

# Physica Radio Field Notes

## Dr. Stephen H. Atkins

Well, Good afternoon everyone! It's Wednesday, it's lunchtime and that means it's time for 'Field Notes'. My name is Dr. Stephen Atkins and I am your host for this weekly reoccurring lunchtime segment. As always I want to thank you all for tuning in and it is always a pleasure of mine to be here.

I don't know about you guys but what happens in my practice is, whenever a "syndrome" condition comes into my practice it doesn't just arrive in one person – it comes in groups! And that has been happening of late with *Passive Leaky Gut Syndrome*.

Along with a detailed patient history I test the patient on my Avatar and do a Functional Terrain Analysis. This is a series of tests that I do on the 'first' morning's urine sample and interestingly enough I find a large number of people have an elevated urinary indicant measurement.

The Urinary Indican Test looks for an overgrowth of pathogenic bacteria in the small intestine. These patients have an increased sedimentation rate, which means their body cannot adequately digest proteins, fats and carbohydrates. When you either have an elevated indicant or an elevated sedimentation measurement it

provides a perfect situation for what is now being called Passive Leaky Gut Syndrome.

It's funny I was talking to a patient about this yesterday and I said, "You have passive leaky gut which basically means that undigested molecules move from the small intestine into the outer body cavity." He said, "What does that mean? Does it mean if I eat a piece of pizza, the pizza's not going into my stomach?" I said, "It doesn't really work like that."

Basically it works this way. Passive leaky gut syndrome is a common and colourful name for symptoms associated with the increased passage of large molecules between the *enterocyte lining*. Typically it refers to the *paracellular hyper permeability* of the small intestine. In this state, the tight junctions between the enterocytes fail to exclude the large molecules which are normally kept out of the *lamina propria* of the small intestine. The continuous layer of the enterocyte lining of the gastrointestinal tract actually forms the barrier between the external environment which is the lumen of the intestine and the organism. So the enterocytes are bound together by tight junctions near the cell apices which limit the passage of the contents of the intestinal

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lumen through the barrier to water and other smaller molecules.

Basically the integrity of the enterocyte barrier is essential, indeed vital(!), to our health. If the barrier is incompetent to the gut, the immune cells can be inundated with non-pathogenic antigens. For example, food proteins. Now, this can result in allergies and antigens to specific foods and it can also add to the development of *auto-immune disease* and/or the induction of *mast cell activation disorder*. The loss of the epithelial border competence can also allow exposure to the absorption of food and bacteria toxins to other molecules, and then on into the blood and the lymphatics. These would normally be excluded or degraded by the enterocytes. Now interestingly enough, when the tight junctions are open due to physiological stimulus, pathogens or toxins, large molecules are able to pass between the cells. When you have incompetence of the paracellular type junctions, this allows passage of large molecules between the enterocytes. The disruption of the mucus layer overlying these enterocytes can give bacteria abnormal access to the enterocytes which may affect its tight junctions. For example you may have a situation where you have bacteria secreting toxins which can then activate the intracellular pathway in the enterocytes resulting in the production of a certain protein, typically something like *zonulin*.

Zonulin will open the tight junctions and increase paracellular permeability.

Here's some more interesting biochemistry for you. You need to know this as it will open a wonderful door for correct product choices and treatment protocols. It also emphasizes the power of the Physica Energetic formulates in terms of research value, ingredient patterns and skilful recipe creations. Let me show you what I mean.

These tight junction rings of the apex of the cell to which I've been referring are made up of at least 19 different proteins which include *zonulin*, *occludin* and *claudis*. These proteins make the cell behave like a zip-lock, so only very tight molecules can sweep through. Now humans have about 24 different *clodin genes* – clodin 15 is the most highly expressed in the small intestine and clodin 4 and 7 which are also highly expressed from the colon. The presence of the different clodin proteins expressed by the cells in various areas of the intestines and other tissues, allows various tissues to permit passage or blockage of many different compounds in and out, which is very, very interesting.

Examples of factors that can potentially increase intestinal permeability. Nutrients such as glucose, incomplete amino acid patterns, middle chain fatty acids, oligo saccharides, etc. Bacterial toxins; you can have zonula, oculins, bacteroids and clostridium. Infections; really any bacteria like campylobacter or a virus or protoza like

giardia. Also hormones can increase intestinal permeability, especially if you have a corticotrophin releasing hormone issue. There are certain cytokines like interferon, certain medications such as aspirin, anti-inflammatories, chemotherapy which can all increase intestinal permeability. Also irritants like alcohol, sulphates and secondary bile acids. Food toxins like incomplete saponins or poor forming proteins, eg. oyster mushrooms; lectins can do it; alkaloids which come from poorly stored potatoes, eggplants, etc. If the body has some kind of injury either a burn to the skin, ischemic heart failure, or a bone fracture, this will increase intestinal permeability.

Other issues such as nutritional deficiencies like Vitamin A and zinc will add to it. It is very common in youth, especially premature infants. It is also increased with a disturbed sleep cycle which in turn can increase cortico releasing hormone altering GI motility. And oxidative stress is another big one. So there are a lot of factors that can lead to intestinal permeability and you might want to look at these things when treating your patients. Let's remember however, that there also is a propensity underlying this condition which has been setting up the "pattern" for some time. It isn't just the presence of these potential toxins, pathogens and xenobiotics whether physically, mentally and/or emotionally. There are always events leading up to this scenario prior to a full blown out passive

leaky gut pattern. Understanding this central point is extremely helpful otherwise we are just chasing rabbits, as Dr. Cass says. These rabbits (and their holes!) are definitely there however you can spend a lifetime running after low leverage factors which may help the patient feel better but you are getting to the causative factors and you run the risk of practicing suppressive therapies as we have seen over and over again in homotoxicological and biotoxicological examples. It's more than just a matter of giving butyrates, probiotics, enzymes and eradicating xenobiotics!

Fortunately Dr. Cass saw the need and formulated a well rounded, synergistic and reasonable priced (!) new product to initiate the corrective cycles. Were you on line two weeks ago on Wednesday night for his hour and three quarter intensive, clinical presentation on the 21 new products? Get the notes and if there's a copy of the presentation get yourself a copy. His clinical webinar training sessions are not sales sessions. They are specific to our practice at the levels we all need!

I'm referring now to the *Glutamine Complex PLG-U Powder*. PLG-U stands for 'passive leaky gut and ulcer' pattern. Now I am really, really looking forward to using this lot in my practice. I actually got some to beta test and it has worked wonders with my patients! It has a very unique formula and Dr. Cass has put in 5000 mg of CLEAN UNADULTERATED L-Glutamine. FIVE GRAMS is a hefty dose. Most glutamine products

are way under dosed and way over priced! We never want a glutamine deficiency, because this will lower levels of our protective T cells and reduce the ability of macrophages to kill viruses and bacteria. He has also added 600 mg *Deglycyrrhizinated Licorice DGL* at a **10:1 ratio** which is superb.

*Aloe Vera Leaf*: 100 mg at 200:1 means that it takes 200 pounds of the aloe vera inner gel fillets to make one pound of this nourishing aloe extract. He's been working on this product for quite some time now and he told a few of us recently that he was finally successful in retaining a broad spectrum of polysaccharide chains (mannan molecules) without chemicals that have been typically used. Now, why is this important? When low-heat dehydration system is used, it ensures that the long polysaccharide chains remain intact, as they are found in nature. The longer the polysaccharide chain, the greater the effectiveness in supporting immune function.

*Marshmallow Powder* 4:1 100 mg is present as a soothing botanical to the damaged cell walls.

500 mg of *Arabinogalactan* rounds of the formula beautifully. Because of its ability to increase colonic butyrate and decrease colonic ammonia concentrations (you should be thinking of degenerative colon conditions when I'm referencing the ratio of colonic butyrates and colonic ammonia concentrations.....). Did you get that? No,

really. Did you get that little pearl? Increased colonic butyrates and decreased colonic ammonia concentrates. Very specific to the resolution of degenerative colon conditions. Remember this isn't just about whacking pathogens!

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Ok, *Arabinogalactan*: this fermented fiber is a preferable form of fiber therapy.

AG (*Arabinogalactan*) supports immune cells involved with the body's first line of defence and to promote cytokine production, the communication and signalling pathway of immune cells. *Restoring Cellular Communication Pathways™* anyone?? AG supports a healthy environment for the liver and colon as I've indicated. In the colon, AG enhances the growth of the friendly microflora lactobacillus and bifidobacteria.

This formula is really great! If you have any patients with intestinal problems this will be a wonderful product to utilize. Especially as we are talking today about passive leaky gut. Don't forget food allergies, dysbiosis, candidiasis, parasite and other pathogens. But lay the foundation first!

It will accelerate wound healing; it will help immune system weaknesses; viral infections; chronic fatigue; it speeds recovery of sore muscles and preserves muscle tissue; it will help with respiratory problems and growth hormone production.

It also helps to counter balancing blood sugar levels which is another amazing facet

of this remedy. It promotes healthy acid-alkaline balance too, because we always want people to be a little more on the alkaline level than the acid....we are born alkaline and we perish acid. It can counter the side effects of chemotherapy and I have used this a lot with my chemotherapy patients. I give 2 scoops daily to them to counter the effects.

**It also helps with the development of enterocytes (as I have just spoken about), this is a cell that is very plentiful in the epithelial lining of the GI tract and the tight junctures between these become loose and that is when passive leaky gut can occur. Another great thing about this product is it helps cross the blood-brain barrier where the brain can then use it for fuel.**

So many products have a problem with this but *Glutamine Complex PLG-U Powder* doesn't. You can just use it to help fight flu's and colds! I would dose this anywhere from 1-2 scoops twice daily.

What I like to do with my patients is to take the *Glutamine Complex* and mix it with the *HepataGest Powder* using it in the morning and the evening in a smoothie. The *HepataGest*, as we should all know by now, helps to balance Phase 1 and Phase 2 liver detoxification and also Phase 3, biliary insufficiency. *Glutamine Complex PLG-U Powder* will actually help close up or seal these tight junctures in the enterocytes when they start to loosen.

So it is really, really an amazing product. I think Physica Energetics is going to be releasing this soon as I know you will all be excited when it hits your shelves. It is going to be a staple in my practice.

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Don't forget to include the *GALT Fortifier*, I go through a ton of this remedy. Remember it stands for 'gut associated lymphoid tissue'. This is a powerful product that helps to heal and seal the gut. It works by the okra sticking to the mucus build up on the intestinal wall and the pepsin using its enzymatic action to break down the protein based mucus. Pre-digested white fish protein provides the essential amino acids and polypeptides to restore the integrity of the mucosal lining, while beta 1,3-D glucans and colostrum nourish the immune cells of the Peyer's Patches....beautiful. I use this in conjunction with the *Flora Syntropy*. This helps to repopulate the GI tract with 'right spinning' spore forming lactobacillus sporogenes and offers assistance to all cases of GI distress. It will take care of any underlying bacteria or pathogenic organisms by making the terrain totally inhospitable to them.

*Hypo Zymase* is another must. Remember, *Hypo Zymase* is a dual phase digestive enzyme. It works at the level of the gastric and also at the level of the duodenum with appropriately targeted enzymes (correctly proportioned and balanced HCl, glutamic acid and other enzymes for the gastric) and targeted enzymes, *bile salts(!)*, botanicals, etc, for the small intestine. It's such a well

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rounded and well balanced remedy and I use it on almost every patient.

You should also look after the adrenals.....that's right, *Adrenal Life Force!* You may also want to consider using *Berberine Intrinsic* as berberine has been shown to have a high activity against infection by parasites, bacteria, viruses, mold, fungi, candida and yeast all of which can disrupt the tight junctures of the GI tract.

AND that is about all the time we have right now.

REMEMBER:

*In a New York minute - everything can change!*

*Hopefully this will get you started or at least remind you of what you may have already known, but forgotten.*

*I'm Dr. Stephen Atkins and this has been Field Notes and I'll see you next week.*