

A White Paper

Functional Medicine And You.

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Functional Medicine: A White Paper

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When Your Doctor Can Find Nothing Wrong With You

When people do not feel well, it is advisable for them to see their primary care physician to rule out the presence of any serious disease. However, it is not uncommon for a patient to come home from a doctor's visit still feeling in poor health yet having no answers. People might suffer from constant fatigue, headaches, constipation, muscle aches, abdominal pain or nausea – but their blood work and other tests come back negative, and their physician cannot detect the presence of any known disease.

Certain that *something* is wrong, people might start searching online for an explanation of their symptoms in a futile attempt at self-diagnosis. Sometimes they will turn to friends and family members for advice, or spend needless time and money going from one medical doctor to the next. Medical doctors, however, do not specialize in **functional medicine**, which deals with primary prevention and the underlying causes of serious chronic disease.

For the best possible outcome, functional medicine should be used in combination with conventional medicine. Functional medicine focuses on how well a person functions in everyday life; i.e., whether the person has the maximum energy available to enjoy daily activities. With a patient's optimal wellness as the ultimate goal, the functional medicine practitioner takes into account not just a patient's physical body, but also the mental, emotional and spiritual aspects of that person's life. This approach is commonly called "holistic" in nature.

Functional medicine has historical antecedents in the nutrient deficiency model, and its practitioners believe that imbalances in digestive processes can cause functional disorders. The purpose of this white paper is to explain three common functional disorders:

- Hypoglycemia
- Leaky Gut Syndrome
- Vitamin and Mineral Deficiency

This paper discusses common symptoms of these three functional disorders, which adversely affect health and well-being, and informs the public how these ailments can be identified through special tests. This paper also discusses a number of the available functional medicine therapies used to treat these three ailments.

Most routine medical tests do not look for hypoglycemia, leaky gut syndrome or vitamin and mineral deficiency. Treatment of these ailments is commonly positioned under the umbrella of complementary and alternative medicine, of which functional medicine is a subset. To begin with, a general definition and discussion of complementary and alternative medicine will be helpful.

Complementary And Alternative Medicine

Complementary medicine comprises treatments and therapies used *in addition to* the conventional ones prescribed by a physician. An example might be massage or meditation therapy in addition to prescription medicine for anxiety.

Alternative medicine comprises treatments and therapies used *instead of* conventional ones. An alternative approach to back pain, for example, might involve seeing a chiropractor instead of a primary care physician.

Among the most popular complementary and alternative medicine therapies are nutritional and phytonutrient supplementation, acupuncture, herbal remedies, homeopathy, aromatherapy, ayurveda (the ancient Hindu art of medicine), applied kinesiology, and a wide range of massage and manipulative therapies and treatments.

Complementary and alternative medicine products and practices are not part of the standard care provided by hospitals and physicians in the United States, nor are these interventions taught in U.S. medical schools.

In the absence of clinical studies, this white paper will present three case studies that are representative of the many patients I have treated who suffer from the functional disorders of hypoglycemia, leaky gut syndrome, vitamin and mineral deficiency,.

Case Studies

Case #1 -- Hypoglycemia

A 55-year-old female patient presented to my office complaining of fatigue in the afternoons and slow weight gain over the past five years. She stated that she craved carbohydrates and wanted sugar after every meal. Her blood sugar levels were a little low on her lab test. I gave her gymnema* to take with every meal. We reviewed the glycemic index, and I taught her how to identify foods that were better for her hypoglycemia. I also instructed her to eat five small meals a day. After 30 days the patient returned to my office. She had lost six pounds and had her energy back.

**Gymnema sylvestre*, an herb native to the tropical forests of India, has been used as a naturopathic treatment for nearly two millennia. Data suggests that extracts derived from gymnema may be useful as therapeutic agents for the stimulation of insulin secretion in individuals with diabetes mellitus type 2.

Case #2 -- Leaky Gut Syndrome

A 16-year-old female presented to my office complaining of stomach pain and nausea in the mornings. She also stated that her stomach hurts after every meal and she suffered bloating and constipation. She stated that she would go three days without eliminating. After a full applied kinesiology exam, I identified several food intolerances and *candida albicans*. She was instructed to completely avoid the foods that she was sensitive to and to take acidophilus* and caprylic acid**. After 30 days she was symptom-free.

**Lactobacillus acidophilus* is a bacteria that normally lives in the human small intestine and is generally considered to be beneficial. An acidophilus compound is used to replenish the good bacteria in the gut.

**Caprylic acid is the common name for the eight-carbon saturated fatty acid known by the systematic name octanoic acid. Known to have anti-fungal properties, caprylic acid is often recommended for the treatment of candidiasis, or candida albicans in the intestines.

Case #3 – Vitamin and Mineral Deficiency

A 40-year-old female presented to my office complaining of fatigue and exhaustion. She stated that she had been feeling this way for more than a year. Her results from her SpectraCell blood test revealed several nutritional deficiencies. Her vitamin D level was very low; she had a vitamin B12 deficiency and a deficiency of alpha lipoic acid*. After taking the appropriate nutrition for 30 days she reported feeling 80 percent better.

* Alpha lipoic acid is a fatty acid found naturally inside every cell in the body. It converts glucose (blood sugar) into energy and is also an antioxidant, which neutralizes potentially harmful chemicals called free radicals.

Hypoglycemia

Like diabetes mellitus, hypoglycemia is a blood sugar ailment. Commonly called “low blood sugar,” the condition of hypoglycemia results when the pancreas produces an over-secretion of insulin in response to a rapid rise in blood sugar or “glucose.”

Carbohydrates are natural organic substances such as fruits, vegetables and grains. Table sugar also is a carbohydrate. The process of digestion converts carbohydrates into simple sugars like glucose so they can be absorbed through the intestinal walls into the bloodstream. Glucose is then stored in the liver and distributed to cells throughout the body for energy. Too much sugar or carbohydrates in the diet and not enough exercise or stress reduction can impede the body’s ability to use food for fuel when needed. Eventually the body will stop being able to properly metabolize sugar. When this happens, people can have mood swings, feel tired after eating and have sudden weight gain.

Hypoglycemia is easily treatable if identified. A glucose tolerance test can identify this condition. Before taking the test, one cannot eat or drink anything after midnight. For the test, the patient’s blood is taken, and then the individual drinks a liquid containing a certain amount of glucose. The individual’s blood is taken again every 30 to 60 minutes after drinking the glucose solution, for up to three hours.

If left untreated, hypoglycemia can lead to diabetes. In functional medicine, the practitioner may suggest a number of natural therapies, among them gymnema sylvestre, alpha lipoic acid, fenugreek (an ancient herb often used in curry) or fresh garlic. These therapies are adjunctive to a healthier diet, in which the patient avoids over-consumption of sugar and carbohydrates.

Leaky Gut Syndrome

Leaky gut syndrome is a condition where there has been damage to the lining of the small and large intestines. The damage may have been caused by poor diet, alcoholism, ingestion of allergy-causing foods, antibiotics, parasites or infection, leading to increased permeability of the gut wall. NSAIDS (non-steroidal anti-inflammatory medications) such as Ibuprofen and Naproxen can also be a factor in leaky gut syndrome. Toxins, undigested food, waste or bacteria may then pass through the small intestine and enter the bloodstream. The result is mild to severe health problems.

Symptoms associated with leaky gut syndrome range from fatigue to pain in the joints, muscles or abdomen. The individual may suffer from fever, abdominal swelling, diarrhea, skin rashes or shortness of breath. Cognitive or memory problems are also associated with leaky gut syndrome.

A lactulose/mannitol test is one way to identify this condition. Following an overnight fast of

at least eight hours, the individual drinks a solution containing mannitol and lactulose, which are two water-soluble sugars that are not metabolized by the body. Urine is then collected and measured. During the six-hour urine collection, the individual must avoid eating or drinking any substances containing fructose (fruit sugar), including fruits, fruit juices, soft drinks sweetened with high-fructose corn syrup, jams and jellies, chocolate or honey. Mannitol is well absorbed and will be transported through the intestinal lining, while the intestinal tract is impermeable to lactulose. A high lactulose/mannitol ratio in the collected urine sample reveals excess leakage of lactulose through the intestinal wall and is indicative of leaky gut syndrome.

Leaky gut syndrome is treated with nutritional support combined with a healthy diet, which repairs the lining of the gut. Among the treatments known to be effective are a high potency blend of acidophilus, caprylic acid, fresh garlic, colloidal silver, diet restrictions and nutritional supplements.

Vitamin and Mineral Deficiency

Although nutrition and dietetics are acknowledged branches of conventional medicine, nutritional supplementation is often considered a modality of complementary and alternative medicine. Vitamin and mineral deficiencies can lead to fatigue, depression, body aches and overall malaise.

It is always a good idea to have a vitamin B12 and vitamin D check on a routine visit to your physician. These are among the most common vitamin deficiencies. A vitamin B12 deficiency can potentially cause severe and irreversible damage to the nervous system. The lining of the entire gastrointestinal and respiratory tracts require a constant supply of vitamin B12. Common early symptoms of anemia are fatigue, decreased concentration and decreased memory, irritability, sleeplessness and depression.

Vitamin D deficiency can lead to serious diseases such as rickets, osteomalacia and osteoporosis. A deficiency in vitamin D has also been linked with cancer, periodontal disease, high blood pressure, multiple sclerosis, depression, schizophrenia, seasonal affective disorder, chronic pain and several autoimmune diseases.

The Enzyme-Linked ImmunoSorbent Assay, also called an ELISA test, can rule out food allergies. This test looks for the presence of antibodies in patients to numerous food allergens. ELISA tests require sophisticated equipment and skilled technicians and use components of the immune system and chemicals to detect immune responses in the body. Allergies occur when an individual's immune system mistakenly identifies a normally harmless food as a bacteria or virus. The individual's immune system then attacks this food the same way it would attack an invader. When your immune system attacks an invader, side effects such as aches, pains and fatigue can occur.

By drawing a small amount of blood, the ELISA test will test for 190 or more food allergies. A food allergy such as a gluten intolerance can lead to gastrointestinal complications such as spastic colon, diarrhea or other problems. If left untreated, a food allergy can make a patient extremely sick. Food allergens primarily affect the airway, the skin and the digestive tract.

There are many types of tests that identify any imbalance in an individual's system. For example, saliva hormone tests measure current levels of hormones such as estradiol, progesterone and testosterone in the body. These tests measure the tissue reserve of hormonal imbalances and will identify a problem before it shows up in the blood, when it becomes more serious. Hormonal imbalance can manifest through depression, fatigue, headaches, decreased libido, weight gain or anxiety.

The SpectraCell test assesses the function of specific vitamins, minerals, antioxidants and

other essential micronutrients within an individual's white blood cells (lymphocytes). This test allows the identification of missing vitamins and minerals for targeted nutritional replacement.

Diagnosis and Therapeutic Treatment By An Applied Kinesiologist

When your body cannot metabolize food correctly, your quality of life suffers. If you are experiencing conditions ranging from chronic headaches, fibromyalgia, irritable bowel syndrome, chronic fatigue and chronic joint pain, yet your primary care physician cannot detect the presence of any known disease, it may be time to consult a functional medicine practitioner.

Functional medicine can detect the presence of hypoglycemia, leaky gut syndrome or a vitamin and mineral deficiency in individuals and provide healing therapies before these ailments develop into severe medical problems.

The functional disorders of vitamin and mineral deficiency, leaky gut syndrome and hypoglycemia are all conditions that can be diagnosed and treated by an applied kinesiologist.

References

H Asare-Anane, GC Huang, SA Amiel, PM Jones & SJ Persaud. "Poster Presentations – Stimulation of insulin secretion by an aqueous extract of *Gymnema sylvestris*: role of intracellular calcium." *Endocrine Abstracts*, Volume 10 DP1, 2005.

Maurice E Shils, Moshe Shike, A. Catharine Ross, and Benjamin Caballero. *Modern Nutrition in Health and Disease*. Philadelphia: Lippincott Williams & Wilkins, 2005.

Medford, Lorrie, C.N. *Why Am I so Grumpy, Dopey and Sleepy?* LDN Publishing, 2003.

"The Hidden Disease: Leaky Gut Syndrome." *Health Matters Magazine*, Special Issue, 2004.

About Dr. Angela Baylis

Dr. Angela Baylis, Doctor of Chiropractic, opened her practice in Raleigh in 2000. She is certified and specializes in Applied Kinesiology and Neuroemotional Technique, and in NAET and bioresonance technique. She offers comprehensive, state-of-the-art natural health and wellness care to her patients, working to achieve optimum results in the treatment of conditions ranging from chronic headaches, fibromyalgia, Irritable Bowel Syndrome, Chronic Fatigue and Chronic Joint Pain. Through her alternative treatments, she has been successful in helping women to treat PMS, menopause, infertility and hormone imbalances. Dr. Baylis received her Doctor of Chiropractic from Parker College of Chiropractic in Dallas in 1998, as well as a Bachelor of Science in Anatomy from the same institution.

Disclaimer:

This white paper is not intended as medical advice and does not constitute medical advice. Although the paper may include some discussion of medical facts and procedures, the paper is intended as an informational guide only.