent throat clearing | <input type="radio"/> | 4- Frequently have it, effect is severe |
| | <input type="radio"/> | 0 - Never or almost never have the symptom |
| | <input type="radio"/> | 1 - Occasionally have it, effect is not severe |
| | <input type="radio"/> | 2 - Occasionally have it, effect is severe |
| | <input type="radio"/> | 3 - Frequently have it, effect is not severe |
| | <input type="radio"/> | 4- Frequently have it, effect is severe |
| Sore throat | <input type="radio"/> | 0 - Never or almost never have the symptom |
| | <input type="radio"/> | 1 - Occasionally have it, effect is not severe |
| | <input type="radio"/> | 2 - Occasionally have it, effect is severe |
| | <input type="radio"/> | 3 - Frequently have it, effect is not severe |
| | <input type="radio"/> | 4- Frequently have it, effect is severe |
| hoarseness | <input type="radio"/> | 0 - Never or almost never have the symptom |
| | <input type="radio"/> | 1 - Occasionally have it, effect is not severe |
| | <input type="radio"/> | 2 - Occasionally have it, effect is severe |
| | <input type="radio"/> | 3 - Frequently have it, effect is not severe |
| | <input type="radio"/> | 4- Frequently have it, effect is severe |
| Loss of voice | <input type="radio"/> | 0 - Never or almost never have the symptom |
| | <input type="radio"/> | 1 - Occasionally have it, effect is not severe |
| | <input type="radio"/> | 2 - Occasionally have it, effect is severe |
| | <input type="radio"/> | 3 - Frequently have it, effect is not severe |
| | <input type="radio"/> | 4- Frequently have it, effect is severe |
| Swollen or discolored tongue, gums or lips | <input type="radio"/> | 0 - Never or almost never have the symptom |

Canker sores

- 1 - Occasionally have it, effect is not severe
- 2 - Occasionally have it, effect is severe
- 3 - Frequently have it, effect is not severe
- 4- Frequently have it, effect is severe

- 0 - Never or almost never have the symptom
- 1 - Occasionally have it, effect is not severe
- 2 - Occasionally have it, effect is severe
- 3 - Frequently have it, effect is not severe
- 4- Frequently have it, effect is severe

Skin

Rate the Symptom

Acne

- 0 - Never or almost never have the symptom
- 1 - Occasionally have it, effect is not severe
- 2 - Occasionally have it, effect is severe
- 3 - Frequently have it, effect is not severe
- 4- Frequently have it, effect is severe

Hives or Urticaria

- 0 - Never or almost never have the symptom
- 1 - Occasionally have it, effect is not severe
- 2 - Occasionally have it, effect is severe
- 3 - Frequently have it, effect is not severe
- 4- Frequently have it, effect is severe

Rashes

- 0 - Never or almost never have the symptom
- 1 - Occasionally have it, effect is not severe
- 2 - Occasionally have it, effect is severe
- 3 - Frequently have it, effect is not severe
- 4- Frequently have it, effect is severe

- Dry skin
- 0 - Never or almost never have the symptom
 - 1 - Occasionally have it, effect is not severe
 - 2 - Occasionally have it, effect is severe
 - 3 - Frequently have it, effect is not severe
 - 4- Frequently have it, effect is severe

- Hair loss
- 0 - Never or almost never have the symptom
 - 1 - Occasionally have it, effect is not severe
 - 2 - Occasionally have it, effect is severe
 - 3 - Frequently have it, effect is not severe
 - 4- Frequently have it, effect is severe

- Flushing
- 0 - Never or almost never have the symptom
 - 1 - Occasionally have it, effect is not severe
 - 2 - Occasionally have it, effect is severe
 - 3 - Frequently have it, effect is not severe
 - 4- Frequently have it, effect is severe

- Hot flashes
- 0 - Never or almost never have the symptom
 - 1 - Occasionally have it, effect is not severe
 - 2 - Occasionally have it, effect is severe
 - 3 - Frequently have it, effect is not severe
 - 4- Frequently have it, effect is severe

- Excessive sweating
- 0 - Never or almost never have the symptom
 - 1 - Occasionally have it, effect is not severe
 - 2 - Occasionally have it, effect is severe
 - 3 - Frequently have it, effect is not severe
 - 4- Frequently have it, effect is severe

Heart

Rate the Symptom

- | | | |
|--------------------------------|-----------------------|--|
| Irregular or skipped heartbeat | <input type="radio"/> | 0 - Never or almost never have the symptom |
| | <input type="radio"/> | 1 - Occasionally have it, effect is not severe |
| | <input type="radio"/> | 2 - Occasionally have it, effect is severe |
| | <input type="radio"/> | 3 - Frequently have it, effect is not severe |
| | <input type="radio"/> | 4- Frequently have it, effect is severe |
| Rapid or pounding heartbeat | <input type="radio"/> | 0 - Never or almost never have the symptom |
| | <input type="radio"/> | 1 - Occasionally have it, effect is not severe |
| | <input type="radio"/> | 2 - Occasionally have it, effect is severe |
| | <input type="radio"/> | 3 - Frequently have it, effect is not severe |
| | <input type="radio"/> | 4- Frequently have it, effect is severe |
| Chest pain | <input type="radio"/> | 0 - Never or almost never have the symptom |
| | <input type="radio"/> | 1 - Occasionally have it, effect is not severe |
| | <input type="radio"/> | 2 - Occasionally have it, effect is severe |
| | <input type="radio"/> | 3 - Frequently have it, effect is not severe |
| | <input type="radio"/> | 4- Frequently have it, effect is severe |

Lungs

Rate the Symptom

- | | | |
|------------------|-----------------------|--|
| Chest congestion | <input type="radio"/> | 0 - Never or almost never have the symptom |
| | <input type="radio"/> | 1 - Occasionally have it, effect is not severe |
| | <input type="radio"/> | 2 - Occasionally have it, effect is severe |
| | <input type="radio"/> | 3 - Frequently have it, effect is not severe |
| | <input type="radio"/> | 4- Frequently have it, effect is severe |
| Asthma | <input type="radio"/> | 0 - Never or almost never have the symptom |
| | <input type="radio"/> | 1 - Occasionally have it, effect is not severe |
| | <input type="radio"/> | 2 - Occasionally have it, effect is severe |

- 3 - Frequently have it, effect is not severe
 - 4- Frequently have it, effect is severe
-
- 0 - Never or almost never have the symptom
 - 1 - Occasionally have it, effect is not severe
 - 2 - Occasionally have it, effect is severe
 - 3 - Frequently have it, effect is not severe
 - 4- Frequently have it, effect is severe

Bronchitis

- 0 - Never or almost never have the symptom
- 1 - Occasionally have it, effect is not severe
- 2 - Occasionally have it, effect is severe
- 3 - Frequently have it, effect is not severe
- 4- Frequently have it, effect is severe

Shortness of breath

- 0 - Never or almost never have the symptom
- 1 - Occasionally have it, effect is not severe
- 2 - Occasionally have it, effect is severe
- 3 - Frequently have it, effect is not severe
- 4- Frequently have it, effect is severe

Difficulty breathing

Digestive Tract

Rate the Symptom

- 0 - Never or almost never have the symptom
- 1 - Occasionally have it, effect is not severe
- 2 - Occasionally have it, effect is severe
- 3 - Frequently have it, effect is not severe
- 4- Frequently have it, effect is severe

Nausea or Vomiting

- 0 - Never or almost never have the symptom
- 1 - Occasionally have it, effect is not severe
- 2 - Occasionally have it, effect is severe
- 3 - Frequently have it, effect is not severe
- 4- Frequently have it, effect is severe

Diarrhea

- 0 - Never or almost never have the symptom

Constipation

Rate the Symptom

- 1 - Occasionally have it, effect is not severe
- 2 - Occasionally have it, effect is severe
- 3 - Frequently have it, effect is not severe
- 4- Frequently have it, effect is severe

Bloated feeling

- 0 - Never or almost never have the symptom
- 1 - Occasionally have it, effect is not severe
- 2 - Occasionally have it, effect is severe
- 3 - Frequently have it, effect is not severe
- 4- Frequently have it, effect is severe

Belching

- 0 - Never or almost never have the symptom
- 1 - Occasionally have it, effect is not severe
- 2 - Occasionally have it, effect is severe
- 3 - Frequently have it, effect is not severe
- 4- Frequently have it, effect is severe

Passing gas

- 0 - Never or almost never have the symptom
- 1 - Occasionally have it, effect is not severe
- 2 - Occasionally have it, effect is severe
- 3 - Frequently have it, effect is not severe
- 4- Frequently have it, effect is severe

Heartburn

- 0 - Never or almost never have the symptom
- 1 - Occasionally have it, effect is not severe
- 2 - Occasionally have it, effect is severe
- 3 - Frequently have it, effect is not severe
- 4- Frequently have it, effect is severe

Intestinal or stomach pain

- 0 - Never or almost never have the symptom
- 1 - Occasionally have it, effect is not severe

- 2 - Occasionally have it, effect is severe
- 3 - Frequently have it, effect is not severe
- 4- Frequently have it, effect is severe

Joints/Muscle

Rate the Symptom

Pain or aches in joints

- 0 - Never or almost never have the symptom
- 1 - Occasionally have it, effect is not severe
- 2 - Occasionally have it, effect is severe
- 3 - Frequently have it, effect is not severe
- 4- Frequently have it, effect is severe

Arthritis

- 0 - Never or almost never have the symptom
- 1 - Occasionally have it, effect is not severe
- 2 - Occasionally have it, effect is severe
- 3 - Frequently have it, effect is not severe
- 4- Frequently have it, effect is severe

Stiffness or limitation of movement

- 0 - Never or almost never have the symptom
- 1 - Occasionally have it, effect is not severe
- 2 - Occasionally have it, effect is severe
- 3 - Frequently have it, effect is not severe
- 4- Frequently have it, effect is severe

Pain or aches in muscles

- 0 - Never or almost never have the symptom
- 1 - Occasionally have it, effect is not severe
- 2 - Occasionally have it, effect is severe
- 3 - Frequently have it, effect is not severe
- 4- Frequently have it, effect is severe

Feeling of weakness or tiredness

- 0 - Never or almost never have the symptom
- 1 - Occasionally have it, effect is not severe
- 2 - Occasionally have it, effect is severe
- 3 - Frequently have it, effect is not severe
- 4- Frequently have it, effect is severe

Weight

- | | | |
|-----------------------|-----------------------|--|
| Craving certain foods | <input type="radio"/> | 0 - Never or almost never have the symptom |
| | <input type="radio"/> | 1 - Occasionally have it, effect is not severe |
| | <input type="radio"/> | 2 - Occasionally have it, effect is severe |
| | <input type="radio"/> | 3 - Frequently have it, effect is not severe |
| | <input type="radio"/> | 4- Frequently have it, effect is severe |
| Excessive weight | <input type="radio"/> | 0 - Never or almost never have the symptom |
| | <input type="radio"/> | 1 - Occasionally have it, effect is not severe |
| | <input type="radio"/> | 2 - Occasionally have it, effect is severe |
| | <input type="radio"/> | 3 - Frequently have it, effect is not severe |
| | <input type="radio"/> | 4- Frequently have it, effect is severe |
| Compulsive eating | <input type="radio"/> | 0 - Never or almost never have the symptom |
| | <input type="radio"/> | 1 - Occasionally have it, effect is not severe |
| | <input type="radio"/> | 2 - Occasionally have it, effect is severe |
| | <input type="radio"/> | 3 - Frequently have it, effect is not severe |
| | <input type="radio"/> | 4- Frequently have it, effect is severe |
| Water retention | <input type="radio"/> | 0 - Never or almost never have the symptom |
| | <input type="radio"/> | 1 - Occasionally have it, effect is not severe |
| | <input type="radio"/> | 2 - Occasionally have it, effect is severe |
| | <input type="radio"/> | 3 - Frequently have it, effect is not severe |
| | <input type="radio"/> | 4- Frequently have it, effect is severe |
| Underweight | <input type="radio"/> | 0 - Never or almost never have the symptom |
| | <input type="radio"/> | 1 - Occasionally have it, effect is not severe |
| | <input type="radio"/> | 2 - Occasionally have it, effect is severe |
| | <input type="radio"/> | 3 - Frequently have it, effect is not severe |
| | <input type="radio"/> | 4- Frequently have it, effect is severe |

Energy/Activity

Rate the Symptom	
Fatigue	<input type="radio"/> 0 - Never or almost never have the symptom
	<input type="radio"/> 1 - Occasionally have it, effect is not severe
	<input type="radio"/> 2 - Occasionally have it, effect is severe
	<input type="radio"/> 3 - Frequently have it, effect is not severe
	<input type="radio"/> 4- Frequently have it, effect is severe
Sluggishness	<input type="radio"/> 0 - Never or almost never have the symptom
	<input type="radio"/> 1 - Occasionally have it, effect is not severe
	<input type="radio"/> 2 - Occasionally have it, effect is severe
	<input type="radio"/> 3 - Frequently have it, effect is not severe
	<input type="radio"/> 4- Frequently have it, effect is severe
Apathy	<input type="radio"/> 0 - Never or almost never have the symptom
	<input type="radio"/> 1 - Occasionally have it, effect is not severe
	<input type="radio"/> 2 - Occasionally have it, effect is severe
	<input type="radio"/> 3 - Frequently have it, effect is not severe
	<input type="radio"/> 4- Frequently have it, effect is severe
Lethargy	<input type="radio"/> 0 - Never or almost never have the symptom
	<input type="radio"/> 1 - Occasionally have it, effect is not severe
	<input type="radio"/> 2 - Occasionally have it, effect is severe
	<input type="radio"/> 3 - Frequently have it, effect is not severe
	<input type="radio"/> 4- Frequently have it, effect is severe
Hyperactivity	<input type="radio"/> 0 - Never or almost never have the symptom
	<input type="radio"/> 1 - Occasionally have it, effect is not severe
	<input type="radio"/> 2 - Occasionally have it, effect is severe
	<input type="radio"/> 3 - Frequently have it, effect is not severe
	<input type="radio"/> 4- Frequently have it, effect is severe
Restlessness	<input type="radio"/> 0 - Never or almost never have the symptom
	<input type="radio"/> 1 - Occasionally have it, effect is not severe

- 2 - Occasionally have it, effect is severe
- 3 - Frequently have it, effect is not severe
- 4- Frequently have it, effect is severe

Mind

Rate the Symptom	
Poor memory	<ul style="list-style-type: none"> • <input type="radio"/> 0 - Never or almost never have the symptom • <input type="radio"/> 1 - Occasionally have it, effect is not severe • <input type="radio"/> 2 - Occasionally have it, effect is severe • <input type="radio"/> 3 - Frequently have it, effect is not severe • <input type="radio"/> 4- Frequently have it, effect is severe
Confusion	<ul style="list-style-type: none"> • <input type="radio"/> 0 - Never or almost never have the symptom • <input type="radio"/> 1 - Occasionally have it, effect is not severe • <input type="radio"/> 2 - Occasionally have it, effect is severe • <input type="radio"/> 3 - Frequently have it, effect is not severe • <input type="radio"/> 4- Frequently have it, effect is severe
Poor comprehension	<ul style="list-style-type: none"> • <input type="radio"/> 0 - Never or almost never have the symptom • <input type="radio"/> 1 - Occasionally have it, effect is not severe • <input type="radio"/> 2 - Occasionally have it, effect is severe • <input type="radio"/> 3 - Frequently have it, effect is not severe • <input type="radio"/> 4- Frequently have it, effect is severe
Poor concentration	<ul style="list-style-type: none"> • <input type="radio"/> 0 - Never or almost never have the symptom • <input type="radio"/> 1 - Occasionally have it, effect is not severe • <input type="radio"/> 2 - Occasionally have it, effect is severe • <input type="radio"/> 3 - Frequently have it, effect is not severe • <input type="radio"/> 4- Frequently have it, effect is severe
Poor physical coordination	<ul style="list-style-type: none"> • <input type="radio"/> 0 - Never or almost never have the symptom • <input type="radio"/> 1 - Occasionally have it, effect is not severe • <input type="radio"/> 2 - Occasionally have it, effect is severe

- 3 - Frequently have it, effect is not severe
 - 4- Frequently have it, effect is severe
-
- 0 - Never or almost never have the symptom
 - 1 - Occasionally have it, effect is not severe
 - 2 - Occasionally have it, effect is severe
 - 3 - Frequently have it, effect is not severe
 - 4- Frequently have it, effect is severe
- Difficulty in making decisions
-
- 0 - Never or almost never have the symptom
 - 1 - Occasionally have it, effect is not severe
 - 2 - Occasionally have it, effect is severe
 - 3 - Frequently have it, effect is not severe
 - 4- Frequently have it, effect is severe
- Stuttering or stammering
-
- 0 - Never or almost never have the symptom
 - 1 - Occasionally have it, effect is not severe
 - 2 - Occasionally have it, effect is severe
 - 3 - Frequently have it, effect is not severe
 - 4- Frequently have it, effect is severe
- Slurred speech
-
- 0 - Never or almost never have the symptom
 - 1 - Occasionally have it, effect is not severe
 - 2 - Occasionally have it, effect is severe
 - 3 - Frequently have it, effect is not severe
 - 4- Frequently have it, effect is severe
- Learning disabilities

Emotions

Rate the Symptom

- 0 - Never or almost never have the symptom
 - 1 - Occasionally have it, effect is not severe
 - 2 - Occasionally have it, effect is severe
 - 3 - Frequently have it, effect is not severe
- Mood swings

Rate the Symptom

- | | |
|--------------|---|
| Anxiety | <ul style="list-style-type: none"><input type="radio"/> 4- Frequently have it, effect is severe<input type="radio"/> 0 - Never or almost never have the symptom<input type="radio"/> 1 - Occasionally have it, effect is not severe<input type="radio"/> 2 - Occasionally have it, effect is severe<input type="radio"/> 3 - Frequently have it, effect is not severe<input type="radio"/> 4- Frequently have it, effect is severe |
| Fear | <ul style="list-style-type: none"><input type="radio"/> 0 - Never or almost never have the symptom<input type="radio"/> 1 - Occasionally have it, effect is not severe<input type="radio"/> 2 - Occasionally have it, effect is severe<input type="radio"/> 3 - Frequently have it, effect is not severe<input type="radio"/> 4- Frequently have it, effect is severe |
| Nervousness | <ul style="list-style-type: none"><input type="radio"/> 0 - Never or almost never have the symptom<input type="radio"/> 1 - Occasionally have it, effect is not severe<input type="radio"/> 2 - Occasionally have it, effect is severe<input type="radio"/> 3 - Frequently have it, effect is not severe<input type="radio"/> 4- Frequently have it, effect is severe |
| Anger | <ul style="list-style-type: none"><input type="radio"/> 0 - Never or almost never have the symptom<input type="radio"/> 1 - Occasionally have it, effect is not severe<input type="radio"/> 2 - Occasionally have it, effect is severe<input type="radio"/> 3 - Frequently have it, effect is not severe<input type="radio"/> 4- Frequently have it, effect is severe |
| Irritability | <ul style="list-style-type: none"><input type="radio"/> 0 - Never or almost never have the symptom<input type="radio"/> 1 - Occasionally have it, effect is not severe<input type="radio"/> 2 - Occasionally have it, effect is severe<input type="radio"/> 3 - Frequently have it, effect is not severe<input type="radio"/> 4- Frequently have it, effect is severe |

- Aggressiveness
- 0 - Never or almost never have the symptom
 - 1 - Occasionally have it, effect is not severe
 - 2 - Occasionally have it, effect is severe
 - 3 - Frequently have it, effect is not severe
 - 4- Frequently have it, effect is severe

- Depression
- 0 - Never or almost never have the symptom
 - 1 - Occasionally have it, effect is not severe
 - 2 - Occasionally have it, effect is severe
 - 3 - Frequently have it, effect is not severe
 - 4- Frequently have it, effect is severe

Rate the Symptom

- Frequent illness
- 0 - Never or almost never have the symptom
 - 1 - Occasionally have it, effect is not severe
 - 2 - Occasionally have it, effect is severe
 - 3 - Frequently have it, effect is not severe
 - 4- Frequently have it, effect is severe

- Frequent or urgent urination
- 0 - Never or almost never have the symptom
 - 1 - Occasionally have it, effect is not severe
 - 2 - Occasionally have it, effect is severe
 - 3 - Frequently have it, effect is not severe
 - 4- Frequently have it, effect is severe

- Genital itch or discharge
- 0 - Never or almost never have the symptom
 - 1 - Occasionally have it, effect is not severe
 - 2 - Occasionally have it, effect is severe
 - 3 - Frequently have it, effect is not severe
 - 4- Frequently have it, effect is severe

Appendix C

Small Intestinal Bacterial Overgrowth (SIBO) Protocol

Dietary Recommendations

Follow the low FODMAP diet at the guidance of a healthcare professional. See included Stanford University Medical Center FODMAP handout for a brief introduction to this diet.

Duration

This protocol is designed to take 8 weeks.

Product Overview

Category	Products	Servings per Bottle	Capsules per Day	Duration	Number of Bottles*
Detox Support	Liver-G.I. Detox	60 capsules	2 per day	30 days	One bottle
GI Support	L-Glutamine Powder	73 scoops	2 scoops per day	35 days	One bottle
Microbial Balance	MicroDefense	90 capsules	1 per day	49 days	One bottle
Microbial Balance	A.C. Formula II	120 capsules	4 per day	49 days	Two bottles
Probiotic	Probiotic-5	60 capsules	1 per day	49 days	One Bottle
Digestive Enzymes	Digestive Enzymes Ultra with Betaine HCl**	180 capsules	As needed (up to 6)	Long term	One bottle

*The number of capsules purchased may exceed the amount required by this protocol, due to limited bottle sizes.

**Digestive Enzymes Ultra with Betaine HCl may be replaced with Digestive Enzymes Ultra, if patient responds poorly to Betaine HCl.

Protocol

	Product	Breakfast	Lunch	Dinner
Week 1	Liver-G.I. Detox	1 capsule		1 capsule
	Digestive Enzymes Ultra with Betaine	1-2 capsules or as needed before meal	1-2 capsules or as needed before meal	1-2 capsules or as needed before meal
Weeks 2 – 5	Liver-G.I. Detox (finish 2 days into week 5)	1 capsule		1 capsule
	Digestive Enzymes Ultra with Betaine	1-2 capsules or as needed before meal	1-2 capsules or as needed before meal	1-2 capsules or as needed before meal
	L-Glutamine	1 serving	1 serving	
	A.C. Formula II	2 capsules before meal	2 capsules before meal	
	MicroDefense		1 capsule before meal	
	Probiotic-5			1 capsule
Week 6	Digestive Enzymes Ultra with Betaine	1-2 capsules or as needed before meal	1-2 capsules or as needed before meal	1-2 capsules or as needed before meal
	L-Glutamine	1 serving	1 serving	
	A.C. Formula II	2 capsules before meal	2 capsules before meal	
	MicroDefense		1 capsule before meal	
	Probiotic-5			1 capsule
Weeks 7 & 8	Digestive Enzymes Ultra with Betaine	1-2 capsules or as needed before meal	1-2 capsules or as needed before meal	1-2 capsules or as needed before meal
	A.C. Formula II	2 capsules before meal	2 capsules before meal	
	MicroDefense		1 capsule before meal	
	Probiotic-5			1 capsule



Low-FODMAP Food Plan

PROTEINS

Proteins

Lean, free-range, grass-fed, organically grown animal protein; non-GMO, organic plant protein; and wild-caught, low-mercury fish preferred. Canned meats are allowed if cans are BPA-free and if the meat is free of high-FODMAP fillers.

Animal Protein:

- Cheese (hard): cheddar, colby, feta, havarti, manchego, Pecorino, Swiss— $\frac{1}{2}$ oz
- Cheese (soft): brie, Camambert, chevre, goat cheese, mozzarella—1 oz
- Cottage cheese (dry curd)— $\frac{1}{4}$ c
- Cream cheese—2 T
- Parmesan cheese—2 T
- Ricotta cheese—2 T
- Egg—1, or 2 egg whites
- Fish/shellfish: Anchovies, clams, cod, flounder, halibut, salmon, sardines, trout, tuna, etc.—1 oz
- Meat: beef, buffalo, elk, lamb, pork, venison, other wild game—1 oz
- Poultry (skinless): Chicken, Cornish hen, duck, pheasant, turkey, etc.—1 oz

Plant Protein:

- Spirulina—2 T
- Tempeh—1 oz
- Tofu (firm/extra firm)— $1\frac{1}{2}$ -2 oz

Protein Powder:

- Check label for # grams/scoop (1 protein serving=7 g)
- Bovine collagen, egg, hemp, whey protein isolate

1 serving as listed = 35-75 calories, 5-7 g protein, 3-5 g fat, 0-4 g carbs

Average protein serving is 3-4 oz (size of palm of hand).

LEGUMES

Proteins/Carbs

Organic, non-GMO preferred

- Black beans (canned only)— $\frac{1}{4}$ c
- Green peas (cooked)— $\frac{1}{8}$ c
- Chickpeas (canned only)— $\frac{1}{4}$ c
- Hummus—1 T
- Mung beans (cooked)— $\frac{1}{4}$ c

1 serving = 90-110 calories, 3-7 g protein, 0 fat, 15 g carbs

DAIRY & ALTERNATIVES

Proteins/Carbs

Unsweetened, organic preferred

Dairy:

- Milk (plain): Lactose-free cow, goat—8 oz
- Yogurt (plain): Lactose-free cow, goat—4-6 oz

Dairy Alternatives:

- Milk: Almond, hemp—8 oz
- Milk: Coconut—4 oz
- Milk: Rice—6 oz
- Yogurt (plain): coconut—4-6 oz

1 dairy serving = 90-150 calories, 7-8 g protein, 12 g carbs

1 dairy alternative serving = 25-90 calories, 1-9 g protein, 1-4 g carbs (nutritional values vary)

Eliminate

Buttermilk, evaporated milk, goat milk, heavy cream, kefir, oat milk, sour cream, soy milk, sweetened condensed milk, yogurt (except those listed), and any other lactose-containing dairy products. Check milk substitutes for high-FODMAP sweeteners and additives. Unsweetened homemade dairy alternatives are preferred.

NUTS & SEEDS

Proteins/Fats

Unsweetened, unsalted, organic preferred

- Almonds—6
- Brazil nuts—2
- Chia seeds—1 T
- Chestnuts—5
- Coconut (fresh)— $\frac{1}{3}$ c
- Coconut (dried, shredded)—3 T
- Flax seeds— $\frac{1}{2}$ T
- Hazelnuts—5
- Macadamias—2-3
- Nut and seed butters: Almond, tahini (sesame seed)— $\frac{1}{2}$ T
- Nut flour/meal: Almond— $\frac{1}{4}$ c
- Peanuts—10
- Pecan halves—4
- Pine nuts—1 T
- Pumpkin seeds—1 T
- Sesame seeds—1 T
- Sunflower seeds— $\frac{1}{2}$ T
- Walnut halves—4

1 serving = 45 calories, 5 g fat

Eliminate

Cashews and pistachios.

FATS & OILS

Fats

Minimally refined, cold pressed, organic, non-GMO preferred

- Avocado—2 T or $\frac{1}{8}$ whole
- Butter/ghee (clarified butter, grass-fed)—1 t
- Coconut milk, regular (canned)—1 $\frac{1}{2}$ T
- Coconut milk, light (canned)—3 T
- Mayonnaise (unsweetened)—1 t
- Oils, cooking: Avocado, coconut, ghee, olive (extra virgin), rice bran, sesame—1 t
- Oils, salad: Almond, avocado, flaxseed oil, hempseed, olive (extra virgin), safflower (high-oleic), sesame, sunflower (high-oleic), walnut—1 t
- Olives: Black, green, Kalamata—8
- Pesto (olive oil)—1 t

1 serving = 45 calories, 5 g fat

Eliminate

Chocolate, soybean oil, and any salad dressings or sauces made with sweeteners or other high-FODMAP additives.

Items in orange indicate moderate- and high-FODMAP foods that may be tolerated in reduced serving sizes, as specified. Limit orange foods to a maximum 1 serving from each food category daily.

Notes: Nutritional amounts are based on average values for the variety of foods within each food category.

Dietary prescription is subject to the discretion of the health practitioner.



VEGETABLES Non-starchy

Carbs

- Artichoke hearts** (canned)— $\frac{1}{8}$ c
- Arugula
- Asparagus**—1 spear
- Bamboo shoots
- Beets** (cubed)— $\frac{1}{4}$ c
- Bok choy
- Broccoli**— $\frac{1}{4}$ c
- Cabbage: Green, purple, **Savoy**
- Carrots
- Celeric root
- Celery**— $\frac{1}{4}$ med stalk
- Chard/Swiss chard
- Chervil
- Chives
- Cilantro
- Cucumbers
- Daikon radishes
- Eggplant
- Endive
- Escarole
- Fennel
- Fermented vegetables: **Kimchi, sauerkraut**—1 T
- Green beans
- Greens: Beet, collard, kale, mustard, turnip, etc.
- Ginger root—1 t
- Horseradish
- Kohlrabi
- Lettuce, all
- Microgreens
- Parsley
- Parsnips
- Peppers, all
- Pumpkin** (canned only)— $\frac{1}{4}$ c
- Radicchio
- Radishes
- Scallions (green part only)—2 T
- Sea vegetables
- Snow peas**—5 pods
- Spinach
- Sprouts: Alfalfa, bean
- Squash: Delicata, chayote, spaghetti, yellow, zucchini
- Tomato
- Tomato juice— $\frac{3}{4}$ c
- Tomato paste, sauce (unsweetened)
- Turnips
- Vegetable juice— $\frac{3}{4}$ c
- Water chestnuts
- Watercress

1 serving = $\frac{1}{2}$ c, 1 c raw greens = 25 calories, 5 g carbs

Eliminate

Bittermelon, Brussels sprouts, cauliflower, dandelion greens, garlic, jicama, leeks, mushrooms, okra, onion, shallots, sugar snap peas, sunchoke (Jerusalem artichokes), and sweet corn.

VEGETABLES Starchy

Carbs

- Acorn squash (cubed)—1 c
- Butternut squash** (cubed)— $\frac{1}{4}$ c
- Plantain— $\frac{1}{3}$ c or $\frac{1}{2}$ whole
- Potato: Purple, red, sweet, yellow— $\frac{1}{2}$ med
- Potatoes (mashed)— $\frac{1}{2}$ c
- Root vegetables: Parsnip, rutabaga, taro, turnip— $\frac{1}{2}$ c
- Yam— $\frac{1}{2}$ med

1 serving = 80 calories, 15 g carbs

Organic, non-GMO fruits, vegetables, herbs and spices preferred

FRUITS

Carbs

Unsweetened, no sugar added

- Banana— $\frac{1}{2}$ med
- Blueberries— $\frac{3}{4}$ c
- Cranberries— $\frac{3}{4}$ c
- Dried fruit: Cranberries, currants, Gogi berries, papaya, pineapple, raisins**—1 T
- Grapefruit**— $\frac{1}{2}$ med
- Grapes—15
- Guava—1 med
- Kiwi—1 med
- Melon, all—1 c
- Orange—1 sm
- Papaya—1 c
- Passionfruit—1 med
- Pineapple— $\frac{3}{4}$ c
- Pomegranate seeds**— $\frac{1}{4}$ c
- Raspberries—1 c
- Rhubarb—1 c
- Starfruit—1 med
- Strawberries— $\frac{1}{4}$ c
- Tangerines—2 sm

1 serving = 60 calories, 15 g carbs

Eliminate

Apples, applesauce, apricots, blackberries, boysenberries, cherries, dates, figs, lychee, mango, nectarines, peaches, pears, persimmon, plums, prunes, watermelon, and all canned fruit.

WHOLE GRAINS (100%)

Carbs

Unsweetened, organic preferred

Gluten Free:

- Amaranth**— $\frac{1}{4}$ c
- Buckwheat— $\frac{1}{2}$ c
- Cereal: Corn, quinoa**— $\frac{1}{2}$ c
- Cous cous: Corn, rice**— $\frac{1}{4}$ c
- Flours: Buckwheat, corn, cornstarch, millet, quinoa, rice, teff, potato, tapioca
- Grits: corn (polenta)— $\frac{1}{2}$ c
- Millet— $\frac{1}{2}$ c
- Oats: quick (rolled)**— $\frac{1}{4}$ c
- Oats: steel-cut— $\frac{1}{2}$ c
- Quinoa— $\frac{1}{2}$ c
- Popcorn—1 c
- Rice: Basmati, black, brown, purple, red, white, wild— $\frac{1}{3}$ c
- Sorghum— $\frac{1}{8}$ c
- Teff— $\frac{3}{4}$ c

Gluten Containing:

- Bulgur**— $\frac{1}{4}$ c
- Spelt**— $\frac{1}{4}$ c

Individual portions:

- Bread—1 slice
- Pasta— $\frac{1}{3}$ c
- Tortilla—1, 6 in

All grain servings are for cooked amounts.

1 serving = 75–110 calories, 15 g carbs

Eliminate

Eliminate any breads, cereals, crackers, pastas, etc., made from wheat, rye, and barley. This includes cous cous (wheat), flour tortillas, freekeh, granola mixes, naan, Roti, sprouted bread.

BEVERAGES, SPICES & CONDIMENTS

- Filtered water
- Sparkling/mineral water
- Coconut water**—4 oz
- Coffee
- Fruit juice: Orange, cranberry**—4 oz
- Tea: Black, chai green, peppermint, white
- Tea (diluted): Chamomile, herbal, oolong**
- Cacao powder
- Cocoa powder
- Herbs: basil, cilantro, curry leaves, kafir lime, lemongrass, mint, parsley, rosemary, sage, tarragon, thyme, watercress
- Spices, all
- Condiments: Fish sauce, ketchup (unsweetened), lemon/lime juice, miso paste, mustard, vinegar (apple cider, **balsamic**, rice wine), Worcestershire sauce—use sparingly, suggest 1 T or less per serving

Approved sweeteners: Maple syrup, molasses, Stevia—use sparingly, suggest 1 t.

Eliminate

Artificial sweeteners, dandelion tea, fruit juice (except those listed), garlic salt, honey, and onion salt.

Items in orange indicate moderate- and high-FODMAP foods that may be tolerated in reduced serving sizes, as specified. Limit orange foods to a maximum 1 serving from each food category daily.

Notes: Nutritional amounts are based on average values for the variety of foods within each food category.

Dietary prescription is subject to the discretion of the health practitioner.

