

# THE HEALTH FORMULA

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## Rebuilding a Healthy Gut: Probiotics and Prebiotics

Probiotics and prebiotics are both essential to healing the gut, for different reasons. Probiotics primarily play an immunoregulatory role; they help to balance and regulate the immune system and reduce inflammation in the gut. Contrary to popular belief, most probiotics do not quantitatively change the composition of the gut microbiome over time (soil-based organisms may be an exception to this). That is the role of prebiotics, which provide a food source for beneficial bacteria that already live in our gut and thus do increase their numbers significantly over time.

In simple terms, probiotics (and fermented foods which contain them) are the bugs themselves, and prebiotics are the food the bugs need to survive and multiply.

All long-term gut healing protocols should include both probiotics and prebiotics for optimal results. However, it is sometimes necessary to avoid prebiotics early in the treatment process, because in certain cases they can make conditions like small intestinal bacterial overgrowth (SIBO), parasite infections, and fungal overgrowth worse. Like the beneficial bacteria, pathogenic organisms can also “feed” on prebiotics, which has the effect of multiplying their numbers. If I’ve instructed you to avoid prebiotics during the early phase of your treatment, simply omit them from the protocol below for the first eight weeks.

The strategy with probiotics is to take a wide spectrum of microorganisms, including lactic-acid producing bacteria (unless you have elevated D-lactate on the Genova Organix test; see below), soil-based organisms, and beneficial strains of yeast.

The strategy with prebiotics is to include a range of fermentable fibers such as resistant starch (e.g. unmodified potato starch, green banana flour, or plantain flour), non-starch polysaccharides (such as inulin, FOS, larch arabinogalactan, etc.) and soluble fiber (psyllium husk, acacia, glucomannan, etc.). Each different type of fiber stimulates the growth of different beneficial bacteria in the gut, so it’s important to include all of them.

## Supplements You’ll Need

### Probiotics

- Prescript Assist
- FloraMyces by Designs for Health (a special strain of *Saccharomyces boulardii*)
- Primal Defense Ultra\* by Garden of Life

# THE HEALTH FORMULA

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\*If you have SIBO and/or your D-Lactate levels are elevated (on a urine organic acids panel), do not take Primal Defense Ultra above. It contains lactic-acid producing bacteria that could worsen your SIBO. Instead, buy the product below:

- MegaSporeBiotic

## Prebiotics

Important note: prebiotics are best avoided if you have SIBO, fungal overgrowth, or a parasite infection, and/or you are in the first 6-8 weeks of an anti-microbial protocol. Once the anti-microbials have reduced the levels of harmful bacteria or yeast, prebiotics can be introduced slowly and gradually, and are an important part of the healing process over the long term.

- Prebiogen
- Unmodified potato starch\*\*: Bob's Red Mill All Natural, or other certified gluten-free brand
- Glucomannan powder: Now brand
- Psyllium husk powder: Now brand
- Acacia fiber: may be used as an alternative to psyllium husk

\*\*If you are following an autoimmune protocol, or don't tolerate potatoes, choose one (or rotate between both) of the following. You can also take these even if you tolerate potato starch to further diversify your fiber intake:

- Green banana flour: WEDO brand
- Plantain flour: any brand you can find

## Food Sources of Prebiotics

To ensure you are taking adequate amounts of prebiotics, supplementation is often necessary. However, there are some food sources of prebiotics that you may consider adding to your diet to increase variety, if you tolerate these foods well:

- Cooked and cooled\* potatoes, sweet potatoes, and yams
- Cooked and cooled\* parboiled rice or other properly prepared rice
- Cooked and cooled\* properly prepared (soaked or sprouted) legumes
- Dehydrated plantain chips

# THE HEALTH FORMULA

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\* After cooling these foods completely in the refrigerator or freezer, they can be warmed for eating, but the temperature of the food must stay below 130 degrees in order for them to provide the beneficial prebiotics.

## Starting Your Probiotics and Prebiotics

Start slowly with the amount of both probiotics and prebiotics that you take, and gradually increase the dose of both as tolerated, based on symptoms of GI distress. Know that some increased gas and bloating is expected, particularly as you begin taking prebiotics, and for many people this improves after a few days and may then occur only intermittently.

In general, probiotics are best taken with your prebiotics on an otherwise empty stomach.

Research on prebiotics is ongoing as to the specific benefits and role of each, and so it is generally best to take a variety of prebiotics on a rotating basis. And just as our diets have seasonal and even daily variation, it's okay to vary the amount of prebiotics you take each day. For example, if you have a short vacation planned, you may choose to take more prebiotics over the days leading up to your vacation so that you may then go a few days without.

Most people do best spreading their prebiotics throughout the day. If you are focusing on weight loss, you may consider timing some of your prebiotic consumption 15 to 30 minutes before meals as this may increase your feeling of fullness, help with weight loss, and even lower your blood sugar.

Consider mixing your psyllium husk powder with the unmodified potato starch for added benefit. You may mix these into water, almond milk or a smoothie.

## Specific Dose Recommendations

### Probiotics:

- Prescript Assist: Take one capsule daily for seven days, then increase to one capsule twice daily.
- FloraMyces: Take one capsule daily for seven days, then increase to one capsule twice daily.
- Primal Defense Ultra: Take one capsule daily for seven days, then one capsule twice daily for another seven days, and then one capsule three times daily if tolerated.
- MegaSporeBiotic: Take one capsule once daily for seven days, then increase to two capsules once daily. This is best taken about 10-20 minutes after a meal.

# THE HEALTH FORMULA

## Prebiotics:

- Prebiogen: Start with 1/8 scoop daily and increase to 1/2 to 1 full scoop
- Unmodified potato starch\*\*\*: Start with 1/4 teaspoon daily and gradually increase over the course of a couple months to 1-3 tablespoons daily.
- Glucomannan powder: Begin with 1/8 teaspoon once daily mixed in 8 ounces of water and very slowly increase up to 1/2 teaspoon daily.
- Psyllium husk powder: Begin with 1/4 teaspoon mixed in 8 ounces of water and gradually increase to 1 to 3 teaspoons taken in separated doses.
- Food sources: Eat freely within the context of a healthy diet.

\*\*\*You may use plantain flour and green banana flour interchangeably with the unmodified potato starch.

The timing of taking your probiotics and prebiotics is very flexible, and the combination of your prebiotics is best varied. Here is just one example of how you may take your prebiotics and probiotics when you are taking the full doses\*\*\*\* (as you build up to these doses you may omit the doses taken later in the day, for example, only taking the “on rising” supplements):

	Probiotics	Prebiotics
<b>On rising</b>	One capsule of each: Prescript Assist FloraMyces Primal Defense Ultra	1 teaspoon psyllium husk powder 2 teaspoons plantain flour 1/2 teaspoon glucomannan All mixed in 16 ounces of water
<b>30 minutes before lunch</b>	One capsule: Primal Defense Ultra	1 tablespoon unmodified potato starch 1 scoop prebiogen Mixed together in 12 ounces water
<b>15 minutes after lunch</b>	If NOT taking Primal Defense Ultra: Two capsules of MegaSporeBiotic	
<b>15 to 30 minutes before dinner</b>		- If focusing on weight loss consider taking a few teaspoons of potato starch before dinner
<b>Before bed</b>	One capsule of each: Prescript Assist FloraMyces Primal Defense Ultra	1 to 2 teaspoons psyllium husk powder 1 to 2 teaspoons unmodified potato starch Mixed together in 12 ounces of water

# THE HEALTH FORMULA

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*\*\*\*\* If you are still taking antimicrobials (including GI Synergy, Lauricidin and/or InterFase Plus), you will need to take your probiotics one to two hours apart from the antimicrobials.*