

# Tequesta Family Practice

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## **Leaky Gut Syndrome**

We take care of a broad range of problems in our practice. Any good physician will look for the root cause of a problem, to try to eliminate the problem at the source instead of merely controlling symptoms. Leaky Gut Syndrome (LGS) is a good example of this. It's been associated with food sensitivities & allergies, inflammatory bowel diseases such as Crohn's and Ulcerative colitis, Irritable bowel syndrome, fibromyalgia, chronic fatigue syndrome, diabetes, pancreatic problems and other autoimmune syndromes such as lupus.

How does it all start?

When we eat food, our gut is supposed to form a barrier to all but the nutrients that we need via a system that's said to be *differentially permeable*. It lets the right size nutrients in while keeping larger potentially dangerous things such as germs out of our circulation. It can even work against a concentration gradient, concentrating essential nutrients at higher levels in the bloodstream than are present in the gut lumen. What happens if items that are too large get into our circulation?

**INFLAMMATION!** Our immune system is always on the alert looking for things that don't belong such as viruses, parasites & bacteria. Even large molecules can be a problem—certain bacteria and other organisms can release toxins that can kill us if they get into our bloodstream. The first stage of a “gut leak” allowing the “wrong stuff into the wrong place (our circulatory system)” is that the liver has a chance to detoxify and clear the potential problems. The liver can become overwhelmed however, with all of its immune tissue already working hard to do its job of filtering blood from all over the body, removing toxins and helping get them packaged to be removed from the body.

The larger molecules then escape from the liver and journey into the rest of the body where the immune system will still encounter them and try to remove them. The problems now are larger however, as there are more places for “collateral damage” to be done. The immune system works like a roadside bomb in Iraq at times. It causes inflammation that is not always well controlled; sometimes the “good guys” get hurt and tissue damage occurs. These larger molecules also can bind to our normal proteins and other body components altering them so that the alert immune system starts attacking them and all things that “look

like” them at the molecular level. If a protein binds to collagen in a joint and is then attacked by the immune system, the B-Cells of the immune system may make antibodies that cross-react with normal proteins, now targeting them all over the body as “dangerous invaders that must be eliminated”. It doesn’t take much of a leap of the imagination to see what will happen next; every joint in the body can now be attacked as happens in rheumatoid arthritis, lupus and other diseases.

These food constituents can also be recognized as allergies and sensitivities. Allergies involve Immunoglobulin class E (IgE), sensitivities happen with IgG antibodies. There’s always a question as to which came first; inflammation can cause the leaky gut which can then contribute to more inflammation.

### **Foods are more likely to cause problems;**

Refined sugars

Low fiber

Candida overgrowth

Alcohol

Bowel inflammation from any cause

Various drugs such as certain antibiotics and anti-inflammatory agents that damage the gut

### **What symptoms are found with LGS?**

Nutritional deficiencies

Candida overgrowth

Food Sensitivities (IgG) & Allergies (IgE)

Anxiety (common with candida overgrowth)

Skin rashes

Impaired immune function

Impaired memory/concentration

Fatigue

Headaches.

### **Dysbiosis;**

This is a term that refers to an imbalance between the friendly bacteria such as Lactobacilli & Bifidobacteria that act as our defense system against the “bad bugs” while producing vitamins such as B12, Folate, Short chain fatty acids, enzymes needed for absorption such as Lactase and detoxification. We typically have about 3.5 lbs of bacteria in our gut, both good guys and bad guys. This imbalance can cause all of the problems listed above, as a consequence of bad habits and result in troubling symptoms.

### **Treatment of LGS;**

The first thing we need to do is minimize inflammation while maximizing function.

Candida and parasites are common problems. While a little candida is necessary, too much in the diet (beer/wine/bread and fermented & yeast products) and causing them to grow out of control with too many simple sugars in the diet will lead to problems. Specific anti-candidal and anti-parasitic products include; Acidophilus and probiotics

Caprylic acid capsules 700-1,000 mg bid for 3-9 months

Pau D’Arco 2 500 mg capsules three times daily for up to 3 months while taking probiotics

Colloidal silver 200-500 ppm twice daily for 3-9 months

Fresh Garlic Cloves several daily if tolerated

Diet Restrictions;

Plenty of high-fiber foods, decreasing the simple sugars & starches in the diet with a low-carb type diet. The sugars to avoid include fructose, honey, molasses, and simple carbohydrate/snack foods such as potatoes, chips, cakes, cookies, desserts, sodas, fruit-juice and ice-cream.

Fermented products

Fungal products (Mushrooms & cheeses)

Fruit & fruit sugars to excess until candida has been brought under control with fewer symptoms.

#### Nutritional Supplements;

Increased essential oils; fish oils, flax seed, borage, evening primrose oils

Permeability factors; gamma oryzanol, L-glutamine, N-acetyl-D-glucosamine, gamma-linoleic acid and phosphatidyl choline.

Olive Leaf Extract 500 mg three times daily as a 10% extract

Grapefruit seed extract

Caprylic acid 300 mg three times daily, increase as needed

Garlic 2-3 times daily possibly as capsules with high allicin yield

Oil of Oregano 150 mg twice daily

L-Glutamine 500 mg three times daily

#### Bowel Cleansing;

Increase fiber to help remove toxins, Psyllium seed and husk works well and can bind up to 40 times it's weight in toxins. Citrus Pectin is another effective fiber choice. Think of Metamucil and Citrucell respectively.

#### Digestive enzymes;

There are many products available that contain Protease, Lipase, Amylase and other essential enzymes that typically tend to decline with aging. These help digest and break down the larger molecules while they're still in the gut lumen before they are absorbed and have a chance to trigger the inflammation cascade. We can also get a lot of enzymes in the food we eat, but heat typically destroys them, so raw foods can be a good source, especially vegetables and fruits such as pineapple, papaya, avocado, mango & banana. Sprouts are another good source of enzymes.

#### Probiotics;

We should try to keep a ratio of 85%/15% of Good/Bad bacteria in our gut. When this gets out of balance we can expect poor digestion, flatulence, bloating, vomiting, diarrhea and other problems. The good bus also keep the candida population under control as they help us by making nutrients that we need and helping to digest and absorb the nutrients that we need.

Remember, leaky gut is a result of the gut lining becoming inflamed due to food intolerances, drug ingestion, bacterial and viral infections, and stress. This inflammation produces gaps in the gut wall which allow macro food particles and other foreign microbes to enter the body and create an immune response. This can result in allergies, it further exacerbates food intolerances, and it possibly triggers autoimmune diseases. Therefore, focus on each of the five treatment categories above and you may experience results that approximate a leaky gut syndrome cure.

Eat Well, Stay Healthy!

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