



## Enhance Your Mental Capacity by Your Digestive System

Isn't it interesting that we constantly use the expression: "my gut feeling tells me"? In reality, our brain is considered as our second gut — or, you could say our digestive system is our second brain.

#### THINK OF YOUR GUT AS YOUR SECOND BRAIN

You actually have two brains — one inside your skull and one in your gut — and each needs its own vital nourishment. Your gut and brain work in tandem, each influencing the other. This is why your intestinal health can have such a profound influence on your mental health, and vice versa. This is also the reason why your diet is so closely linked to your mental health. According to research, probiotics have a significant effect on brain chemistry, modulating mood and behavior, regulating signals to your brain via the vagus nerve.

You may not be aware that you actually have two nervous systems — the central nervous system composed of your brain and spinal cord, and the enteric nervous system which is the intrinsic nervous system of your gastrointestinal tract that runs from your mouth to your anus. Both are actually created out of the same type of tissue. During fetal development, one part turns into your central nervous system while the other develops into your enteric nervous system. These two systems are connected via the vagus nerve, the tenth cranial nerve that runs from your brain stem down to your abdomen. It is now well established that the vagus nerve is indeed the primary route your gut bacteria use to transmit information to your brain.

The brain exchange center of the nervous system is where sensations generate ideas, and where ideas are expressed by action. Evidence of its importance to the body comes from the fact that the brain accounts for only two percent of the body's weight yet its operation uses twenty percent of the oxygen and blood. It

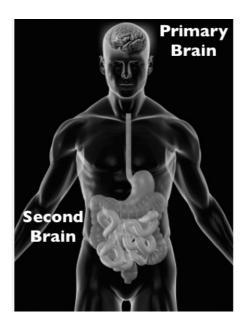
is a mass of soft, spongy, pinkish-gray nerve tissue. The weight of the brain in an average adult is about 3 pounds. The neurons, or nerve cell bodies, fit together as precisely and compactly as a puzzle. They are so intimately coordinated as to allow the size and shape of the brain to be used to maximum efficiency. Neither the weight nor the size of the brain is a reliable clue to the intelligence of the individual. The size of the cells does not matter either — rather, the number of brain cells is exceedingly important.

The human brain, and that of higher animals, is not fully formed at birth. Like life itself, the brain is a growing, flowing thing. It first becomes discernible in the human embryo about 2 weeks after conception. A thin, gray film of cortex begins to spread across its upper surface. It crinkles as growth continues and it nestles into the cerebrum. At birth, the human baby is about one-third head and literally top-heavy with brains. The infant brain is still only an overgrown seed, weighing in at only twenty-five percent of its adult weight.

Just as muscles grow with exercise, so does the brain as the child gets older and uses the brain's countless parts and pathways. The structure of the brain is formed by the mental experiences of the growing child. This formation is the most rapid in the preschool years. However, it continues to a lesser degree throughout life. About fifty percent of the brain's capacity is genetically inherited, while the other fifty percent is culturally shaped (by teaching and example). Day by day, the living brain models itself biologically as a physical organ. Language, images, and ideas continually course through its convoluted passages.

The brain is protected from harmful substances in the blood stream by the blood-brain barrier. It keeps most toxins away from the brain, or at least delays their entry for several hours, sometimes days. If the toxins have already penetrated other parts of the body, they are blocked from the brain.

The hypothalamus, an organ the size of a lump of sugar, is located at the base of the cerebrum (the upper, main part of the brain, consisting of the left and right hemispheres). Although it is very small, the hypothalamus controls some very vital functions, including the ebb and flow of the body's fluids, the regulation of fat and carbohydrate metabolism, blood sugar levels, and body temperature. It directs the rhythmic cycles, such as activity and rest, appetite and digestion, sexual desire, and the menstrual and reproductive functions. In addition, the hypothalamus is the body's "emotional" brain. This miraculous little organ is the coordinating center for the nervous system. It controls our sleep, wakefulness, alertness, and reactions to pain and pleasure. Without this gland, I would not be writing this book if everything I discuss here depends on the hypothalamus! The question then arises – how does the hypothalamus receive its information?



Think Twice: How the Gut's "Second Brain" Influences Mood and Well-Being. The emerging and surprising view of how the enteric nervous system in our digestive tract goes far beyond just processing the food we eat.

Although its influence is far reaching, the second brain is not the seat of any conscious thoughts or decision making. "The second brain doesn't help with the great thought processes . . . religion, philosophy, and poetry is left to the brain in the head," says Dr. Michael Gershon of Columbia University Medical Center. However, a deeper understanding of this mass of neural tissue, filled with important neurotransmitters, is revealing that it does much more than merely handle digestion or inflict the occasional nervous pang. The little brain in our gut, in connection with the big one in our skulls, partly determines our mental state and plays key roles in certain diseases throughout the body.

Technically known as the enteric nervous system, the second brain consists of sheaths of neurons embedded in the walls of the long tube of our digestive system, or alimentary canal, which measures about nine meters end to end from the esophagus to the anus. The second brain contains some 100 million neurons, more than in either the spinal cord or the peripheral nervous system. This multitude of neurons in the enteric nervous system enables us to "feel" the inner world of our gut and its contents. Much of this neural firepower comes to bear in the elaborate daily grind of digestion — breaking down food, absorbing nutrients, and expelling of waste require chemical processing, mechanical mixing, and rhythmic muscle contractions that move everything on down the line.

Thus equipped with its own reflexes and senses, the second brain can control gut behavior independently of the brain. We likely evolved this intricate web of nerves to perform digestion and excretion "on site," rather than remotely from our brains through the middleman of the spinal cord. "The brain in the head doesn't need to get its hands dirty with the messy business of digestion, which is delegated to the brain in the gut!" says Gershon.

However, the second brain's complexity likely cannot be interpreted through this process alone. "The system is way too complicated to have evolved only to make sure things move out of your colon," states UCLA professor Emeran Mayer. For example, scientists were shocked to learn that about ninety percent of the fibers in the primary visceral nerve, the vagus, carry information from the gut to the brain and not the other way around. "Some of that info is decidedly unpleasant," says Gershon.

The second brain informs our state of mind in other ways, as well. "A big part of our emotions are probably influenced by the nerves in our gut," says Mayer. Butterflies in the stomach, signaling in the gut as part of our physiological stress response, is but one example. Although gastrointestinal (GI) turmoil can sour one's mood, everyday emotional wellbeing may rely on messages from the brain below to the brain above. For example, electrical stimulation of the vagus nerve — a useful treatment for depression — may mimic these signals.

Given the two brains' commonalities, other depression treatments that target the mind can unintentionally impact the gut. The enteric nervous system uses more than thirty neurotransmitters, just like the brain, and in fact ninety-five percent of the body's serotonin is found in the bowels. Because antidepressant medications called selective serotonin reuptake inhibitors (SSRIs) increase serotonin levels, it's little wonder that meds meant to cause chemical changes in the mind often provoke GI issues as a side effect. Irritable bowel syndrome, which afflicts more than two million Americans, also arises in part from too much serotonin in our gut, and could perhaps be regarded as a "mental illness" of the second brain.

Scientists are learning that the serotonin made by the enteric nervous system might also play a role in more surprising diseases. In a *Nature Medicine* study published in 2014, a drug that inhibited the release of serotonin from the gut counteracted the bone-deteriorating disease osteoporosis in postmenopausal rodents. Serotonin seeping from the second brain might even play some part in autism, the developmental disorder often first noticed in early childhood. Gershon has discovered that the same genes involved in synapse formation between neurons in the brain are involved in the alimentary synapse formation. "If these genes are affected in autism," he says, "it could explain why so many kids with

autism have GI motor abnormalities" in addition to elevated levels of gut-produced serotonin in their blood.

Down the road, the blossoming field of neurogastroenterology will likely offer some new insight into the workings of the second brain and its impact on the body and mind. "We have never systematically looked at [the enteric nervous system] in relating lesions in it to diseases like they have for the" central nervous system. One day, perhaps there will be well known connections between diseases and lesions in the gut's nervous system as some in the brain and spinal cord today indicate multiple sclerosis.

Cutting-edge research is currently investigating how the second brain mediates the body's immune response. After all, at least eighty percent of our immune system is aimed at the gut to expel and kill foreign invaders. Mayer is doing work on how the trillions of bacteria in the gut "communicate" with enteric nervous system cells (which they greatly outnumber). His work with the gut's nervous system has led him to think that in coming years psychiatry will need to expand to the brain in the gut.

Now I will take a look at the connection between the second brain and the body, and how supplemental digestive plant-based enzymes support them. Food is defined as anything ingested into the body that serves to nourish or build tissues and cells. The book *Brain Allergies* by William H. Philpoot, M.D., and Dwight K. Kalita, Ph.D. (Keats Publishing Inc., 1980) states: "A person cannot be nutritionally deficient, toxic, infected, or addicted to any food or chemical without suffering the consequences of progression of the disease process into a chronic degenerative illness of some type."

Previous studies have already linked sugary drinks with a host of diseases including obesity, diabetes, high blood pressure, high cholesterol, cancer, coronary artery disease, and gout. "Soda remains the largest source of added sugar in the diet," Dr. Adam Bernstein, study author and Research Director at Cleveland Clinic's Wellness Institute, said in a press release. "What we're beginning to understand is that regular intake of these beverages sets off a chain reaction in the second brain that can potentially lead to many diseases, including stroke." Researchers speculate that the high amount of sugar in sodas leads to rapid increases in blood glucose and insulin. These increases eventually cause glucose intolerance, insulin resistance, and inflammation, which in turn influence the development of atherosclerosis and blood clots and the stability of plaque.

The study, which was published in the *American Journal of Clinical Nutrition*, examined the soda intake of 43,371 men and 84,085 women and found that

study participants who drank more than one soda daily had higher rates of blood pressure and blood cholesterol combined with lower rates of physical activity. The news was not any better for those who drank diet soda — they had a higher incidence of chronic disease and a higher body mass index (BMI).

Researchers found that sugary sodas increased the risk of ischemic stroke, caused when a blood vessel that supplies blood to the brain is blocked by a blood clot. Diet sodas fared no better, increasing the risk of hemorrhagic stroke, triggered when a weakened blood vessel bursts and causing hemorrhaging inside the brain. The risk for both types of stroke was higher in women compared to men.

It is vital to feed and fortify the second brain in order to have a healthy, balanced body. Many uninformed people will naturally assume this means eating sugar to energize the system. The media and other sources have conditioned us for years, all of them telling us to eat a candy bar or drink a cola beverage for that boost around three o'clock in the afternoon. However, brain food must be highly nutritional and must contain high levels of oxygen. If we have digestive and assimilation difficulties, both brains will suffer. When food remnants in the blood stream reach the first brain, the barrier regards them as invaders. The hypothalamus operates our endocrine and nervous system, our two major control centers. It stands to reason that we should feed our brains only with the healthiest foods.

#### **ENHANCE YOUR MENTAL CAPACITY**

#### **CASE HISTORY**

One day a woman brought her husband to my office, a gentleman in his sixties. His son, a medical doctor, had tested him for Alzheimer's hoping to find a natural way to treat him. They requested diet and enzyme counseling from me, and I suggested a diet suitable for his body type and enzyme formulations to feed and fortify his system. I knew there is a time to feed and fortify and a time to detoxify. However, the beauty of enzymes is that these formulations allow us to do both at the same time and in harmony. I put him on a vigorous program supplemental digestive enzymes and a food plan, and they departed for their home in another state. Three weeks later I received a phone call, followed by a letter. The elated wife told me that before beginning his enzyme program, her husband could not remember their children's names and could no longer read or watch television. After only a few weeks on enzymes, her husband wrote notes to her and was watching TV again. Within 9 weeks, he was almost completely restored to his former self. Is this a miracle? Yes - it is the miracle of enzymes delivering nutrients to a depleted system that desperately needed them, and in tandem, influencing the brain!

#### **FIBROMYALGIA**

FM is a "chronic invisible illness." It is not just a form of muscular rheumatism. It is actually a type of neurotransmitter dysfunction. One symptom is poor concentration. The nervous system is composed of the brain, the spinal cord, and the enteric nervous system. Collectively, these work in harmony with one another and serve as the communication and coordination systems of the body. The nervous system transports information to the brain and relays instructions from it. Then there are two subsystems that together could perform functions that are more complicated. The first is the autonomic nervous system. The caretaker of the body, it operates without conscious control, taking care of involuntary actions like breathing or the heartbeat. The voluntary nervous system includes both motor and sensory nerves. Among many other tasks, it controls our voluntary muscle movement and carries information to the brain. The command centers of both these systems lie in the hypothalamus. They are in perpetual activity, fine-tuning the body's processes to all the internal and external demands made upon it. Research is showing that people with FM have defects in the neuroregulatory system, especially transmitters and poor digestion that affects the brain neurotransmitters.

You should now understand that our enteric nervous system (second brain) runs throughout the digestive tract. You have heard many times that it is not a good idea to eat when you are upset, or if you have suffered severe trauma. When the body is stressed, many reactions are set into motion. Elevated levels of epinephrine are released into the blood to enhance muscle action. The liver immediately dispatches glucose, which is a source of instant energy for all the muscles. Heart rate and breathing accelerate, but digestive activity slows. Blood vessels constrict to cause sweating, so the body will stay cool while under stress. The body becomes ready for some extraordinary actions.

While all this is taking place, the parasympathetic nervous system prevents these processes from speeding up to extreme rates. The parasympathetic, part of the autonomic system, originates in the midbrain. It monitors constriction of the eye pupils, slows the heartbeat, and stimulates certain digestive glands. The parasympathetic acts as a damper. If the trauma is not too serious, it allows the body to return to normal. It does not work as fast as the sympathetic system (also part of the autonomic system, which works in opposition to the parasympathetic, i.e., dilates the pupils, etc). Messages from the brain, often in response to information conveyed by the sensory nerves, are delivered to the muscles by motor nerves. One motor nerve with its branching tendrils may control thousands of the muscle fibers.

All the parts of the nervous system are constantly interacting with one another. They are so well coordinated that you can simultaneously think, feel, and act on many levels without confusion. We suffer neurological disorders if the organs of the nervous system are inflamed or affected by disease or injury. The manifestations such as paralysis, seizures, or sensor malfunctions immediately happen. When we say we are nervous, it simply means we are in a state of excitability with great mental and physical unrest.

The foods we eat (and the enzymes carrying the nutrients) feed our nervous system. The enzyme action is what helps the nerves communicate with each other. Inflammation creates problems for the nervous system, with symptoms including tenderness, pain, or paralysis of a limb. Toxic substances poison our nerves. Alcohol and any vitamin deficiency are the worst offenders. Diabetes poses additional difficulties for those with nervous disorders. Any type of allergy, as well as some viral or bacterial infections, has an impact on the nervous system.

Rest, therapeutic digestive enzymes, and a nutritious diet are the best treatments for these conditions. Extra vitamins from the B group are essential. However, they cannot be delivered without enzymes. Very few of the vitamin tablets on the market are chemical free and can only be used by one-half of the measured milligrams. Even enzymes cannot deliver the unused artificial compounds.

Foods called super foods, those highly nourishing ones that occur naturally, are those whose nutrients will actually be delivered. The absolute best are those freeze-dried vegetables that contain the truly natural synergy of the nutrients. Chemically made vitamins usually create more toxicity rather than provide any nutritional benefits. So if you take vitamins long term, make sure they are natural complex vitamins, not synthetics. For example, B6, B12, etc, should say Whole B Complex, not cut out with a chemical and measured as in B6: 50mg.

#### **ANXIETY**

Anxiety is a feeling of uneasiness, apprehension, or even dread. In many instances anxiety is a perfectly rational response. We may feel anxious about passing an exam at school, starting a new job, or moving to a new city. Realistic anxiety means we have pronounced concerns about world issues like war, the effects of toxic air, or social and economic conditions that affect our lifestyles. Our easy access to the mass media can serve to intensify normal anxieties — a certain amount of unrealistic and irrational anxiety is an accepted part of our daily lives.

Our awareness of both past and future can result in increased levels of anxiety during certain times of our lives, especially adolescence and middle age. People who spend much of their time alone are likely to suffer more anxiety than those who live and work with others. Most of us find healthy ways to work with our anxiety. We make new friends, take up new hobbies, become good listeners, and volunteer in our communities as a means of helping others. We can relieve our anxiety through exercise and physical activity. Games and sports, participating in group activities, or taking a good walk often dissipates an anxious mood.

Real anxiety is created by something specific and identifiable, such as alcohol. When anxiety is chronic and not traceable to a specific cause, we call it neurosis. This is an especially difficult one, because it always interferes with normal activity. Often the sufferer is subject to extreme fear. It becomes pathological when the individual can no longer control his emotions. It may be severe enough to manifest as organic pain or true physical illness. The best way to fight anxiety is to find its cause. Identify your own specific body type and investigate your food allergies and choices. This will greatly help you to alleviate the problem.

#### **ENERVATION — THE CAUSE OF ANXIETY AND NERVOUSNESS**

Enervation is physically-induced anxiety. The word itself speaks of being drained of energy or fatigue. We can enervate ourselves in a variety of ways. Overeating, too much alcohol, sugar, cooked food, salt, caffeine, tobacco, drugs, and impure water consumption as well as over-work, worry, tension, depression, and lack of rest all serve to enervate us. When these habits are dropped, headaches and general letdown usually occur. As the body discards toxins, it is normal to experience depression, a decrease in energy, and feeling generally unwell.

Have you have heard the expressions "You need to feel bad to feel good" or "You will get a lot sicker before you get better"? Several times when treating clients, I have found that these beliefs have kept them from giving me an accurate picture of their health. They assume they should feel unwell, and it is not important enough to let me know about it. After realizing what was happening, I could match the enzymes with their needs. This fortified their bodies, creating a greater sense of wellbeing and increased stamina. I believe a great deal of the disease we see in our society today is caused by enervation. Enervation resides in almost every home in the country.

Years ago when I first began my practice in nutrition, the first 2 weeks of association with a new client required great vigilance on my part. During those times, the client was in desperate need for motivation. Many of them were, at first, under the false impression that they did better on junk foods. It was my responsibility to get them through the first stages of withdrawal. I heard complaints of weakness, of feeling a lack in the necessary strength to continue. Often the weakness and the results of the dietary changes were blamed on me! I had to do some fancy

footwork to convince them of the need for "house cleaning." Sometimes it was very difficult to accept the fact that it was normal to feel ill. The more toxic the body, the worse they felt.

Now I realize when a client is experiencing cleansing and still feels ill and fatigued, it is because I did not match the correct amount of supplemental plant-based enzymes to their needs. The body will move through a catabolic state. It rids itself of old obstructive material that has been stored in the tissue and joints. However, when we ingest the correct amount of foods high in nutritional value, renewed strength and rejuvenation occur. From time to time, as you continue to build good health, you may experience a common cold or other symptoms. If this occurs, simply return to the routine initially prescribed for the enzymes. This type of recurrence is usually due to not taking the correct quantity of protease while detoxifying.

I like to see each client 2 weeks after the initial visit. I know the client will be in a recuperative period and that the enzymes will have done a good part of their work. Most of the clients' education takes place at the second visit. Frequently, they have more questions about diet. This establishes a working knowledge between us of where we are in their wellness cycle. One month later, I see them a third time, where they are now in an anabolic (constructive metabolism, the process by which food is changed into living tissue) stage of healthy living.

I am very committed to the principle that the more clients are educated and encouraged, the more likely they will take responsibility for their own progress. I have an open-door policy. I always want my clients to feel free to ask questions about their healing and their state of balance. As a teacher in the field of building good health, I have discovered I must have patience, thoroughness, and kindness. These are easily recognized traits. If they are not found, the prospective client will go elsewhere. This does not mean they can get away without assuming any responsibility for themselves. When I think of someone about to undertake a natural health regimen, it brings two old adages to mind: "You can lead a horse to water, but you can't make it drink," and "There are no incurable diseases; there are only incurable people."

Prospective clients come to me after they have doctored themselves for years by taking various medications, yet they are still miserable and sick and never really feel good. When they hear about the enzyme program, they expect to feel like new overnight. That will not happen. You must be very committed anytime you decide that you are going to start a new, healthy lifestyle. If the program is going to work, it will not be a fad or trendy diet. Rather, it will be tailored to your needs and your body type. You cannot change your body type, who you are, what your

family is like, or your strengths and weaknesses by simply changing your mind. Some things we bring into our lives are hereditary. As we get closer to a balanced state, it may be more difficult to recognize our body type. I ask each client to take the enzymes for at least 3-9 weeks from the initial visit. As they progress, I will move them into a maintenance program.

Education begins when enervation (fatigue or exhaustion) is detected. Rebuilding a consciousness of wellness is a good starting point. People who suffer from anxiety often forget to breathe! Some have a problem breathing because of an acid-alkaline imbalance caused by poor food choices for their own unique body types. But since oxygenating the blood is critical to good health, it is no wonder so many of us feel ill and fatigued all the time. The purpose of breathing is to supply oxygen to the body and to aid in cleansing the blood stream. Abnormal cells multiply in the absence of oxygen. Breath is life. It has been said that we learn to breathe a few seconds after we are born, and when we forget to breathe, we die. The significance of proper breathing and fresh air cannot be over-emphasized.

What happens when we breathe? The chest rises and falls while the diaphragm expands and contracts. This naturally creates a vacuum into which air rushes. Finally, the air is forced from the lungs. Blood then enters the lungs to pick up the oxygen and carry it to the cells. At the same time, it takes on carbon dioxide that has been expelled by the cells. Our breath rate and volume are adjusted constantly to the body's need at every single moment. The entire process is automatically controlled. This respiratory center is located in the medulla oblongata at the base of the brain where the top of the spinal cord widens. Carbon dioxide acts as a stimulant of the respiratory center — the more carbon dioxide present in the blood, the more the respiratory center is stimulated and the faster we breathe. Conversely, the more oxygen in the blood, the slower we breathe because oxygen inhibits the medulla.

If the air around us is clean, it gives us energy. Since we are living beings and breath is life, I encourage everyone to spend time outdoors breathing fresh air as much as possible. I closely observe people as they relate their stories of illness to me. Many times they rush through these tales, never stopping to breathe. It is sad to me how our society has become so anxiety-ridden.

May I say again, the way to make a change is to make a change! Do the things you find pleasurable. To go beyond exhaustion, we must change the way we eat and change our attitude.

#### **ATTITUDE**

I will never stop saying how crucial it is for you to develop a good, positive attitude. This is of extreme importance in the practice of good health. Remember, there are no incurable diseases — there are only incurable people. We discuss our health in everyday conversation as much as we talk about the weather. I know people who would rather sit around all day and talk about their illnesses than do anything about them. Why do this? Their thinking is misguided. They are self-absorbed and negative because of self-poisoning, thus allowing themselves to be brainwashed into thinking ill health is normal. Ever since the days of Freud, we have been taught to cure our problems by dwelling on them. The efforts of psychiatrists and psychologists today help to perpetuate this, leaving us with uncured mental health maladies and a prevailing order of failure and chaos. There is an above-average rate of suicide among these mental health practitioners.

Dr. Abraham Maslow, a brilliant psychologist, has changed all that. He said, "What we need is a new direction. We ought to stop dwelling on the sick and the deranged if we want to restore people to a perfect mental health. We ought to study health; not illness. We ought not to treat illness but to direct the person into the life patterns of the mentally healthy." Those who are using Dr. Maslow's philosophy are revolutionizing the mental health field with tremendous results. Those who are truly successful in building optimum health are those who never look back once they have established healthy new life patterns. They focus on constant rejuvenation of the body's systems. In my practice, I have found it is far more effective to talk about healthy knuckles rather than the arthritis afflicting a client's hands.

The food we eat is our body's fuel. These foods nourish and fortify our nervous and endocrine systems with healthy nutrients. I ask you to remember at all times that we cannot take synthetic, chemical vitamins and expect them to be delivered to our cells. The body is not designed to assimilate chemicals. It will attempt to digest and deliver them, but in the process it uses up precious metabolic enzymes needed to rebuild nerves and tissues. Plant-based enzymes will only deliver pure, natural nutrients. Common sense tells us these nutrients should come from one source — pure, natural foods. Our nerve fibers are made of protein and fat. If you want to nourish your nerves and your immune and endocrine systems, you must ingest a certain amount of protein, complex carbohydrates, and some fats.

#### BANISHING HEADACHE PAIN

A pain or ache in the head — I have a headache! The headache is one of the most common ailments known to humanity. We all are familiar with it. It may come as a stab between the eyes when you eat cold food too quickly. Perhaps it is the

ever-tightening clamp of tense muscles around your head. Worst of all, it can be the "lock me in a dark room until it's over" pain of a migraine. If you suffer from a headache, you treat it as most of us do. We either wait for it to stop, or we go for the bewildering array of over-the-counter pain medications. Often, this is sufficient treatment. However, if you have a headache more than three times a month, you need to take a close look at the possible causes. It is reported that recurrent migraine or tension type headaches are seen in about fifty percent of FM patients.

There are three types of headaches. The first, a tension headache, is that tightening band of pressure around your head. This is triggered by stress and usually lasts anywhere from 30 minutes to 7 days. In the worst cases, it lasts all day every day. Cluster headaches cause excruciating pain behind or around one eye. Sometimes this pain radiates into the temple, jaw, nose, chin, or teeth. Nasal congestion, sweating, watery eyes, and a flushed face can add to the discomfort. This type of headache may occur three times a day, lasting from 15-90 minutes for up to 16 weeks at a time. Migraines bring on severe, pulsating pain, nausea, and sensitivity to light and noise. Many migraine sufferers retire to a darkened room until the pain subsides. This can take anywhere from 2 hours to 3 days.

Medical doctors urge patients with serious headaches to keep a headache diary. It is very helpful to record the intensity, duration, symptoms, the degree to which the patient is disabled, and how they are affected by any prescribed treatments. The doctor may even recommend fighting headaches with changes in eating, sleep, or work habits. Other treatments commonly used are physical therapy, biofeedback, and drugs. For tension headaches, physical therapy, hot packs, cold packs, or electrical stimulation devices such as ultrasound and massage are the accepted treatments. Biofeedback helps about eighty percent of the time, and it is the only non-pharmaceutical treatment that works for migraines. It is somewhat helpful for tension headaches but completely ineffective for cluster headaches.

Most of us do not know that it is actually a symptom rather than a disorder in itself. The most common causes of a headache are:

Allergies	Sinus infection	Hunger	Arthritis
Red wines	Head trauma	Blood pressure	Hangover
Caffeine withdrawal	Disease	Cold or flu	TMJ disorder
Food	Eyestrain		

Foods that cause most of our headaches are aged cheeses, smoked meats, chocolate, alcohol (especially red wines), homemade yeast breads, raisins, avocados, and MSG, an additive in Chinese and processed foods.

Those who suffer from chronic headaches are usually in a state of enervation. Their lifestyles and diets do not work for them, so they experience headache interference. This indicates it is time to make changes. Often it is a change in food choices that works the best. My experience with headache treatment through the use of enzyme therapy is always the same. The headaches become a thing of the past, even those intense migraines. The support products used in my practice make healing the headache a simple process. I am thrilled to see the amazing properties of enzymes doing the work for which nature intended them.

When I meet a client for the first time, I cannot always know what causes the headache because many different factors are involved. No matter what the cause, I begin with protease in order to create a healthier immune system. Dosages of 330,000 to over 400,000 units of activity several times daily are initially required to make a difference with those who have toxic undigested foods in the blood stream. One of the products I formulated includes herbs to feed and fortify the nervous system. Other herbs are used as antioxidants that add oxygen to the blood. When these two specific formulas are used together — protease and the herbal compound — the results are stunning.

I conclude from this that most headaches are caused by one of two things. First, widespread toxicity in the body, sufficient to prevent the breakdown of food particles in the digestive tract, is a primary cause of headaches. Second, a stressful event taking place that involved the nervous or endocrine system also produces headaches. When I give either the protease or the combined herbs and enzymes, the headache frequently disappears within moments. After using this formulation for a short time, those migraine sufferers realize they are not having the headaches as often or as intensely as they once did. If the headaches come back, the clients must readjust the care they are giving to themselves and get right back on track. Keep in mind, a headache is a symptom indicating something is wrong in the body. It is not a disease itself.

It is important to remember that stress is not an external force. Developing from an internal source, it is the result of cellular contamination and nutritional deficiency. Manifestations of stress take the form of pain, fatigue, anxiety, disability, and malfunction. These are the direct results of substandard health conditions. The stress due to poor health can be light, mild, moderate, serious, and severe. If we are experiencing light stress, usually there will not be any kind of physical symptom to inform us of its occurrence. With mild stress, we may sometimes feel slightly out of sorts. In moderate stress, constant symptoms are present, though they are still sufficiently weak to be merely annoying. Serious or severe stress will undoubtedly manifest in some way, often as strong pain.

This is the body reacting to the stress of cellular contamination and nutritional deficiencies. It has finally reached the point where it can no longer endure the stresses imposed upon it without physical manifestations. The common response is, of course, to take some kind of therapy to alleviate the pain and other symptoms. This is certainly appropriate, but it does not address the cause of the problem. It is only a matter of time before the malfunction returns, possibly in the same form. However, it can be in a much more severe form or a totally different one. Looking at it as a health care professional, I believe an individual with health stress manifestations should be placed on a health-building program that complements the immediate therapy prescribed by his or her doctor. This would guarantee that the reasons for the stress are properly addressed.

The new choices offered for a health-building program would include foods appropriate for the client's body type and eliminate the ones that create stress. Plant-based supplemental enzymes will aid the digestion, assimilation, utilization, and elimination of the food ingested. Protease will be taken to destroy cellular contaminants. Other enzyme fortifiers will eradicate nutritional deficiencies. Good health would return to the patient. No matter the symptom or problem, learn to change your habits for the better and return to a path that gives life to your system.

#### RECURRENT HEADACHES IN CHILDREN AND ADOLESCENTS

Our children are suffering from headaches that come up often. We are now recognizing that these children have long-term anxiety. Recurrent headaches, defined as the occurrence of less than 15 days with headaches per month, are common in children and adolescents (those under 20 years of age, referred to collectively as children). These headaches from anxiety many times keep these children home from school and from having an active life. Who gets it? About fifty percent of 7-year-olds and almost eighty-five percent of 15-year-olds report such headaches. Children as young as 2 years of age can also complain of headaches. Boys and girls are equally affected, although girls may be more affected when compared to boys in their late teens.

### STRESS AND HYPERTENSION: CALMING YOUR NERVES AND REDUCING ANXIETY

The best example to demonstrate the interdependence of the body's many systems is the nervous system. Earlier in this chapter, I characterized the endocrine and nervous systems as the two major control centers. We know the hormones cannot function without a strong and well-balanced endocrine system. Consider that the nerves, like the hormones, are closely related to the endocrine system. One of the physiological responses created by the electrical impulses from the nerves

is the secretion of hormones by the endocrine glands. Yet the nervous system receives its support from the endocrine system. Research shows that people with Fibromyalgia have low growth hormone, which is involved with muscle repair.

The complexity of your nervous system is truly mind-boggling. The system is a perfectly coordinated network of nerve cells — possibly in the hundreds of billions — that are tied to threadlike formations. These work together to process and respond to information from all your senses. Electrical impulses in the neuro-chemical process travel throughout your body. However, when nerve cells die, they are not replaced. Hence, an older person has many millions less than a youngster. If you suffer nerve damage, only a limited amount of repair is possible. The cells are obviously very sensitive and will not perform well if your brain is perturbed by a concentration of undigested protein fragments or a shortage of oxygen or glucose. All this begins to thicken the plot. Not only is a sufficient supply of enzymes necessary to fortify and revitalize our endocrine system, which in turn supports our nerves, but those same enzymes are vital for complete digestion. Digestion is what allows our nerves to do their job.

Clients with anxiety problems often complain of other difficulties. In most cases, we can trace these back to the same fundamental cause — an overall bodily imbalance. The lack of internal equilibrium or challenged homeostasis is the true culprit. After a regimen of enzymes, calming herbs, and the appropriate genetic diet for their own specific body type, the client shows a dramatic improvement in both health and mental and emotional outlook.

#### **HYPERTENSION**

High blood pressure, or hypertension, can cause or aggravate disorders like heart attack, stroke, and kidney disease. Weight loss will significantly lower blood pressure without the use of drugs. A *Journal of the American Medical Association* study revealed that losing only 8 pounds reduces diastolic blood pressure (the reading taken when the heart muscle relaxes and the chambers fill with blood) by an average of 2.3 points. Walking four or five times a week for 30-45 minutes will create an overall reduction of the blood pressure. Eating less salt, if you have a high blood reading, will lower diastolic blood pressure an average of one point as long as your blood sodium is high. Diastolic pressure is the second of two numbers in the blood pressure reading, such as 137/80. Those with a reading of ninety or above have high blood pressure.

The findings of the American Medical Association showed that in spite of the widespread belief that emotional stress can elevate blood pressure, no benefit was gained from participating in a stress management program or taking vitamin

supplements. Researchers from eleven medical centers are collaborating on an ongoing project sponsored by the National Heart, Lung, and Blood Institute in Bethesda, Maryland. They are seeking ways to prevent high blood pressure from developing in people who face a higher-than-usual risk for it. A diet low in sodium and high in potassium helped, but not nearly so significantly as losing weight. Most doctors order this part of the blood test, but the sodium concern has become more complicated recently. It depends on the sodium in your blood. There have been many who were tested showing that they removed healthy sodium that influences potassium and created more problems. Most Americans eat too much salt, but once again, it depends on your biochemical type.

This is the latest information we health professionals are being brought up to date with from The Institute of Medicine: "Despite public health efforts over the past several decades to encourage people in the United States to consume less sodium, adults still consume an average of 3,400 mg/day, well above the current federal guideline of 2,300 mg or less daily. Evidence has shown that reducing sodium intake reduces blood pressure and the risk of cardiovascular disease and stroke. Some recent research, however, suggests that sodium intakes that are low may also increase health risks — particularly in certain groups." A sodium blood test is part of the normal blood tests doctors can test for to make sure you are not salting your food into an unhealthy range.

There are myths about blood pressure. They start from the belief that high blood pressure is no big deal, that everyone has high blood pressure once in a while, or you may have heard or read that there is nothing you can do about high blood pressure, which is wrong. We always have choice, and weight control is one of the biggest. Having mentioned those myths, I do want to make sure you understand that if your blood pressure remains on the high side, you must have some direction on how to treat it.

Biochemical Types Two and Three are the ones most susceptible to hypertension. The reasons are clear — both body types go for strong-flavored, spicy foods with high sodium content. In addition, these types are drawn to fatty proteins. I have discovered that when the proper biochemical diet is followed and enzyme deficiencies are replaced, the patients are once again in control of their own blood pressure. These types also tend to hold their emotions inside and do not share with others, which leads me to my next point.

#### CHILDHOOD ABDOMINAL PAIN LINKED TO ADULT ANXIETY

Before we go further into the body and anxiety, I want to make you aware of the most recent problems our children are facing. It is called functional abdominal pain

(FAP). Two studies presented at the Anxiety Disorders Association of America 32nd Annual Conference suggest that treating anxiety reduces both gastrointestinal and psychiatric symptoms. The studies show that the early diagnosis and treatment of pediatric anxiety can have a significant impact on the adult brain–gut connection. "It's a bidirectional relationship. If you have anxiety and depression, you're more likely to have FAP; if you have FAP, you're more likely to have depression," said John Campo, MD, a pediatric psychiatrist who moderated the session. His previous research showed that eighty percent of pediatric FAP patients have current anxiety, forty-three percent have current depressive disorder, and twenty-nine percent have current major depressive disorder. His study involved children from 61/2 years through 9 years old.

New work by Lynn Walker, a PhD holder from the Vanderbilt University School of Medicine in Nashville, Tennessee, has shown that children 8 to 15 years of age whose abdominal pain persists to age twenty are five times more likely to have an anxiety disorder in adulthood. It continues to urge that those with pain that has resolved age twenty-one are twice as likely to have an anxiety disorder. Dr. Walker's study involved 754 children, 8 to 15 years of age with FAP and no identifiable organic disease. Nine years after enrollment, 379 patients (average age, 21 years) were contacted and re-interviewed about their abdominal pain, other pain, and psychiatric symptoms. In the high-pain dysfunctional group, sixty percent of patients still had persistent abdominal pain. More than forty-five percent of patients in the high-pain dysfunctional group met the criteria for a current anxiety disorder. "The majority of those with a lifetime anxiety disorder often had an onset prior to their FAP evaluation," she said, adding that almost one in five patients in the high-pain dysfunctional group reported that they had lost a job because of illness. She commented, "Poor outcomes were driven by anxietyrelated processes, including threat appraisal, fear, and avoidance."

#### **PSYCHONEUROIMMUNOLOGY**

It is difficult to fathom how emotions can trigger illness. George Solomon, MD, professor of psychiatry at UCLA and adjunct professor of psychiatry at the University of California at San Francisco, has demonstrated that emotional stress can affect the immune system. Dr. Solomon is known as the "father of psychoneuroimmunology." This new science is now taught at universities. Psychoneuroimmunology is a field of medicine that joins immunology and neurology. It focuses on the relationship of stress upon the HPA axis (hypothalamus, adrenal, and pituitary). This lengthy word means the study of the effect of emotions on the immune system as a result of stress, can lead to a multitude of diseases and disorders. More evidence arises every year to support this discipline.

After the decision has been made to create changes in lifestyle, the body responds within a 21-day period. If you stop smoking or overeating or start taking a health care product, it paves the way for the healing process to begin. During the second 21-day period, the body begins to balance, adjust to, or accept the changes. In the third 21-day period, the body undergoes transformation. This gives the mind an adequate length of time to adjust to the change and continue healing in a positive and beneficial manner. These 21-day segments of response to change and therapy are an established regimen among health care practitioners. Although we may feel better immediately when we begin a new program, there is a period of adjustment while our bodies seek their comfort zone. Response is heightened in the second period. In the third, the condition or problem that prompted us to take action has definitely improved for the better. This is why my answer to the question about how long we need to be on a program like enzyme therapy is "anywhere from 6 to 9 weeks."

If my book has inspired any of my readers to take supplemental plant-based enzymes, they may have to adjust the number of capsules taken with meals during the first 21 days. Your goal may be to improve your digestion, or to take a formulation that feeds and fortifies your hormones. For example, a client who is on a set formulation calls to say that the results first experienced have now changed. To meet this new need, I will make the appropriate adjustment of the number of capsules taken. This is a very normal scenario, and one that is frequently experienced. If you have ever tried to stop smoking or eating chocolate, you find the first 3-7 days the most difficult. The remainder of the time finds the need or desire much alleviated. This is how and why I advise clients to make periodic adjustments.



Another way to use the science of psychoneuroimmunology is to interview cancer patients or those with other catastrophic diseases. You will be surprised to find that most of them suffered some form of trauma 2 or more years before the onset of their illnesses. This trauma could be the death of a loved one, surviving a serious automobile accident, or any other devastating experience. Some people have actually gotten so involved in their own illness that they have precipitated a depressive effect onto the immune system.

I recently lost a friend, Dr. Candace Pert, who wrote a book I have referred many to throughout the years, *Molecules of Emotion*. Candace spent the last 30 years of her life devoted to the message that when we have a negative thought or feeling, it is registered throughout our bodies in moments. When asked what she felt was first, as in the chicken and egg — the body or the mind — she always answered, "the bodymind." They are not separate.

Dr. Bernard Siegel has stated on his tapes *Life, Hope, and Healing* (Nightingale Conant) that he believes surviving cancer has as much to do with our mental attitude as it does with the extent of our disease. I definitely agree with both him and Candace. My own personal experience with cancer proved this to me beyond all doubt. When I finally realized this, I no longer had to blame myself. Rather, I learned my lessons from it and went on to make the positive changes I needed to remain alive, healthy, and happy.

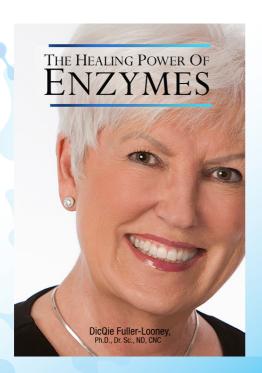
#### **TESTIMONIALS**

"Dr. DicQie, I want to thank you from the bottom of my heart for the positive difference you have made in our family's life. I say family because when one of us is down, it affects all of us in ways I could not before this imagine. When my daughter first started complaining about not feeling well enough to go to school, I simply put it down as being a teenager. After a time, her complaints turned into unbelievable headaches and slight rise of temperature. We began the test of time by going from doctor to doctor. Only thing that changed were their specialties. Many of the tests were evasive and always followed with some medication. The first few days we would begin to have hope but only to have it turn out sometimes worse than before we went. Thank God I heard about you from another mother who was going through something similar with her son and stomach aches. You educated us in nutrition, especially sugar, and what it does to the brain. The enzymes made such a difference and helped so very much. Your protocol, understanding, and the correct choices for all of us gave us back our joy. Know that we love you." - N. Lewis - Oregon

"My mother complained of extreme gall bladder pain and inflammation and had a referral to visit with a surgeon to have it removed. After only being on your digestive enzymes and gastrointestinal soothing formula with each meal for a week, her pain was gone and the surgeon decided that surgery was not necessary. She was able to avoid losing a vital organ and the recovery time associated with surgery. And she felt so good, she told my Aunt who was taking two capsules of the highest strength prescription proton pump daily for extreme acid reflux. After taking digestive enzymes with each meal for 1 week, she no longer needs her medication at all!" - J. Buchman - Pearland, TX

"Before I placed my first order, I received a few samples and distributed the samples to my necessary patients. They really liked your digestive enzymes. An 82-year-old lady suffering with indigestion and lower abdominal pain and a 38-year-old lady with chronic discomfort in lower abdomen — these two ladies loved your products. Therefore, I decided to include digestive enzymes with every nutritional protocol in my clinic. Personally I think that your digestive enzyme is super-duper product." - S. Ahm, DC - Dallas. TX

# NEWLY REVISED WITH 6 ADDITIONAL CHAPTERS!



Dr. DicQie Fuller-Looney has enjoyed and been blessed by her 30-plus years as a clinician, educator, researcher, and author. She has earned two Ph.Ds, one in Health Science and the other in Dietetic Nutrition, and also holds a degree as Naturopathic doctor – Heilpraktiker from Germany Kneipp Heilpraktiker Akademie. Her passion in the last 35 years has been in the realm of Enzyme Therapy along with Biochemical Individualism and their use in bringing balance to the body whether involving our health, thoughts, or harmful beliefs.

"How exciting! A Must Read For Everyone!!! What a great educational tool for those practitioners stuck on the simplicity of our wonderful enzymes" - Rose Jacobson, CT



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