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Do you have a nutritional E. F. Hutton in your life? You know, when they speak, you listen. That's my relationship with Dr. Harry Eidenier. After working in the nutrition field for over 30 years, he has seen the fads come and go. I just heard a lecture he gave on the "Physiology of Digestive Function and How to Treat **Common Digestive Problems**" and I want to share four clinical pearls that will definitely change the way you see digestion.

Digestion starts in the mouth where carbohydrates are tagged in an alkaline medium. pH changes in the stomach to 1.5 where protein digestion begins. As the chyme moves into the small intestine bicarbonate is secreted to change the pH to 8.0 -8.5. Secretin is released by the pancreas and cholecystokinin is released by the gallbladder to complete digestion. The pH is further changed in the large bowel from 8.0 to 6.8. However if the pH of the chyme leaving the stomach is over 5 due to use of histamine blockers, PPIs, antacids,



food allergies, lack of hydrochloric acid etc., the bicarbonate and secretin will not change the pH to the desired alkaline state in the small bowel. The chyme stays mildly acidic contributing to small intestine dysfunction, inflammation and a condition called small intestinal bacterial overgrowth or SIBO.

The healthy bacteria in the large bowel enjoy a pH of 6.8. If chyme leaving the stomach has not been buffered, it will be too acidic for the large bowel, meaning the competitive bacteria and fungus can thrive. For years, Dr. Eidenier has said when searching for the cause of a problem in the south end of the digestive tract always look north. Here's the key.

If pH is in the correct range, enzymes can be released, the balance of oxidation and reduction is maintained, proteins, fats and carbohydrates are digested and absorbed and the 100 trillion population of our microbiome that live in the bowel flourish.

If the pH is incorrect, healthy physiology is compromised. The microbiome in your gut are altered which then affect the 1,000,000 genes they contain, genes that signal cells to turn on and off inflammation as well as regulate our immune system.

The pH of the blood is 7.345. It takes a tremendous amount of energy for the stomach to concentrate hydrogen ions to 1.5 to make HCL. Therefore with chronic fatigue or infection, long term stress or diets high in refined foods, deficiencies in HCL are to be expected. Zinc, B1, amino acids and chloride are needed to make HCL. Each of these conditions puts stress on the availability of these key nutrients.

But here is something I never thought about. Heavy metals reduce the production of HCL. For example lead, cadmium, nickel, mercury and tin block zinc utilization needed to make HCL. Mercury has a direct effect on ATP production which can reduce the amount of available energy needed to make HCL. So for stubborn cases of digestion, always rule out heavy metals.

Secretory IgA (SIgA) serves as the first line of defense in protecting the intestinal epithelium from toxins and pathogenic microorganisms. The majority is produced in the mucosal membranes and can be found in the mucus secretions found in lungs, sinus, sweat, colostrum, bowel, urinary tract and prostate. Low secretory IgA indicates reduced GI immune function. At least 70% of the immune system starts in the gut; so if we don't have a healthy gut, we will never have a healthy immune system. When Secretory IgA is low, it can be increased with Saccharomyces boulardii, 1 capsule tid; IAG, 1 tsp tid; Cytozyme-Thy, 3 tablets tid; and Immuno-gG, 1 capsule tid.

In terms of the large bowel, butyric acid as Butyric-Cal-Mag should be considered in any inflammatory condition such as colitis, Crohn's or IBS. Butyric acid reduces NF-kappa B and as such is a major player to reduce inflammation. According to the literature, butyric acid reduces the seepage of undigested food as seen with allergies. It seals up the holes left by the penetration of undigested food. It also seals up the holes left by the penetration of roots, rhizoids of candida and other fungus. It increases the epithelial sloughing of the intestinal tract creating new attraction sites for favorable bowel flora. Many clinicians have reported that it is helpful with ADD, ADHD and many forms of colon cancer.

As a side note, some doctors treating autistic children find high ammonia levels. Ammonia can be a neurotoxin in excess and comes from a gut/dysbiosis issue. These same doctors see ammonia levels decrease with the use of butyric acid and see an improvement in symptoms. Dr. Eidenier feels that Butyric-Cal-Mag is the most effective, underutilized and economical product in the Biotics Research line. Use Butyric-Cal-Mg 2 capsules, three times a day.

By the way, Dr. Eidenier doesn't lecture anymore, however, Dr. Abbas Qutab has been trained by him to disseminate how to read blood chemistries. You can see a link below to know where he is speaking and how to gain access to his work on using nutrition to balance blood chemistry.

You may feel like you are going against the grain as you have conversations with your patients on these topics but it shows you care and in today's world that goes a long way.

Thanks for reading this week's Tuesday Minute edition. I'll see you next week.