

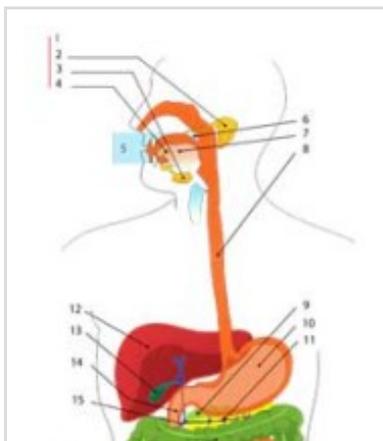


# Changing Your Gut Flora Pt I: Food to Feed the Good Bacteria in Chronic Fatigue Syndrome

by Ken Lassenen | Sep 5, 2013 | Gut | 37 comments

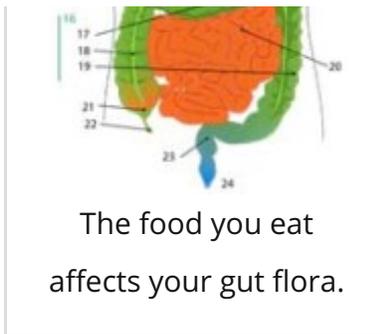


*(Ken's gut series explaining how he recovered from ME/CFS continues with a focus on food and the gut. A reminder – Ken is a layman, not a doctor; check with your doctor before altering your diet or your treatment regime.)*



This is the first in a series of posts of ways to address the stable but dysfunctional microbiome that I believe is the root cause of CFS and some other autoimmune illnesses.

Our gut flora or microbiome can be altered in four ways; through diet, herbs and spices,

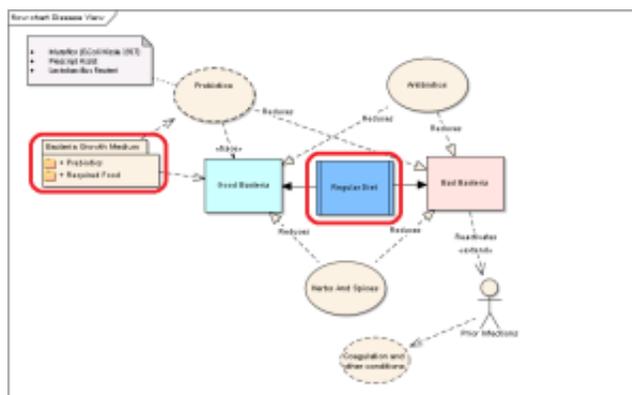


probiotics and antibiotics. This first post will focus on diet. (See the diagram to the right with this posts topic highlighted in red).

## Feeding the Good Bacteria

The main source for this information is, interestingly, agriculture research papers. (More research has been done on keeping animal guts healthy than humans.) For example, there is [a study](#) on the impact of GMO food on the health of pig guts from Australia that found: “*GM-fed pigs had a higher rate of severe stomach inflammation with a rate of 32% of GM-fed pigs compared to 12% of non-GM-fed pigs (p=0.004). The severe stomach inflammation was worse in GM-fed males compared to non-GM fed males by a factor of 4.0 (p=0.041), and GM-fed females compared to non-GM fed females by a factor of 2.2 (p=0.034).*”

The issue may be more complex than just GMO. GMO food is an attempt to “hyper-breed” *better* species. Better means having better characteristics that are commercially important – for example shelf life. Conventional breeding (selecting only plants with desirable traits) may have the same issue.



In the overweening rush to produce plants or animals that tolerate herbicides better, have a longer shelf life, produce higher yields, can tolerate transportation better, etc. blinkers are put on unintended side effects. ‘Heritage’ plants (non-genetically modified plants), for instance,

may have low yields but produce more nutritious plants while modern higher yielding plants may carry secondary costs that are not seen until after a decade of use. (It may be more important to shop for 'heritage' or 'heirloom' species than to buy organically grown produce from more productive but less healthful stock.)

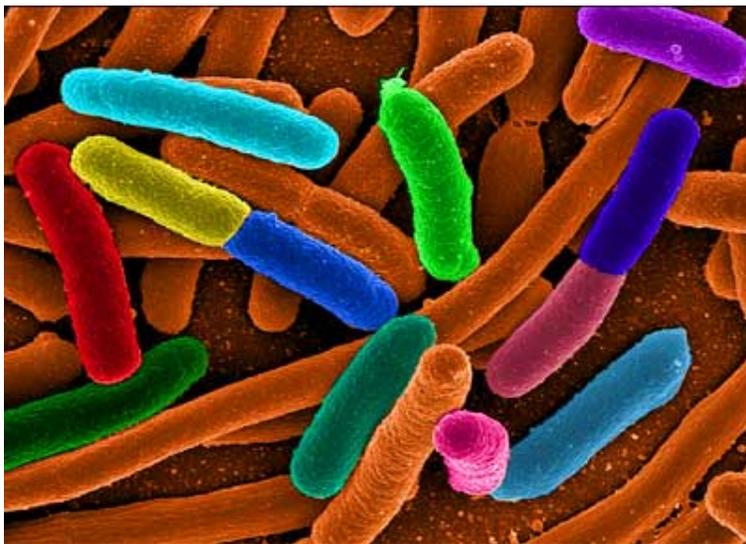
## Prebiotics and Biotic Nutrients

Wikipedia defines **Prebiotics** as are "non-digestible food ingredients that  
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Year Donation Drive [Find out more here](#)

I looked beyond this limited group of items and included **digestible** food ingredients that stimulate the growth of specific bacteria.

## Encouraging *E.coli*

The few virulent strains of *E. coli* give it a bad name but most *E. coli* strains are benign and some are very helpful. Two *E. coli* strains (Nissle 1917, also known as Mutaflor, Colinfant) are used to treat gastroenterological disorders).



Some studies and indirect evidence suggest

Both direct and indirect evidence suggests *E.coli* population may be low in chronic fatigue syndrome. *E.coli*'s production of NADH, for instance, could be why some people with

beneficial strains of *E. coli* may be low in ME/CFS but  
some food may help

ME/CFS benefit  
from NADH  
supplements.

D-Ribose – a precursor to [tryptophan](#) and [histidine](#) -was postulated to help ME/CFS/Fibromyalgia in 2004, and a later study found that 66% of ME/CFS/Fibromyalgia patients taking it improved. *E.coli*, interestingly enough, likes D-Ribose, especially if [L-fuculose](#) is present. [Fructan](#), a fructose polymer, also encourages the growth of *E coli*. Are both these supplements helping *E. coli* rebalance the gut?

Some high fructan foods include:

- Agave 15–22%
- Artichoke, Globe 2.0–6.8%
- Artichoke, Jerusalem 16.0–20.0%
- Asparagus 1.4–4.1%
- Asparagus Root 10–15%
- Barley kernels (very young) 22%
- Cheese spread 4.5%
- Chicory Root 10–15%
- Chocolate 9.4%
- Garlic 15–20%
- Onion 1.1–10.1%
- Pasta 1–4%
- Rye (bran) 7%
- Rye (grain) 4.6–6.6%
- Wheat flour 1–4% (different wheat species impacts different bacteria – [study](#))
- White bread 0.7–2.8%

Of special interest  
is Real Rye Bread  
(100% Rye). Rye



bread encourages the growth of lactobacilli, bifidobacteria, and pediococci better than other FOS according to a [2011](#)



Studies suggest that rye provides an excellent substrate for probiotics

[study](#). *Bifidobacterium* (another bacteria that appears to be low in ME/CFS), releases more minerals from food according to a [2012 study](#). In terms of breads, sourdough bread result in up to 40% more mineral absorption than regular bread according to a [2003 study](#). “Wonder Bread” and similar white breads may be part of the problem.

I use the German (Non-GMO) manufactured rye bread (Mestemacher, Feldkamp) that are available in some deli’s and via Amazon.com.

Needless to say, for many weeks I was having 2-3 slices of German rye bread with goat cheese brie (very good price at Trader Joe’s). I still consume a loaf a week.

On the “kill E.Coli” list are:

- Quercetin
- Zinc

## Neu5Gc Sugar

The Neu5Gc sugar comes from red meat (lamb, pork beef) and dairy products and encourages ***bacteroides*** (which CFS patients also appear to

be low on). Bacteroides are involved in many important metabolic activities in the human colon including carbohydrate fermentation, metabolizing bile acids and other steroids and making use of nitrogenous substances. Food sources include:

- Food Ug/g
- Butter 1.2
- Salmon 1.47
- Cow Cheese 6.4
- Cow Milk 7.74
- Lamb 18.2
- Pork 25.5
- Beef 30.1
- **Goat Cheese 39.9**

## Feeding the Most Important Bacteria

L. reuteri is not found in many yogurt mixes.

### *Lactobacillus*

*Reuteri* is near the top of my list of probiotics. The reason is simple; in almost all mammals *L.reuteri* is the species usually most often seen in healthy individuals. Often studies reported something like 55% of the

*Lactobacillus* species are Reuteri. Most *Lactobacillus* species simply flow

through the gut but do not 'colonize' it; ie they don't stick around. Of all the *Lactobacillus* species, *L. reuteri* is the strain that is most likely to 'stick around' in the gut. *L. reuteri* is also the only *Lactobacillus* strain to produce [reuterin](#) and [cobalamin \(B12\)](#),

*L. reuteri*, however, is NOT most in most probiotics.

My own practice is to buy as many different strains of *L. reuteri* that I can find (unfortunately most are coupled with *L. Acidophilus* (which does not stick around) but this is the best that I can do). For maintenance, I do a week of *L. reuteri* every 2-3 months.

For a more technical description of *L.reuteri*, see

- [http://microbewiki.kenyon.edu/index.php/Lactobacillus\\_reuteri](http://microbewiki.kenyon.edu/index.php/Lactobacillus_reuteri)
- <http://www.plosone.org/article/info:doi/10.1371/journal.pone.0031951>

## Feeding L.Reuteri

*Glutathione is one of L.Reuteri essential foods* (<http://www.ncbi.nlm.nih.gov/pubmed/21585317> ) so make sure that you supplement with it (I would suggest taking that 1 hr before the L.Reuteri) .

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- [\[Effect of acupuncture on serum malonaldehyde content, superoxide dismutase and glutathione peroxidase activity in chronic fatigue syndrome rats\].](#)
- [Increased ventricular lactate in chronic fatigue syndrome. III](#)

- ▼ [increased ventricular lactate in chronic fatigue syndrome. III.](#)  
Relationships to cortical glutathione and clinical symptoms implicate oxidative stress in disorder pathophysiology.
- Lower whole blood glutathione peroxidase (GPX) activity in depression, but not in myalgic encephalomyelitis / chronic fatigue syndrome: another pathway that may be associated with coronary artery disease and neuroprogression in depression.
- Competition for glutathione precursors between the immune system and the skeletal muscle: pathogenesis of chronic fatigue syndrome.

The reason that some people may be non-responders to Glutathione could be as simple as having no L.Reuteri left to feed!

**Bottom line:** L Reuteri and Glutathione should be taken together – taking one without the other may result in little or no effect. Whey may be an alternative to Glutathione – it's documented to increase the production of Glutathione in the body, it is unclear if the

Ken suggests that you take your glutathione and L. reuteri together

Glutathione is in a form usable by L.Reuteri in the gut.

- Glutathione (and no, I don't know which is better: no studies)
  - [Jarrow Formulas Reduced Glutathione 500mg, 60 Capsules](#) \$19
  - [NOW Foods L-glutathione 250mg, 60 Capsules](#) \$ 16
- L.Reuteri containing probiotics
  - [Nature's Way Primadophilus Reuteri, 90 Vcaps](#) \$15
  - [Biogaia Probiotic Straws, 30 Count Boxes](#) \$27

# Diet

## Getting Cheesed Off Microbiome Shifts

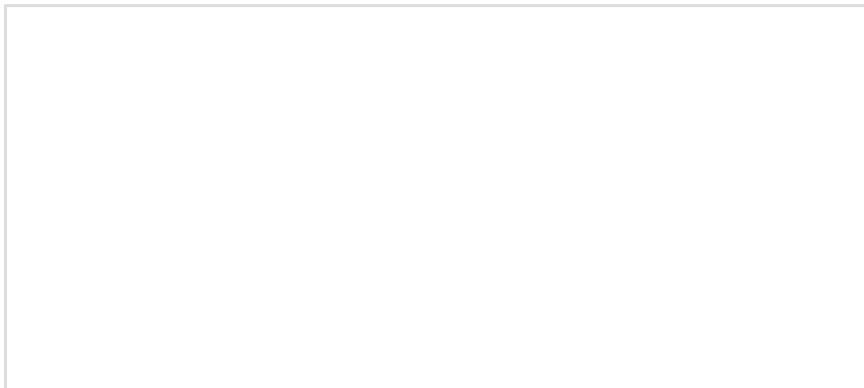
One approach that I researched (and tried) was consuming cheese that have living active organisms. My logic was that bacteria that are normally friendly to a healthy gut (no downside risk), may also be disruptive to unhealthy gut bacteria (upside benefit).

[Weston Price's](#) use of fermented foods such as sauerkraut is a similar approach to modifying our gut bacteria. Our more homogenized and 'sterilized' diet has decreased our exposure to a variety of [healthful microbial cultures used in cheese](#) and fermented foods. My preference are raw milk produced cheeses that have more chance of capturing these "wild" species. Using commercial cultures to make your own cheese or fermented foods may have be less effective.

## Low Budget Options

There are some options for those with a limited budget.

### Goat Cheese



This type of cheese is rich in a sugar (Neu5gc) not found in most cheeses which feeds

Goat cheese contains a substance Ken suggests may be helpful in producing better gut flora in ME/CFS

one of the bacteria that we are low in. Trader Joes has a Goat Milk Brie at a very reasonable in

price.

## Penicillin Roquefort

This is a member of the penicillin family, and while it does not produce conventional penicillin — it does produce many chemicals that could be very healthful. I found that Trader Joe's [blue cheese crumbs](#) (very good price) produced a very minor herx in me — taken at bed time, I fell asleep very fast and slept long. It is found in [Roquefort](#), [Stilton](#), [Danish blue](#), [Cabrales](#).

## Penicillin Candidum

Another member of the penicillin family that is used in [Brie](#) and [Camembert](#) cheeses. Trader Joes has an awesome [Goat Brie](#) at \$2.79 for 4.4 oz. You get both the good sugar and penicillin candidum ! We still pick up 4-6 wheels of it a week for the family.

# Diet Change

One of the contributing causes of my first remission was the removal of gluten from my diet. This was not an intentional change. To address

weight gain that happened as a result of my first onset, my MD put me on a high protein – low carbohydrate diet. The side effect was very low starch and gluten. There are a few diet changes (besides those mentioned above) that have appear to have established benefit for CFS patients. These include:

- [85% Chocolate](#)
- [Licorice](#) (pure stuff not the candy)

Both are known to change the microbiome according to PubMed studies.

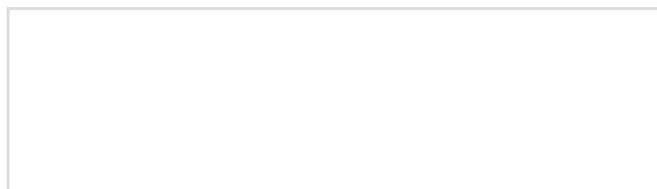
## Flavonoids

Aglycones or flavonoids can also alter [the gut microbiome](#). (You can find a list of high [flavonoid foods here](#).) At the moment, we don't know which flavonoids impact which bacteria. We should note that sometimes more is not better with flavonoids, as well. *“Excessive amounts of polyphenols reaching the colon may **inhibit** the growth of beneficial microbiota, which is responsible for bioconversion of polyphenols and enhancing the bioavailability of those compounds”, in other words, taking too much flavonoids may do far more harm to the gut than good.*

# Changing Your Gut Microbiome

My model suggests that a **stable but dysfunctional** micro-biome is probably present in ME/CFS, and this and other blogs will review ways I used to alter my gut microbiome and move it to a more functional state.

Microbiome disruption begins with food. Your stable but dysfunctional



micro-biome has, after all, ***become tuned to your current diet.*** If you made a radical change of your diet (and I mean radical!) I would expect your stable micro-biome to become more unstable for a while.

Could a radical change in our diet destabilize the gut flora enough to reset it? Check with your doctor before dramatically altering your diet.

What change to make? I have no clear advice, but dropping all of your usual vegetables and replacing them with turnips and beets for 3 weeks may be a start. Add unusual spices. You may have to *forget* about eating a healthy balance diet for 3 weeks. Just fish for 3 weeks; salads (without dressing) for 3 weeks; beans for 3 weeks; you want to have nothing in common with your usual eating habits. You actually want to upset your digestive system!

(Check with your doctor before beginning any radical dietary changes....)

## Summary

The above are not complete by any stretch of the imagination but this is the easiest approach to start correcting the dysfunctional microbiome that I have found. Will you see a dramatic effect or have a strong herx?

Probably not, but some of your symptoms may alter or disappear over several weeks. But be warned, you may have farts that qualify as smells of mass destruction (of bad bacteria) or mild diarrhea. These are signs of thing changing — hopefully for the better.

## Changing the Gut Flora Series

## Changing the Gut Flora Series

- [Changing Your Gut Flora Pt I: Food to Feed the Good Bacteria in Chronic Fatigue Syndrome](#)
- [Changing Your Gut Flora II: Changing the Gut Ecosystem with Probiotics](#)
- [Changing Your Gut Flora III – Change Agents: Prescription and Herbal Antibiotics to Alter the Gut Flora in Chronic Fatigue Syndrome](#)

Find more of [Ken's blogs here](#).

*Ken Lassesen is a recovered patient not a doctor. His blogs are for informational purposes only. Please check with your health practitioner before changing your treatment protocols.*

## 37 Comments

**M.C.** on September 5, 2013 at 2:38 pm

I say bring on the smelly farts Ken!

I think many of us have a sense that our 'guts' are playing some sort of pivotal role in our illness. One of my first major symptoms seventeen years ago was unceasing nausea and pain in my stomach that has stayed with me all these years. I have recently made some significant changes to my diet and am feeling for the first time in all these years

...coming for the first time in an almost year that my digestive system is undergoing a shift which is very exciting. I turned to the ketogenic diet, very high in fats, and low in carbs (mostly low carb green veggies, sprouted almonds, berries) , under 50 grams per day, with only moderate protein intake (the Ron Rosedale diet essentially), have incorporated lots of coconut oil into my diet, and have also incorporated certain anti microbials (monolaurin, garlic, oregano oil), and 3-4 tablespoons per day of organic turmeric powder, copious amounts of fresh parsley and cilantro, and some specific vitamins and minerals that I feel I am not getting optimum amounts of in my diet, and whole milk kefir..... and finally I feel that my gut is undergoing a major shift on this new protocol. I feel that the coconut oil (which is strongly antimicrobial via its medium chain fatty acids) the additional anti microbial agents, the turmeric, and the kefir are causing the shift. Though other foods and the high fat intake may certainly also be playing a role.

Its interesting your mentioning the German Rye bread. Though I am personally no longer a grain consumer I do remember fondly the depictions of some of the classic and hearty 'peasant' breads that Weston Price mentioned in his book Nutrition and Physical Degeneration and feel that, if one is

going to eat grains, it makes a big difference which grain based foods you eat, how they are prepared and processed, and know that many of these 'older' recipes from old world Europe and around the world were both nutrient dense and lower glycemic, including the rye breads and the sour dough breads which research has also shown significantly reduce their glycemic index (if one is concerned about this).

I feel as you do Ken that its important for us, being ill year after year, to try to change things up in order to try to 'shift' the body toward wellness, with hope using the idea of epigenetics partly. Trying to create a shift, any shift, through diet, is a good place to start.

Also loved the point about the newer breeds of plants possibly having hidden deleterious characteristics and or reduced nutrient density. Very interesting.

Thanks for the great Post Ken. Looking forward to the next one.

**Aravir** on September 5, 2013 at 3:11 pm

Many people with CFS trying to radically change their microbiome through "human probiotic transplants" (fecal microbiota transplant).

<http://thepowerofpoop.com/>

**Pamela** on September 5, 2013 at 3:12 pm

Any opinions on the Jarrow Femdophilus, which contains L Rhamnosus and LReuteri RC-148?

Do you think this is a good combination?

**Ken Lassesen** on September 5, 2013 at 4:56 pm

IMHO, yes — my preference is always a single species at a time. Just two species is the next best (especially if Lactobacillus Acidophilus is NOT one of them)

**Elaine Coffman** on September 5, 2013 at 3:14 pm

“One of the contributing causes of my first remission was the removal of gluten from my diet.”

Boy, you really struck a chord with that comment. With the help of my ME/CFS doctor and multiple IV cocktails over the last 3 years I had gotten my CFS into remission. However my rheumatoid & osteoarthritis has been really acting up lately along with

has been really acting up lately along with severe aches and pains so my doctor asked me to go gluten-free for a month. It's been 2 weeks, and I feel like my chronic fatigue has reawakened with a vengeance. The arthritis has calmed down to be almost unnoticeable, and the aches and pains have subsided but the CFS has left me utterly wasted. At this point I am ready to try some high-quality non-GMO breads to see what effect they have. It's interesting that in the barely 2 weeks we have been on the gluten-free diet, my husband has been exceptionally tired too, and he is in excellent health. It's also interesting that I can consume both goat cheese frequently and small amounts of 85% chocolate and neither has a negative impact. Thank you, thank you, thank you for your research, and for such a timely article. I'm really looking forward to the next installment.

**Issie** on September 5, 2013 at 3:27 pm

Interesting topic and one that I'm on board with.

My diet change seems to have been one of the best things I've done for myself. Although, because of being low-fat, whole food vegan (which does not included any animal products), some of these suggestions are not an option. This can however be

accomplished for us that are true vegans. There are ways we can do it with veggies, fruits and certain grains – and a few alternative supplements. I too am gluten free and rye, barley and wheat are not an option as these grains have gluten in them.

One food that I've found to be a pre-biotic is jicama.

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<http://www.holistic-medicine-md.com/rfth-jicama.html>

The soluble fiber found in jicama (and our old friend asparagus) is called inulin (pronounced IN-yew-linn). Inulin has been the subject of intensive research in recent years, and the news adds important reasons to eat plenty of foods high in this fiber. Inulin promotes bone health by enhancing absorption of calcium from other foods, thus protecting against osteoporosis. It promotes heart health because soluble fiber decreases LDL cholesterol, and your heart will be healthier when you are an ideal weight. Inulin functions in the intestine as a prebiotic, meaning it is a food for the “good” bacteria that keep your colon healthy and balance your immunity

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It's wonderful in salads and to eat as a snack with say salsa or humus. Very good for the

digestion. I use lots of lemon and that's good for the health of the liver which helps our immune system and detoxes us. (Very tasty on broccoli and salads – instead of dressing. Also using vinegar on salads is good and helps with the gut ecology too – also helps with ph balance of the body. Is good as a natural type of anti-biotic. Raw apple cider vinegar with mother will kill strep within 24 hours – according to some researchers. And I've tried it and it worked for me.)

The one thing we have complete control over is our diet. It's one of the hardest things to change and because of habit is the one thing people refuse to change. Our eating habits is something that generations pass down and could explain some of the reasons for genetic mutations and why family generations of people have the same problems. (I know that's a stretch of the imagination. But, think about it.)

<http://ghr.nlm.nih.gov/handbook/inheritance?show=all>

It's the one thing we can do for ourselves that doesn't require a doctor to help us with. Except for maybe having a blood draw every few months to make sure we are doing it healthy. (Especially for us vegans that may need to supplement B12, iron and iodine and probably Vit D.)

I'm having wonderful improvements in my health and my list of ailments is long (but getting shorter). Best thing I've done for myself to date. Working on my immune system with diet and low-dose antibiotics and supplements. Win, win and winning!

Issie

**Penny** on September 5, 2013 at 5:22 pm

What if you're allergic to Penicillin? How would this effect me?

**Ken Lassesen** on September 5, 2013 at 5:26 pm

That is a question for a MD/ND to answer — ideally from actual studies and not speculative inference.

**Caledonia** on September 6, 2013 at 12:49 am

Timely article, as I've been researching treatments for leaky gut recently.

I found this amazing information regarding leaky gut in pigs fed genetically modified corn – “meat processors in the US typically import intestinal sausage casings from New Zealand, since the quality of the intestines in

US livestock is too poor.”

<http://www.responsibletechnology.org/autism>

If this is what is happening to livestock, imagine what is happening to us. Between antibiotics, gluten and GMOs, as a nation, our guts are in terrible shape. Have you noticed the proliferation of tv ads for IBS medicines, yogurts which regulate digestion, proton pump inhibitors and other heartburn meds? Apparently there’s a great market for digestive treatments, but of course, these medicines only provide symptom relief and won’t fix the root of the problem.

It all goes back to what Ken is talking about, which is our gut flora. My research is showing that a 4R gut rebuilding program is the best way to treat gut issues.

**Ken Lassesen** on September 6, 2013 at 7:48 am

Whenever I see “best way”, I automatically ask for the independently conducted studies comparing it against alternatives. There is a tendency to slip into ideological best, which may not reflect actual results.

I am interested in getting a URL for the 4R gut rebuilding program. I am doubtful that “one program fits all”, just as I am that “one antibiotic treats all bacterial infections”. There are massive complexities, which is hard for a healthy mind to understand, little more a cognitive impaired CFS mind.

However, I am interested in knowing more about it, especially on doing a gap analysis.

**Brent** on

September 6, 2013

at 12:12 pm

I also believe normalizing gut flora to be helpful in reducing symptoms and a corner stone in the overall recovery process. Like you, I agree that one program does not fit all and it needs to be

individualized  
depending on  
ones current  
digestive issues.  
Dr Sarah Myhill  
has a good piece  
written on her  
website titled,  
Fermentation In  
The Gut and CFS,  
which I came  
across recently  
and may be  
helpful to some.

<http://www.drmyhill.co.uk/wiki/Fermentati>

**Caledonia** on

September 8, 2013

at 12:42 pm

I'm having trouble  
finding a  
definitive version  
of the 4R  
program.  
Everyone seems  
to have a little  
different take on  
it, but the basics  
are:

Remove – remove

gluten and other  
offending foods  
from the diet, do  
a stool test and  
remove any bad  
bugs or parasites  
which show up

Replace – replace  
things out of  
whack like  
stomach acid or  
digestive  
enzymes, start  
rebuilding the  
mucosal lining

Reinoculate – put  
the good bacteria  
back in, again  
guided by stool  
testing. It's  
possible to get an  
overgrowth of  
good bacteria  
too. What you  
want is a balance.

Repair – repair  
the gut lining, this  
will fix leaky gut

There seems to

be a lot of flexibility in how long to do each step and whether or not to combine steps. Different people recommend different supplements to accomplish the same thing. You may have to repeat stool tests several times and use a couple different types of stool tests to detect all the bad bugs.

Here are a couple of pretty good links:

Metamatrix  
Interpretive  
Guide:

<http://www.metamatrix.com/files/test-menu/interpretive-guides/GI-Effects-IG.pdf>

The 4R program

· · · · ·

is described on page 2. It also has great info on what herbs/meds will kill what bugs.

2001 Deann Liska paper:

<http://www.afmcp-sa.com/Protocols/MET558%204R%20ANSR.p>

This one is older information, but it's nice because it has references to studies to back it up.

I'm trying to get hold of the latest Institute of Functional Medicine textbook via interlibrary loan to see if they've updated the program.

I can personally attest that if you don't remove the bad bugs, and do

all the other steps, it's not going to work. This is what my naturopath had me doing for years and it was a giant FAIL. My leaky gut is worse than ever and I still have candida. So now I have to go back to square one and figure this out myself.

**Stephen in Atlanta** on September 6, 2013 at 6:24 pm

I am glad to see that cheese still has a place in this food list! A lot of these things recommend ditching the cheese all together, and it's not that I can blame them. In any case, that was certainly a surprise. On the other hand, I was also glad to see that probiotics were listed in here. I'd say that these are a good thing to add to your diet regardless of your level of health. Studies have shown that probiotics can help lower high cholesterol in a safe and natural way, essentially replacing the need for statins and other drugs. There are a number of good

articles on this research:

<http://www.clinicaltrials.gps.com/high-cholesterol/reduce-cholesterol-with-new-probiotic/>

**Judy** on September 6, 2013 at 7:03 pm

I can't find any of the probiotics without acidophilus. But I did find one that has both infantis as well as reuteri. The bad news is that it's \$54! Only one capsule a day, but still.

**Ken Lassesen** on September 6, 2013 at 10:30 pm

I will put together a list of available (via Amazon or other sources) that are available that do not have Lactobacillus Acidophilus in it. One of them is available in many pharmacies in both Canada and the US: "Align Digestive Care Probiotic Supplement". It's around \$30-\$35 for one month. Mutaflor is \$70 /month (excluding shipping that usually run \$10+ depending on volume) if you can navigate the logistics of getting it.

<http://ctsremission.wordpress.com/2013/08/1//checklist-of-atypical-cfs-recommendations/> are the ones that has significant research with appropriate results.

I will attempt to get a list (of both documented beneficial, and not documented) blends and singletons by the end of the weekend.

**Issie** on September 8, 2013 at 11:22 am

I just got this update from LifeExtension on gut bacteria being linked to obesity and diabetes. More reasons to get our gut ecology into better balance.

Also, mentions that a high fat diet – creates more problems. If you eat a low-fat diet it helps to repair some of the damage to the gut bacteria.

Interesting read.

[http://www.lef.org/newsletter/2013/0906\\_Weight-Gain-Linked-To-Poor-Gut-Bacteria.htm?utm\\_source=eNewsletter&utm\\_medium=email&utm\\_term=Article&u2&l=0#article](http://www.lef.org/newsletter/2013/0906_Weight-Gain-Linked-To-Poor-Gut-Bacteria.htm?utm_source=eNewsletter&utm_medium=email&utm_term=Article&u2&l=0#article)

Issie

**Pam** on September 9, 2013 at 8:25 am

Very interesting articles. I can tell something is wrong but can't explain what it is. Just a gut feeling. Thank you for all this information.

**Selma** on September 9, 2013 at 7:12 pm

I've been thinking of the gut brain connection-and the idea that the gut is the culprit. But, what if the brain is the culprit and healing the brain, heals the gut? This could also explain the healing success of Ashok Gupta's amygdala retraining and Annie Hopper's DNR program. Heal the limbic system, and the gut heals. We all know how emotions affect our GI system. I think about that lately when I read the 10,000 ways to heal the gut.

**Ken Lassesen** on September 9, 2013 at 7:25 pm

The thing to remember is that direct line causality is rarely the case with biological systems. Stress increases certain chemical, those chemicals encourages certain bacteria, those bacteria releases other chemicals that may immede

chemicals that may impede cognitive levels, resulting in more stress. Thus the bacteria got a kick-start and is now milking your system for all that it is worth.

Cognitive programs that reduce stress results in less of those chemicals, which can eventually cascade into remission for some. For others, appropriate probiotics or antibiotics may be needed.

**Anne** on

September 10, 2013

at 12:33 pm

I agree with Ken on this. I don't know anyone who has fully healed on Gupta's programme. The people I know who say they are better seem to all have horrible gut problems that they still think they are the fault

they are the result  
of their brains,  
even when they  
have religiously  
done the  
program for  
years.

I think it is likely  
impossible to  
fully heal without  
re-balancing the  
gut biome.

**Pamela** on September 10, 2013 at 2:58 pm

Hi Ken,

Do you think while you are making up the  
list of probiotics without  
acidophilus, you could recommend a reliable  
source of piracetam?

Sorry, know this is off topic, but when I tried  
to click on a link in one  
of your previous articles for piracetam, it  
seems like amazon is no  
longer selling it, not available on iherb  
either, my other choice.

I did order phenylpiracetam from Liftmode,  
its made in China, so  
don't know if that's o.k. would prefer made  
in US if possible.

Also ordered the prescript assist from

also, ordered the prescription from Amazon, the product description says it breaks down toxic chemicals, do you think this might cause a severe herx in someone with possible mold exposure? It's for my daughter, who has cfs, and is in her last semester of a nursing major, so I'm kind of worried about that,

Thanks for everything your do!

**Ken Lassesen** on September 11, 2013 at 1:40 pm

The model that I am using has everything being a potential herx inducer. I have seen severe herx in a few people from every probiotic I have suggested. The herx is caused by the chemicals being dumped by what is being eliminated.

Given what she is doing, I would suggest Haritaki, Neem and Tulsi. They are used in Indian native medicine for cognitive issues — and had a dramatic impact on my cognitive issues.

Discontinuation is generally

Piracetam is generally manufactured in China — look at fitness websites for it. We have a 10lb container of it that we are slowly working thru — there have been constant rumors of it being removed by the FDA, so we stocked up on it a few years ago. The other nootropics are also good, but more expensive. Each nootropic tend to have slightly different effects.

**Allan Balliett** on September 11, 2013 at 6:53 am

Great article.

I'm concerned that the recommendation for 'heirloom foods' doesn't go far enough. What's an heirloom technically? A food over 20 years old? Regardless, the process of domestication required intensive breeding of most food stuffs. Few foods aren't larger, more productive, more filled with sugar than they were in nature. Purslane and Lambs Quarters are two exceptions, of course.

But, what, really, is the deal? Take take the potato: even the heirloom varieties have had thousands of years of selective breeding and god-knows-what happen to them.

are they really REAL FOOD?

On the other hand, heirloom plants, generally, bring more nutrients out of the soil and into the food.

Just askin' 😊

**Ken Lassesen** on September 11, 2013 at 1:34 pm

No argument from me. Everyone must balance their beliefs against costs etc. It is very much a personal decision (and there are no **\*\*good\*\*** studies backing the decision).

**M.C.** on September 11, 2013 at 7:27 am

Hello Ken,

I have a couple of questions for you if you're still reading the comments section which would be helpful if you could answer them:

1. You mention in the "Encouraging Ecoli" Section two Ecoli Strains used to treat Gastro Infections, Nissle 1917 which is in the MutaFlor I believe and then you mention Colinfant.....I was a little unclear as to whether the Colinfant is another Nissle 1917 Probiotic or if the Colinfant is in reference to a second Ecoli strain. Could you clarify?

a second EColi strain. could you clarify:

2. In reference to Mutaflor after doing some research, the Company in Canada which manufactures it no longer will ship to the US due to an FDA ruling on this product. Do you have any insight on how I might be able to get some into my hands regardless? I have friends in Canada who might be willing to order it to them and then ship it to me in the mail. Do you have any insight as to whether its possible to 'sneak' it through via mail from Canada? I also live in Massachusetts three hours from the border. Do you know of anyone who has purchased it in Canada at a brick and mortar location and then tried to 'drive' it through customs?

3. Also in the "Encouraging Ecoli" Section you mention Quercetin and Zinc as E coli Killers. I was a bit confused by this. If we want to encourage the growth of Healthy strains of Ecoli are you suggesting avoiding zinc and quercetin or were you referring to possibly using them as anti microbials if one feels that one has pathogenic strains of E Coli?

Thanks!

Mark

**Ken Lassesen** on September 11,  
2013 at 1:32 pm

Excellent questions (and I get emailed on every comment – so expect answers, work permitting).

1. Colinfant is Escherichia Coli Cryodesiccata (See <http://www.sukl.eu/modules/medication/detail.php?kod=0053494>) and Mutafor is Escherichia Coli Nissle 1917.

See

[https://www.myhealthbox.eu/en/search.php?s=ESCHERICHIA+COLI&adv=false&filter\\_principio\\_attivo=](https://www.myhealthbox.eu/en/search.php?s=ESCHERICHIA+COLI&adv=false&filter_principio_attivo=)

For a list of available E.Coli probiotics (note many are intended for vet use and some require prescriptions).

2. I just picked up a shipment from Canada last week. I actually picked it from a UPS depot where I got it delivered. You need to make sure you are notified immediately when it arrives so you can get it quickly before the ice packs warm up. As for crossing the border, my usual tactic is simple and honest: I pick up a tub of Yogurt and Alene probiotic in Canada and declared “Wife’s favorite yogurt and probiotics”

— having the bag with the above beside me.. “Don’t ask for the species, don’t tell the species”. I had to get my daughter to do the actual order because it must be done by a Canadian PayPal account... She is working in Canada at the moment.

3. Those are on the avoid list — I rather eliminate bad E.Coli via aggressive good E.Coli.

**M.C.** on September 11, 2013 at 1:45 pm

Thanks Ken for the reply. Just a quick follow up to ordering Mutaflor. I did call them (Medical Futures Inc. located in Richmond Hill Ontario) and they told me flat out they would not ship it to a US address. So I'm wondering how did you get it shipped to a UPS depot in the United States I wonder? Did you place an order with Medical Futures? And do they somehow allow shipment to the US if you ship it to a UPS depot rather than a home/business address? Or did your daughter order it within Canada and then shipped it to you to a UPS depot. And if your daughter shipped it to you via the UPS depot did you ship it that way so as to avoid detection in some way, as opposed to your daughter shipping it to

opposed to your daughter shipping it to your home, which might make them 'check' the package as it moves through customs? Sorry for all the questions, it just seems the devil is in the details 😊

Thanks for the other answers and thanks for all that you are doing!

Mark

**Ken Lassenen** on September 11, 2013 at 1:49 pm

UPS Depot in CANADA. If your Canadian friends are at home, (shipment must be signed for), have it sent there. Have them unpacked it and put in the fridge until you can get up and visit them (and leave with it).

Trying mail risks warm-mutaflor and too many questions....

**M.C.** on September 11, 2013 at 3:14 pm

Ok Ken great.  
Thank you!

**Ken Lassenen** on September 14, 2013 at 9:02 am

**Neil Lassen** on September 14, 2013 at 9:05 am

By popular request, I have started a page on probiotics that do not have Lactococcus acidophilus in them. I will be updating the page regularly:

<http://cfsremission.wordpress.com/2013/09/14/probiotics-lack-lactobacillus-acidophilus/>

**Sandra** on September 17, 2013 at 10:56 pm

Hello,

My Doctor told me to get a juicer.

Betroot, Celery, Ginger, Lemon, Spinich.

Small amount Orange, works wonders.

Avoid Wheat, its just for cows. So go gluten

free. Have a drink everyday it helps a lot.

**Cort Johnson** on September 18,

2013 at 7:39 am

Sounds yummy.. thanks for the tip 😊

**Leandra A.** on November 17, 2013 at 8:24 am

Hello,

I developed in 2009 (age 59yrs), secondary trimethylaminuria (or TMAU the short version). TMAU is a metabolic disorder that can be inherited or acquired. TMAU1 or TMAU, is derived from intestinal bacterial

degradation of foods rich in choline and carnitine and is normally oxidized by the liver to odorless trimethylamine N-oxide what is then excreted in the urine.

So, foods rich in choline exacerbate the condition. Also, foods high in sulfur will cause symptoms of fish odor or other unpleasant noxious odors.

In my case I will smell of dirty gym socks or sewage. I went on a gluten, dairy and red meat free diet and seem to have the symptoms under control. I

I wanted to order the gut flora supplements but because it contained fish oil and choline it was a no-no for me. I was wondering if you have any suggestions what else I could take for this problem which is psychologically taking a huge toll on my mental status.

Thank you,  
Leonor

**Ken Lassesen** on November 17, 2013 at 11:10 am

I am unclear about what you mean by "gut flora supplements". Do you mean Duraflora

(<http://www.sourcenaturals.com/products/GP1920/>) which contains no fish oil. I cannot recall any probiotics

cannot recall any probiotics that contain fish oil. Nor any demonstrated probiotics containing them.

This article suggests strongly that it may be a gut bacteria disorder

(<http://www.cleveland.com/healthfit/index.ssf/2011/04/>

) which suggests that aggressive probiotics treatment may be significant. I would suggest checking out the list at:

[http://cfsremission.wordpress.com/2013/09/14/probiotic-lack-lactobacillus-](http://cfsremission.wordpress.com/2013/09/14/probiotic-lack-lactobacillus-acidophilus/)

[acidophilus/](http://cfsremission.wordpress.com/2013/09/14/probiotic-lack-lactobacillus-acidophilus/) . Because this disorder is connected to fat (and thus dairy products), I would suggest avoiding all Lactobacillus species which are ones that digest milk products. Fortunately, this is possible.

Not medical advise, consult with your health professional first.

**dn0999** on April 7, 2014 at 4:14 am

Thanks for sharing this, it's gonna help me a lot, I'm currently at war with e-coli.

Do you know how would one get a e-coli

dysbiosis fixed?

Here's the context : Mutaflor was great for me for a while, then I found out I was fatigued and had foul smelling loose stools. I stopped taking pills and my symptoms went away in a few days. Somehow it must have given me dysbiosis. It got worse : I was taking enteric coated capsules so I thought, well, maybe if the capsule releases late in the small intestine, just before the colon, then it avoids being balanced by the small intestine flora thus creating a dysbiosis in my colon. So I tried Mutaflor's liquid solution product. Bad idea : Now the symptoms are back and they won't stop even after I stopped Mutaflor. So I guess the dysbiosis has moved to my small intestine :/ I've been trying to rebalance it for the last 4 days, using probiotics, homemade fermented vegetables... No change... I'm gonna try switching my diet to beets + turnip as you suggested, hope I'll find a way before I get too exhausted!

**Ken Lassesen** on April 7, 2014 at 5:17 am

Perfect timing to ask, I am starting a series which deals with HIGH E.Coli which typically gets a IBD diagnosis: UC and Crohn's disease being common

progression from IBD and CFS  
in my opinion.

<http://cfsremission.wordpress.com/2014/04/06/crohns-disease-a-review-part-1/>

However, be sure that you have E.Coli overgrowth be getting appropriate testing to measure your level.

As a FYI — having foul stools implies die off. I have experienced the same and just kept going, **\*\*rotating\*\*** probiotics weekly.

**Paul Fitzgerald** on March 6, 2020 at 7:33 pm

Hi , just a note to say please avoid Ecoli Nissle 1917 , regularly taken in the supplement Mutaflor. That strain has been found to produce colobactin which can cause bowel cancer, the association was previously not well understood. As someone who supplemented Witt it for over 10 years I wish I had known before.

<https://www.theguardian.com/society/2020/feb/27/common-toxin-made-in-gut-can-cause-bowel-cancer-scientists-find>

## Trackbacks/Pingbacks

1. **Health overpowers – initial research | Fusion Organic** - [...] are left to discovery and salvage, rather than safety and prevention. It seems GM foods may have a direct...