

The First Pillar of Integrative Health - Nourishment

By Li-Chuan Chen, Ph.D.

Nourishing the Body, Mind and Spirit

The Trinity of Integrative Health is based upon the three pillars, nourishment, detoxification and regeneration.

To fully understand the impact of nourishment on human existence, we need to know the functions of our digestive tract, proper food choices, dietary therapies, healthy eating habits and the attitude in which to consume food. In short, we need to know how to nourish our body, mind and soul in a wholesome way.

I. Introduction

We generally eat three meals per day to sustain our physical and mental activities, as well as our spiritual pursuits. Some people say we are what we eat; others think we are how we eat. Perhaps, both sayings hold true. The attitudes and manners in which we eat our food are as important, if not more so, than the food we consume. Expressions such as "food for thought" and "chicken soup for the soul" suggest that there is more than a mechanical process involved in eating, digesting and assimilating foods.

So, what do we eat? For the past twenty years people have been told to lower their fat consumption for weight loss. The sad truth is that Americans are still getting fatter and fatter. Recent studies show that obesity is the single most detrimental risk factor in health. While protein and fat consumption remain constant, the number of overweight adults is continuously rising. This suggests that the problem is more complex than simply fat consumption. And in fact, according to most experts, the culprit is carbohydrates. They believe that excess carbohydrates are turned into fat and stored.

Then, do fats play no role in the obesity problem? They do. But it is the kind of fat, not the amount, that can lead to trouble. The timing of the American weight gain problem overlaps with the period when more and more partially hydrogenated oils (shortenings) were introduced into our foods. Partially hydrogenated oils contain trans-fatty acids, which our cells are not able to utilize. Instead, the oils are stored in our adipose tissues. Have you ever wondered about the shelf life of sweets, cookies and deserts? They all contain trans-fatty acids that don't decay on the shelf. Well, they hang around in our bodies too. Worst of all, the cholesterol scare pushed people to consume margarine, which is nothing but hydrogenated fat. Affordable vegetable oils are also high in trans-fatty acids, especially when they are not cold-pressed. No wonder people are getting fatter; they eat a high carbohydrate diet and the wrong fats.

Are there any other factors involved in obesity? Certainly, I can name a few from my intuitive readings from the past five years. First, when the body is in short supply of micro-nutrients the brain continues to send signals to eat. The phenomenon of obesity is actually caused by malnutrition, although not the usual

variety that you see on television in impoverished areas. Second, fatty tissues are used by the body to harbor lipid-soluble toxins and entrap infectious agents, and are thus indicative of the increasing load of toxicity and infection. Many man-made chemicals have been found in adipose tissues, according to a recent study by the Center for Disease Control. Alternative medicine also presents evidence that adipose tissue entraps infectious agents. This subject is not yet well received by mainstream medicine. In addition, some of the weight gain can be due to retention of water soluble toxins. This weight is the easiest to get rid of with simple detoxification methods. Some people have lost several pounds over night simply by excretion of water weight. Third, overeating can be a way of compensating for emotional distress. People have a tendency to overeat when they are depressed in the winter. They then make their New-Year resolution to lose a few pounds, but often to no avail.

Obesity takes a heavy toll on our overall health. It is linked with increased risk of diabetes, cardiovascular disease, and cancer, to name just a few diseases. So, what is the solution? Choose a diet that is proper for your unique body type, metabolism and lifestyle (several articles in this issue will touch upon the topic of metabolism).

There are many diets being promoted by health care professionals, but there is one dietary principle that will never fail. It involves the attitude and manner in which you eat. How you eat is going to affect your digestion and assimilation. There is no substitute for healthy eating habits, especially good chewing. Most experts now agree that chewing is important. But you will be surprised just how important.

Before delving into chewing, let us first learn more about our digestive system and its relation to health and disease.

II. The Digestive System

A. Functionality of the Digestive Organs

Digestion begins in your thoughts before the food hits your mouth. We salivate over appealing food prior to tasting it. The minute you put it in your mouth all the digestive juices are flowing. Your body has prepared itself to eat.

The salivary glands in your mouth secrete digestive enzymes such as amylase, lipase, and some protease. If you eat raw foods, plant digestive enzymes will also assist your digestion. One plant enzyme, cellulase, is not made by the human body. The value of raw food lies in the active digestive enzymes it contains. Cooking (heat) destroys these plant enzymes. However, extended cooking breaks down lectins (see article by Dr. DeOrio), fiber and cellulose. This is the reason why well-cooked food is prepared for sick people in the tradition of Chinese Medicine.

According to Dr. Victor Zeines, a biological dentist and the author of *Healthy Mouth, Healthy Body*, saliva is extremely important to good oral health. "In addition to helping digest food and remove leftover food particles, saliva carries minerals to the teeth. Saliva is nature's antibacterial substance. Insufficient saliva leads to attacks of oral bacteria, viruses, and fungi. Proteins in saliva can kill bacteria and stop bacteria from sticking to teeth, thereby preventing them from starting an infection. Saliva also causes bacteria to clump together for easier disposal. Finally, saliva neutralizes bacterial toxins." A dry mouth or dysfunctional salivary glands caused by illnesses or chronic dehydration can be detrimental to our health and digestion.

Salivary enzymes and plant enzymes continue the work of digestion in the upper or cardiac portion of the stomach. By this point amylase will digest up to 60% of carbohydrates, protease up to 30% of protein, and lipase up to 10% of fat. Amylase and plant enzymes are temporarily deactivated, when hydrochloric or stomach acid acidifies the food to a low pH (from 3.0 to 1.5) and allows pepsin, the main protease in the stomach, to digest proteins. Pepsin needs a low acidic environment for optimal function. This function occurs mainly in the lower pyloric portion of the stomach. Food stays in the stomach from two to four hours, less time with a low-fat meal, more time with a high-fat or high fiber meal.

Next, the partially digested food and the deactivated plant enzymes pass in small quantities through the pyloric valve into the duodenum (upper small intestine). The passage of small amounts ensures that the gastric acid can be neutralized to allow pancreatic enzymes to work at their optimal pH. Here the digestion continues with the aid of bile, pancreatic enzymes, and bicarbonate (an alkalizing agent) to reactivate the food enzymes. Disaccharides (sugar-digesting enzymes) join the digestive crew and brew in the jejunum after leaving the duodenum. The Ileum is the last section of the small intestine where vitamin B12, cholesterol and bile salts are absorbed.

Most of the digested food nutrients are absorbed into the blood stream in the small intestine. Water and some nutrients, including vitamin K formed by intestinal flora, are absorbed by the large intestine. Short-chain fatty acids and volatile fatty acids are also generated from fiber digestion in the large intestine. This journey of digestion and assimilation ends with defecation. Dysbiosis (bad bacteria in the colon), long transit time, constipation or diarrhea can cause its own set of problems for digestion.

Let's not forget the liver, gallbladder and pancreas, the supporting organs of digestion. The liver produces bile and the gallbladder stores it. The bicarbonate content of bile neutralizes the high acidity of gastric acid. Bile is made of bile salts, cholesterol and lecithin; it emulsifies fats and makes them more water-soluble for absorption. The pancreas produces digestive enzymes and insulin. Let us now turn to a discussion of some amazing and little-known features of the gut.

B. The Wisdom of the Gut

Recent advances in medical science have shed light on the major importance of the gut. The term "gut" can refer both to the intestines alone and to the entire digestive tube. It appears that the digestive tract is more than just an assembly of digestive organs. Dr. Michael Gershon, chair of the department of anatomy and cell biology at Columbia University, argues in, *The Second Brain* (1998), that there is a little brain in the gut. After peeling off the layers of padding surrounding the digestive tract, scientists have discovered more than 100 million nerves. This is more than the number in the spinal cord. Most significantly, these nerves carry out their functions without guidance from the brain. They also project into and command the functions of neighboring organs such as the pancreas and gallbladder. Indeed, the German scientist, Paul Trendelenburg, who suggested in 1917 that the gut was a self-contained, self-regulating nervous system able to function without the help of the brain or the spinal cord, has been found to be correct. The gut has a mind of its own.

Although separate, there is communication between the little brain in the gut and the big brain. A "gut feeling" is not just an intuition. It arises from the interplay between the big brain and the gut. When faced with stressful and anxiety-ridden situations, the big brain sends signals to the gut, which begins to orchestrate, a physical response generally referred to as "butterflies" in the stomach. These sensations are registered in an emotional memory bank in the big brain. The next time the big brain makes a similar decision, it is not based on intellectual calculations, but a spontaneous "gut feeling" stored in the brain.

The significance of the interconnectedness of the brains in the head and gut can be seen in findings about anatomical and pathological conditions. Unlike all other nerve cells in the body, those in the big brain, spinal cord and gut have no insulating sheath. Interestingly, as healthy cells in the head and gut resemble each other, so do the diseased ones. Studies have shown that some Alzheimer's and Parkinson's disease patients have the same type of tissue damage in their bowels as in their heads. This raises the possibility that these neurological disorders may be diagnosed by routine rectal biopsy and that the gut pathology may be playing a role in the brain pathology.

The fact that the two brains are so much alike can explain why some psychiatric medications have side effects on the gut or efficacy in treating gut disorders. For example, Prozac, which increases brain serotonin and settles the emotions, also causes abdominal cramping and diarrhea. Imipramine, used for migraine headaches, has effectively healed the gut in two Belgian studies and Lotronex, an anti-anxiety drug, was recently released for irritable bowel syndrome.

But the gut is more than just a digestive and a nervous system. Recent studies have also shown that the intestine is the single most important organ in our defense against infections and chronic diseases. The gut provides the most

important defensive barrier against the establishment of infectious diseases because 50% of the immune cells reside in the Peyer's patches (a variety of lymph nodes) lining the intestine. The gut is the focal point in the establishment of allergic and intolerance diseases, and is the most important mediator in the initiation and severity of chronic inflammatory diseases. In addition, the gut is the most intensive site of free radical and antioxidant interplay. The gut interfaces with our normal microflora whose population is greater than the total number of our own cells, according to Nigel Plummer, Ph.D., a microbiologist and leading expert in the areas of GI tract physiology and disease.

Dr. Plummer has found that several allergic and intolerance diseases are linked to abnormalities in the gut, and treatment of the gut can alleviate their symptoms. Normal microflora cover the intestine and serve as the filter and digestive sheet for food components. Bad bacteria upset this function and cause allergic reactions and food intolerance. Probiotics, or friendly bacteria, not only kill bad bacteria but also re-colonize the intestine to improve digestion and assimilation. Without that protection, allergic and inflammatory reactions occur. The use of antibiotics destroys the living microflora environment leading to the ultimate pathology, increased gut permeability, which may be implicated in many intractable and ill-defined diseases. Dr. Plummer advocates the use of nutritional regimens to maximize the intestinal function. He summarizes his findings: "if the intestine is the strongest mediator of health and disease, then nutritional factors clearly must play a role in prevention, cure and maintenance of optimal health." Dr. Majid Ali, president of Capital University of Integrative Medicine, is the leading physician in aggressively treating the gut. He clearly shows in his integrative health model that cleansing the bowel, liver and blood is the first stage in reversing chronic degenerative diseases.

III. Healthy Eating Habits

Healthy eating habits start with proper chewing and a right mind-set. Good choices of foods, the proper ratio of macronutrients, and other healthy habits will free your life of many diseases.

A. You Are How You Eat

Lino Stanchich, author of Power Eating Program: You Are How You Eat, describes an amazing story about his father during World War II. Antonio, and his fellow crew members, were taken prisoner in Greece by the Germans and sent to a concentration camp in Germany. They were forced to do hard labor and live in terrible conditions; the barracks were poorly heated, clothing was sparse, and food was substandard and scanty. Antonio was cold most of the time and hungry all the time.

However, Antonio made a discovery that would save his life. He intuitively retained and chewed the cold water in his mouth when thirsty. He found that besides quenching his thirst, the chewed water actually seemed to give him energy. He began an experiment. First he chewed his food 50 times per

mouthful, then 75, then 100 up to 150, 200 300 times or more. He found the magic minimum number of chews to be 150 times and after that he could chew almost indefinitely with steady increases in energy. He shared his discovery with his fellow prisoners. Most of them dismissed the idea but two joined him and compared notes. They all concluded that his technique satisfied their hunger and gave them more energy and warmth.

In 1945, when the prisoners were liberated by the American Army, it was discovered that Antonio and his two chewing friends survived while the rest of the 29-member crew had died. Antonio attributed his survival to chewing. He said to Lino, "If ever you are weak, cold, or sick, chew each mouthful 150 times or more." Lino was 14 years old and he never forgot his father's words. Lino, himself, was later imprisoned when his escape from Yugoslavia failed. He was sentenced to hard labor. He chewed his food up to 150 times or more with one important addition, his eyes were closed. The results were excellent. He avoided taking in the depressing surroundings, and closing his eyes internalized his energy. That strengthened him even more, according to his account. There is more to Lino's Power Eating Program than what I have passed on to you. Chewing is the surprise that I talked about earlier. Please treat yourself to this small, but wonderful book by Lino Stanich.

Here is his advice for chewing. If you are healthy, chew about 50 times. This translates into 30 minutes per meal. If you have some health issues, chew each bite 100 times or more. This will take about one hour. If you are seriously ill, try to chew 200 times or more. This takes at least two hours for each meal. Talking takes additional time.

Why is chewing of so much importance for seriously ill people? Saliva is the manifestation of Qi, the life force, in TCM. Sick people are wanting in Qi (saliva). The only way to increase the volume of saliva is by chewing. Water is not the same as saliva. Having a peaceful and grateful mindset will increase the volume of saliva even more. If you eat under duress or in a fight-or-flight state, your mouth becomes dry. In short, your saliva flows best when you are in a "meditative" or "limbic"chewing state. In addition, when you chew peacefully you will feel the pulsation of your breathing. Steady breathing of oxygen fans the fire of digestion. The term "digestive fire" is a very common expression in ancient cultures, including India and China. If you are a skeptic, please conduct your own chewing and breathing experiment at home. I have done it and found the lesson to be profound. Most dietary experts do teach chewing. But they stop short at 50 times. I would recommend that you do more than that. By the way, if you chew each mouthful more than 100 times you will lose weight if you are overweight. I have seen it happen.

Many people chew poorly and that causes the digestive tract to produce mucus-like lubricants for protection, which decreases the digestibility of the food. Another natural response from poor chewing is the drinking of fluids (often cold)

to wash the food down. The cold drinks not only dilute the digestive juices but also chill out the digestive function. Indigestion ensues. Because your brain knows that the body is not receiving enough nutrients (with poor chewing), it will send out request signals for more food until all nutritional demands are met. However, in response to those signals you will consume food and calories beyond your real needs. Of all the food ingredients, carbohydrates are the easiest to digest and absorb. But they provide extra calories that turn into fat and still leave you short of nutrients. Chewing well naturally cuts down the amount of food you eat and leaves you feeling satisfied. You don't need to diet. Every restrictive diet eventually fails because you feel deprived.

If the first rule for developing healthy eating habits is to chew your food well, the second is to stop eating before your stomach is full.

Many ancient cultures have taught that rule. Eating too much in the Chinese Taoist medical tradition was a cardinal sin, just as was gluttony in Christianity. Overeating blocks and depletes the life force and makes you lethargic. Leaving the table early is an important facet of Taoist longevity practices. Indian Ayur Vedic medicine advises people not to overeat as well. Modern science has validated this ancient wisdom. Dietary restriction has been shown to increase the life span of all test animals, sometimes very substantially.

B. Conscious Eating

After mastering chewing, and learning to restrict the amount you eat, conscious eating is the next priority. Conscious eating means that you have actively chosen to be fully engaged in eating with deep appreciation for the Divine supply. It includes periodic fasting for cleansing the body and soul.

1. The Concept of Mindfulness in Conscious Eating

To digest your food completely without much outside help (such as with digestive enzymes) one needs to practice the concept of mindfulness. Be sensitive to how the food tastes and affects your body. For example, does your heart beat faster after you've eaten a certain food like wheat? The practice of mindful eating is a stepping stone to intuitive eating. Most people eat simply to fill their stomachs. Their minds are engaged in other tasks. Do you often do that? If so, please change your habit. As Mr. Stanchich says, closing your eyes while eating helps you to reach mindfulness.

In the pursuit of happiness or a stress-free life, modern man has turned to meditation, yoga, Tai Chi, Qigong and all sorts of relaxation techniques. Fundamental to all of these ancient techniques is mindfulness. Many people are too strapped for time and complain about not being able to relax. Wouldn't it be wonderful to turn your meal times into a meditative state and feel energized afterwards?

2. Gratitude and Respect for Your Foods

After you achieve the goal of mindfulness in eating, please eat your food with appreciation, respect and love. You will find a difference in the taste of foods and your sense of well being. Prayers or blessings, common practices before meals in many religions, are very conducive for creating a mood of gratitude.

If you eat food in a stressful state, filled with anxiety, anger or hatred, you will develop bowel problems. Interestingly, I have found a subgroup of people with leaky gut syndrome who at a young age often endured family distress at supper time. Another subgroup developed this syndrome at a later age due to work-related stress. This cause-and-effect situation is best explained by the autonomic response. Those tough times are conditioning for diminished digestibility. When in a fight or flight situation, your body naturally shuts down the digestion and pours the blood to the muscular system for escape. Years later, your body still suffers this reaction and eating remains associated with pain. For optimum success in treating leaky gut syndrome, the emotional trauma must be cleared. No supplements or dietary therapies will bail you out completely.

3. Fasting

The act of fasting has tremendous healing power and health benefits. The ancients utilized it to cleanse the toxins from the body and to purify the soul. This practice still merits consideration today. However, physician supervision is necessary when it is conducted over a long period. A milder form of fasting is the juice fast. Drinking freshly squeezed vegetable juice through out the day also achieves the goal of fasting, which is to give our digestive system a break and a chance to heal. Digestion consumes most of the daily metabolic fuel. No wonder our inner wisdom shuts down our appetite when we get sick and need to conserve energy for overcoming illness. Respect your body at these times and don't force yourself to eat. Fasting can be seen as simulated appetite loss. If you are not able to fast, at least refrain from eating grains for a time. In fact, the Chinese characters for fasting literally translate into "avoiding grains". Why is this? Most grains are difficult to digest and may contain lectins that cause digestive problems in chronically ill people (discussion of this problem follows in articles related to blood type diets). Sprouted grains are the alternative choice for raw food enthusiasts and others.

C. Guidelines for Food Choices

The many guidelines put forth by health practitioners can be confusing and down right contradictory. The following are assembled as a general rule, rather than an absolute truth, for healthy eating. When you stick to these rules long enough, they become your eating habits (detailed discussions of these guidelines can be found in our website: integrativehealthandhealing.com)

1. Eat organic, whole foods whenever possible
2. Reduce your consumption of animal meats and replace them with vegetables
3. Each meal should have a proper ratio of proteins, fats and carbohydrates
4. Be aware of food allergy or intolerance
5. Pay attention to the fat you eat
6. Be aware of the devastating effects of too much sugar on the body.

7. Drink enough good water every day
8. Practice simple food combining: don't mix proteins and carbohydrates
9. Eat some raw food whenever possible

IV. All Those Diet Therapies

Designing the right diet is not simply a matter of putting foods together; there are theories and principles behind diet therapies. The fact is there is no single diet just right for everyone. Many factors, i.e. the autonomic nervous system, oxidation, genetic predisposition, living climate, season, age, sex, mental activity, and emotional state, govern your daily nutritional needs. If you are confused about diet therapies you are not alone. But, start from somewhere one step at a time.

The naming of the many diet therapies in the competitive arena is fascinating:

Diets with Human Names: Atkin's; Bond; Dean Ornish; Dong; Dries; Gerson; Hay; Hippocrates; McDougall; Moerman's; and Pritikin's; etc.

Diets with self-evident names: the Body Ecology Diet; the Seasonal Detox Diet; False Fat Diet; Rice Diet; Mucusless Diet; No-Nightshade Diet; Whole Foods Diet; Vegan Diet; Vegetarian Diet; etc.

Diets with location names: Mediterranean Diet; Okinawan Diet; Hawaii Diet; China Diet from the China Project, etc.

Diets with divine connotations: The Conscious Eating Diet; The Rainbow Diet; The Only Diet There Is Diet; etc.

Diets from our ancestors: Natural Eating; Nourishing Traditions; Pleistocene Diet; Cave Man Diet; etc.

Ethnic Diets: Ayur Vedic Diet; Traditional Chinese Medicine Diet; Hawaii Diet, Okinawan Diet, Ethiopian Diet, etc.

Diets concerning individual metabolic states: Atkin's Diet; Zone Diet; Blood Type-based Diets; Metabolic Typing Diet; Ayur Vedic Diet; TCM Diet; Body Ecology Diet; New Millennium Diet; Glandular Body Type Diet; Different-Body-Different-Diet; etc.

This list goes on and on. In this issue we focus on the last category, metabolic diets, which emphasize the unique metabolism of each individual. There are at least 10 homeostatic controls that need to be addressed in a comprehensive dietary program: the autonomic nervous system, the oxidative state, catabolic/anabolic balance, electrolyte/fluid balance, acid/alkaline (pH) balance, prostaglandin balance, endocrine/glandular balance, blood type, constitution

(Vata, Pitta and Kapha), Five Elements, and yin and yang balance (you will find articles on all of the above homeostatic controls).

The lesson here is to create and eat the diet that feels best for you. Most animals, if left to nature, will instinctively eat the foods that they need. Cindy Engel, in her book, *Wild Health*, documents case after case of animals selecting healing foods. We can learn from them. After all, the Hoxsey formula is derived from the herbs a cancerous horse ate to restore its own health. Of course, we must be aware of the problem of food addictions when encouraging intuitive or spontaneous eating.

V. Intuitive Eating

Some people, out of frustration, have come to terms with diet issues by developing intuitive eating programs. For example, Evelyn Tribole and Elsie Resch wrote *Intuitive Eating: A Revolutionary Program that Works*. Humbart Smokey Santillo's book, *Intuitive Eating* defines it as "a personalized relationship to food and nutrition that is characterized by self-awareness and environmental sensitivity. It is based on an energy-efficiency model of human health." He gives three reasons for developing intuitive eating: (1) everyone is different; (2) we are out of touch with our own nature; and (3) food is energy. The processes of his intuitive eating include (1) detoxification, (2) a gradual transition, (3) eating for low stress and energy efficiency, (4) positive mental attitude and self-responsibility, and (5) learn about yourself (these proposals are similar to the principles that underlie the Trinity of Integrative Health model).

I do intuitive eating as well. When I first developed the intuitive skill for diagnosing health problems by the mode of knowing, I pondered whether this ability was applicable to other aspects of life. It was. I started choosing foods that I needed. I developed a strong sense of what I had to eat for the particular day or even meal. I used my food to detoxify myself and gradually moved from a diet with meat to vegetarianism (I never attempt to persuade others to be vegetarian). I further developed a positive mental attitude and sense of self responsibility. In the end, I learned more about myself. For example, recently I found myself feeling uncomfortable and ready to release a load of organic mercury from my brain. I went to a restaurant and ordered dishes with spinach, tomato and asparagus. I was fully recovered the next day. In two other incidences, although a vegetarian, I ate fatty chicken to detoxify aluminum that was coming to the surface.

VI. Nourishing Your Body and Soul

How do we become resourceful and intuitive? By feeding ourselves with love. I became intuitive because of the opening of my heart and have gone on to study the odysseys of other intuitive healers. It always comes back to unconditional love. Sondra Ray wrote a book called, *The Only Diet There Is*. She speaks of a diet of love and forgiveness. Self love, without guilt, is the beginning of nourishment. Love energy, the tonic for our spirit, is the most under-rated nutrient

in our fast food culture. I will bet you that meals consumed in a state of chaos, anger, stress, rush or grief are the cause of most digestive problems. This is truly food for thought, isn't it?

People who take lots of supplements complain about the high price tag of their natural pills. Do they know that their state of mind affects the absorption of these supplements? Many intend to stay on their supplements forever. But I wonder, is there a difference between dependency on natural supplements and dependency on synthetic pills? Make no mistake, I believe that supplements are wonderful for disease intervention. But their constant use can cause us to ignore our own human potential. Through foods and mindful eating we can liberate ourselves from medication and visits to the doctor's office.

VII. Conclusion

Please nourish yourself through a carefully selected diet. Chew well and be mindful of what you are eating. You are how you eat. Become a life-long student of diet and nutrition. Grow and tend your own garden, literally and figuratively. Cook your foods with love and share them with joy. Fan your digestive fire with divine air/oxygen and quench your thirst with holy water. This is to nourish your body, mind and spirit in its totality and is a heart-centered, integrative practice. Doing so will reverse illness and bring you health and longevity.

Dr Li-Chuan Chen.