Healing the Gut and Working with Food Allergies

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From the Book – Is your child's brain starving?
By Dr. Michael R. Lyon, MD

The GI tract has an enormous influence over both the immune system and the brain. Over _ the cells in the immune system are located in and around the GI tract.

Leaky Gut Syndrome – The lining of the small intestine is nearly leak proof and only fully digested food molecules are permitted to pass thought this lining into the bloodstream and lymph vessels. The stomach and intestines are full of hostile elements: Hcl, digestive enzymes, undigested food material and trillions of microorganisms. To inject even a small amount of the contents of the digestive tract into the bloodstream would be very unhealthy. This leak proof lining is only one cell layer thick and can be easily damaged. The cells of this lining live only 3 days. They have an extremely high metabolic activity and intense nutritional demands.

When enough of these cells are damaged there are more and more gaps in the intestinal lining allowing large quantities of molecular debris – undigested and partially digested protein, carbohydrates and fat as well as fragments from microorganisms to pollute the blood and lymph of the intestinal tract. Some gets transported to the liver which has to process it, other ends up circulating through the body – all of this puts a great strain on the immune system, the liver and virtually every other organ and system of the body. Leaky gut syndrome has also been found in cases of autism and research that Dr Lyons has done shows that most children with attention deficit hyperactivity disorder suffer from a leaky gut.

A medical test known as the lactulose-mannitol intestinal permeability test can be done by a nutrionally oriented medical doctor. The test is relatively inexpensive but usually not covered by insurance providers.

What causes a leaky gut?

Severe emotional stress or trauma, drug use especially anti-biotic and anti-inflammatory drugs, alcohol abuse, GI tract parasites, intestinal bacterial infections or overgrowth, ingestion of junk foods - especially deep fried foods made with hydrogenated vegetable oils, excessive consumption of starchy or sugary foods and food allergies. One major junk foods binge or a single course of anti-biotics can create a condition of leaky gut in hours. If the diet doesn't contain enough nutrients to repair the leaky gut it can become a persistent problem.

Food is information

Bioflavanoids instruct the brain to produce more neurotransmitters
Omega 3 fatty acids encourage cells to cool off inflammation.
Natural whole foods have ways of communicating with the brain –junk foods doesn't
Leaky Gut Syndrome may also cause a flood of wrong messages to be communicated from the digestive system to the body.

Wheat protein contains gluten and Milk protein contains casein - these can have morphine like properties in the brain called exorphins. These exorphins can accumulate and cause undesirable drug-like or toxic effects upon the brain.

The Probiotic-ADHD Connection –
Research Dr.Lyon did on 75 children with ADHD showed that the majority of these kids had little or no friendly (probiotic) gut bacteria, but all had high amounts of potentially harmful (pathogenic) bacteria in their bodies. About 1/3 had colonies of pathogenic yeast and nearly _ had one or more intestinal parasite. Some kids had as many as 5 different species of intestinal parasites. His research also indicated that more than 80% of children with behavioral or cognitive problems identified specific immune system weaknesses in them.

3 steps to take are:

1) Heal the leaky gut
2) Re-establish healthy gut bacteria
3) Take care of the nutritional inadequacies.

The importance of Probiotics – these flora help us to digest food, generate important nutrients, stimulate the immune system, diminish allergic reactivity and prevent the reproduction and colonization of undesirable microbes as well neutralize toxins in the gut and stimulate gut wall healing in those with a leaky gut. Breast fed infants have higher amounts of bifidobacteria in their gut. Research now suggests that children with adequate quantities of bifidobacteria are less likely to develop allergic diseases such as asthma. Of the many strains of probiotics few can establish themselves well in the GI tract. Eating yogurt is beneficial because the transient bacteria still help. *Lactobacillus rhamnosus* is a species that contains some of the most impressive strains of scientifically validated probiotics. LactoBacillus rhamnosus can markedly diminish symptoms in those with food allergies. Another strain taken from Swiss Cheese is called Propionibacterium freudenreichii which stimulates the growth of various strains of bifidobacteria primarily for stimulating the gastrointestinal immune system. Propionibacterium generates a byproduct known as propionic acid. *This is a very potent but non-toxic yeast suppressing substance.* Dr Lyons found that 1/3 of kids with ADD had an overgrowth of yeast.

Help the Brain: the ANT PIE program:
ABSTAIN: Leave off the most obvious gut offenders: Junk food, fast food, deep-fried, overcooked, over-processed and most canned foods. Avoid products containing hydrogenated vegetable oils. Reduce the amounts of dietary fat, sugar or starches. Replace coffee, sugary soft drinks and fruit juices with water, green tea or herbal tea. *Learning Factors Smoothie Mix makes a great alternative to a meal or snack.*
NOURISH – Intestinal cells have high nutritional demands. Get a foundation of whole foods like whole grains, vegetables and fruits, good quality protein, vitamins, minerals, trace elements, essential fatty acids, fiber and a variety of phytochemicals. L-Glutamine is a key intestinal nutrient that needs to be included in any gut rehabilitation program. Zinc, anti-oxidants- (grape seed extract, milk thistle extract and green tea extract, Vit C, E and carotenes), water soluble fiber such as guar gum, lecithin and omega-3 fatty acids from fish and flax oil. Minerals such as calcium, magnesium, selenium and chromium. Finally digestive enzymes are often recommended by nutritonal professionals in improve digestive function.
TOXINS – Exercise promotes good digestion and helps effective detoxification. Certain nutrients can help the liver and gut efficiently dispose of toxins. The amino acids glycine, taurine, N-acetyl cysteine, and L-Glutamine are key liver detoxification nutrients along

with inorganic sulfate. Milk Thistle extract, Green Tea and Turmeric help with detoxification activities as well as vitamin C and B-complex vitamins. Finally both soluble and insoluble dietary fiber activate liver detoxification systems and can act as a natural "broom" sweeping toxins out of the body.

PROBIOTICS – Are especially important during and after anti-biotic use, but are best used on a regular basis throughout life. They should always be used with Pre-biotics such as FOS, Inulin, oat bran, legume fiber or guar gum.

IDENTIFY – People with brain-related problems often have persistent adverse food reactions that need to be identified and dealt with. Identifying and properly managing food allergies or intolerances can bring about dramatic improvements in cognitive performance, behavior and overall health. Dr Lyons has found it amazing how many kids with brain –related difficulties have intestinal parasites. Identifying and then eliminating them can often bring about very clear benefits. Stool Testing can be ordered from Great Smokies Labs in Asheville, NC 828-252-9833

ELIMINATE – 1) Allergic or intolerant foods. If problematic foods are eliminated for a few months while the gut is being supported, these problematic foods can be gradually reintroduced and eaten again, at least on an infrequent basis. 2) Intestinal parasites or other undesirable gut microbes. In the western world, most parasites found on stool examination are single-celled animals known as protozoa's. Renew Life Products have a number of excellent products designed to help the body eliminate parasites.

The war within: food allergies and the brain

True Food Allergies: Only affect 1-5% of adults and 3-7% of children, which involve allergic reactions usually occurring immediately after exposure to food allergens. They are caused by the release of the chemical histamine and other inflammatory compounds from specific immune cells. They can cause symptoms such as swollen lips, hives, difficulty breathing, itchy eyes or stuffy nose or anaphylaxis.

Food Intolerances: A far higher percentage of people, perhaps as many as 75% experience other adverse reactions to food. These can be classified as either food intolerances or food hypersensitivities. Food intolerances generally refer to non-immunological reactions to foods such as those that occur when food is improperly digested. A common example of this is lactose intolerance with gas bloating or diarrhea or headaches and flushing experienced by people eating MSG

See handout sheet – food additives to avoid - for common chemicals in food that causes intolerance.

Food Hypersensitivities: Food hypersensitivity is known as immediate Type 1 reactions such as swollen lips or breathing difficulties – more common are delayed hypersensitivity reactions known as Type III – these occur in people primarily with leaky gut problems. Most people with delayed hypersensitivity reactions are unaware that they are reacting – instead they often suffer with a variety of vague complaints such as fatigue, anxiety and muscle pain. It is quite common to crave the foods that are causing their adverse food reactions.

Finding the Culprit - The most effective way to identify food allergies and intolerances, or hypersensitivities is to temporarily restrict the diet, eliminating the foods most likely to be associated with allergic reactions. If done properly the elimination diet can show observable improvements in mood, cognitive performance, energy levels, physical

symptoms and general wellbeing within 1 to 4 weeks. In children, improvements in behavior, attitude, reading abilities and school performance are often clearly observed.

7 Steps for Allergy Elimination

1- The person should complete a diet and symptom diary for one week using the form provided. Make copies of this document and use one of these forms each day to record pertinent info. At the end of the week, review the diet and symptom diary sheets to look for clues that suggest which foods may be causing adverse effects.

2- The next week the person should begin the elimination of possible offending foods – this is a strict period of leaving out all possible commonly allergic foods this list can seem overwhelming at first. It can take several weeks for some people to move into an elimination diet. The first week on the diet is often the most difficult. Many people feel and behave worse than they did before the diet for the first few days. In some ways this can be likened to an addict in withdrawal. By the end of the 2nd week many children and adults feel better than they have at any other time in their lives.

3- The food challenge process. This step involves identifying allergic or intolerant foods by a careful and systematic reintroduction method known as the food challenge process. This is done after the 2 to 4 week elimination diet. The most common - dairy and wheat are the 1st foods to be challenged, since they are the most common foods to cause adverse food reactions. Test only 1 food on one particular day. The challenged food is eaten at each meal, doubling the quantity eaten with each meal. For example milk would be drunk starting with _ a glass at breakfast, 1 full glass at lunch and 2 glasses at dinner. If a clear adverse reaction occurs to the challenged food, it is not necessary to challenge it again at subsequent meals. Keep a careful record of the foods eaten, the quantity consumed, the time of day and the symptoms experienced after eating the foods. Follow the suggested photocopied chart from the book.

4- Food challenges occur on one day and symptoms are observed that day as well as the following day. Any physical symptoms, bad behaviors, mood swings or cognitive problems experienced by the person during the day are recorded, along with the time the symptoms occur. The person should also record the quality of sleep that night and how the person feels and behaves the next day. Fatigue, bad breath, stuffy nose, headaches, moodiness, aggressiveness or other bad behaviors the day after a food challenge should all be recorded. If the person gets sick with a cold or ear infection wait until the individual recovers before resuming the food challenge.

5- Take the Pulse Test – Before eating a test food, sit quietly and measure the pulse rate (in heartbeats per minute). Keep the information recorded on the food challenge dairy form. After the challenge food is eaten, the person should remain still and measure the pulse rate after 5 minutes and then after 10 minutes. Food allergies or intolerances may cause the release of the stress hormone adrenaline, which will increase the pulse rate by about 10 beats per minute or more. Such a rise will help confirm the presence of an adverse food reaction.

6- Always have a day of elimination diet between food challenges. This wash out day is important for accurate observation and recording.
7- For older children and adolescents it is worthwhile to challenge junk foods by letting the child or teenager to binge on junk foods during one of the challenge days. This will let them experience how dreadful they feel after eating these foods and may help them to understand why they should avoid them. Be sure to have adolescents record how they feel after their junk food binge, so later if they are tempted to start eating junk food again they can remember how it made them feel.

This is a difficult process to follow – but it is the best-known system to accurately determine and help eliminate food allergies and intolerances. Many of the most renowned food allergy clinics in the world rely exclusively on this method. Following a healthy diet can heal a leaky gut and improve immune function. Over weeks and months, positive dietary changes can reduce sensitivities to previously difficult foods to the point that it may be possible to eat them again in small quantities without ill effects. Avoiding junk food and sticking to a diet rich in whole foods, fruits and vegetables and whole grains is a lifelong commitment to good health. The prize – a healthy brain, a healthy body and a new positive outlook on life.

The vast majority of the information in this handout was taken from the book – Is your child's brain starving? By Dr. Michael R.Lyon, MD Mind Publishing 2002 ISBN 0-9685168-5-8