



Lincoln College of Postprofessional, Graduate and Continuing Education

SIBO, Food Intolerance, and the Bi-phasic Diet Protocol

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The SIBO Bi-Phasic Diet[©]



3 month Treatment Protocol to help restore the function of the small intestine

Dr. Nirala Jacobi, BHSc, ND (USA)

WHAT IS SIBO?

Small intestine bacterial overgrowth is a condition where bacteria which are normally found lower in the large intestine have overgrown in the small intestine instead.



Health care disclaimer: This treatment protocol is not intended as medical advice and is best used with the guidance of a health care professional. Please ask your doctor if this protocol is appropriate for your condition before starting.

Abnormal amounts of these bacteria cause a number of problems:

1. **They damage the microvilli** - the absorptive surface of the small intestine. This can lead to malabsorption of nutrients. Microvilli are also responsible for the digestion of small starch molecules from food. When the microvilli are not working, the bacteria use these small starch molecules to cause fermentation. This bacterial fermentation produces methane and hydrogen gas. Not only is this uncomfortable, but causes further damage to the microvilli.

Research has now shown that SIBO is a major cause of intestinal permeability, or "leaky gut", a condition where partially digested food particles are absorbed through the lining of the small intestines where they can cause an immune reaction. Leaky gut also causes bacterial by-products to be absorbed - a major trigger for inflammation

2. Leaky gut can also cause **malabsorption of nutrients** from your food which can cause a wide variety of symptoms such as restless legs at night, fatigue, skin rashes, muscle aching as well as a host of digestive symptoms
3. The bacteria cause the **motility** of the small intestine to slow down or work improperly, causing further fermentation. Restoring proper motility in the small intestines is a major focus of eliminating SIBO for good and your practitioner is likely to prescribe a "prokinetic" supplement or medication
4. Many people who test positive for SIBO will also have a co-infection with fungal organisms, a condition known as **SIFO** (small intestine fungal overgrowth) – the SIBO Bi-Phasic diet helps to address this as well

Please visit SIBOTest.com for more information

WHAT IS THE SIBO BI-PHASIC DIET?

This protocol of diet combined with specific gut healing and antimicrobial phases was created by Dr. Nirala Jacobi. The diet is based on Dr. Allison Siebecker's SIBO Specific Food Guide (found at www.siboinfo.com) a therapeutic diet combining the low FODMAP (fermentable oligosaccharides, disaccharides, monosaccharides, and polyols), and Specific Carbohydrate Diet. The goal of the protocol is to help eliminate bacterial overgrowth from the small intestine.

The Bi-Phasic Diet Protocol uses a phased approach to diet and treatment which limits the side effects of bacterial and fungal "die-off". The die-off process occurs when bacterial and fungal endotoxins released by their elimination are absorbed and cause physical symptoms. Die-off can be intense for some people. Phasing the treatment through stages also aims to prioritise the repair of disturbed digestion over the use of antimicrobials. That means you'll feel better sooner! The first phase of the diet eliminates all grains, legumes, dairy, sugar, and certain vegetables. Canned, processed, and fermented foods are to be avoided in Phase 1 but some will be introduced again in Phase 2.

It is important to note that fermentable fibres are an important part of a healthy diet as they feed our microbiome—the communities of organisms living in our gut which perform many vital functions for us. The goal of treatment is to eventually reintroduce these fibres again. Phasing the treatment through stages also aims to prioritise the repair of disturbed digestion over the use of antimicrobials. That means you'll feel better sooner! The first phase of the diet eliminates all grains, legumes, dairy, sugar, and certain vegetables. Canned, processed, and fermented foods are to be avoided in Phase 1 but some will be introduced again in Phase 2.

WHAT ABOUT FOOD REACTIONS COMMONLY SEEN IN SIBO?

Chronic SIBO sufferers often find that they can be prone to food "reactions". Besides genuine food allergies, for these people, seemingly healthy food can cause reactions such as itching, hives, joint pain, and a host of other symptoms.

The most common culprits are Histamine, Oxalates, and Salicylates which are substances in foods that are normally tolerated but can cause problems when the digestive tract is inflamed and reactive.

Healing the small intestines can lead to resolution of these reactions. See the FOOD REACTIONS section.

PHASE 1: REDUCE AND REPAIR (4-6 weeks)

Reduce

The first phase of the diet focuses on reducing fermentable starches and fibres, which is necessary to starve bacteria of their preferred fuel so they will begin to die-off.

Repair

Repairing the damage to the integrity of the intestinal lining, as well as repairing proper digestion, is a key element of this phase.

Your practitioner may prescribe digestive support, gut healing nutrients and targeted probiotics to repair the intestinal lining and digestive processes during this phase.

This phase is divided into 2 groups to be able to adjust the strictness of the diet.

- **Phase 1 restricted diet** – everyone starts with this diet. Some have to stay on this diet for the entire 6 weeks. How quickly you can move to the semi-restricted diet depends on how quickly your symptoms improve. If your symptoms are greatly improved after the first week, talk to your practitioner about moving into the semi-restricted diet. If at any point during treatment you suffer a relapse of symptoms, please go back to the restricted diet.
- **Phase 1 semi-restricted diet** – this diet builds on the restricted diet but allows for some starches such as rice and quinoa. Your practitioner may start you on this level if you are prone to rapid weight loss or need more energy from starches.

PHASE 2: REMOVE AND RESTORE (4-6 weeks)

Remove

Remove remaining overgrown bacteria and fungi from the small intestines: In this phase of the protocol, antimicrobials will be prescribed by your practitioner.

Even though still a low fibre diet, the protocol becomes a bit more lenient to allow for some bacterial growth so that antimicrobials are more successful.




Restore

The restoration of the normal motility of the small intestines is important to prevent relapse of SIBO. In this phase your practitioner may prescribe prokinetic medication or supplements.

This phase builds on the allowable foods from Phase 1.

Phase 1: Reduce and Repair (4-6 weeks)

All listed quantities are per meal

RESTRICTED DIET 	SEMI-RESTRICTED  <small>Add (or increase) these foods from the Restricted Diet</small>	AVOID UNTIL FURTHER NOTICE 
Protein Meat/Fish/Poultry/Eggs	Protein Meat/Fish/Poultry/Eggs	Protein All legumes
Dairy Products Avoid	Dairy Products Avoid	Dairy Products All Dairy products
Vegetables (unlimited) Bamboo shoots, bok choy, carrot, chives, cucumber, eggplant, witlof, ginger, kale, lettuce, olives, capsicum, radicchio, radish, rocket, spring onion (green part only), tomatoes/sundried, sunflower sprouts, alfalfa sprouts	Vegetables (unlimited) Parsnip[gh]	Vegetables Potato: white, sweet Starch powder: arrowroot, corn, rice, and tapioca canned vegetables, Onions, Garlic, Mushrooms
Vegetables (1 per meal) Asparagus – 1 spears Artichoke hearts – 1/8 cup Beet root– 2 slices Broccoli – ½ cup Brussels sprouts 2ea Butternut or Jap pumpkin – 1/4 cup Cabbage – ½ cup Cabbage, savoy – ¾ cup (Wombok) Celery – 1 stick Celery root – ½ cup Chilli – 11cm/28g Fennel bulb – ½ cup green beans 10 ea Peas, green – 1/4 cup Snow peas 5 pods Spinach 15 leaves zucchini ¾ cup	Vegetables (1 per meal) Asparagus – 2-3 spears Brussels sprouts ½ cup Pumpkin: ½ cup Leek ½ ea Spinach >15 leaves/150g Zucchini 1 cup	
Fruit (2 serves per day) Lemons Limes	Fruit (2 serves per day) Banana- ½ Berries – all varieties – ½ cup Citrus – 1 piece Kiwi – 1 piece Rock melon, honeydew, paw paw, pineapple – ¼ cup Passion fruit – 1 piece Rhubarb – 1 stalk Avocado – ¼ Cherries – 3 Grapes – 10 Lychee – 5 Pomegranate – ½ small or ¼ cup of seeds	Fruit Canned fruit in fruit juice (Apple, apricot, blackberries, custard apple, fig, jam, mango, nashi, nectarine, peach, pear, persimmon, plum, watermelon) – allowed after Phase 2 at discretion of practitioner

Phase 1: Reduce and Repair (4-6 weeks)



All listed quantities are per meal

<p>Grains, starches, breads and cereals</p> <p>Avoid all – this includes all grains, breads, cereals, cakes, biscuits</p>	<p>Grains, starches, breads and cereals</p> <p>Quinoa, White rice: basmati or jasmine only, ½ cup cooked per serve</p>	<p>Grains, starches, breads and cereals</p> <p>Avoid all grains, breads, cereals, cakes, biscuits, except if practitioner ok's rice</p>
<p>Legumes (lentils, beans)</p> <p>Avoid</p>	<p>Legumes (lentils, beans)</p> <p>Avoid</p>	<p>Legumes (lentils, beans)</p> <p>Avoid</p>
<p>Soups</p> <p>Homemade broths: Beef or Lamb bone broths, chicken meat broths</p>	<p>Soups</p> <p>Homemade broths: : Beef or Lamb bone broths, chicken meat broths</p>	<p>Soups</p> <p>Canned soups and soup boullions, broths made from chicken frames</p>
<p>Beverages</p> <p>Water, Herbal teas, black coffee (1 cup daily), black tea</p>	<p>Beverages</p> <p>Water, Herbal teas, black coffee, black tea, Alcohol (clear spirits) no more than 30ml 2x weekly</p>	<p>Beverages</p> <p>Soft drinks, fruit juices, wine, beer, dark liqueurs and spirits, energy drinks</p>
<p>Sweeteners</p> <p>Stevia (pure, not containing inulin)</p>	<p>Sweeteners</p> <p>Stevia, Dextrose, Glucose Organic Honey (clear) – no more than 2 tbsp per day</p>	<p>Sweeteners</p> <p>Xylitol, Artificial sweeteners, agave nectar, maple syrup</p>
<p>Nuts and Seeds</p> <p>Almonds: 10ea, 2T almond flour/meal Coconut: flour/shredded ¼ cup, Ayam blue label coconut milk ¼ cup (or any other brand without thickeners) Coconut cream 2 Tablespoons Hazelnuts 10ea, Macadamia 20ea, Pecans 10ea, Pine nuts 1T, Pumpkin seeds 2T, sesame seeds 1T, sunflower seeds 2t, Walnuts 10ea</p>	<p>Nuts and Seeds</p> <p>Unsweetened Almond Milk 1 cup (Sanitorium or other brand without added thickeners) Hazelnuts 20ea Pecans 40ea Walnuts 100g</p>	<p>Nuts and Seeds</p> <p>Peanuts, Chia or Flax seeds</p>
<p>Condiments</p> <p>Sugarless Mayonnaise, Tabasco, Wasabi, Mustard (without garlic) Vinegar: apple cider, distilled, white/red All fresh and dried herbs and spices but not the spice blends Turmeric and ginger are particularly beneficial as they are anti-inflammatory</p>	<p>Condiments</p> <p>Sugarless Mayonnaise Coconut Aminos 2 tbsp fish sauce All fresh and dried herbs and spices but not the blends</p>	<p>Condiments</p> <p>Spice sachets or pre-mixes READ LABELS! – no maltodextrin, starches, sugar etc Asafetida, chicory root, gums/carrageenans/thickeners, soy sauce/tamari, balsamic vinegar, onions, garlic</p>
<p>Fats/Oils</p> <p>Coconut, olive, infused oils (ie garlic or chili) Ghee, MCT oil, Polyunsaturated Vegetable oil: Flax (low lignin), grape seeds, pumpkin seed, sesame, sunflower, walnut</p>	<p>Fats/Oils</p> <p>Butter, Coconut, olive, infused oils (ie garlic or chili)</p>	<p>Fats/Oils</p> <p>Palm oil, soybean oil</p>

Phase 2: Remove and Restore (4-6 weeks)



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

PHASE 2 DIET ✓	AVOID UNTIL FURTHER NOTICE ✗
Protein Meat/Fish/Poultry/Eggs (organic)	
Dairy Products (Organic) Homemade yoghurt, Butter, Cheese: aged 1 month or more: example parmesan, pecorino	Dairy Products All other Dairy products
Vegetables (unlimited) Bamboo shoots, bok choy, carrot, chives, cucumber, eggplant, witlof, ginger, kale, lettuce, olives, capsicum, radicchio, radish, rocket, spring onion, tomatoes/sun dried, sunflower sprouts, alfalfa sprouts, Parsnip	Vegetables Potato: white, sweet Starch powder: arrowroot, corn, rice, and tapioca canned vegetables, Onions, Garlic, Mushrooms
Vegetables (1-2 serves per meal) Asparagus – 2-3 spears Artichoke hearts – ¼ cup Beet – 2 slices Broccoli – ½ cup Brussels sprouts ½ cup Cabbage – ½ cup Cauliflower – ½ cup Cabbage, savoy – ¾ cup (Wombok) Celery – 1 stick Celery root – ½ cup Chilli – 11cm/28g Fennel bulb – ½ cup Green beans 10 ea Peas, green – ¼ cup Pumpkin: ½ cup Snow peas 5 pods Leek ½ ea Spinach > 15 leaves/150g Zucchini > ¾ cup	
Fruit (2 serves per day) Banana- ½ Berries – all varieties – ½ cup Citrus – 1 piece Kiwi – 1 piece Rock melon, honeydew, paw paw, pineapple – ¼ cup Passion fruit – 1 piece Rhubarb – 1 stalk Avocado – ¼ Cherries – 3 Grapes – 10 Lychee – 5 Pomegranate – ½ small or ¼ cup of seeds	Fruit Canned fruit in fruit juice (Apple, apricot, blackberries, custard apple, fig, jam, mango, nashi, nectarine, peach, pear, persimmon, plum, watermelon) – allowed after Phase 2 at discretion of practitioner
Grains, starches, breads and cereals White Rice: Basmati or Jasmine only. ½ cup per serve, plain rice cakes 2, rice noodle ½ cup cooked, Quinoa ½ cup	Grains, starches, breads and cereals Avoid all - this includes all grains, breads, cereals, cakes, biscuits

The SIBO Bi-Phasic Diet



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

<p>Legumes (cooked) Lentil: brown ½ cup, green and red lentil ¼ cup, Lima bean ¼ cup</p>	<p>Legumes All other legumes and beans</p>
<p>Soups Homemade broths: Beef or Lamb bone broths, chicken meat broths</p>	<p>Soups Canned soups and soup boullions, broths made from chicken frames</p>
<p>Beverages Water, Herbal teas, black coffee, black tea, Alcohol (clear spirits) no more than 30ml every other day</p>	<p>Beverages Soft drinks, fruit juices, wine, beer, dark liqueurs and spirits, energy drinks</p>
<p>Sweeteners Raw Cacao (1 teaspoon per day), Stevia, Dextrose, Glucose Organic Honey (clear) – no more than 2 tbsp per day</p>	<p>Sweeteners Xylitol, Artificial sweeteners, agave nectar, maple syrup</p>
<p>Nuts and Seeds Almonds: 10ea, 2T almond flour/meal, Unsweetened Almond Milk 1 cup (Sanitarium or other brand without added thickeners) Coconut: flour/shredded ¼ cup, Ayam blue label coconut milk ¼ cup, coconut cream 2-3 tablespoons, Macadamia 20ea, Pine nuts 1T, Pumpkin seeds 2T, sesame seeds 1T, sunflower seeds 2t, Hazelnuts 20ea, Pecans 40ea Walnuts 100g</p>	<p>Nuts and Seeds Peanuts, Chia or Flax seeds</p>
<p>Condiments Sugarless Mayonnaise, Tabasco, Wasabi, Mustard (without garlic), Vinegar: apple cider, distilled, white/red Tamari, fresh (not powdered) Miso, fish sauce All fresh and dried herbs and spices but not the spice blends Turmeric and ginger are particularly beneficial</p>	<p>Condiments Spice sachets or pre-mixes READ LABELS! – no maltodextrin, starches, sugar etc Asafetida, chicory root, gums/carrageenans/thickeners, soy sauce, balsamic vinegar, onions, garlic</p>
<p>Fats/Oils Coconut, olive, infused oils (ie garlic or chili) Butter, Ghee, MCT oil, Polyunsaturated Vegetable oil: Flax (low lignin), grape seeds, pumpkin seed, sesame, sunflower, walnut</p>	<p>Fats/Oils Palm oil, soybean oil</p>

FOOD REACTIONS

(do not avoid unless you are sensitive to these foods)

In many cases of SIBO, other foods besides fermentable starches are problematic. Though there are a few more, the main ones that can cause problems are histamine, oxalates, and salicylates.

These are substances in certain foods which are relatively benign in many cases, but can cause symptoms in those with severely disrupted mucosal lining of the small intestines. As this lining repairs, these food reactions should become less common. Talk to your practitioner if you should avoid any the foods below in addition to the Bi-Phasic Diet. You can probably add them back in later on.

FERMENTED FOODS

Fermented foods such as cultured vegetables, sauerkraut, kimchi, as well as miso and yogurt are wonderful for the digestive tract as they contain high amounts of probiotics, or beneficial bacteria.

This is helpful even in the case of SIBO but many people can react to the histamines in these foods. It is suggested to introduce them slowly towards the end of Phase 2.

HISTAMINE

Histamine is a biogenic amine which is naturally high in certain foods.

Symptoms of histamine intolerance include headaches, bloating, cramping, insomnia, itching, and allergies. Histamine is found in a number of foods on the SIBO Bi-Phasic Diet but are particularly high in: **spinach, aged meats, bone broth which has been cooked for hours, tinned fish or meats.**

If these foods cause symptoms, you may want to ask your practitioner for a full list of histamine containing foods.

OXALATES

Oxalates are natural molecules abundant in green leafy vegetables and certain other plant based foods. Well-known in their role in kidney stones, oxalates can also cause gut reactions by irritating the mucosal lining. They usually are not problematic in a healthy digestive tract. Symptoms of oxalate sensitivity include: joint pain, kidney stones, vulvar pain.

The ranges of oxalate content varies but high oxalate foods on the Bi-Phasic Diet are: **almonds, spinach, silver beet, beet root greens, rhubarb, quinoa, cacao.**

(If these foods cause symptoms, you may want to ask your practitioner for a full list of oxalate containing foods)

SALICYLATES

Salicylates are natural plant substances which help the plant defend itself against bacteria, fungi and other pests. Salicylates are toxic to everyone in very high doses, but with a salicylate sensitivity the threshold is much lower before a reaction occurs.

Symptoms of salicylate sensitivity include: itching, stomach pain/nausea, headaches, puffy or burning eyes, sinus congestion.

The range of salicylate content of foods varies, but foods in the SIBO Bi-Phasic Diet highest in salicylates are: **nightshade vegetables: tomato, eggplant, capsicum, chilli, as well as radish, zucchini, berries, avocado, coconut and olive oils**

(If these foods cause symptoms, you may want to ask your practitioner for a full list of salicylate containing foods)

GENERALLY AVOID ALCOHOL

Alcohol is a known gut irritant and disrupter of the normal microbiome of the intestinal tract. It is strongly recommended to avoid all alcohol whilst on the Bi-Phasic Diet. Now we all know this is sometimes very difficult in social situations. In these instances, clear spirits like vodka or gin are much preferred over beer and wine as they do not contain sulfites and high yeast content. Please limit alcohol consumption even in these cases.

Here are some recipes to get you started.

Purchase the SIBO cookbooks at sibotest.com/pages/so-you-have-sibo



Almond Pancakes

INGREDIENTS

2 tbsp almond meal
2 tbsp Coconut flour
1 organic free range egg
1 organic or free range egg white
1/4 cup sparkling water
Pinch of salt
Coconut oil for cooking

METHOD

1. Mix all ingredients together in a bowl until there are no lumps
2. Use 1/4 cup measure to spoon mixture into pan oiled with coconut oil
3. Look for bubbling or browning of the edges before flipping
4. Makes about 4 small pancakes



Pumpkin Soup

INGREDIENTS

500gm pumpkin – skinned & cubed
2 cups chicken broth
1 tblsp ginger
Salt n pepper to taste

METHOD

1. Place all ingredients in crock pot and mix
2. Set on low for about 8 hours or till pumpkin soft
3. Using a blender process mix... either puree or leave a bit chunky



Thai Fish Cakes

INGREDIENTS

400gm boneless white fish – chopped
1 tsp red chillies – chopped
2 tsp fish sauce
4 kaffir lime leaves – chopped
1/2 cup green beans – finely sliced
1/2 cup red capsicum – finely chopped
Coconut oil – for frying

METHOD

1. Place fish, chillies, hone, fish sauce, kaffir lime leaves into a food processor and process til smooth.
2. Transfer mixture to a bowl and add beans, capsicum – mix through.
3. Heat pan. Divide mixture and shape into 8 balls.
4. Fry evenly on both sides for about 4 minutes until golden brown and cooked through.

Here are some recipes to get you started.
[Purchase the SIBO cookbooks at
sibotest.com/pages/so-you-have-sibo](http://sibotest.com/pages/so-you-have-sibo)



Bone Broth

INGREDIENTS

Bones from raw or cooked meat (Avoid chicken frames)
1/8 – 1/4 cup of apple cider vinegar
Water: enough to cover the bones + a bit more

METHOD

- Using a crock pot
 - Bones size 2.5 – 5 inches
1. Add in water and apple cider vinegar
 2. Simmer for 24 hours on low
 3. Remove bones, strain soup
Marrow should fall off the bones



Berry Smoothie

INGREDIENTS

1/2 cup fresh/frozen berries
500ml filtered water
2 tbsp of coconut oil
2 scoops Hydrolyzed Whey (if tolerated) or equivalent low fibre/ carbohydrate protein powder
Ice

METHOD

1. Combine ingredients & blend
 2. Option - sprinkle nutmeg on top
- **Note: Berries have anti-inflammatory properties as well as being high in antioxidants.**



Chicken Curry

INGREDIENTS

700gm chicken thighs – bite sized pieces
1 tsp olive oil
2 chillis – seeded & chopped (optional)
1 Tbs ginger minced
2 1/2 tsp curry powder
2 med size tomatoes – chopped
1/2 cup Ayam Blue label Coconut Milk
1 1/2 cups water
Salt to taste

METHOD

1. Saute salt, ginger, curry powder for 1- 2 minutes, stirring to prevent sticking
2. Add tomatoes and mix well
3. Stir in chicken pieces, mixing it with the spices
4. Pour in water to cover the mixture
5. Cook on medium-low heat for 20-30 minutes or until chicken cooked through

Here are some recipes to get you started.

Purchase the SIBO cookbooks at sibotest.com/pages/so-you-have-sibo



Grilled Salmon and Spinach Frittata

INGREDIENTS

10 organic eggs, whisked
1 large can salmon – drained
12 fresh spinach leaves
½ tsp dried thyme
½ tsp dried basil
½ tsp rosemary
salt & pepper, to taste
1 tbsp olive oil

METHOD

1. Preheat oven to 170oC degrees; prepare tray
 2. Mix eggs, salmon, herbs, salt and pepper.
 3. Pour into prepared tray
 4. Distribute spinach leaves evenly on top
 5. Bake for 18-20 minutes or until middle of frittata is completely cooked through
 6. Serve with topping, like a tomato
- **Serves: 4-6**



Homemade Chicken Soup

INGREDIENTS

Drumsticks, thigh chicken pieces
10 carrots, peeled only
3 celery stalks
Green tops of spring onions
3 sprigs of parsley
Pinch of celtic or Himalayan salt
Water

All ingredients should be organic or free range

METHOD

- Using a crock pot
1. ½ fill with chicken pieces
 2. Add in peeled carrots
 3. Add in onions, celery, parsley
 4. Fill pot with water
 5. Simmer for between 4-8 hours on high or 8-10 on low
 6. Strain soup, skim off layer of fat
 7. Remove onions, celery and parsley, do not consume these at this point.
 8. Remove and puree carrots only and add back into the soup.