Followup Q&A to December 7 webinar “Probiotics: Understanding the Microbiome and the Role of Probiotics in Long Term Health” with presenter Jaime Capizzi RD, LD, CLC, Sigma Tau Healthscience

If anyone is interested in probiotics and their use in integrative health management, I suggest joining the Dietitians in Integrative and Functional Medicine (DIFM) DPG of AND. You can ask specific questions relating to patient diagnosis and personal experience on their listserv.

**Probiotics in SIBO**

Physicians will often start with Rifaximin and pulse with their preferred probiotic blend. Practitioners typically prefer a probiotic that contains Lactobacillus and/or Bifidobacteria and no other genus. Prebiotics often worsen the symptoms of gas and bloating. Other techniques include a short-term FODMAPs diet for symptom management combined with appropriate probiotics for Dysbiosis. Probiotic intake should start small <25 Billion and increase with symptom improvement. The amount of time on a low FODMAP diet depends on the patient’s sensitivity to FOS/GOS. However, eventually including foods with FOS/GOS help promote a diverse and healthy microbiome.

**IBS/Constipation and Probiotics**

Yes, probiotics can help a lot of with IBS-C and IBS-D. IBS-D is improved with calming the inflammation and improving the absorptive process. IBS-C is affected with an improvement in mucin production. Stools pass easier with the mucus covered lining, it does not affect the nerve function. A couple of probiotics have medical food status for IBS. Others have good data in diarrhea, which can help with symptom management in IBS-D. Gas, bloating and abdominal pain are typically the markers in studies that improve with probiotic supplementation.

**Yogurt consumption in infancy**

We discussed this on the phone, but I would recommend 6 months of age. If solids have been postponed due to developmental challenges, I would not introduce yogurt until other solids are deemed appropriate by a pediatrician. Yogurt, Greek or regular, is a safe way to introduce probiotics into your baby’s developing microbiome.

**Specific strains and Obesity**

Inconclusive at this point. Studies, mostly animal studies, are getting closer to the mechanism at which metabolism and adiposity are affected by the microbiome. It is understood at this point that having a diverse microbiome can positively affect the metabolic rate. Specific strains and how to supplement them or promote their growth is not known.

**Hand sanitizers**

I do not agree with hand sanitizers being ubiquitous. To me, it is reactive and harmful to our immune system hemostasis. I believe thorough hand washing, using regular soap and friction is a better approach.
**Studies on Auto-immune diseases secondary to the Hygiene Hypothesis**

Simply put, yes there are studies evaluating auto immune disease management and probiotics. However, it is not grouped into one category. Probiotic supplementation in diabetes and in ulcerative colitis are very different. Or rather, have to be studied independently. I would look to the Yale Symposium on Probiotics or Probiotic advisor if you would want studies on specific disease states.

**Sprouted Wheat vs. Whole Grain Flour**

I am not too familiar with this discussion. My understanding is that sprouted grains retain more of the nutrients and may be better tolerated by people with gluten sensitivities.

**Probiotics and mental health**

I do not know of specific study references with this, but a lot of functional/integrative practitioners understand that optimal gut integrity promotes serotonin production. If a patient has “leaky gut,” they may have an issue with the pathway that produces serotonin from tryptophan. A practitioner will work on decreasing permeability and promoting natural synthesis over adding an SSRI.

**Cholesterol and probiotics**

Another area of study, a lot to be determined. I would say promoting healthy fiber intake, including prebiotics, would be a win-win for cholesterol clearance and microbial diversity. Sources of fiber examples: acacia, inulin, citrus fiber, apple pectin, glucomannan, psyllium, resistant starch and prune

**Florastor vs. VSL #3**

Florastor is a dietary supplement that contains 5 Billion CFUs of saccharomyces boulardii lyo per capsule. The recommended intake is 2 capsules 1-2 times daily. This is a yeast and not a bacteria. Look for this strain in the Yale Symposium on Probiotics to understand where Florastor is best used. Physicians will often use this when a patient is on an antibiotic because the antibiotic will not affect the yeast and it is proven helpful with AAD. VSL #3 is a medical food used in the dietary management of IBS, UC and/or an ileal pouch. It has 112.5 Billion live CFUs of 8 strains. Again, please refer to Symposium. Intake of VSL #3 is dependent on patient diagnosis and symptoms. Patients with mild IBS will take 1 capsule daily. Patients with mild to moderate ulcerative colitis may take the equivalent of 4-8 capsules/day. VSL #3 packets are available in 450 Billion CFUs or VSL #3 DS is by prescription only and comes as a 900 Billion CFU packet.

**Prebiotics**
Eating a diet high in fiber and variety should be adequate to feed the microbiome. However, studies using prebiotic supplements are growing in number. An excellent source for learning more is [www.chriskresser.com](http://www.chriskresser.com).

**Antibiotics**

When supplementing probiotics, specifically bacteria, while on an antibiotic, be cognizant of timing. Either take the probiotic 2 hours before or 2 hours after the antibiotic dose. If taken too close together, the antibiotic will kill off the probiotic. Yeast probiotics are not effected by timing.

**C-Diff and FMT**

Physicians follow protocols for performing FMT with a C-Diff patient. It is more common at this time to begin first with an antibiotic protocol. If the patient fails at this step, a physician will most likely consider FMT. With the positive data and improvements in administration, I think most assume FMT will become a standard care approach for C-diff patients.

**Consumers Lab**

I like consumers lab for supplements in general. The probiotic market has improved since a Consumer Labs report a few years back that showed missing strains and substantial misinformation on CFU content. The report is seen as fair and informative.

**Probiotics during Pregnancy Reference**


**What is Leaky Gut**

It is a state of hyperpermeability in the gut. The tight junctions, gate analogy in presentation, are not functioning correctly and antigens, pathogens, environmental pollutants, etc are allowed to enter the immune system. If the microbiome is not healthy, a person does not have the protective layers of mucus and/or beneficial bacteria to help guard the tight junctions. As I mentioned in the presentation, if a person does not consume a healthy diet of pre and probiotics, bacteria will feast on the mucus and further advance the vulnerability of the epithelial layer.

**Probiotic Supplementation**

A person can tailor their daily intake or strain preference by symptom management. If someone does not have a diagnosis to contend with, eating naturally fermented foods daily is a great defense. If someone does have a GI issue, they will need to continue the supplement as long as the symptom
returns when they try to stop. I think of probiotic supplements as MVIs, they are needed daily. If the disease progression improves, they can try taking less.