

Enzymes

What an Enzyme is

Enzyme is a protein molecule. Enzymes act upon substance and change them into another substance but meanwhile they remain unchanged. The number of enzymes in the body is overwhelming (about 3 000 different types), and yet each one has a specific function. Each enzyme acts in certain ways in the body doing specific jobs such as digesting food (and build it into muscle, nerves, blood and glands), building protein in the bone and skin and aiding detoxification, no name few. Enzymes assist in storing sugar in the liver and muscles, and turn fat into fatty tissue. Enzymes aid in the formation of urea which is to be eliminated as urine and also in the elimination of carbon dioxide in the lungs. Actually, enzymes are involved in every process in the body. Our immune system, bloodstream, liver, kidneys, spleen, pancreas, as well as our ability to see, think, and breathe depend upon enzymes. All cellular activity is initiated by enzymes. Life could not exist without them.

Enzymes are missing link between food and health. This vital component is missing from nowadays-regular foods, and result is health problems. Enzymes are necessary for every chemical reaction in your body. Also they are necessary for proper working of your cells, organs and tissues. They essential for digesting food, transporting vitamins and minerals where they are needed in your body, and creating the energy you need to function every day.

Enzymes are complex molecules, vital catalysts that are needed for every chemical reaction in the body. There are 3 major classes of enzymes – metabolic enzymes (enzymes which work in blood, tissues, and organs), food enzymes from raw food, and digestive enzymes. Metabolic enzymes help build body structure. Digestive enzymes work to break down large food molecules into smaller, readily absorbable building blocks the body requires. Naturally grown foods contain the enzymes necessary to break the food down to the essential nutrients the body needs. Nature provides enzymes in food to aid in the digestion process so that the body doesn't have to use its enzyme reserves to do all the work. But when we process, refine, overcook, or microwave our food, most if not all enzymes are rendered useless. At a temperature above 118 degree Fahrenheit, all enzymes activity is destroyed. When we consume cooked or highly processed foods, our digestive system has to produce the enzymes necessary to digest what was eaten. The body has to replace enzymes from within itself, stealing enzymes from all parts of the body, which in the end causes exhaustion, premature aging and a low energy levels.

Enzymes and Digestion

A human being is not maintained by his food intake, but rather, by what is digested. Every food must be broken down by enzymes to simpler building blocks. Without sufficient enzymes during digestion, you may lose essential

vitamins, minerals, and nutrients. As it mentioned baking, boiling, microwaving, and irradiating can completely destroy these enzymes, making our bodies work much harder to absorb these essential nutrients from the food. When we consume such foods our bodies must supply the necessary enzymes to digest these foods. If you are missing just one type of enzyme, your digestive process will be thrown into chaos. If your body is unable to properly digest certain foods, you will experience consequences like food allergies, food intolerance, heartburn, vitamin deficiencies, and more.

It is important to realize that the enzymes in raw food actually digest 5 – 75% of the food itself without the help of the enzymes secreted by the body.

Every time you put food into your mouth, the enzymes in your saliva and the enzymes in your food start the process of pre-digestion, helping to break down the food on its way to your stomach. However, in our modern eat-and-run society, most people fail to chew their food well enough to release the enzymes and start digestive process; as a consequence, most of the food you eat reaches your stomach without the benefit of all the enzymes needed for optimum pre-digestion. This is the blueprint for heartburn. When your stomach sees that the food you eat has not been properly digested, it tries to compensate by producing increased amounts of stomach acids to help continue the digestive process. These excess acids often results in one of today's most common health concerns – heartburn, indigestion, or acid reflux. Despite the best efforts of your stomach, undigested food still manages to make its way to the next stop on the digestive trail, your small intestine. When partially-digested food enters your small intestine, your pancreas goes to work secreting the necessary enzymes to break down carbohydrates, proteins, fats, and sugars. Your pancreas also secretes alkaline fluids, creating the proper pH level to re-activate the plant enzymes contained in the food. However, if no plant enzymes are present (as in cooked or processed food) or if the food has not been entirely pre-digested, your pancreas must go into overdrive to secrete additional enzymes. Studies show that a large majority of people on a typical American diet will have an enlarged pancreas by the age of 40, which is likely due to the lack of enzymes in their diet. Over the time, this put a large amount of stress on your pancreas and depletes your body's enzyme reserves. Foods that cannot be digested often find its way into your bloodstream and tissues where real trouble can start.

The process of digestion begins and ends with enzymes. The digestive process starts as we chew our food and continues as the food sits in the stomach. The food stays in the stomach 1 – 2 hours and any remaining food enzymes in the food begin the digestive process. If food enzymes are lacking, then the body must take digestive enzymes from the liver, pancreas, and other organs to continue the digestive process. Taking enzymes (in supplement form) or eating a large percentage of raw food, will help take stress off not only the pancreas, but the entire body.

Enzymes and Allergy Connection

Unassimilated proteins, yeast cells, carbohydrates and fats can be reabsorbed into the blood stream, causing allergies, skin disease, and other illnesses. When pancreatic enzymes are administered (amylase, protease and lipase) to patients having allergies accompanied by low blood levels of enzymes, this level returns to normal and the allergy subside. Functional digestive disturbances, hyperacidity, and skin problems were relieved the same way. Clinicians have effectively relieved a variety of skin diseases caused by incompletely digested food material.

Allergens (substances causing the allergy) can also enter the body simply through the air that we breathe. Most antigens, bacteria, viruses and yeasts are proteins. Often the toxins that are causing allergies and infections are secreted by bacteria which also contain protein substances. At this point it can be understood that the body needs a tremendous supply of protease (protein digestive enzymes) to counteract the constant bombardment of these proteins to digest and eliminate them. This digestion of protein is done by enzymes, not only in the digestive tract, but in the bloodstream. If digestion is not properly accomplished, undigested substances can be absorbed through the digestive tract. Antigens (any substance foreign to the body that evokes an immune response) that cause allergies attach themselves to these proteins in the blood (antigen complex), deposit in the walls of tiny capillaries and secrete substances that cause inflammations which result in swelling, hay fever, hives, asthma, etc. In order for the body to rid itself of the allergen it must be separated from the protein molecule. This is accomplished by enzymes that digest the protein and release the allergen so the body can eliminate it via the lymphatic system. This is why it is so important to keep the lymphatic system clean. For more information about lymphatic system check my file "Lymphatic System."

Candida and Enzymes Connection

The importance of understanding why undigested proteins, bacteria and yeast entering the blood via the intestinal wall have toxic effects on one's system, cannot be stressed strongly enough. Their quick and proliferate spreading often leaves the body with numerous symptoms and physical indications. Candida Albicans, which lives practically everywhere in the body, is an example of such yeast. Candida can take over our whole body if the immunity is weakened. Candida is root cause of many degenerative diseases. It contributes to allergies, anxiety, irritability, depression, dizziness, bloating, fatigue, unclear thinking, difficulty focusing, loss of memory, digestive disturbances, vaginitis, cystitis, menstrual problems, migraine headaches, extreme weight gain or loss and other health conditions. Some oncologists claim that the main cause of cancer is Candida overgrowth in body. All cancer patients have uncontrolled Candida yeast infection problem. It is important to realize that any yeasts (including Candida) are also protein bodies and can be digested by enzymes if the body has a proper supply. This is the reason for similar approach in treating both Candida and allergies. Thus with the advent of digestive enzymes, a new tool against Candida

has emerged. Since Candida's cell wall is made largely of cellulose, cellulose enzymes break it down. As this occurs, the yeast dies.

Cellulose enzymes do not harm the liver (like anti-fungal drugs do), and also safe in every other way. Further, because Candida cannot change the structure of its cell wall, it cannot become immune to these enzymes (like they do to anti-fungal drugs). Finally, because the enzymes do not cause the yeast to release toxins, you'll begin to feel better almost at once, and with no healing crisis (die-off reaction) whatever.

Endocrine System and Enzymes

Cooking does not improve the nutritional value of food. It destroys or makes unavailable 85% of the original nutrients. A cooked food diet not only kills the enzymes in food but causes the endocrine glands to become overworked and encourages the development of diseases such as hypo-glycemia and obesity. A cooked food diet exerts a powerful stimulating effect on the endocrine glands, which can cause an increase in body weight.

The endocrine system and the nervous system cooperate in regulating the appetite. The glands know when the body has had enough food and will shut off the food craving. Eating mostly raw food takes the stress off the endocrine system. Sugar and processed foods disrupt the endocrine balance because of their high caloric content. If the glands know the organism has had enough calories, but the nutrients and enzymes that usually accompany food aren't present because of being overcooked, the glands, not finding these nutrients over-stimulate the digestive organs, demanding more food than is need to maintain strength and vitality. This result in the over-secretion of hormones, overeating, obesity, and finally exhaustion of the hormone-producing glands, not to mention the enzyme reserve it depletes trying to carry on the increased metabolic activity.

The false feeling of well-being is caused by the over-stimulation of the pituitary gland. This gland is considered to be master gland because it sends hormones to all of the other glands such as thyroid, adrenals, reproductive glands, and pancreas. So, you can the overshadowing damage that is done by eating enzymeless, overcooked food. Large amounts of enzymes are used up in this process, leaving the organs and tissues without their rightful share.

The endocrine glands need trace minerals and vitamins to function properly. A similar example of this is that of the thyroid gland needing iodine, and the adrenal glands needing vitamin C. Overcooked food is deficient not only in enzymes, but in nutrients also. These deficiencies cause many problems. The glands of the body are controlled by stimuli from the brain to secrete their hormones. When the blood sugar level drops below normal, the pancreas and adrenal glands are called upon to secrete their hormones. When there is a lack of nutrients in the blood which support the endocrine glands, the hypothalamus stimulates the appetite and causes a craving for food. The more that cooked food is eaten the more there will be hormone stimulation, resulting in overeating. Excessive eating can cause one to be overweight and obese.

Quick rising and falling blood sugar levels (as a result of cooked food, especially starch consumption) in the body cause emotional and mental imbalances. Finally, the endocrine glands, deficient in their secretions from trying to keep the body metabolism normal, become exhausted. This state of exhaustion can be foundation of both mental and physical diseases.

Another observation made is that fat (not properly digested by lipase) can be absorbed in an undigested state. Fats impair the function of blood cells in the immune system by slowing down their circulation. This may be the reason why obese individuals seem to be prone to infections. High levels of fat in the blood also block the action of insulin which aids in the tissue absorption of sugar. This allows the sugar to rise in the blood which can be an attributing factor to diabetes.

Enzymes and Diabetes

About 86% of diabetics have deficiency of amylase (enzyme) in their intestinal secretions. After administering amylase approximately 50% of the diabetics (who were users of insulin) could control their blood sugar levels without the use of insulin. Amylase helps in storage and utilization of sugar in the blood. Shortage of amylase can cause drastic emotional swings as well. Check also "Endocrine System and Enzymes."

Detoxification and Enzymes

Enzymes can be used not only to maintain health, but also be used during detoxification programs. Actually enzymes plays very important role in detoxification process. In the detoxification process, what we are trying to accomplish is the purification of the blood stream and the balancing of the endocrine glands so that they will work in harmony instead of being over-stimulated and exhausted. This purifies the organs and tissues, and takes the stress off the entire body. To know how enzymes exactly help in purification of blood stream and balancing endocrine system check "Enzymes and Allergy Connection," "Endocrine System and Enzymes," and "Enzymes and Elevated Cholesterol and Triglycerides, High Blood Pressure and Weight Loss Connection."

Emotional – Mental Health and Enzymes

Enzymes have as much to do with our emotional, mental and physical health as any other considered elements of nutrition. Check also "Endocrine System and Enzymes," and "Enzymes and Diabetes."

Enzyme – Energy and Vitality Connection

There is a definite correlation between the amount of enzymes an individual possesses and the amount of energy they have. Enzymes are a true

yardstick of vitality. Enzymes offer an important means of calculating the vital energy of an organism. That which we call energy, vital force, nerve energy, and strength, may be synonymous with enzyme activity. The building up and breaking down of tissues is performed by enzymes. In other words, our metabolism is maintained by enzyme activity. When our enzyme level is lowered, our metabolism is lowered, and so is our energy level. There is a direct correlation between enzyme levels and the youth of the tissues of an organism and energy levels (the higher enzyme level in the body more youthful tissues and more energy that body will have). About half the amount of body energy is spent digesting food. If exogenous enzymes (enzymes taken through raw food or through supplementation) are added to the diet daily, more nutrients will be available and less food will be needed, resulting in less digestive stress and waste elimination. This is called energy conservation.

Athletes – Sports and Enzymes

A major concern of an athlete is that his/her system absorbs and properly utilizes the food ingested. Utilization is the key word here because the food ingested usually lacks the proper enzymes. Enzymes are essential in the digestion of food and release of nutrients into the body. It is great to enjoy sports and related activities, but it will be a short-lived experience if our metabolic enzyme reserves are not maintained and we fail to supplement the daily losses to our system. Don't forget that when we have increased physical activity level we spend more enzymes as well. Enzymes are also important to increase and/or maintain energy and vitality (both important for athletes and sport participants). For more information about this check "Enzyme – Energy and Vitality Connection."

Enzymes and Immune System

The other important function of enzymes is that they boost your immune system. In addition to digesting food, enzymes are also vital to your immune system and keeping your body free of viruses and toxins. When taken as a supplement on an empty stomach, enzymes are absorbed into your bloodstream where they seek out and dispose of foreign substances. Enzymes actually "eat" the protein coating of several types of viruses, making it easier for your immune system and white blood cells to destroy them and keep you healthy. Each type of enzymes also has a specific anti-inflammatory action that will relieve many different inflammatory conditions. In addition, supplementing with extra enzymes between meals allows them to go to work helping to clean your bloodstream of undigested foods and bacteria. By sweeping out these foreign invaders before they can make you sick, you can help your body to be stronger than ever. What a great way to boost your immune system!

Enzymes and Longevity

Young individuals had 30 times more amylase in their saliva than the elderly person. This is why younger person can tolerate a diet of white bread, starches, and predominately cooked food. But as our enzyme reserve is depleted over the years, these same foods can cause illnesses such as constipation, blood diseases, bleeding ulcers, bloating, and arthritis. In older individuals, the enzyme content in the body has been depleted and these foods are not properly digested. They ferment in the digestive tract producing toxins that are then absorbed into the blood and deposited in the joints and other soft-tissue areas. Thus having less enzymes we digest food not properly, and as a result of it we obtain different health conditions. This in its turn leads to premature aging. It was been found that when there was a rise in the blood amylase level (this is one of digestive enzymes), there was an improvement in the general condition of each patient, as well as an improvement in the liver condition. So, age is not so much a matter of how many years one has been alive, but rather is a matter of the integrity of the tissues of the body. These tissues integrity depend upon the amount of enzymes present to carry on the metabolism of every cell of the body. It is an important fact to remember that aging corresponds to diminishing enzyme levels. Increasing age shows a slow decrease in enzyme reserve. When the enzyme level becomes so low that metabolism suffers, death will be finally resulting. In other words depleted body's enzyme bank is one of the paramount causes of premature aging and early death. It is actually the underlying cause of almost all degenerative diseases.

Enzyme and Arthritis Connection

Many people believe that arthritis is a normal part of the aging process. But in reality arthritis is caused by many factors including injuries, genetics, and even a diet lacking in certain enzymes. Rheumatoid arthritis, where the body attacks its own tissues, has been linked to a condition where undigested foods enter the blood stream, causing release of antibodies into the blood. Over the time, these antibodies build up and are stored in the tissues where they cause inflammation and pain, allergic reactions, and stress to the immune system. Oral therapy with pancreatic enzymes produces certain analgesic and anti-inflammatory effects. Proteolytic (pancreatic) enzymes (including the plant enzymes bromelain and papain) are commonly used in enzyme therapy as treatment for inflammation, joint pain, and stiffness.

Note: Proteolytic enzymes are an excellent way to keep inflammation and swelling down, however, they cannot be taken with prescription blood thinners.

Enzyme and Osteoporosis Connection

Protease (enzyme) plays a large role in keeping your body supplied with the calcium you need for healthy bones. Calcium is carried in the blood partially bound to digested proteins. Inadequate protein digestion makes calcium metabolism difficult for the body because it is unable to carry it where it is

needed. Instead, the precious calcium will sit unused, which can sometimes result in bone spurs. Make sure your body can use the calcium you are supplying by getting enough protease.

Enzymes and Elevated Cholesterol and Triglycerides, High Blood Pressure and Weight Loss Connection

Lipase (one of the enzymes) is the essential enzyme for breaking down fats and fatty acids. Every time you eat something containing fat, your body first uses stomach bile to break the fat up into smaller parts. Then, lipase goes to work eating the fat, extracting the nutrients your body needs, and pushing the rest of the particles through the digestive process. When your body is unable to digest fats, the consequences for your health are obvious – rising cholesterol and triglycerides, arteriosclerosis (hardening of the arteries), higher blood pressure, difficulty losing weight, and deficiencies in many fat-soluble vitamins like A, D, and E. When fats remain undigested, they can make their way into your blood stream and build-up in the walls of your veins and arteries; this build-up is called plaque and contributes to your cholesterol levels. A build-up of plaque makes your veins and arteries narrower and restricts the amount of blood that can flow, resulting in high blood pressure. In addition, your body has to work much harder to use and burn fats that are not properly digested. Without the fat-digesting enzyme lipase, the fats you eat will go directly to your fat storage areas and turn into extra pounds.

It has been reported that in human obesity, the lipase content of fatty tissue is decreased. As it mentioned above without proper amount of lipase, fat stagnates and accumulates in the arteries, capillaries and other organs, causing cardiovascular problems and obesity.

Why is there a deficiency of lipase in fatty tissues and in obese individuals? It is because when food is cooked, the lipase, which aids in fat digestion, and the burning of fat for energy and the storage and distribution of fat, is absent.

Enzymes and Internal Organ's Health

Average person in our modern society mostly consume cooked and enzyme deficient food. If there is an overabundance of cooked calories, they are stored in the body tissue as fat. This fat accumulates in the liver, kidneys, arteries, and capillaries. The stress of the body of enzymeless food not only causes an increase in body weight, but also the internal organs go through changes. A heat-treated, refined food diet causes drastic changes in the size and appearance of the pituitary gland. Enzymes affect hormone-producing glands and hormones influence enzyme levels.

The glandular secretions of the pancreas and pituitary glands become exhausted from over-stimulation resulting from a cooked food diet. The body becomes sluggish, thyroid function also becomes exhausted, and weight is

gained. Raw calories are relatively non-stimulating to glands and stabilize body weight.

Pancreatic Enzymes and Cancer Connection

Each day everyone's body produces defective cells. And each day most everyone's pancreas produces adequate enzymes to digest the food they eat, as well as the normally developing malignant tumor cells.

It is when one's pancreas fails to produce the necessary proteolytic enzymes to accomplish these tasks that a disease process takes place, which we can correctly call "cancer". Cancer is nothing more than the failure of one's pancreas to produce adequate proteolytic enzymes and the failure of one's body to deliver adequate amounts of proteolytic enzymes to the malignant cell.

When this disease "process" occurs, one is not aware of it. It is so subtle that most of the time the progress takes 2 to 4 years before one, or one's physician realizes he or she is in trouble. The things one often complains about to his or her physician during this time are indigestion and weight loss at first and then, a few months later, excessive weight gain, eye trouble and often pyorrhea. Eventually, a large enough malignant tumor mass forms, which is the "object" the cancer victim and/or the physician sees, which he, in error, calls cancer. By the time one and/or one's physician discovers a malignant tumor mass, one has had what is generally called cancer for two or more years. This disease "process", is THE FAILURE OF ONE'S PANCREAS TO PRODUCE ADEQUATE AMOUNTS OF ENZYMES TO DIGEST THE MALIGNANT TUMOR CELLS.

When our body have enough metabolic enzymes, and they are free from participating in digestive process (that's why food should not be enzymeless) the (enzymes) start attacking the protein coating of cancer cells found in our bloodstream. This helps our white blood cells identify and destroy these renegades. The less demand we make on pancreatic enzymes to digest our food intake, the more enzymes there will be to function as part of our immune system.

The pancreas is the key to breaking down proteins. According to Dr. Kelly the cause of cancer is a bodily inability to break down and use protein. Tumors occur because of this metabolic problem, he believed. Even if the tumor is removed, the cancers will likely return if the underlying metabolism problem is not treated. Those deficient in pancreatic enzymes are good targets for cancer, since these chemicals are the body's first line of defense against cancer cells.

Dr. Gerson states that cancer patients are usually enzyme-deficient. When their diets are supplemented with enzymes, the protein-cell wall that surrounds the tumor is broken down. This allows the white blood cells to attack and kill the cancer.

Our body's ability to function, to repair when injured, and to ward off disease is directly related to the strength and number of our enzymes. That's why an enzyme deficiency can be so devastating.

Pancreatic enzymes are normally activated by the liver and are important to food digestion. By taking pancreatic enzyme supplements with your meals, the load will be taken away from your liver, so it has a chance to heal. These

enzymes are also known to attack the coating on cancer cells, exposing them to the immune system for destruction.

SO, THE OTHER VERY IMPORTANT ROLE OF ENZYME IS DE-COATING CANCER CELLS. TUMORS AND CANCERS HAVE THEIR OWN “DEFENSE MECHANISM” IN FORM OF COATING. THIS COATING PROTECTS THEM FROM THE ATTACKS OF IMMUNE SYSTEM. PANCREATIC ENZYMES DISSOLVE THIS COATING AND OPEN THE CANCER OR TUMOR TO THE IMMUNE SYSTEM ATTACKS.

Enzyme Deficiency and Weakened Immunity

Protease (another enzyme) digest protein into smaller units called amino acids. Amino acids are the building blocks of many important body chemicals including hormones and neurotransmitters. The body cannot make eight amino acids, called “essential amino acids,” – they must be found in your diet – and you need protease to properly digest them. Protease breaks down all organisms made of protein, not just food. Therefore, a protease deficiency can weaken your immune system and leave you vulnerable to infection from protein-based microbes, bacteria, viruses, and certain chemicals the body makes when injured. Protease will also break down and destroy the foreign proteins that are responsible for most food allergies. These special properties make this enzyme essential in fighting infection and relieving inflammation, especially inflammation related to soft tissue trauma or surgery.

Enzyme and Inflammation Connection

The oral administration of proteolytic enzymes for inflammation and sport injuries has been used for many years. Also check “Enzyme and Arthritis Connection” and “Enzyme Deficiency and Weakened Immunity.”

Enzyme and Obesity Connection

Check “Enzymes and Elevated Cholesterol and Triglycerides, high Blood Pressure and Weight Loss Connection,” “Endocrine System and Enzymes,” “Enzymes and Internal Organ’s Health” and “Enzyme and Carbohydrate Connection.”

Enzyme and Carbohydrate Connection

Amylase (it is one of the enzymes) is essential for breaking down starch and other carbohydrates into usable fuel for the body. Because a majority of our daily calories come in form of carbohydrates, amylase is essential for keeping us active and alert. One of the most common indicators of amylase deficiency is fatigue. When carbohydrates are properly digested, they eventually become simple sugars like glucose, lactose, or fructose. These sugars, especially glucose, provide a large majority of energy for our brain and cells. But when

carbohydrates are not properly digested, we all know what happens. You feel full, bloated, and sluggish and eventually, these unused carbohydrates turn into ugly fat. Amylase is the key to enjoying bread, pasta, and potatoes without packing on the pounds.

Enzymes and pH Balance Connection

Because your body may have been suffering from enzyme depletion for several years, it is likely that your pH is out of whack along with the rest of body chemistry. An imbalanced pH can reduce the effectiveness of some enzymes formulations because enzymes are pH sensitive.

Another point is that when raw foods are eaten, less stomach acid is secreted than when cooked food is eaten, which gives the enzymes contained in the raw food more time for pre-digestion. This in its turn contributes to proper digestion. When the food is not properly digested and starts fermenting it contribute to acid forming pH balance.

Enzymes and their Relationship to Disease

Enzymes are a part of every metabolic process in the body – from the working of our glands to the proper functioning of our immune system. The speed of metabolism is determined by the activity of enzymes. The more rapidly the metabolism is working, the more enzymes are required to participate, and the faster the enzymes will be used up. During pneumonia, acute appendicitis, malaria, pulmonary tuberculosis, fevers of all types, and children's diseases, enzymes were found to be elevated in blood, urine, and feces. Any increase in metabolic activity, whether it is associated with fevers, heart action (exercise), digestion, muscular work, or pregnancy, is paralleled with an increase in enzyme activity. It is evident that if enzymes respond to fevers and infections, they have a direct relationship to the defense mechanism in our body.

There is a connection between the strength of our immune system and our enzyme level. The greater the amount of enzyme reserves, the stronger our immune system, the healthier and stronger we will be.

When the enzyme level is low and digestion is sluggish, as found in elderly folks, the ferments and causes gas, bloating, constipation, colitis and other problems. Enzymes can be used in both medical and non-medical approaches to healing. They can be the support system to all systems and to health-promotion processes.

Enzyme Functions in the Body

As it mentioned above enzymes are involved in every process in the body. They are responsible for millions of reactions inside of our bodies; from creating energy and digesting food to feeding your cells and fighting viruses. Our bodies can spend a great deal of energy just to produce the additional digestive

enzymes needed to compensate for the food enzymes destroyed by cooking and processing. Enzymes are needed to absorb the food you eat, fight disease, produce hormones and protect against high cholesterol, high blood pressure, cardiovascular disease, obesity and many other health conditions. Enzymes act as scavengers in the body. They latch onto foreign substances and reduce them to a form that the body can dispose of. They also prevent the arteries from clogging up and joints from becoming gummed up. Also, if your body lacks adequate enzyme reserves your current nutritional supplements cannot and will not work effectively. All vitamins (including C, E and B) and minerals (including calcium, magnesium and iron) depend on enzymes for proper absorption.

Signs of Enzyme Deficiency

Did ever feel tired or sleepy after eating a big meal? Other signs of enzyme deficiency are food allergy or intolerance, experiencing bloating, gas or constipation, vitamin and/or mineral deficiency, being susceptible to colds or viruses, experience heartburn or acid indigestion after meals, having joint or muscle pain and stiffness. If you have even one of these signs you may be running low on enzymes.

Enzyme Sources and Factors that Deplete Them

For a healthy helping of live enzymes, there's no better source than a high-quality Bee Pollen. Bee Pollen is richly enzyme-active and a superior source of all nutrients (amino acids, vitamins, minerals, essential fatty acids, hormones, carbohydrates, and trace elements) required for healthy life. As a cancer fighter, Bee pollen has been shown in scientifically controlled double-blind studies to inhibit the development of tumors.

Frequent enemas (coffee) prevent suppression of protein-digesting enzymes, which eat away at the tumor's mucous coat and make them vulnerable to the body's immune mechanisms. Don't forget that the most of the waste eliminated by coffee-enemas is in the form of enzyme inhibitors.

Now that it is known how important enzymes are, where does one get his/her enzymes? The food one eats is the primary source. Sprouted seeds and fruits are naturally predigested foods full of enzymes. Actually in sprouted grains and soaked seeds and nuts the enzyme content sometimes increases 10-fold. Another benefit of eating predigested food is that in the pre-digestion process the food is broken down into simpler components. Sauerkraut is another predigested food full of enzymes. Drinking daily fresh squeezed fruits and vegetable juices is a good means of supplying the body much needed vitamins, minerals and enzymes.

Cooking, food additives, preservatives, radiation, long-term storage, canning, freezing, drying, can kill or reduce the enzymatic activity in the foods one eats.

Heat destruction of enzymes begins at 107 degree F and is completed at 122 degree F. About 65 percent of food in supermarkets has been processed (refined) and, thus is enzymeless. More than 90% of the enzymes in milk are destroyed by modern-day pasteurization methods. Humans are the only creatures that alter food before eating it (forgetting that it is impossible improve Nature), thus killing the enzymes and many of the nutrients in the process. Such dead (enzymeless) food although can sustain life in the human beings, it does so at expense of progressively degenerating health, energy and vitality.

If a disease is present, enzymes are being used up to fight the condition and pancreas (and all enzyme producing organs) are affected. So, eating mostly cooked food all our lives, or trying to overcome a chronic disease while still eating this type of diet, can be detrimental.

Hundreds of thousands of these important for health enzymes are made by the human body. They are essential to numerous body functions including breathing, delivering nutrients, fighting disease, and producing hormones. Without enzymes you couldn't live.

Our body is an enzyme factory with limited production potential. Our body gets enzymes from two sources – those it makes, and those it gets from outside. Unfortunately, the enzyme production of the body is limited. Over time as we abuse our bodies with unhealthy lifestyles, it is very likely that our bodies will become deficient in enzymes and the ability to produce an adequate supply of them for the body's needs. Cooked and processed food, caffeinated and alcoholic beverages, colds and fevers, pregnancy, stress, strenuous exercise and extreme weather conditions are just some of the things that use up the body's enzymes at a rapid rate.

Another source of enzyme is an extract of whole pancreas taken in form of supplement. Of course taking high-quality enzymes is excellent source of enzymes and is a good idea.