



Healthy and Happy Monthly Newsletter

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The State of Gut Health in America: One Nation under Inflammation, with Nutrient Deficiencies and Pathogenic Toxicity for All

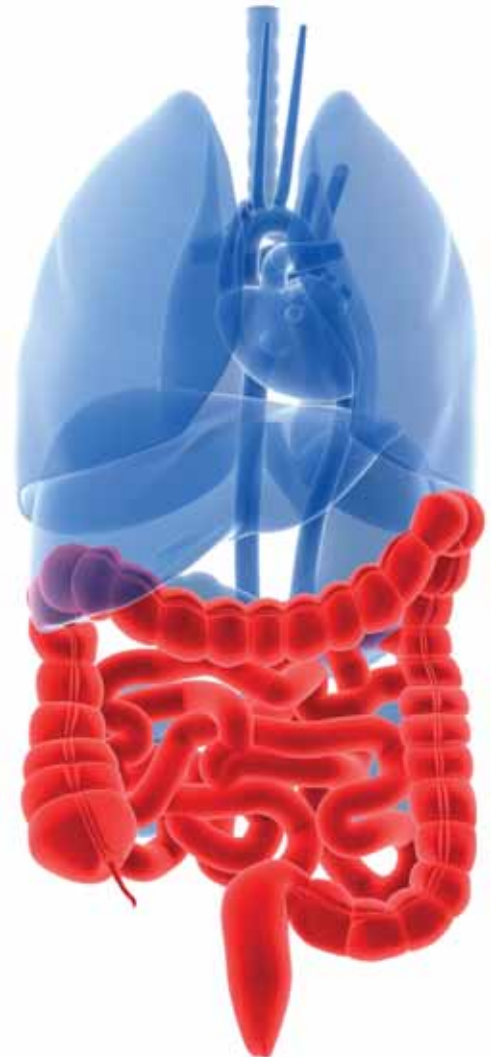
In past newsletters we have discussed mineral and vitamin deficiencies, dehydration, blood pressure, inflammation, diabetes, heart disease, stroke, and more. Interestingly, these health concerns are interrelated inflammatory conditions, and the root cause of each can be linked to the gut. The gut is largely responsible for the absorption of nutrients and the detoxification and elimination of waste, bodily functions that all of us should be concerned about maintaining for our health as well as the health of those we care about.

Today, all around the world, but especially in the United States, our population is experiencing record levels of inflammatory conditions, autoimmune disorders, and leaky gut syndrome, a phenomenon which has developed to epidemic proportions and significantly contributes to the deteriorating health of our nation. Would you be interested to know that maintaining a proper gut function may be the single most important thing that you can do to achieve health, wellness, and vitality, and prevent inflammatory conditions, disease, cancers and a variety of other life debilitating illnesses? If so, read on as we highlight and explore the gut and the amazing processes that it undergoes to help maintain a healthy body and mind.

The gut, or lower gastrointestinal tract, refers to the stomach and small and large intestines, which together make up approximately 80% of the immune system. The surface area of the digestive tract is estimated to be the size of a football field, a testament to the fact that the immune system must work really hard to prevent pathogenic bacteria and toxins from inhabiting the body and entering the bloodstream. Unfortunately, the monumental importance of these facts is often overlooked by most individuals, who by their poor dietary intake, set the stage for a suppression of the immune system, an interruption of the metabolic process, an overgrowth of pathogenic bacteria, and a relentless build up of toxins in the body's tissues and bloodstream.

Along with the brain, heart and spinal cord, the gastrointestinal tract begins to develop around the fifth week of embryonic growth. At birth the gastrointestinal tract is sterile. As the infant passes through the birth canal and out into the world, it ingests good bacteria laden mucus from the vaginal wall which immediately begins to colonize the gastrointestinal tract. In addition, the newborn infant feeds from the mother's breasts shortly after birth. This first breast milk is called colostrum, and it contains antibodies that help to protect the newborn against disease. In concert with the good bacteria from the vaginal mucus, colostrum serves to jumpstart the fragile and immature digestive/immune system of the newborn infant.

Fast forward to adulthood, and the latest research indicates that a healthy adult gut should contain approximately 500 different strains of good bacteria, numbering into the trillions, which if scraped out and weighed should amount to around eight pounds. The gut is a delicate yet resilient environment which functions best by maintaining a unique balance of good and bad bacteria. A healthy gut should contain 85% good bacteria, and 15% potentially harmful bad bacteria, with the latter being consistently kept at a minimum.



It is from here that diet is extremely influential in maintaining ideal gut health, as it is the foods which we ingest that can enhance and maintain good bacteria and enzymatic digestive activity, or pave the way for opportunistic pathogenic bacteria and infectious disease and the debilitating health conditions that follow.

As cited in previous newsletters, the American diet consists of approximately 62% processed foods. The problem is that these products are not fit for human consumption, they are not real food, and when ingested regularly, they will wreak havoc on the human body, beginning with the gut. Most processed foods take natural foods that can be perfectly healthy and nutritious, and alter them by processing them to be depleted of nutrients, fiber and enzymes, and rich in additives and preservatives so that consumers can enjoy greater convenience and a longer shelf life. The problem with this is that short of daily supplementation with vitamins and minerals, refined foods have processed out nearly all of the vitamins and minerals that the food contained in its natural form, and so they are devoid of nearly all nutritional value, and without the natural enzymes there is really no way for the body to properly digest them.

Processed foods typically contain a higher concentration of sugar, high fructose corn syrup, fat and salt, all of which will lead to increased risk of developing cancers, heart disease and obesity, just to name a few. Interestingly, the bad bacteria that reside in the human body grow and thrive on sugar. Therefore, the more sugar that you take into your body in the form of refined sugar, carbohydrates, and high fructose corn syrup, the more fuel that you provide for the bad bacteria to grow and thrive, upsetting the unique balance of good and bad bacteria, eventually creating an environment of toxicity and inflammation in the body.



The regular, steady intake of sugar in the form of sucrose and high fructose corn syrup can cause a number of complications in the body in concert with promoting the growth of bad pathogenic bacteria. Primarily, simple sugars cause an increase in uric acid. Everyone produces uric acid to some degree in the body. Uric acid is produced naturally in the body as a waste product from the process of cells dying and releasing purines.

Purines are natural substances found in all of the body's cells and in virtually all foods. They provide part of the chemical structure of our genes and the genes of all plants and animals. When cells die and get recycled, the purines in this genetic material also get broken down. Uric acid is the chemical that gets produced when the purines have been completely broken down and it serves as an antioxidant in the bloodstream, helping to prevent damage to the blood vessel lining. With an increase in sugar intake, the over-production of uric acid can occur, at which point the uric acid becomes too concentrated in the blood stream, where it functions as an antioxidant, and it seeps into healthy cells where it becomes a pro-oxidant and causes inflammation in the bones, joints, and kidneys, a condition better known as gout. Along with increased uric acid, there are a number of diet related conditions that are directly related to sugar intake and uric acid concentrations, such as obesity, diabetes, heart disease, and kidney disease.



Also, the gut is less commonly known as the second brain. The gut contains approximately 100 million neurotransmitters that operate independently of the brain in our skull, but also communicate with it on a regular basis. The neurons in the gut are mainly responsible for the elaborate daily grind of digestion and detoxification, helping to carry out the chemical processing, mechanical mixing and muscle contractions that break our foods down into what the body needs and moving the rest down the line for elimination.

If the bad bacteria are allowed to proliferate in our gut, due to the ingestion of sugars and carbohydrates, then the phenomenon of food addictions can occur, making it very difficult for the body to ever break itself of the bad bacterial infestation and the health conditions that develop as a result.

The reasoning behind this is that the bad bacteria in the gut actually communicate with the brain in our skull through the neurotransmitter pathways signaling “feed us sugar, we grow and thrive on sugar”, triggering the host human to think, “I need a soft drink, some ice cream, I need some cookies and cake, some artificially flavored corn chips. I know it is not good for me but I have a craving for this or that!” It is not the human host that desires the intake of these processed unhealthy foods, but the bad bacteria that have taken hold and do not want to leave the body, but instead prefer to remain as inhabitants in the body, and can only do so by triggering the food cravings, which are the fuel that is necessary for them to endure. A good rule of thumb to live by is the foods that we crave the most are the ones that we are most allergic to, that cause inflammation and imbalance in our bodies, the ones that lead most to a decline in our health.

Over time, as the bad bacteria overtake the good, and the enzymatic breakdown of food begins to decline, this can lead to a buildup of toxins, and an erosion of the gastrointestinal lining. A healthy gastrointestinal lining is similar to the skin on our inner forearms, soft, smooth, and with tiny pores. On our outer skin these tiny pores excrete perspiration, but in our intestines these pores open and close to take nutrients into the bloodstream and maintain normal biological processes. As the environment of the gastrointestinal tract becomes more imbalanced, the surface becomes less smooth and more pitted and rugged, and the tiny pores become larger and remain open when they are supposed to be closed. This deterioration of the gastrointestinal tract is known as leaky gut syndrome, and allows digested waste and toxins that would normally be eliminated to pass into the bloodstream on an at will basis.

Leaky gut syndrome has grown to epidemic proportions in the United States and there are a number of other health conditions that are associated with it, and can become accentuated as the leaky gut syndrome develops. With an overgrowth of pathogenic bacteria, and a decrease in enzymes that are processed out of the refined foods that make up a large part of our American diet, the continual ingestion of processed and high sugar high carbohydrate foods can only make the problem worse, causing symptoms such as diarrhea and constipation, otherwise known as irritable bowel, and inflammatory conditions such as arthritis symptoms in the bones and joints and skin conditions like psoriasis and eczema.

Diarrhea and constipation are often viewed as funny to joke about, but when they befall you, especially on a regular basis, they are no laughing matter. Diarrhea can strip the body of nutrients and water in a relatively short period of time, leaving the body stressed and dehydrated. If the body remains dehydrated for even a short period of time, it can affect the normal processes of nutrient absorption and detoxification, and produce a rebound effect of constipation.

As if diarrhea is not detrimental enough, constipation can cause additional discomfort, and increase pathogenic bacteria in the intestines and toxins in the bloodstream. When constipation occurs, the stool that would be normally eliminated every twelve to twenty four hours remains in your colon for up to five days or longer. The problem with this is that it is a serious indication that something is not right in your gastrointestinal tract. Over time, fecal matter can become impacted and build up in your colon. This fecal impaction can develop into an obstruction to your body’s elimination of foods ingested at a later time. It can also interfere with nutrient intake, meaning decreased appetite and food consumption, and decreased nutrient absorption from dehydration. The longer that the stool remains in the intestinal tract and colon, the more toxins that reabsorb through these tissues back into the bloodstream, and the process continues to compound itself.

With the buildup of toxins in the body due to an overall malfunction of the digestive and elimination processes, the body has to deposit the toxins and store them in the body’s tissues, or resort to other forms of excreting the toxins from the body. This usually takes place in the form of inflammatory responses like arthritic symptoms and chronic fatigue, and skin conditions like psoriasis and eczema. The body literally pushes the toxins out of the bloodstream, and into the body’s cells, causing them to be fatigued and produce energy less effectively and efficiently, and makes the skin more dry and prone to rash and irritation.

Often these conditions are treated on an individual basis, enabling the patient to manage the symptoms of the disease, but never addressing the root cause, and so the symptoms generally never resolve themselves. For example, when an individual gets skin conditions like psoriasis and eczema, they are usually prescribed a cream or ointment to be applied topically, directly to the site of irritation. While these topical medications may make the skin conditions subside, they are actually pushing the toxins that have broken the surface of the skin back down into the dermal layers and further increasing the inflammatory conditions caused by the toxin buildup, only to likely resurface on the skin at a later time.

So, let us briefly explore some effective ways to prevent these conditions from developing, and if already present in your body, methods to rejuvenate and restore gut health and intestinal flora imbalance, thereby eliminating the symptoms that may have developed as a result.

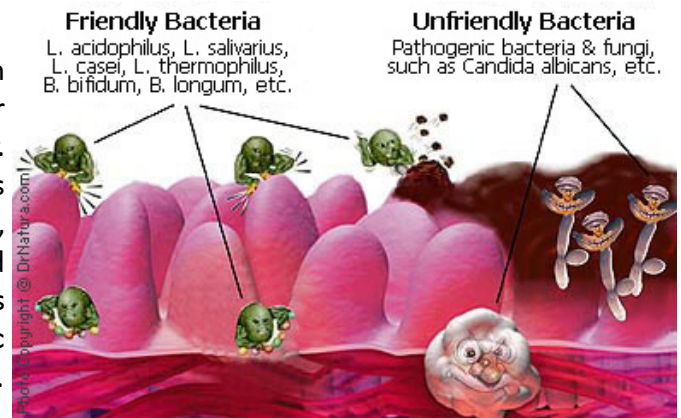
Try to avoid processed foods as much as possible. This includes soft drinks and energy drinks, alcohol, potato chips, white bread, bagels, cookies, cupcakes, cake, icing, brownies, processed meats, hotdogs, sausages, bratwurst, anything that is canned, or boxed and intended for an extended shelf life. The list of processed and refined foods is enormous and too great to cover in this newsletter alone. The fact is that processed foods are difficult to avoid altogether, so the best plan of action is to keep processed food consumption to a minimum. Instead, try to make up a larger percentage of your diet with fresh, raw, fruits and vegetables. These foods do contain natural sucrose, but they also contain vitamin C, and other antioxidants which counteract the effects of the natural sugars. In addition, these foods contain vitamins, minerals, and fiber, as well as enzymes that are necessary for the body to break these foods down into the nutrients that we need for survival.

If you eat ice cream before bedtime, or drink soda throughout the day, or both, you can bet on the fact that you are killing off good bacteria and creating an ideal environment for pathogenic bacteria and inflammation. You will most likely be feeling fatigued when you wake up in the morning, and experience brain fog, and irritability. If these unhealthy habits fit into your regular schedule, then you should do your best to cut back or eliminate these activities all together.

If you are already experiencing gut issues, like bloating, diarrhea, constipation, are you also experiencing arthritic symptoms like joint pain and stiffness? Do you have any skin conditions in addition to these other inflammatory symptoms? If so, then you should consider supplementing daily with probiotics and digestive enzymes.

Probiotics are good, healthy, bacteria that are present in all of us, and also available in supplement form. A probiotic is the opposite of an antibiotic. Antibiotics are anti-life, prescribed by a physician to kill off bad bacteria. Probiotics promote life, but are also killed off by antibiotics, which do not discriminate, but kill off all types of bacteria. Probiotics are a broad class of beneficial bacteria that inhabit a healthy person's body and have an influence on every single process that keeps you alive. Probiotics, good bacteria, mainly inhabit your digestive tract and are integral to the proper digestion of the foods that we eat. Both good and bad bacteria digest our food during their life cycle, but it is what they leave behind as their waste products that either enhances our health or promotes disease.

The presence of probiotics in large numbers promotes good health and as long as we promote the colonization of good bacteria in our systems, pathogenic bad bacteria will have a difficult time taking over. Probiotic supplementation can benefit many common health issues such as diarrhea, constipation, gas, bloating and reflux, yeast infection, antibiotic use, ear infections, acne, lactose intolerance, body odor and bad breath, diaper rash, colic, inflammatory conditions such as arthritis, skin conditions and more. A good over the counter probiotic should be refrigerated and contain multiple strains of good bacteria.



Digestive enzymes are also available in supplement form, and are critical for the proper breakdown of our foods, to ensure that they have been properly metabolized and absorbed. An ideal diet provides the enzymes that are necessary to help make foods easier to digest, but the typical American diet of cooked and processed foods robs the body of these digestive enzymes. There are over twenty digestive enzymes that exist to promote the healthy digestion of proteins, fats, and carbohydrates, all of which are necessary to maintain a healthy body. Digestive enzymes are present in the mouth and secreted in saliva, as well as the stomach, pancreas, small and large intestine. But, if there is an over abundance of pathogenic bacteria and a shortage of probiotic bacteria, then the production of these enzymes will be altered and depleted as well, so enzymes and good bacteria are intimately related.

Doing your best to maintain a diet that is rich in fresh fruits and vegetables, as well as supplementing with probiotics and digestive enzymes is the best format for maintaining a healthy body and preventing a variety of inflammatory conditions. A steady intake of processed and refined foods that are nutritionally deficient but rich in sugars, carbohydrates, and high fructose corn syrup is a recipe for destruction of a healthy digestive tract and the growth of pathogenic bacteria and the accumulation of toxins in the body. Ultimately, the choice is up to you. Now that you have more insight into how your food is digested and the influence that processed foods can have on your overall health, the next time that you are about to eat something that is nutritionally deficient, hopefully you will go with your gut.