



Ken Lassenen on Changing the Gut Ecosystem With Probiotics

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Changing the Gut Flora II

(Recovered ME/CFS patient Ken Lassenen relates his understanding of probiotics and gut bacteria. He is not a doctor. Please consult with your doctor before making any changes in your diet or supplement regimen.)

Changing your gut flora is actually not easy. Think of a healthy gut as a well-balanced ecosystem whose flora supports your health. Now think of an unhealthy gut as a well-balanced ecosystem who's flora supports their health – not yours.

Invasive species in



ecosystems present a good model.

From [Scotch broom](#) to [zebra mussels](#), [invasive species](#) from other countries are creating havoc in ecosystems from across the U.S.

The changes can be enormous. The entire native grass population in California was essentially relegated to a minority player by annual grasses from the Mediterranean that were better adapted to cattle grazing and disturbance. Some states like [North Carolina](#) have over 100 different invasive species.



The Giant African Land Snail can grow as big as a rat, can chew through stucco and eats any plants in its path...Oh, yes – it can also cause meningitis if touched. It recently invaded Miami.

A common factor in many invasive species invasions (which fits with our model of chronic fatigue syndrome) is a disturbance of some kind that opens the door to invasive species.

Getting rid of invasive species once they've become entrenched, however, is very difficult.

Now think of a CFS gut as having several [invasive species](#). Some sort of disturbance occurred – a virus, some new bacteria, problems with the gut lining, immune activation – whatever, and some invasive microbial species either swept in or took advantage of the disturbance and multiplied greatly. You now have a new gut ecosystem ...

You can

- Exterminate them
- Introduce aggressive native species to push them out, often this needs the soil to be augmented to allow the native species to fare better
- Introduce a natural predator (which can compound the problem often)

With invasive species in the gut, there are similar options. In this post I will look at the most natural way, introducing healthy good species.

A Microbiome Fight For Survival

Probiotics are bacteria. They are bacteria that appear to be *harmless to humans* and may have beneficial effects. Often one species of a family will try to kill off other species of the *same* family. Taking several probiotics at the same time could result in less benefit and more cost than just doing one at time.

Many common commercial gut bacteria tests count that count the *volume* of a family of bacteria do not determine if they are good ones or bad ones. There are three levels in describing a probiotic or a bacteria:

- the family ([lactobacillus](#), [bifidobacterium](#), [escherichia](#), etc)
- the species, usually designated by the second name (lactobacillus acidophilus, bifidobacterium thermophilum, escherichia coli (E.Coli), etc)
- the strain, often designated by a number or a set of characters (E.Coli Nissle 1917, Bifidobacterium Infantis 35624, lactobacillus reuteri JCM1112)

We have dogs (family) which are Welsh Pembroke Corgis (species), two of them were from the same kennel (strain) and these two have very similar looks and personalities. If you are looking for a creature to guard

looks and personalities. If you are looking for a creature to guard chickens, picking any dog from a pound at random may not have good outcomes. That sweet chihuahua may not keep away the coyotes (and may need frequent replacement). The same happens with probiotics.

Most people in the US believe that all E.Coli are dangerous, but there are good E.Coli and bad E.Coli. (In fact, several E.Coli **probiotics**, both over the counter and via prescription are available in Europe). Similarly, most alternative medicine people believe lactobacillus are all good, but [lactobacillus endocarditis is a known killer](#). We must be very careful of over generalizing in this area.

A Probiotic Catch-22 in the U.S.

"a problematic situation for which the only solution is denied by a circumstance inherent in the problem or by a rule," i.e. if clinical

There's an interesting catch-22 with probiotics. Probiotics demonstrated in clinical trials to be effective are categorized as a [biologic](#) medical product, may require a prescription, and are subject to control by the FDA. Probably the best studied probiotic product, Mutaflor, was pulled from the U.S. market after the FDA deemed that it was a 'biologic product'. [Mutaflor contains an E.Coli strain called 'Nissle 1917'](#), which was identified in 1917, and has been studied for over 90 years. You can buy it over the counter in Europe, but can't get it

trials have proved a probiotic is effective, you may not be able to get it in the U.S.

in the U.S. It has been used successfully for Crohn's Disease, and two well know CFS physicians in Europe often ask their patients to take it (Dr. Myhill (UK), and

Dr. De Meirleir (Belgium)).

Probiotics that have not been clinically studied, and which may do little or no good, on the other hand, are readily sold. Mutaflor's efficacy was dependent on a specific **strain** of e. coli. Despite that fact that probiotic strains can vary markedly in efficacy, probiotics or yogurt containing probiotics, often focus solely on the family, and rarely specify the strains present. "**Five billion lactobacillus and bifidobacterium**" may appear on the package with no details about species or strains.

The ideal situation is to have:

- The family, species and strain to be declared on the probiotic
- Research papers show a specific strain has clear benefits for ME/CFS or a comorbid condition.

The good news is that there are a few such probiotics, the bad news is that they are rarely found in health food stores!

The Lactobacillus Reality

Often our efforts to 'right' our gut flora's are often misguided. Many people, for instance, believe that Lactobacillus is the dominant bacteria in the gut, and the more lactobacillus bacteria they take, the better off they'll be. This is actually false.

"It is somehow intriguing how lactobacilli could maintain a reputation as numerically important intestinal inhabitants, given that the vast majority of experimental studies conducted after 1960 clearly showed that they form

marginal populations in the human gut." [2008]

A [recent paper](#) states "*It is important to note that the majority of **traditional** probiotic strains are probably allochthonous to (not originally part of) the intestinal tract, and they show very little ability to persist in the human gut.*"

A [2009 article](#) provides some interesting insights:

- *Members of the genera Bacteroides, Eubacterium, Clostridium and Ruminococcus were the major species found in the adult microbiota.* – Lactobacillus species are a minor player.
- *For instance, E. coli K12 had a ratio of 3.4% for adult gut-enriched genes,* – there are other E.Coli present.

Lactobacillus acidophilus is easily the most well-known (and advertised) *Lactobacillus* species, but *Lactobacillus reuteri* is more commonly found in humans. *L. reuteri* may have special significance for people with chronic fatigue syndrome because it produces B12. If you are low in B12, as many people with ME/CFS appear to be, then your *L. reuteri* levels are likely very low or non-existent. Instead of doing B12 shots or pills, you might be better off taking *L. reuteri* and having this species making your own B12.

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The Lactobacillus You Want

There are two good members of the lactobacillus family of bacteria to

There are two good members of the *Lactobacillus* family of bacteria to consider:

- *Lactobacillus reuteri* — produces B12 and is the dominate *Lactobacillus* species in healthy animals (and humans)
- *Lactobacillus rhamnosus* — some strains has positive effects on the brain, and others have a negative effect[1], so you need to know the strain and then check the research papers.

Personal Observations : I noticed in my last remission was that one spice-herb-supplement resulted in one or two symptoms disappearing and having no effect on the other symptoms. I have also observed [very distinctive changes](#) from specific probiotics which I describe on my own blog.

I believe different strains of bacteria cause specific symptoms. You may eliminate a few symptoms from each spice-herb or probiotic. You may need to rotate through many of them to eliminate most of the symptoms

Escherichia coli

There is only one commercial probiotic available without prescription (and not in all countries), *E.Coli Nissle 1917* also known as Mutaflor. It has been in use for over 90 years (longer than most *Lactobacillus* probiotics). CFS patients appear to be very low in *E.Coli*.

Bifidobacterium Infantis 35624

This species and the “soil bacteria” listed below have been demonstrated to be effective for IBS. IBS is very common in CFS and thus both of them have evidence of being beneficial for CFS symptoms. This is patented and sold as [Align Probiotics](#) and [very well reviewed](#) on Amazon.

Walgreen's have a different strain (same species) available in their [Walgreens 4x Probiotic Digestive Care Supplement](#). There are no studies on it — but it is reasonable to assume similar benefits (may be less or may be more).

“Soil Bacteria”

The mother's microbiome appears to be DNA compatible with the child.

Mother's pass their microbiome to their children by the children sticking their fingers into their mother's and father's mouths. Messy kids are likely healthy kids.

Microbiomes from another person may be rejected or fail to thrive because they are not compatible with the person's DNA. Our Victorian sense of cleanliness may be doing us, and our children significant harm.



Don't forget your dirt!

Some commercial probiotics contain a large number of common soil bacteria. One, [Prescript Assist](#) has been found in a clinical trial to be effective for IBS: Most of these bacterias are not available in any other way for human consumption (they are, however, available in some animal feeds). Because these are soil based, they are robust and do not require refrigeration. Prescript Assist includes

- Anthrobacter agilis,
- Anthrobacter citreus,
- Anthrobacter globiformis,

- *Anthrobacter luteus*,
- *Anthrobacter simplex*,
- *Acinetobacter calcoaceticus*,
- *Azotobacter chroococcum*,
- *Azotobacter paspali*,
- *Azospirillum brasiliense*,
- *Azospirillum lipoferum*,
- *Bacillus brevis*,
- *Bacillus marcerans*,
- *Bacillus pumilis*,
- *Bacillus polymyxa*,
- *Bacillus subtilis*,
- *Bacteroides lipolyticum*,
- *Bacteriodes succinogenes*,
- *Brevibacterium lipolyticum*,
- *Brevibacterium stationis*,
- *Kurtha zopfil*,
- *Myrothecium verrucaria*,
- *Pseudomonas calcis*,
- *Pseudomonas dentrificans* – produces B12
- *Pseudomonas fluorescens*,
- *Pseudomonas glathei*,
- *Phanerochaete chrysosporium*,
- *Streptomyces fradiae*,
- *Streptomyces cellulosae*,
- *Streptomyces griseoflavus*.

Another product, Floracol Generation Plus, contains almost the same species:

- *Lactobacillus sporogenes*,
- *Arthrobacter agilis*,
- *Arthrobacter citreus*,
- *Arthrobacter globiformis*

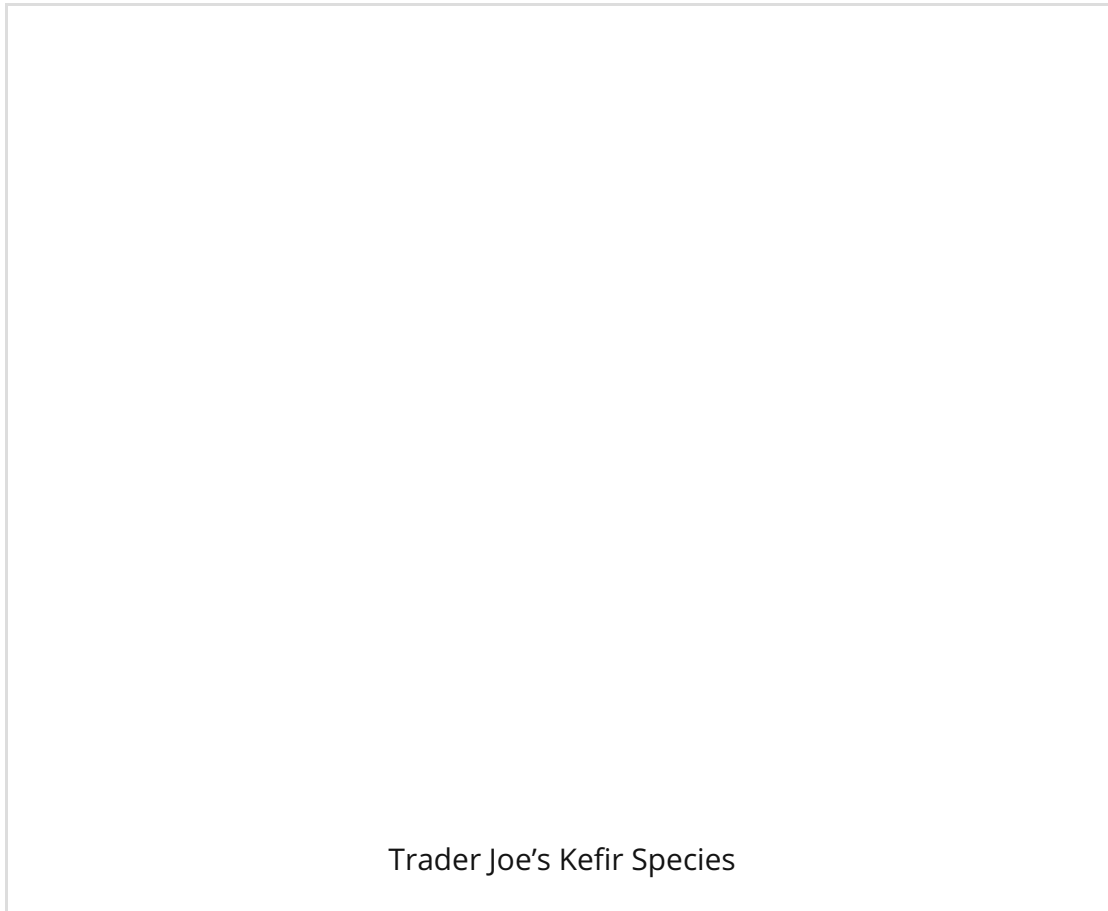
- Arthrobacter globiformis,
- Arthrobacter leuteus,
- Arthrobacter simplex,
- Azotobacter chroococcum,
- Azotobacter paspali,
- Azospirillum brasiliense,
- Azospirillum lipoferum,
- Bacillus brevis,
- Bacillus macerans,
- Bacillus pumilus,
- Bacillus polymyxa,
- Bacillus subtilis,
- Bacteroides lipolyticum,
- Bacteroides succinogenes,
- Brevibacterium lipotycum,
- Brevibacterium stationis,
- Kurtha zopfil,
- Myrothecium verrucaria,
- Pseudomonas calcis,
- Pseudomonas dentrificans,
- Pseudomonas fluorescens,
- Pseudomonas glathei,
- Phanerochaete chrysosporium,
- Streptomyces fradiae,
- Streptomyces cellulosae,
- Streptomyces griseoflavus

Yogurts, Kefers and other bacteria laden foods

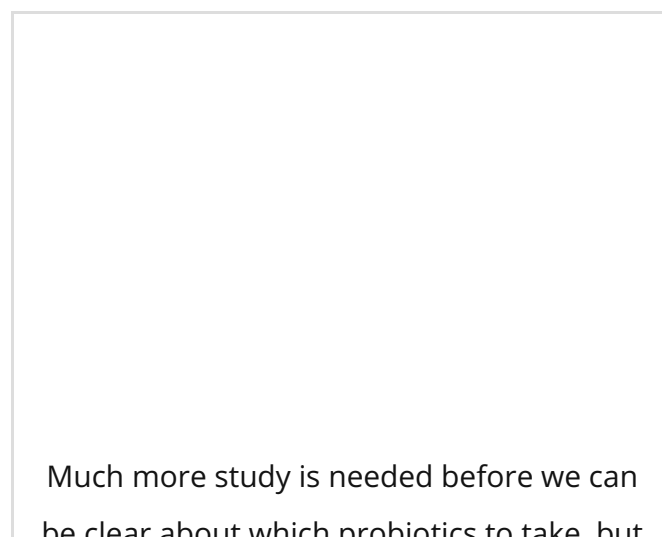
The first question is simple: which species are you getting? A good product will list the species, and generally, the longer the list (especially of non-lactobacillus species), the more likely it will be beneficial to you.

THE 12 SPECIES OF BACTERIA THAT ARE MOST COMMONLY USED IN PROBIOTICS

The Kefir below is well labelled and has 5 non-lactobacillus species in it (and 10 species in total!). It's also from Trader Joe's and thus good value for the money! When you shop for yogurt, kefirs etc — read the labels carefully — all fermented milk products are not the same.



Bottom Line



Most gut tests measure the amount of a family of bacteria. A very small number of tests identify the species. An even smaller number measure the exact strains. Even if we know the precise strains, we do not know

be clear about which probiotics to take, but we do have a few arrows in our quiver now.

the health effects (or side effects) of 99.9% of the strains. We do not have strains available as

probiotics commercially (some are available, but only in a research context).

IMHO, we only have a few possibilities in our arsenal at this point. The two dominant ones are Prescript Assist and Mutaflor.

Personal Note: My wife and I have observed that they do not compliment each other when taken together, i.e. we get less positive change from both together than taking either by it self. Our usual practice is to do 7-10 days on one, take a 7 day break, then 7-10 days on the other and another 7 day break before repeating. With mutafloor, studies have shown that minocycline does not decrease its effectiveness.

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 Lassenen 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.

82 Comments

Betsy on December 15, 2013 at 1:58 pm

Interesting – I've never noticed any difference taking lactobacillus but have with reuteri. Can we get the Mutaflor sent from Europe?

Ken Lassesen on December 15, 2013 at 3:39 pm

I have not heard of anyone successfully doing that. I have heard of people getting it by friends and family carrying it with them on return flights from Europe. Given the FDA current position (and that it is very perishable), trying to get it shipped (because it is a biological) would be denied by most shippers and expensive to get delivered in two days.

I doubt that any authorized seller would ship it — so you would need an individual there that is willing to purchase and

snip.

Betsy on December
15, 2013 at 9:07 pm

Ok, thanks Ken.

Katy on November 9, 2018 at 1:35
am

I have low ecoli, and am told it is best to feed your current e coli levels with the correct prebiotic rather than trying to introduce a single strain with mutaflo.

The correct prebiotics are galactose and fucose. (Fucose is cheap and comes from a particular strain of seaweed. The galactose was the more expensive/difficult one to buy).

Lynn on December 15, 2013 at 2:43 pm

Hi Ken,

I followed CFSExperimental for years. I am hoping you can give me some advice regarding hives and restoring my gut flora..

After having chronic hives for the last 6 months. I am now testing the hypothesis

that the hives are histamine related. In the last week I started a protocol of taking 25 grams of L-Glutamine and a probiotic each day in the hopes of healing my gut and getting rid of the hives.

The probiotic that I chose (with no research at all) is Vitacost Probiotic 15-35 with 15 strains 35 billion CFU. They had a buy one get one free sale, so it cost \$27.99 for a 60 day supply. Here are the ingredients. Do you think they will help to help my gut or should I start with one of the ones that you recommended?

Supplement Facts

Serving Size: 2 Vegetarian Capsules

Servings per Container: 60

Amount Per Serving % Daily Value

Sodium 80 mg 3%

Proprietary Blend Probiotic 15-35

Ultra Complex in VIABLEND® (L.

acidophilus, L. casei, L. rhamnosus, L.

plantarum, B. bifidum, B. breve, B. infantis,

B. longum, L. paracasei, L. salivarius, L.

brevis, L. fermentum, L. helveticus, L. lactis,

S. thermophilus) 35 billion CFU *

FOS (Fructooligosaccharides) NutraFlora®

200 mg *

CFU** : At the time of manufacture.

On another note, I did not have this hive problem until I started high dose vitamin B-1

therapy. It may be a coincidence but I am not willing to give up the B-1 as it has much improved the quality of my life. The researcher for the high dose vitamin B-1 therapy said he has not encountered a patient that got hives from the supplement.

Thanks for any help that you can give.

Lynn

Ken Lassesen on December 15, 2013 at 4:01 pm

One of my frustrations with probiotics labeling is that they often do not tell how much of each ("Proprietary Blend" issue). With 15 species listed, The average would be 2.3 billion, however I suspect that they are listed in order of amount. B.Infantis is #7 so I suspect well < 1 billion.

I dropped into Walgreen's this week and found two blends: "Ultimate Flora RTS Colon Care Probiotics" which is only Bifidobacterium (including infantis – the one that has been shown to be effective for IRS) and "Finest Nutrition

IBS, and IBS Nutrition

Digestive Probiotic Probiotics

Maximum Care (30 billion) –

that also included B.infantis in

it's list. The latter one has L.

acidophilus as it's first

ingredient (which means that it

could easily be 90+% of this

species and still be truthful in

the labeling.

Because IBS is co-morbid so

often with CFS (and MCS), I

would recommend not using

general purpose probiotics but

those that are specifically

targeted for the colon or

digestive health. If

L.Acidophilus is the first

species, I would look for

alternatives.

Back to the Hives issue:

"Recent study show that

probiotic bacteria induced in

vivo increased plasma levels IL-

10 and total IgA in children

with allergic predisposition.

Many clinical studies reporting

significant benefits by

probiotics supplementation in

food allergy prevention and

management but not everyone

agree on their effectiveness. These differences are probably related to differences in selected populations and in probiotic strains used." 2010 —

<http://www.ncbi.nlm.nih.gov/pubmed/20562632>

Unfortunately no guidance of the right ones. My approach, for my family, is to take as many different species (ideally mono-species when practical) probiotics as possible with a weekly rotation. Note any changes of symptoms with each one (usually seen about day 3-7). If there are zero changes, then record that.

Ken Lassenen on December 15, 2013 at 10:23 pm

Lynn, I did a bit more digging and suggest you read:

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3038963/>

"Over 70 years have passed since dermatologists John H. Stokes and Donald M. Pillsbury first proposed a gastrointestinal mechanism for the overlap between depression, anxiety and skin

conditions such as acne.
Stokes and Pillsbury
hypothesized that emotional
states might alter the normal
intestinal microflora, increase
intestinal permeability and
contribute to systemic
inflammation”

Diane on December 15, 2013 at 2:52 pm

Can you get Mutaflor from Canada, and
does it require a prescription?

Ken Lasseesen on December 15,
2013 at 3:35 pm

Mutaflor may be ordered
WITHOUT prescription from
<http://www.mutaflor.ca>.

Payment is by PayPal only —
and it must be a CANADIAN
PayPal account (i.e. billing
address in Canada)

It is shipped 2 day express to
CANADIAN addresses only and
must be signed for
It is shipped in large form
container with lots of ice packs
– it needs to be kept cold

It may be carried across the

it may be carried across the border for personal use. Shipping it into the US can be legally problematic with the FDA current position on it. I usually pick up some Align, Kefir, etc in Canada at the same time, so I am bringing back groceries and thus I may truthfully tell the customs agent, "groceries and probiotics" – there have never been a question about the probiotics — but if they were, I would hand him the Align as an example..

Debbie on December 15, 2013 at 5:17 pm

Just a caution about look alike packaging. I went to our local Walgreens for my Align probiotic and noticed that Walgreens had what looked identical to Align for half the price. When I brought it home and compared the strains of bacteria it was not identical. I have had such good results with Align for my IBD (using for over a year now). I now buy it through Health Rising's Amazon page (best price) and it is the only one I now buy. More expensive than most on the market but I've been very happy with the results.

Ken Lassesen on December 15, 2013 at 8:50 pm

"You need a good probiotic" is often what both regular and alternative health professionals will tell patients. If you ask for which, the answer is often the one that they sell or a generic one. If you ask what species should be in it, and research backing up those recommendations... you will often encounter deer in the headline syndrome. My favorite question is "Which species should I not take?" — if they cannot answer that question, they are likely ignorant about species and just re-iterating a "modern wives tale"...

It is unfortunate that brain-fogged CFS patients often have to do their own resource because this area of treatment is either poorly or not taught.

MK Gilbert on December 16, 2013 at 3:13 pm

at 3:13 pm

What about the Align
“wannabe” they sell at
WalMart? That’s what I’ve been
taking...I also eat the Activia
yogurt. Is it any good?

Ken Lassenen on

December 16, 2013

at 4:57 pm

There is a high
probability that if
it has the same
species, it will
have similar
effects. In
general, I use the
“official paper”
ones as my first
line. I will
circulate for a
week of the
wannabe’s as a
second line of
action – since I
believe that the
more different
strains you
intake, the better
the odds that one
of them will take

an attitude to the
cartel of evil
bacteria.

Activa is “bifidus
regularis” – an
invented name
for marketing
purposes. This is
the species
Bifidobacterium
animalis
according to
Wikipedia

(<http://en.wikipedia.org/wiki/Bifidobacteriu>

This species is
available in many
probiotics (search
Amazon.com for
“Bifidobacterium
lactis” for many
hits). Each serving
is alleged to be 1
Billion units.

If you are
probiotic
intolerant but can
tolerate yogurt,
then it is likely a
good choice to try
shifting your gut
sufficiently to

sufficiently to
tolerate
probiotics.

There is an
interesting review
on Activa at

<http://www.powerofprobiotics.com/Activia>.

Chris Cairns on December 15, 2013 at 10:28 pm

Ken,

I cannot express enough gratitude for your work in this area of probiotics and ME/CFS. I myself think the gut microbiota is tremendously important and that each of us, with discipline, can work for betterment in this area.

Several items recently have become a concern to me. It is my belief, through experience, that prebiotics (inulin, arabinogalactan) cause more problems than one might expect. It is my supposition that they promote growth of many bacteria, both good and bad, in an unpredictable fashion.

Also I have become concerned about streptococcus thermophilus, which is in many probiotics and all yogurt (by definition).

What does your experience tell you about

these items?

Your website is an invaluable resource and thanks for this.

Chris

Ken Lasseesen on December 15, 2013 at 10:57 pm

Thank you Chris, my basic rule is to work from PubMed articles as much as is possible. With my remission, I have a brain that can digest the material and actually been reading professional medical papers since I was 14 (Gifted Child Program). My primary concern has been *Lactobacillus acidophilus* because it is known to kill *E. Coli* (which CFS patients are low in — possibly making a bad situation worst). What I could find quickly was: **Antimicrobial activity of bacteriocin-producing lactic acid bacteria isolated from cheeses and yogurts** (2012) which found “*Strep. thermophilus* and *Lact. casei* effectively inhibited the growth of natural microflora” as well

as this 2011 article, "**Identification and characterisation of an iron-responsive candidate probiotic**" which states "an inability to compete with potential pathogens under conditions of high iron availability such as stress and trauma may contribute to the lack of efficacy of many LAB-based probiotics in treating disease." LAB, including *Lactobacillus acidophilus* and *Strep. thermophilus*.

So, I believe your concern (apart from personal experience) may have a scientific basis.

Chris Cairns on

December 16, 2013

at 5:12 pm

Ken,

Thank you for your response.

I assume that you yourself do not take probiotics

take probiotics,
except those
included in
Prescript Assist.
When I spoke to
Simon Carding,
he did not seem
overly interested
in prebiotics for
ME/CFS.

I wonder what
you think about
the following
probiotics, all of
which have some
science behind
them. I am
particularly
interested in the
research of
Gregor Reid, who
developed GR-1.

L. plantarum
299v

L. rhamnosus GR-
1

Bifidobacterium
animalis spp.
lactis BB-12

Custom
probiotic's d-

lactate free blend
Russian Choice
Immune
S. Boulardii

S, Boulardii
seems to have
the capacity to
raise fecal IgA.

Regards,

Chris

Ken Lassen on

December 16, 2013

at 6:59 pm

Bifidobacterim
animalis spp.
lactis BB-12 is
effectively what is
in Activa Yogurt
(they renamed it
for marketing
purposes). I do
not recall that
any of the others
had "clear"
results from
reviewing
pubmed. L.
rhamnosus has

slight improvement for IBS and has a moderate positive effect for Crohn's and UC – it's impact was a lot less than Align or Prescript Assist on IBS. S.

Boulardii also has moderate impact on CD and UC — but studies found zero impact on IBS.

So bottom line, if it does not have major impact on IBS by PubMed studies

(regardless of what it may do for IgA levels) – I view them as likely low value.

Most CFSers have very limited budget — if the probability of a positive effect is

not very good (as reported by PubMed studies), I prefer to avoid advocating it.

Diane Drayson on December 15, 2013 at 10:55 pm

Hi Ken

I have M.E. A few years ago I started getting blepharitis (allergy-based problem with my eyes). That improved drastically for no reason I could fathom but I immediately developed eczema. I have wondered if they are related. It seems to me that they are both allergy based. Could these be a result of gut problems?

I can treat the eczema with cortisone cream, or I could have allergy testing to discover what is setting it off, but if the root cause is something else then I can see I will simply have a problem erupt elsewhere on my skin.

I have also developed asthma, and again that only occurs in specific places so I know that must be allergy-based too.

Any help would be appreciated.

Diane

Ken Lasseesen on December 15,
2013 at 11:15 pm

The short answer is yes – and
was proposed 70 years ago.

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3038963/>

“Over 70 years have passed
since dermatologists John H.
Stokes and Donald M. Pillsbury
first proposed a
gastrointestinal mechanism for
the overlap between
depression, anxiety and skin
conditions such as acne.
Stokes and Pillsbury
hypothesized that emotional
states might alter the normal
intestinal microflora, increase
intestinal permeability and
contribute to systemic
inflammation”

Specifically it states later “The
*co-morbidity of chronic skin
conditions* and mental health
disorders has long been
recognized, and in recent years
specialty psychodermatology
and neurodermatology groups
have emerged. Acne vulgaris is
a common dermatological
disorder frequently associated

with depression, anxiety and other psychological sequelae.”

What this 2011 article does not provide is guidance on the microflora alteration/correction. It is interesting that acne is often treated with long term doxycycline. The same antibiotics used by many CFS MDs that use antibiotics. It's actual course of action may be altering gut bacteria. I believe that minocycline is actually a better one (because it has 300+ articles supporting it's use as a neuroprotective).

I realize that the use of antibiotics is a “hot button” for many CFS patients — which is why I have looked as more acceptable alternatives which are herbs documented to be as effective. I will be writing about those in a future post.

Betsy on December 17, 2013 at 5:27 pm

Diane, eczema can be caused by gluten sensitivity and if

by a gluten sensitivity and if this is happening, it only takes a very small amount of gluten to bring on a reaction. If you're not already gluten free, it would be well worth a try.

Steve on December 16, 2013 at 1:13 am

Ken, Great post..where is your blog?

Steve

Ken Lassesen on December 16, 2013 at 8:42 am

<http://cfsremission.wordpress.com/>

Chris Pfeiffer on December 16, 2013 at 8:25 am

Hi Ken,

First, thanks for taking the time to publish your insights and answer questions.

Speaking of which, I have a few. What type of diet would you recommend? When you take the probiotics, how many times a day do you take it? Would you recommend having Kefir along with the probiotics? What do you think of MAF – probiotics?

Thanks for your opinions

Ken Lassesen on December 16, 2013 at 8:57 am

Breakfast is usually a slice of German 100% heavy rye bread (imports from Europe — I can get 1 lb of it from our local Deli or Amazon for about \$3.50, it does not go stale or mold fast, and a single slice is filling) The shelf life of a sealed package is 6+ months. Rye encourages the most diversity of microflora of all prebiotics tested in one study. Often with peanut butter or meat slice on top — this morning it was liver pate (high in iron).

I maintain a preference for high protein (lots of meats, fish) and low carbohydrates (except for rye bread) — which comes out of my first and second remissions.

To this, the usual supplements, 15000 IU of vitamin D, multivitamin with minerals, 500 mg of flushing niacin. Other items added when something suggests them.

Usual caveat: every one's microflora is different and unique — so experimentation is often required — taking notes and being systematic (1 week during this, one week doing that) is essential.

Ken Lassesen on

December 16, 2013

at 8:58 am

PS: Every one else in the family is gluten intolerant (except me) — so while I do have the occasional gluten-goodies, there is very little gluten in my diet.

Terry K on December 16, 2013 at 8:59 am

When you go to Canada, where do you get the Mutaflor? Is there a storefront?

Ken Lassesen on December 16, 2013 at 11:00 am

There is no store front —
however this may be a

however this may be a
**business opportunity for
Canadian CFSers** to
supplement their income.

Many years ago, I was getting
my piracetam from the Czech
republic from a CFSer who
purchased it over the counter
at her local pharmacy and then
sent it on; I was very fine with a
40% markup in order to get it
(today, I have a 2 kilogram
container of it sitting on my
shelf).

I have a daughter working in
Canada so she orders it on her
Canadian Paypal account and I
schedule delivery with friends
or family just across the border
from me as the shipping
address.

Val Evans on December 16, 2013 at 2:28 pm

Hi I'm in Australia , where do I get the proper
probiotics from? As I have m.e . Many thanks

Ken Lassenen on December 16,
2013 at 2:59 pm

Several options for a few:

Mutaflor:

<http://www.mutaflor.com.au/>

Align:

<http://www.shopbot.com.au/align-probiotic/price/australia/392635>

Reuteri:

http://www.myshopping.com.au/PR-450742_Blackmores_Lactobacillus_Reuteri

in New Zealand:

<http://www.blackmoresnz.co.nz/products/nutritional-support-lactobacillus-reuteri-protectis>

Prescript-Assist:

<http://shop.realizehealth.com.au/heat-stable/2397-prescript-assist-60-caps.html>

You may need to shop around carefully, some items like

<http://shop.realizehealth.com.au/dairy-free/2251-bifidobacteria-four-strain-50g.html> are \$150

where as the same apparent combination from a US supplier may be just \$35 plus shipping. What I found interesting is that some probiotics require **prescriptions!**

Annie on December 16, 2013 at 5:04 pm

Thanks for this article.

Sorry I am a bit confused do you advise taking the reuteri as well as the prescript assist and mutaflo? Or is the reuteuri as well as if you know your B12 is low? Many thanks

Annie on December 16, 2013 at 5:20 pm

Sorry two more questions. I am not clear about your recommendations for kefir. Would this be as well as the mutaflo and prescript assist or taken in rotation with these two? So one week mutaflo, one week prescript assist, one week kefir?

Also in what way would mutaflo help. I know papers show people with ME/CFS are low in it but I haven't worked out how taking it could help?

Finally, could gut dysbiosis cause sugar cravings?

Many thanks

Ken Lassenen on December 16, 2013 at 6:33 pm

No need to apologize for being confused. I have had CFS and personally know the problem

of putting the mail in the
icebox, etc.

In general, most CFS patients
improve on increased intake of
B12

(http://www.drmyhill.co.uk/wiki/B12_-_rationale_for_using_vitamin_B12_in_CFS

). It applies to low, normal and
high B12 levels of serum B12.

Since B12 is produced by a
bacteria, there is a likelihood
that it is actually altering the
gut bacteria (hence the serum
level is actually immaterial).

It is also the single
Lactobacillus species that is
likely to take up residence in
your gut.

Mutaflor is an aggressive E.Coli
that out-competes other
species. E.Coli produces NADH
(which studies show lessen CFS
symptoms when NADH is
supplemented). The rationale
is that mutafloor will both
produce the other chemicals
that E.Coli normally supply to
the body(which the body is not
getting because of the lack of
E.Coli), and push out harmful
gut bacteria. Mutaflor has also

been found to be effective with a wide variety of digestive issues, UC, Crohn's etc. and some autoimmune conditions. " Nonpathogenic Escherichia coli strain Nissle 1917 (EcN) has immunomodulatory properties and can act on different cells which are important for the allergic immune response" (2013)

<http://www.ncbi.nlm.nih.gov/pubmed/24247760>,

Ken Lassen on December 16, 2013 at 6:48 pm

No problem — My Ideal rotation would be 1 week Mutaflor, 1 week Prescript Assist, 1 week Reuteri, 1 week Align [Repeat]. Fermented milk products should not be taken with the Mutaflor or 1 week after because they tend to have E.Coli killing bacteria in them. It is fine to take with Reuteri and Align. If during the rotation, you notice significant improvement from one — continue on that one for 2 weeks.

Mutaflor (E.Coli Nissle 1917)

has 171 PubMed articles on it

[http://www.ncbi.nlm.nih.gov/pubmed/?](http://www.ncbi.nlm.nih.gov/pubmed/?term=Nissle+1917)

[term=Nissle+1917](http://www.ncbi.nlm.nih.gov/pubmed/?term=Nissle+1917) and have

many interesting (positive)

aspects, for example “We

conclude E. coli Nissle 1917 to

interfere with bacterial

invasion of via a secreted

component and not relying on

direct physical contact with

either the invasive bacteria or

the epithelial cells.”

<http://www.ncbi.nlm.nih.gov/pubmed/15039098>,

in translation, it produces

antibiotics against many

species, from the positive

effect for digestive disorders, it

is likely killing off more of the

bad than the good.

“Probiotics such as Escherichia

coli Nissle 1917 ... are currently

used to, or have been

evaluated for use to, prevent

or treat a range of intestinal

maladies including

inflammatory bowel disease,

constipation, and colon

cancer.” 2013,

<http://www.ncbi.nlm.nih.gov/pubmed/23457295>

Does it “prove” that it is good

Does it prove that it is good for CFS — no, there have been zero studies on using it with CFS or FM. This is a recommendation by inference from IBS being very co-morbid with CFS and FM.

Annie on

December 17, 2013
at 2:25 pm

Thanks Ken for your very helpful reply. What are your thoughts on kefir?(thank you for advising not to take it when taking mutaflor. Would this also apply to sauerkraut?)
Many thanks

Ken Lassen on

December 17, 2013
at 6:08 pm

Sauerkraut contains
Leuconostoc,

Lactobacillus, and
Pediococcus
according to
wikipedia.

<http://en.wikipedia.org/wiki/Sauerkraut>.

Given the wide
variety of species
cited in the article
— which will vary
from batch to
batch — I just
cannot give a
simple answer. If
you feel
significantly
better after
having it daily for
a week, then it is
likely good. If not,
I would tend to
not repeat the
experiment —
too many
unknowns.

Annie on

December 18, 2013

at 8:51 am

Thanks Ken. What
are your thoughts
on kefir?

Annie on

December 18, 2013

at 8:52 am

Ps to clarify, I notice in your ideal rotation kefir is not mentioned. Do you think it can be a useful probiotic? Thanks

Ken Lasseesen on

December 18, 2013

at 1:39 pm

Kefir has benefits for IBS:

<http://www.ncbi.nlm.nih.gov/pubmed/1763> (2007)

<http://www.ncbi.nlm.nih.gov/pubmed/1880> (2009)

<http://www.ncbi.nlm.nih.gov/pubmed/2149> (2011) "a subset of IBS patients there exists a potential dysregulation in energy

homeostasis
(serum glucose)
and liver function
(serum tyrosine)
that may be
improved
through
probiotics
supplementation.”

<http://www.ncbi.nlm.nih.gov/pubmed/2227>.

(2012) One of my
criteria for
recommending is
“demonstrated by
PubMed to result
in remission for
IBS for at least
some”. Prescript-
Assist and Align
meets that
criteria. Kefir
does not. Most
CFSers can get
saturated with
the list of things
that help (a little).
I prefer to keep
my list small and
where the
PubMed evidence
suggests it will
help a lot.

Read more: Ken
Lassenen on
Changing the Gut
Ecosystem With
Probiotics

<http://www.cortjohnson.org/blog/2013/12/1/lassenen-changing-gut-ecosystem-probiotics/>

Annie on
December 19, 2013
at 2:39 pm

Thanks Ken for
your helpful reply

tatt on December 19, 2013 at 1:08 am

Interesting article. I am in the UK – I have
had some slight improvement with actimel
and more with the prebiotic bimuno

<http://www.bimuno.com/?gclid=CMWd69Lnu7sCFUmWtAodbGwAWQ>

(they ship to the us) and may try Mutaflor
now. I've also tried Biokult (available to
Americans I think) and while this didn't do a
lot for me I wonder what you think of it?

<http://www.amazon.com/Bio-Kult-F7057-B-Probiotic-120-caps/dp/B004XKUD78>

Ken Lassenen on December 19,
2013 at 8:13 am

There are three studies on
Bimuno that I could find:

<http://www.ncbi.nlm.nih.gov/pubmed/23624658>

<http://www.ncbi.nlm.nih.gov/pubmed/20798214>

<http://www.ncbi.nlm.nih.gov/pubmed/19074651>

Only one cited the families of
concern and reports an
increase of Bifidobacteria. A
good thing but only one of 5+
shifts in gut bacteria.

It is also a pure (refined)
substance and my usual
preference is mixtures for
prebiotics (i.e. 100% rye bread)

tatt on December
21, 2013 at 1:06 am

Biokult (available
to Americans I
think) and while
this didn't do a lot
for me I wonder
what you think of
it?

<http://www.amazon.com/Bio-Kult-F7057-B->

Probiotic-120- caps/dp/B004XKUD78

Ken Lassesen on

December 21, 2013

at 6:35 am

Probiotics whose first ingredient is L. Acidophilus are items that I avoid because this species inhibits E.Coli which CFS patients are reported to be very low in.

"complete inhibition of E. coli in 36 h." Immediate effect of Lactobacillus acidophilus on the intestinal flora and fecal enzymes of rats and the in vitro inhibition of Escherichia coli in coculture.

<http://www.ncbi.nlm.nih.gov/pubmed/1082>

Grant nancarrow on December 19, 2013 at 6:35

pm

Hello ken

I have tested high for entero, strepto, staphylo, klebsiella, bifidobacterium. Low for clostridium, lactobacillus and bacteroids.

Are the three herds you use effective against all of these?

Do you know which of these clarithromycin and azithromycin are effective against? I took both of these for a while and did see benefits but the Dr had me on to short a course and now seem ineffective.

Do you know if penicillin is effective against any of these? I took this for a few months as a child and am wondering if it had much to do with my dysbiosis?

Thanks so much for your help.

Ken Lassesen on December 19, 2013 at 8:49 pm

In my next post I actually layout some key source material and what need to be done. From come of the articles cited:

" Best antimicrobial activity was found in case of ethanol extract of *Z. officinale*, P.

granatum, T. chebula, O. sanctum, C. cassia, C. asiatica and acetone extract of T. chebula against multidrug resistant UTI pathogens. This probably explains the use of these plants by indigenous people against a number of infections since generations. The plants studied here had shown that they are potentially rich in antimicrobial compounds and have also been extensively used by the tribals. "

– T. Chebula is Haritaki,

– O. Sanctum is Tulsi

"extract of Azadirachta indica and Ocimum sanctum exhibited antibacterial activity against Enterococcus faecalis."

– A Indica is Neem.

"All strains of bifidobacteria, whatever the species, were sensitive to penicillins:

penicillin G,

amoxicillin (MIC₅₀ 0.06 mg/L), piperacillin,

ticarcillin, imipenem and usually anti-Gram-positive antibiotics (macrolides, clindamycin, pristnamycin, vancomycin and teicoplanin)"

Grant nancarrow on December 21, 2013 at 7:09 pm

Thanks for your answer. I've heard that staphylococcus can be hard to treat. Do you

happen to know if it is
susceptible to these herbs
also? Thank you

Ken Lassesen on

December 21, 2013

at 7:32 pm

You can review a
list of herbs
effective from
this URL:

[http://www.ncbi.nlm.nih.gov/pubmed/?
term=staphylococcus+herbs.](http://www.ncbi.nlm.nih.gov/pubmed/?term=staphylococcus+herbs)

Looking at the
first one article

<http://www.ncbi.nlm.nih.gov/pubmed/2419>

compares
antibiotics and
herbs –
Ciprofloxacin was
the best antibiotic
tested, for herbs
Cuminum
cyminum aka
Cumin seeds,
Curcuma long
Linn aka
turmeric.

Turmeric
constantly turns

up in multiple dimensions as being very good for CFS patients. There are other herbs reviewed in later articles — but often they can be hard to obtain in the US.

**Grant
nancarrow**

on December 22,
2013 at 9:45 pm

Hi Ken
Do you know if we try to treat these infections with herbs and they do not work if it makes the bugs stronger and more resistant?

Ken Lasseesen on
December 22, 2013
at 11:32 pm

Bugs becoming resistant to antibiotics or herbs is a bit of a loaded question that I could write about for several posts (my academic training was in modelling and statistics — and the “overuse of antibiotics causing drug resistance” does not stand up to rigorous modelling IMHO)

To hit the issue of herbs: No. These have been used for hundreds if not thousands of years effectively by tribal medicine men in India. They are still effective today. Resistant comes from variation often — when the

often — when the treatment is a pure, synthetic substance with no variations (i.e. prescription antibiotics) then the outcome is simple: the adaptable triumphs over the rigorous!

With herbs, every batch is collected from a different collection of plants, many are still semi-wild, so variations meets variation. The herbs continue to work. Yes, some bacteria may adapt to one batch over time. But the next batch of the same herb may become effective because of natural variations. With

variations. With herbs, I tend to buy from different suppliers whenever I run out — “the best provider, is changing providers”.

This is also why I favor 100% rye bread as a prebiotic over a filtered extract of some prebiotic.

That’s the short answer.

**Grant
nancarrow**

on December 23,
2013 at 1:52 pm

Excellent thank you. Then there is nothing to lose by trying the herbal approach.

Grant

nancarrow

on December 23,
2013 at 2:04 pm

Sorry also how
much tumeric do
you advise we
use? Have you
found it more
effective when
used with olive oil
as well as black
pepper?

Ken Lasseesen on

December 23, 2013
at 4:11 pm

We add black
pepper (1% by
weight to out
turmeric – unless
the person
cannot tolerate
pepper): based
on PubMed
studies.

I could not find
any studies on
olive oil and
turmeric. Each (as

well as
monolaurin) has
benefits by
themselves.

**Grant
nancarrow**

on December 23,
2013 at 5:20 pm

How many grams
roughly per day
of turmeric?
Thanks again

Ken Lassesen on
December 23, 2013
at 6:07 pm

we usually find 8
"00" capsules
/day works well.
That's about 4
grams. We add
1% black pepper
(by weight) when
we make the
capsules (from
organic bulk
turmeric)

acer2000 on December 20, 2013 at 3:54 pm

Hi Ken, I noticed that a company called "BioGaia" sells probiotics based on L Reuteri. Do you have any experience with them? Do the work better/worse than the Nature's Way product?

Ken Lassenen on December 20, 2013 at 5:07 pm

There are very few suppliers of pure L Reuteri around. I have used both BioGaia and Nature's way with no apparent difference. However, Nature's way is a mixture – the label states 5 Billion CFU and has L.Reuteri as the last species (thus the least one), thus it is 1.6 Billion CFU or considerably lower. BioGaia state it is 100 million CFU (i.e. 0.1 Billion CFU).

Blackmores L. Reuteri (available in Australia) is 200 million CFU per capsule and recommend dosage of 2 per day (thus 0.4 Billion CFU).

Raoul T on December 23, 2013 at 6:37 pm

Hi Ken, I've been on Mutaflor for 5 days now starting with 2 caps on the 3rd day.

Question: feelings a little turbulent in the stomach and i kind of feel depressed. I am going to go with it for week. Is this a normal initial herxheimer reaction I'm experiencing thus far? Just a little background: I believe I have an antiviral resistant latent b cell Epstein Barr dna virus condition.

Ken Lassesen on December 23, 2013 at 7:07 pm

Depression and other herx-like (worst symptoms) are to be expected. My wife is regularly on Mutaflor (for Crohn's) and I tend to often hear "I am feeling horrible and depressed today.... oh I pushed up my mutaflor dosage yesterday!".

Are you doing turmeric (with 1% black pepper) for the EBV? "Turmeric at a concentration of 10 microg x ml (-1) exhibited the most potent anti-EBV-EA activity, which is ten times more than passionflower, that is next in the order of activity. "

<http://www.ncbi.nlm.nih.gov/pubmed/11884218>
(2002)

Mutaflor is also likely to give headaches — real bad ones — (it states that on the package insert and we have experienced it). My first round of Mutaflor was almost a “found no-effect” until I realized that one subset of symptoms had totally disappeared which had been constant for 6 months. It is NOT a miracle cure-all, it’s one component. On my own blog, a reader just posted his experience with another one that recommend:

“Hi ken I just tried the rhamnosus from the allergy research group that you recommend and wow... I took six of these and about two hours later felt 50% better. Clearer head, could feel energy coming back, felt happier. Have had similar reaction to mutafloor and even yogurt before but never as strong as this and the effects never last” from this [comment](#)

Raoul T on December 25, 2013 at 6:59 pm

Hi Ken, Maybe I was over reacting but i was intrigued to learn about the feature "Big Antiviral Trial Could Usher in New Treatment Era for FM" on Health Rising a couple of weeks ago discussing the promising use of Celebrex with Valtrex as a new and effective strategy for FM and CFS. I just wondered what you opinion on this might be. Are there significant health risks associated with Celebrex? If so are there any good alternatives? Has anyone you know tried or had success using this therapy?

Ken Lassenen on December 25, 2013 at 10:00 pm

Short answer: Only a small minority may benefit.

Alternatives to Celebrex are listed at

<http://arthritis.emedtv.com/celebrex/celebrex-alternatives.html> and it was

almost taken off the market:

<http://www.nbcnews.com/id/6727955/>

. My own preference would be white willow bark – AKA Aspirin.

Long answer with documentation of four studies:

<http://cfsremission.wordpress.com/2013/12/26/celebrex>

[with-valtrex-a-pubmed-review/](#)

IMHO: Not recommended

berkpsy on December 29, 2013 at 7:11 pm

I have used VSL #3. Which has exceedingly high levels of several different bacteria (see VSL3.com). Several years ago I was taking several packs a day of this probiotic. It brought tremendous positive changes to my CFS. At that time I was not doing high dose anti-virals as my body couldn't handle it at that time. So, the majority of what I was doing to improve CFS symptoms was taking the VSL#3.

Cort Johnson on December 29, 2013 at 7:15 pm

Thanks for passing that on 😊

Grant nancarrow on December 31, 2013 at 3:43 am

berkpsy, what happened with the vsl3? Did it stop working or you reach a plateau?

Ken, you say it took about six months for you to become

well. If you had have doubled the dose of herbs do you think it would have killed the bugs of quicker?

Thanks to both of you.

Ken Lassenen on

December 31, 2013

at 9:00 am

I know the thinking — I have no evidence one way or the other. My thinking is that you want to see the effect of each one over a 1-2 week cycle. Note the herbs/probiotics with no effect and those with some effects. With Mutaflor, I was originally looking for a big effect: it was only because I was tracking symptoms that I

realized that one set disappeared and realized that it was actually changing things (since less symptoms — for the better).

Remember that each of us has a different mixture of microflora/gut bacteria — which appears to be DNA associated (fecal transplants work several times better when the donor is a blood relative). This also applies to the cartel of bacteria causing CFS.

I believe it is fine to increase the dosage but may be contra-productive to “double up” on taking things (i.e.

several things at the same time). Also remember rotation is a key part of the treatment ****model****. First, you will not know what is the item that is causing the change, second, some items may interact with each other. For example there are pub med articles that suggests Haritaki and Mutaflor should not be taken together because the first inhibits the seconds.

Valerie on January 1, 2014 at 9:02 am

Hi Ken and Cort,

Ken, I was wondering about these products having dairy proteins in them and if there are non dairy alternatives. I am colic and

are non-dairy alternatives. I am celiac and allergic (by Elisa testing) to all dairy products (although I don't feel the symptoms from it). Do you know if there are kefirs and probiotics which do not have dairy from the ones you mentioned? I do believe VSL has some dairy in it and many others do too because of how they are made. Maybe other people have found some alternatives to tell us about because dairy sensitivity, allergy as well as lactose intolerance seems common in ME/CFS. Thanks so much for the article. I look forward to the one on herbs. All the best.

Annie on January 3, 2014 at 11:57 am

Hi Ken,

I'm on my third day of prescript assist and am possibly having a reaction, as feel very shaky and more lead like. I say possibly because I did a little bit more over Christmas (I am bedridden so a bit more for me means talking for longer) and I could just be reacting to that and getting some delayed PEM.

Should the reaction be to the prescript assist, should I continue hoping it will pass?

Many thanks

Annie

Ken Lasseesen on January 3, 2014
at 1:06 pm

Hi Annie, I believe that I mentioned that any attempt to alter gut bacteria will, *for a few people*, result in a 'die-off' or herxheimer reaction. At one extreme, I personally known people that with a single (common) probiotic capsule will significantly herx, and the herx will continue for almost a week. With Mutaflor, both my wife and I had the worst headaches we have ever experienced during our first course (and the packet insert warns about headaches! — so that was not an unusual reaction to Mutaflor).

You are the one that must make the call on when "too much" happens and you take a break, allow the body to calm down, and then try a different one at a low dosage.

For those that are very

sensitive to probiotics and drink milk (or put milk in their tea or coffee), one solution is to open a single capsule and put it into a quart or half-gallon of milk. This results in a low dosage that is constantly added.

My daughter has just finished her 2nd bottle of Keifir (finding the ones with the most different species) and had bowel-distress for almost two weeks that has finally quieted down. We assume that she had made one minor step forward towards correcting her gut bacteria — and we see it in a change of mood and behavior.

Annie on January 3, 2014 at 2:52 pm

Thanks Ken. I will persevere as it's bearable. Could i open the prescript assist capsule and mix with water, allowing me to take say half a capsule a day?

Annie on January 3, 2014 at 2:57 pm

Ps to add before starting the prescript assist
I took Nature's way probiotic including the

reuteri for two weeks with no die off. As said, I could just be crashing after doing a bit more but just noting it may be the prescript assist. I'll continue to monitor

Annie on January 3, 2014 at 3:31 pm

Sorry another question. In a reply to one of my questions above you suggested a one week rotation of align, mutaflo, reuterk and prescript. Just to clarify do you suggest taking them one after the other with no breaks in between or do you one advise say one week mutaflo, followed by no probiotics, then one week prescript, one week no probiotics and so on. Just reading through your blog, I started to think you may suggest a week off probiotics between trying each one? Thanks

Ken Lasseesen on January 3, 2014 at 5:15 pm

In general, take substance X for 7-10 days. Do a wash-out of at least 2-3 days (until things seem to stabilize (hopefully in a new and better normal) and then do the next item. Make notes of the changes you experienced. People experience on each item will

be different (because we have different gut bacteria and a different Cartel of CFS bacteria).

In general, when you herx — it is a good sign because it implies (but does not prove) that bacteria are being impacted that are likely causing some of your symptoms.

During my last relapse, I had a checklist of some 35 symptoms that I had and every 3-4 days went thru the list to log which ones were present. This allowed me to recognize that some symptoms had disappeared. Symptoms include items like “Niacin flush from 500 mg”, how many minutes could I do Wii Fit (doing same sequence every day), etc.

Ken Lassenen on January 3, 2014 at 3:39 pm

Yes, you can mix with water — or even sprinkle on a peanut butter sandwich. Prescript Assist is robust.

Annie on January 3, 2014 at 7:02 pm

Thanks Ken you have been very helpful and generous with your time. Digressing slightly, I always read how low carb and low/no sugar diets starve the bad bacteria but is it not possible such diets also starve good bacteria as well? Is my thinking off track here? Many thanks

Ken Lassesen on January 3, 2014 at 7:52 pm

The answer really depends on what bacteria you are targeting. If it is an overgrowth from a sweet tooth then that is very likely to help.

"Lactobacilli grow by fermenting sugars and starches and produce lactic acid as their primary metabolic product." [2014] which is also seen with *saccharin*

<http://www.ncbi.nlm.nih.gov/pubmed/24382146>

And Lactobacilli is low (usually) in CFSer.... so it may be counter productive.

Annie on January 4, 2014 at 9:40 am

Grant on January 4, 2014 at 9:40 am

Thanks Ken

Grant nancarrow on January 5, 2014 at 10:38 pm

Hello Ken

When I take big doses of some probiotics like mutaflor for example. Within a few hours I feel much better. But it does not last.

How did improvement progress for you? Did this kind of thing happen to you?

How do I get these probiotics to colonise the gut so the effects are permanent?

Thank you

Ken Lasseesen on January 5, 2014 at 11:07 pm

Most probiotics are “pass thru and kick start some process”. Two of them are likely to be colonizers because their source was a human: BioGala L. Reuteri and Mutaflor. I say likely because of the DNA – gut bacteria association.

For myself, there were up and

downs during recovery (and I keep monitoring — if there are any negative signs, I will double-dose one probiotic for a week. The rationale (may not be true) is that the sign suggests a new bacteria is trying to get established — if I slam another bacteria into the same space, it's ability to get established may be subverted significantly. In this case, I am using the "pass-thru" probiotic as a disruptor of a suspected negative gut bacteria that seem to be increasing.

My attitude if I start getting sick (from ANY thing, such as legitimate flu, etc) is to accept that infections alter gut bacteria — if I intentionally alter it by high dosages of probiotics, then the infection-gut bacteria co dependency may be subverted and the infection period will be shorter and symptoms milder. All theory/speculation based on the findings in the literature.

Back to your question, I tended to do kill / repopulate cycles. This

to do him / populate cycles. This somewhat comes out of a story in the New Testament: Chucking out an evil spirit (bacteria) leaves an empty house, if this vacuum is not occupied, then seven evil spirits move in as a result. This is very much the case with Prescript Assist being intended for use after prescription antibiotics.

Have you checked this posts on my own blogs?

<http://cfsremission.wordpress.com/2013/12/26/why-jadins-antibiotics-protocol-usually-work-pasteur-institute-got-the-solution-right-and-the-explanation-wrong/>

The table is helpful and I am hoping to put together the same type of table for herbs in the next few weeks.

Grant nancarrow on January 5, 2014 at 10:42 pm

Sorry I forgot to ask. Have you heard of anyone trying the new fecal pills?

Ken Lassesen on January 5, 2014
at 11:11 pm

Not personally. We have two dogs, and dogs tend to naturally do “dog probiotics” (eat p...) and that story put a very different perspective on their behavior from an evolutionary perspective.

Grant nancarrow on February 11, 2014 at 8:24 pm

Ken do you know if it is possible to culture prescript assist?

Ken Lassesen on February 11, 2014 at 9:13 pm

Yes it is possible – after all it is commercially produced. How is the question.

<http://www.sciencedirect.com/science/article/pii/S002364380190833>:

hints that every probiotic require different medium for best growth. What the medium is for this is unclear.

There are some hints in this article on growing soil-based bacteria.

<http://aem.asm.org/content/68/5/2391.full>

Mark on May 7, 2014 at 3:59 pm

mark on May 7, 2014 at 3:55 pm

Hi Ken,

I don't know if youre still reading the comments from this article but I had a question for you about this quote..... "The mother's microbiome appears to be DNA compatible with the child. Mother's pass their microbiome to their children by the children sticking their fingers into their mother's and father's mouths. Messy kids are likely healthy kids. Microbiomes from another person may be rejected or fail to thrive because they are not compatible with the person's DNA."

My question is.....do you know of any research that supports the claim that microbiomes from another person (non familial DNA lineage) may be rejected or may not thrive in the gut of a recipient of that foreign biome? I think its a very important question for those of us considering doing FMT. From my research it appears that many people are having success with FMT (Fecal Microbiota Transplant) for many conditions but primarily C Diff infection, Ulcerative Colitis, Crohns and IBS, many of those persons using the fecal material of non family members. Im curious if you have found research which speaks to the idea of rejection of non familiar biomes.

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Thanks!

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