

# *Optimal Digestion*

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Within this article is information *you will learn* about your digestive system and its energy and enzyme reserves; practices that drain it; and practices to support it. Hopefully you're open minded and ready to learn major secrets to better health and start giving your body the help and additional strength it truly needs.

When we begin to grasp the complexity and needs of our different body systems and functions, and see the intricate "holistic" balance required for each to function well, the body becomes a walking miracle, and "owning" a body becomes a humbling experience. Eating becomes more than a pleasurable social or "recreational" event, and optimal digestion becomes a caring consideration for how to nurture and care for this miracle body which has, in modern times, become a "homeland" easily threatened by a toxic environment and demands and ignorant habits that violate its natural needs daily. Competition at its worst.

Modern lifestyles so often push one to extremes of eliminating relaxation time and reducing needed sleep, taking away from the body's quality time to repair and maintain body functions that support our daily activity. The intensity of that fast paced lifestyle makes fast choices in the moment about "what to have for dinner", often going for quick fixes that lack the ability to support the body energy systems for long term health. In turn, the vitality we so admire, in the "younger" generation, becomes lost to us, as our energy stores fall and become less available to both our inner body processes as well as fuel for our outer activity.

It is essential to understand principles of basic functions common to all of Life kind, such as respiration and digestion, to discern and prevent violation of their essential life supporting rhythms. The ability to adapt to an external changing environment is unique to each human individual. We can deny change to happen, but it happens anyway. Books can tell us about biological functions and how they are supposed to work, and we do need to know, to prevent ourselves from violating our personal needs; but we are each left to discover how to care for our bodies, at an individual level, as the seasons, the physical environment, and social structures change around us. Adaptation, is individual, it is an inside job. There is no manual or "expert" with the answers but some fundamentals do exist.

The complexity of our body rhythms, in health, know a harmony, an integrity that taps into a fountain of life and borrows from wisdom of the ages. This innate life force guides the rhythms and harmony of our activities, as we travel life's journey, flexing with the seasons and changes that come and go, so as to not fragment our natural connection to life's ancient rhythms.

From a holistic perspective, bringing awareness to lifestyle issues that contribute to enzyme depletion, and awareness as well to dietary supplement options that help restore

natural, as well as optimal, digestion is of paramount importance. There will never come a time when supplements are not valuable. To not allow for that will send people to a dead end street. The ONLY way one can manage food without supplements is by drinking freshly squeezed juices only for years as they require little to no digestion. Almost no one will do that. As soon as activity gets below nutrient rich or devitalized food intake/balance the need to for extra help will mandate supplementing with concentrated food sources.

It may be necessary to do a rotational diet to test out foods, one by one to re-establish what one can eat. The real solution is to understand why our digestion is faulty. How it gets restored. This might take years.

Too often we context food as a social or entertainment event, and the body as a robot with replaceable parts . . . another context is lost . . . That of Life and of the incredible Human Body as a miracle. Without seeing life as sacred, we don't remember to use food to support and care for it . . . so we each can excel at what we care the most about. In addition stress plays a huge part in distorting digestion. Optimal breathing plays a huge part in how we manage stress.

There is so much attention on diet and eating these days. The topic of Optimal Digestion is a vast field that goes beyond food and eating. It is at the very heart of "having a Life". Optimal digestion is more about feeding our Life Force energy and body in a way that sustains a meaningful Soul filled life, however this article is mostly about enzymes and their role in our life force and vitality.

Almost everyone is depleting their body's energy stores on a daily basis disturbing healthy balance of body processes . . . which in turn results in quicker aging, increased susceptibility to disease, and acquisition of physical symptoms.

The negative statistics are very real:

It's estimated, that 80% of the population will end up with a tumor, cancer, disease or some type of physical problems or pain. This means approximately 4 out of 5 people are on the highway to some type of physical tragedy.

Most people don't know how they are draining their body's energy supply and consequently the body's ability to protect and repair itself is impaired. If continued *depletion* of the body's energy *stores* isn't corrected... most health problems are going to continue or worsen. If you're going to achieve great health... you must understand the severity of the *means by which the damage is* being done.

Learning how to *strengthen the immune system and* give the human body back its full power to protect, repair and function properly is the real secret to better health. When the human body *maintains its energy systems through* optimal breathing, moderate exercise and *optimal diet/fuel, energy is adequate to* focus on what it has to do... *including ongoing repairs that can lead to disorders.* But when the human body doesn't have enough energy and is toxic we can catch a cold, get the flu, have indigestion, get

constipated or even end up with a tumor or cancer. Understanding how the human body is supposed to work ...will give you the knowledge you need to correct the human body's *imbalances before they lead to BIG* problems, and help you reach higher levels of optimum health.

### ***Oxygen, Water and Food***

There are three basic foundations the human body absolutely must have to function properly and they are oxygen, water and food.

#### ***Water***

Water makes up 60%-75% of the human body and is essential to life for several reasons.

- Water is a solvent that many substances can dissolve in to be transported throughout the body. As the primary liquid ingredient of blood it transports nutrients and oxygen to all the cells of the body, and carries away carbon dioxide and cellular waste products to be excreted.
- Water is a lubricant which prevents friction between the moving parts of the body, where they meet and move. As mucus it allows the slippery movement of food through the digestive system. Fluid prevents friction when bones move.
- Stabilizes body temperature, because the temperature of water shifts significantly only after absorbing or losing a large amount of heat. When body heat is in excess, cooling via evaporation of sweat brings the temperature down.

***Water is very important in removing waste and impurities from your body.*** Drinking at least 64 ounces to one gallon of water a day is highly recommended! I agree that more is needed but water needs can vary greatly due to activity levels. Foods that contain copious water, such as fresh fruits, (with enzymes intact) can often be counted as part of that supply, but not always if you are not getting enough overall.

#### ***• FOOD***

Food is much more than a celebration, social or recreational event. Food provides the raw ingredients for repairing and building new tissues. Energy required for building, is released from food in the process of cellular respiration.

Regular intake of food provides a source of nutrients which are stored for continuous use.

Food is only useful, when it is broken down to molecules, useable at the cellular level. Foods supply the body with the nourishment it needs when: food contains the specific nutrients the body requires, provided in the correct amounts, in a digestible form.

The human body is a community of trillions of cells Each and every one of the cells needs specific nourishment to help keep it healthy to do its specific task. For each of the cells to get the benefit of the nutrients, the food must be completely broken down into the smallest possible size, which is called ionic. In this ionic state the food particles are small enough to dissolve in the blood, to be carried through the body, to enter body cells and be utilized along with oxygen for cellular functions. If the nutrients aren't fully broken down and digested properly they can be too large to enter the cells and the cells can't benefit, even though the nutrients were absorbed into the bloodstream. This is why there's a huge difference between absorption and utilization. Unabsorbed nutrients that aren't fully digested or useable and excess food and nutrients that must be eliminated use energy

from the body energy stores to be excreted as waste. Poor food choices and digestive habits are important reasons why the human body doesn't function as well as it could and it's also a big part of how we're abusing and draining the entire body's energy and vitality.

***The Facts:***

Fact # 1- If you had a fully functional and effective immune system, and were toxin free you wouldn't get colds, flu, tumors, cancer and more.

Fact # 2 - Your human body has an army capable of repairing any nutritionally damaged area within the human body.

Fact # 3 -If your repairers were fully functional and strong, many of the physical problems that occasionally appear wouldn't stay forever... they'd get repaired.

Fact # 4 – There are exceptions but mostly we cause our own problems by compulsively eating a diet high in processed and cooked foods. Foods that are not “natural” must be reconfigured or eliminated by the body and should be highly scrutinized. When we eat them... we're eating dead or denatured food that has no live enzymes or life within the food to help digest or break down that food. These dead foods force the human body to work double time or twice as hard each and every day. Over time this weakens the human body's effectiveness and problems start surfacing. It's fairly easy to correct this situation and give your human body back its power to protect, repair and function more effectively. Wouldn't it be nice to see the human body use its miraculous healing power to reverse physical problems and get rid of disease? A great digestive enzyme formulation can greatly assist in lifting a heavy digestion work load off of the human body.

**There are only *five types* of food on earth: raw, sprouted, fermented, dehydrated and cooked.**

1st –**RAW FOODS**, straight from nature, with no human processing are almost always enzymatically alive. These live enzymes contained in the food help digest 40 to 60% of that particular food, *the body is not forced to make up extra enzymes or use the body's metabolic energy stores to process the food.*

2nd –**COOKED AND PROCESSED FOODS** came after humankind discovered fire. Cooking preserved foods for longer periods, when refrigeration was not available, but at the same time made new demands on the digestive system. Cooking food kills the live food enzymes within that food. All foods cooked and processed above 110 degrees are dead or denatured. They are lifeless because the live enzymes within the food have been killed. Years and years of eating dead or lifeless food requires the human body to adapt its digestion processes to meet the new demand. The digestion system has more work to do which **overworks and needlessly** drains the human body's energy and enzyme reserves... making it possible to acquire all types of physical problems and diseases.

Cooked and processed foods are void of live enzymes which are denatured and destroyed by heat and chemical processing. There are no live enzymes within that food to help with digestion of that food. These dead foods will stress the body systems including the digestive system, the pancreas, the immune system, the body's energy and the body's enzyme reserves.

History indicates that the digestive systems of humankind and animals was designed to eat mostly raw food... like raw (bacteria free if possible) meat, raw plants, fruits and vegetables. Raw food is alive and has live food enzymes within the food that will help break down a lot of that food. In today's world it's nearly impossible to eat all raw foods and many foods should not be eaten raw... because of possible bacteria contamination or difficulty in digesting and a few like rhubarb are toxic.

3rd. **SPROUTED FOODS** are seeds or nuts that have had the outer protective coat deactivated by soaking, so that the precious life force energy can be released to transform the dormant seed into a growing sprout which is metabolically alive and responsive to sunshine and water to spur and nurture its growth.

4th. **FERMENTED FOODS** Some naturally fermented foods are rich with beneficial lactic acid fermenting microbes. Historically, these microbes naturally grow on or in plants and animal products, and, with the right temperature and absence of oxygen, use the enzymes present to break the food down into a more digestible and tasty form. These foods have become traditional foods in many parts of the world. Humankind from different cultures have developed a taste for a variety of fermented products and encouraged this symbiotic food production because these foods keep for a longer period without spoiling, and often are easier to digest. Today, we know nature's process for these foods, and have successfully reproduced them commercially under controlled conditions that eliminate fluctuations in environmental conditions that spoil a product. However, commercial products often have preservatives and processed sugars added that can reduce their food and nutritional value, especially if not eaten in moderation.

Unfortunately, commercial processes often destroy the beneficial bacteria after they complete the fermentation process, so they are not alive and available to make their traditional contributions to intestinal and overall health. Some examples are sauerkraut, cheese, kimchee, and yogurt. In yogurt, the bacterial strains *Streptococcus thermophilus* and *Lactobacillus bulgaricus*, work together and transform milk into tasty yogurt. Kefir, a sour drink originating from the Middle East (migrated to the western world in recent times) was milk curdled by the addition of several strains of *Lactobacillus* and *Streptococcus* in an animal skin. Kefir microbes, just like the microbes of the human digestive system form a very complex eco-system and colonize the gut as a polysaccharide matrix. These lactic acid producing bacteria naturally digest carbohydrates from food in the anaerobic (no oxygen) environment of the gut with the release of lactic acid and other nutrients (i.e. the same process they use to ferment cabbage). In addition, they have the capacity to provide a barrier for harmful bacteria and other microbes entering from the outside, and restore the complex ecology of the gut when it is disturbed by antibiotics. Fermented foods such as kimchi, komboucha, and sauerkraut are so beneficial to overall health that they can be considered "functional foods" or "probiotics". That is, substances that restore the natural health of the gut via natural means: by promoting the growth of a friendly eco-flora, which in turn restores balance to the gut environment to enable the microbial eco-system to continue its production of several B vitamins (including B12), omega-3 fatty acids, digestive enzymes, lactase and lactic acid, and other immune chemicals that fight off harmful bacteria and even cancer cells.

5th **DEHYDRATED FOODS** are raw foods that have had the water removed from them *for preservation*. They are not strictly raw but have the potential to become the near equivalent when they become re-hydrated. *For example, dried fruits are a healthier alternative for “sweet” requirements than sugared foods, in moderation of course. Some dried seeds can “Come alive” after months, years or even decades of laying dormant.*

#### **ANIMAL STUDIES and degenerative health:**

In an eye opening cooked versus raw Food Study. The Pottenger cats study lasted for ten years, with three generations of cats being studied. Approximately 900 cats were involved. Dr. Francis Pottenger took 2 sets of cats and fed them only raw milk and raw meat. He took 3 more sets of cats and fed them cooked meat and pasteurized milk. This study was specifically designed to show the difference between eating raw foods versus cooked and processed foods over a long period of time. The cats eating the raw food were disease free and healthy generation after generation after generation. But, the cats eating the cooked and processed foods weren't so fortunate. By the end of the 1st generation the cats started to develop degenerative diseases and became quite lazy. By the end of the 2nd generation the cats had developed degenerative diseases by mid-life and started losing their coordination. By the end of the 3rd generation the cats eating the cooked foods had developed degenerative diseases very early in life and some were born blind and weak and had a much shorter life span. Many of the third generation cats couldn't even produce offspring. The cat study gives us hints as to why children today are developing degenerative diseases that used to only show up in humans at an age of 50 years or older.

I have to add a note here that people of science are attempting to be very astute about how animal studies are translated into “human” application, until adequate data is available. There are many things about human physiology that are unique. But many more I suspect are universal that modern science has yet to learn about. It is serviceable to mention animal studies such as the Pottenger Cats but do not to make direct live saving assumptions with out more information than those animal studies. AND the fact remains that there is good science and bad science so be careful.

#### **“You are what you eat – You be the way you breathe” Gary Hagman, San Francisco Bodyworker.**

In the wild, animals eat live food to live. Life eats life to stay alive. But we human beings, who are supposed to be the more intelligent species, eat dead food and think it's going to keep us vibrant and healthy. How intelligent are we really?

#### **Leukocytosis** – excessive white blood cell count and mucous production

According to Dr. Paul Kautchakoff the major cause of leukocytosis is eating cooked foods. (We believe this is largely because the body reacts by rejecting dead matter instead of live matter that carries its own digestive enzymes.) His research has helped us to understand what develops in the bloodstream when we eat cooked and processed foods.

Dr Kautchakoff divided his findings into four classifications.

1st – Raw foods produced no increase in the white blood cell count.

2nd – Commonly cooked food caused a huge increase in the white blood cell count. .  
3rd – Pressure cooked food caused excessive leukocytosis (build up of too much mucous from excessive white blood cells produced to handle the cooked/dead foods).  
4th – Man-made, processed and refined foods, such as carbonated beverages, alcohol, vinegar, white sugar, flour and other foods, caused severe leukocytosis... and eating cooked, smoked and salted animal flesh brought on violent leukocytosis consistent with ingesting poison. The bottom line is... cooked and processed foods are mostly harmful to the human body.

### **Dr Edward Howell**

Dr. Edward Howell was one of America's pioneering Biochemist and Nutritional researchers. His 50 + years of enzyme research has shown that many to most physical problems and disease can be traced back to one source... which is improperly or not fully digested food. Lately chemical toxins have joined this list. Chemical toxicity can overwhelm the metabolism and severely disturb the whole digestion and assimilation process. In fact, TOXEMIA is also a way to look at unprocessed foods that linger in the blood and tissues causing a host of problems. Both are huge factors! But clearly for most of us the foods we eat that are cooked far outweigh chemical toxicity as a primary focus. How can the human body function properly if we are not digesting our food? It can't.

### **How does Optimal Digestion work?**

Digestion occurs in the mouth, the stomach, and the small intestine. Most absorption of nutrients occurs in the small intestine, and indigestible material is eliminated via the large intestine (colon). Teeth, tongue, salivary glands, liver, gallbladder, and pancreas are accessory organs of digestion. The process is both physical and chemical and requires accurate timing as food moves down the gut, like an intricate dance with many steps, with enzyme secretion and physical rhythms driving the journey of ingested food from mouth to elimination.

**MOUTH:** Mechanical digestion begins in the mouth with chewing, mechanically breaking food into small bits, and the breakdown of starches by enzymes in the saliva. The tongue serves to mix food with the saliva and initiate the swallowing reflex. The ancients taught to chew each mouthful 50 times.

**ESOPHAGUS:** When food is swallowed it goes down the esophagus where the lower esophageal sphincter allows entrance and prevents back up of gastric contents. If not completely closed, acid reflux or heartburn can occur with gastric juices splash up into the esophagus. The triple layered esophagus secretes mucus and enzymes that help to lubricate the passage and mix the food and secretions via peristalsis as the food moves to the stomach. Peristalsis, reflex contractions that progressively move food through the gut, persist at different intensities and rhythms from the mouth to the anus. Stress is critical to peristalsis down the length of the digestive canal for complete digestion because the sympathetic impulses decrease contractions, and the parasympathetic contractions (during relaxation) increase the contractions. And to repeat, breathing patterns are a huge factor rated to stress, distress or deep peace within supporting optimal digestion.

**STOMACH:** The upper portion of the stomach, located in the upper left abdomen is a sac which serves as a food reservoir for gradual physical and chemical digestion and

produces mucus to coat the lining of the stomach to protect it from being attacked by stomach acid.

When the lower portion of the stomach is empty, food is released into this lower main chamber where gastric glands produce gastric juice, a collective of secretions which includes hydrochloric acid (HCL), pepsinogen which is activated to pepsin by HCL to digest proteins, and gastrin which stimulates blood flow to the stomach and secretion of HCL in the lower end of the stomach. HCL is very acid and kills microbes that enter the stomach. The enzymes, HCL and physical churning, convert food into liquid chyme where long molecules of proteins and complex carbohydrates are chopped up and broken into short chains. When gastric digestion is complete, the enterogastric reflex controls emptying of the stomach.

**SMALL INTESTINE:** As chyme squirts into the Duodenum (the first segment of the small intestine) through the pylorus, gastric emptying is spurred on by hormone secretions from the duodenum that signal, at the same time, for the stomach to reduce acid secretion. The

Chyme is ready to be mixed with many specific enzymes to complete the digestion of food into molecules that are small enough to enter the blood (carbohydrates and proteins) or

lymphatic system (fats). Chyme is mixed with bile from the liver to emulsify fats into small globules, with enzymes from the wall of the small intestine (secretin and cholecystokinin) to stimulate pancreatic secretions, and with enzymes (amylase, trypsin, and lipase) and alkaline fluid from the pancreas to further break down starches, proteins and fats. The architecture of the small intestine is a work of art. Macroscopic folds of the mucosa, villi (microscopic folds of the mucosa, and microvilli (at the cellular level) provide a membrane surface the size of a tennis court (!) where absorption of molecules of nutrition can take place, from the lumen of the small intestine to the small capillaries and lymph vessels of the intestinal villi.

This huge surface area is also important to digestion, since many of the enzymes work at the level of the microvilli. Only major enzymes have been named above. There are multitudes of specific enzymes to speed up the break down of different types of foods. Without these enzymes digestion would be too slow to be possible. Food that is undigested must be excreted via the large intestine (colon).

**LARGE INGESTINE:** Water and undigested food pass from the ileum (last segment of the small intestine) to the cecum by passing through the illeocecal valve which prevents backflow into the small intestine. No digestion occurs here, mucus is the only secretion, aids in the passage of fecal material. Absorption is an important function. About 80% of water entering the colon is absorbed, as well as minerals and vitamins. The vitamins absorbed are produced by the normal flora (trillions of bacteria) that live in the colon, this includes Vitamin K and several B vitamins. The normal flora also inhibits the growth of harmful bacteria. Elimination is stimulated by the defecation reflex, a spinal reflex with voluntary control. This reflex is activated, usually after eating when food entering the duodenum, by waves of peristalsis from the colon, when it pushes feces into the empty rectum.

**OPTIMAL DIGESTION HELPS AND HINTS:**

The above is a simplified description of a complex body process that requires both physical and chemical participation by multiple parts of the body including even posture and proper breathing. Eating healthy balanced meals on a regular basis, just like exercising the physical body, trains and maintains a strong digestive system with healthy tone, vibrant rhythms, and timely release of digestive secretions when they are needed.

**Simple habits can make a large contribution to optimal digestion:**

**MOUTH:**

- Chew food well. Smell of food will stimulate saliva. Enzymes in saliva start digesting the food particles. Chewing will signal the stomach to release mucus and acid for the food that is on its way.
- Minimize fluids with meals, these dilute the digestive juices and makes them less effective. Ice can also cool off the digestion. Save most fluids for between meals.

**STOMACH:**

- Find or create a relaxing environment for eating. This supports savoring biting and chewing, which supports the normal waves of contraction which break the food into smaller bits, allowing the digestive juices and enzymes to maximally release the nutrients from the food. Also, this supports the seemingly slower timing of each section of the digestive tract, and opening and closing of valves, which can prevent acid reflux. Just as our thoughts can be much faster than our spoken words, our digestion is much slower than our ability to bite chew and swallow. Hence we need to slow down the food input so the digestion can process in the most effective manner.
- In peak stress times, refrain from eating, until the stress dissipates. If the stress period extends through several meals, choose foods that are easily digested in your system starting with freshly pressed juices. Stress, shunts the blood supply to the skeletal muscles, making blood minimally available for digestion. Eating during such times leads to indigestion because peristalsis is sluggish, and inadequate blood supply is available for the digestion and assimilation process.

**SMALL INTESTINE:**

- Relax! Get our Deepest Calm program [www.breathing.com/deepest-calm.htm](http://www.breathing.com/deepest-calm.htm) . Stress immobilizes both peristalsis and release of enzymes. The many specific enzymes required to reduce food to small molecules that can enter the blood are not available to be released. And with reduced blood supply, limited amounts of nutrients can pass into the blood stream. Much of the food eaten will remain undigested and pass into the large intestine inviting a multitude of allergies and toxic overload. .

**LARGE INTESTINE and FIBER:**

- Maintain a high fiber diet. Eat plenty of no gluten grains, ground flax seeds and fresh vegetables, and limit processed food. While fiber was once thought to be “waste” we now know it provides at least two important functions. One, bacterial flora of the colon require the fiber for food to produce many nutrients that are absorbed (see above). Two, because of its ability to absorb water and not be digested, allows more fluid movement of waste material like a broom pushing the debris down to the rectum. This is important in the prevention of constipation as well s diseases of the colon.

Check out your lifestyle to see how you may be frustrating your body’s best efforts to maintain your overall health.

**SIMPLE SUMMARY**

- **REMEMBER** to eat healthy balanced meals on a regular basis, to entrain your body rhythms and processes to be healthy and efficient. **NEVER** overeat.
- **FIND SIMPLE WAYS TO RELAX** and reduce the stresses that are too often inevitable.
- **ELIMINATE** poor practices that disturb normal gut motility, **DON'T** eat during high stress times, and when needed, use enzyme supplementation to prevent indigestion while working on the above or other practices that restore balance to daily activities.

**The Chain Reaction** When there are no digestive enzymes taken with the consumed cooked and processed foods... Improper digestion and leukocytosis occurs! The human body must work much harder and undigested or not fully digested food particles can get into the intestines, colon and into the bloodstream. In the intestinal track and colon undigested proteins putrefy, undigested carbohydrates ferment and undigested fats turn rancid which causes toxicity. These toxins can seep through the bowel wall, and get into the blood stream. This leads to more work for the human body and draining the body's energy continues.

#### **In the bloodstream**

Your immune system will attack and defend your body against improperly digested foods that get into the bloodstream. The immune system doesn't recognize these particles as food. It sees a toxic invader and attacks and kills the invader. When this happens daily we don't get the full benefit of that food particle and we weaken the immune system by using it in a role it shouldn't be doing. In other words, we are using the immune system and metabolic enzymes (the repairers) daily to clean up the bloodstream of unuseable nonrecycleable undigested food particles

#### **Two Priority Modes**

The protectors and repairers of the human body have two priority modes. The first priority mode is protecting, building, rejuvenating and repairing the human body. If the protectors and repairers could only stay in this priority mode... we could have a fully functional and effective immune system! The second and highest priority mode is cleaning up the blood stream of not fully digested particles. Hence taking non acid based enzymes at bedtime, but more about that later. The immune cells of the human body protect and repair it and all its systems by removing foreign matter, unusable substances (i.e. waste matter and large undigested molecules), and aging cells. If a large amount of energy is spent cleaning up an over loaded blood stream, the enzymatic activity of immune cells is less available to process and remove aging cells that need to be replaced. Unfortunately, if senile cells cannot be removed and recycled efficiently, rebuilding of healthy tissues is compromised while vital supplies of oxygen are diverted in the attempted removal process.. Improperly digested food particles in the bloodstream place a heavy load on the body's processing systems. This can force multiple body systems and oxygen to adapt and habituate the physiology to a dysfunctional "waste removal" mode which has less ability to focus on producing healthy cells and tissues. Removing waste and foreign material is a survival matter, and a first priority but has varying degrees of results depending.

Restoration of healthy tissues, as a necessary background function follows survival demands. Improperly digested foods and supplements can lead to related deficiencies. If our food isn't properly digested... many of the vital nutrients within the food or

supplements will be wasted. If supplements don't have an adequate delivery system (many calcium tablets for instance are hard to digest), there's a good chance they won't be properly broken down, absorbed and or utilized at the cellular level, which means they can be useless or even toxic. This also holds true for carbohydrates, proteins and fats... if they are not fully digested the body won't get the nourishment it needs. What we accomplish by taking digestive enzymes is this: we make absolutely sure the nutrients and food are fully broken down into the smallest possible size, so that every cell in the human body can benefit. Taking enzyme supplements that are in the correct or useable form (ionic or angstrom size are best) is a good step in the right direction toward better health. There is no doubt that many non organic foods available to us today can be 10 to 30 times less nutritious than 70 years ago... and this is why nutritional supplementation is necessary if good health is desired. For more about supplementation get our downloadable version of Building Healthy Lungs Naturally that lists 25 proven reasons for vitamin supplementation. [www.breathing.com/bhln.htm](http://www.breathing.com/bhln.htm)

### **CERTAIN ACID FREE PLANT BASED ENZYME FORMULAS TAKEN ON AN EMPTY STOMACH**

Taking certain acid enzymes with food will help digest that food and may well be extremely necessary in most cases. Varieties abound. What is not widely known is that certain non acid digestive enzymes are taken on an empty stomach (two hours of no food) the benefits are enormous! The combination of taking digestive enzymes with food for proper digestion and on an empty stomach to help clean up the bloodstream turns two negative situations into two positives. Now the protectors and repairers of the human body are no longer needed to clean up improperly digested nutrients and they can go back into the priority mode of protecting and repairing at full strength. In this priority mode the protectors and repairers are ready and waiting to utilize the nutrients from the foods we eat and the supplements we take.

Carefully look at all the benefits when taking our Optimal Digestion Enzymes Supreme Formula on an empty stomach? These enzymes will help all of the following in the bloodstream:

\*\*\* Digest proteins \*\*\* Stimulate the Immune System  
\*\*\* Assimilate fats \*\*\* Shatter Crystalline Deposits\*\*\* Increase energy \*\*\* Breaking up Cholesterol Deposits \*\*\* Reduce bacteria \*\*\* Increase the White Blood Cell size. Eliminate Toxins \*\*\* Eliminate Yeast in the blood..\*\*\* Break up and dissolve more oxygen to all parts of the body. \*\*\* Reduce uric acid crystals \*\*\* Raise T-Cell activity and production.

**If you do not take digestive enzymes on an empty stomach...**

**MANY TO ALL OF THE ABOVE BENEFITS WILL BE MISSED!**

### **The Overworked Pancreas**

The results of autopsies done on people that eat mostly cooked and processed foods have shown that the pancreas is dangerously enlarged, poorly functioning and quite often on the verge of breaking down. In this broken down state the human body has been starved for the lack of properly digested nutrients and the human body has been polluted with improperly and undigested nutrients that cause plaque, high blood pressure, high

cholesterol and a lot more. The intestines and the colon are also being backed up and polluted with nutrients that could have been utilized. An interesting note about the pancreas referenced in Dr. Howell's book, is about animals that grow to be about the same size and weight as humans. When they're born, the animal's pancreas is about the same size as ours... but by mid-life our pancreas is approximately 4 to 6 times larger than the animal of similar size. This indicates that the human body has tried to adapt to and meet the demands we've put on the digestive system, by asking it to work double time every single day. Replenishing our enzyme supplies Dr. Howell theorizes humans are given a limited supply of enzyme energy at birth, which means there's only a certain amount of enzymes the body can produce and it's our job to keep the enzyme supply healthy. Very similar to the fuel gauge in your car, when it says full you know you're OK, but when it gets close to empty... you need to refuel or the car will stop running. When our enzyme supplies run very, very low in the human body, our weakest body system(s) begin to deteriorate. We most commonly call this aging or disease of many names, which can cause us to die prematurely or function at subnormal levels. There is no chance to replenish them and we die.

There are several ways to replenish or conserve our enzyme supplies. Eating moderate amounts of toxin free organic raw food is one way. Another is to take digestive enzymes every time we eat and the third way is taking digestive enzymes on empty stomach and this little secret adds numerous benefits. Dr. Howell says, "If we don't replenish our enzyme supply, we run the risk of ill health", another way of saying this... the faster our enzyme supply becomes depleted, the faster we age and the more likely we will get disease. On the other hand, the more we replenish our enzyme supplies the more we increase the odds we'll live longer and healthier. Here's another quote from Dr. Howell... "We know that decreased enzyme levels are found in a number of chronic ailments, such as allergies, skin disease and even serious diseases like diabetes and cancer." When our enzyme supply is low... physical problems are almost assured. When our enzyme supply is high... great health is our reward.

Still another factor is by handling stresses that reduce natural nutrient processing. With toxic levels of stress the sympathetic system hijacks hormonal production for survival and compromises normal circadian rhythms and parasympathetic function which is highly involved with production of proteins and enzymes required for restoration of homeostasis. Incidentally, most of the hormone systems are controlled by negative feedback as well as interactive feedback among hormone systems, a "tight" system that prevents significant deviations from what the human body is biologically programmed for. Providing concentrated substances to "take control", if used over many years, may create an adapted habituated response which becomes dependent on long term use of that substance . . . This of course may be far superior to not using the supplement in the first place but at least speaks to changing your eating habits as much as practical or desired. Also it is quite acceptable for people in their declining years, where physical changes and habits can no longer be reversed. But this approach is highly questionable for younger people who have "normal adaptable human physiology. However with stress levels what they are these days and the damage to digestion that ensues we can certainly understand those that feel the need to supplement, regardless of their young age.

**SERIOUS stress based Deficiency Minerals** are very involved with the hormone metabolism in an interactive way. Intracellular concentration of some minerals is far more significant than extracellular. The intracellular concentration and movement in and out of the cells is more directly related to hormonal influence. A hormonal imbalance, is common in our modern high demand world is capable of producing enzyme and mineral imbalances referred to. Water availability and dehydration is maintained internally, as a homeostatic mechanism by the exchange of ions in the intestines as well as in the kidneys, which the hormones providing and establishing feedback mechanisms for “healthy” balance for the long term life situations. In situations where normal relaxation does not occur, and homeostasis is not reached, the “stress” physiology is habituated, and eventually “becomes” the long-term balance, we loosely call “burn out”. This type of physiology causes the nervous system to rely more on stimulants and neurotransmitters and less on neuropeptides, because the enzymes are not available.

Vitamin and Mineral deficiencies most often are attached to or are a bi-product of enzyme deficiencies because the food and supplements aren't being properly broken down into the smallest usable form. The sole responsibility for a water deficiency or dehydration falls directly on the individual, however the worst deficiency of all is enzyme deficiencies. More people in the world die of malnutrition than dehydration. As most people are raised on cooked and processed foods, this is where and when the depletion of our enzyme reserves began. It may have all begun with urbanization. People lost touch with nature and natural intuitive ways of health, ate less fresh food, and natural ways were displaced with technology. Extra time provided by modern conveniences (i.e. cars, telephones, electrical devices) rather than creating more vitality supporting quality time was filled with increasing activity, with “doing” now a priority as “intentional” relaxation disappeared as a valued choice. The secret of life is creating energy and managing it.

### **Enzyme Depletion**

At the Michael Reese Hospital in Chicago experiments were done on two groups of people. The first group was 21 to 31 years old. The second group was 69 to 100 years old. They found the younger people who most likely had a simpler lifestyle and less stress had 30 times more amylase in their saliva than the older people. This is why when we're young we can handle a diet of bread, pasta, pastries and cooked foods without much problem other than energy decrease. But this type of diet can cause rapid aging and depletion of our enzyme supplies when the human metabolism slows down or becomes imbalanced, as often happens in later years. This is a very good example of enzyme reserve depletion. The older we get ... the more important it is to eat healthy and engage in meaningful activities that keep us active and feeling useful and the more we need enzyme supplementation.

### **Under the Dark Field Microscope**

Looking at live blood samples under the dark field microscope we can actually see what's going on inside the blood in real time. Some of the unhealthy conditions we see on a daily basis even in people who think they're very healthy: red blood cells sticking

together (which can be caused by very sticky undigested proteins and a host of other blood supply invaders). Red blood cells carry oxygen, but, when they're impaired, this condition can lead to poor oxygenation, poor circulation, migraine headaches and chronic fatigue. Add cholesterol and uric acid crystals (which can lead to arthritis or gout) and we see plaque that is due to undigested fats and undigested proteins that can lead to arteriosclerosis. The before and after live blood cell sessions indicate that when taken on an empty stomach... digestive enzymes will go directly into the blood stream and help clean up the blood including fat and protein deposits (plaque) left in the body from years of past poor eating habits. The blood quickly looks better, in real time.

### **Building a health body**

Building a house and building a strong healthy body can be very similar. To build the house... you'd need the materials, which would include the cement to pour the foundation, the wood, the bricks, the electrical wiring and more. To finish building the house, you'd need the laborers or workforce to put all the pieces together. They include the carpenter, the electrician, the bricklayer, the roofer and more. The same pattern holds true to build a healthy body. A healthy body can't be built without the materials, and a healthy body can't be built without the laborers or workforce also know as enzymes.. You need both to build a strong healthy body. When we distract the laborers and workforce from doing their job... we're diverting their attention away from repairing and protecting the human body... which opens the door to disease, physical problems and pain.

Most Health Products focus on giving the body the materials it needs. We do need water, vitamins and ionic minerals. We also need to give the workforce of the human body back its power and ability to function more effectively. Digestive enzymes take the drain off the workforce and give them the chance to regain their strength and focus.

### **A Rat Study**

Dr. Howell's research has shown that a diet of cooked foods causes rapid, premature death in mice. In fact, rats on a cooked and processed food diet live about two years. While the rats that ate raw food live about three years; 50% longer. Dr. Howell has also noted, the rats that ate dead food... their brain weight went down and their body weight went up .

Eskimo Study In Dr. Howells book "Enzyme Nutrition" he talks about an Eskimo study done by a journalist from the New England Journal of Medicine in the mid 60's. Before the Eskimos were introduced to the cooked & processed Americanized diet they ate mainly whale blubber and seal meat. Eskimos lived on this diet for generations without suffering from nutritional deficiencies, heart disease, cancers, high cholesterol, high blood pressure and many other problems that are now commonplace in our world. The Eskimos didn't have fresh fruits and vegetables available; yet, because there were live enzymes within the raw fat and meat they ate... they lived a long and healthy life. Fat in its raw form is the best source of energy. When fat is cooked or processed it no longer has the live enzymes within it to help break it down and quite often gets stored in the body... This is a big reason why so many people are overweight. Properly and fully digested fat is good fat! Improperly digested fat can create a serious problem for the body both in the bloodstream and in the colon.

### **A Hog Study**

A study done by veterinarians involved two groups of hogs. The first group ate cooked potatoes and gained weight very rapidly. While the second group ate raw potatoes and didn't get fat. Dr. Howell has stated from his work in a sanitarium many years ago "it is impossible to get people fat on raw foods... regardless of the calorie intake." Mike adds "unless they overeat the sweet ones"

### **People Studies**

It's been clinically proven... the more enzymes you take, the quicker your body can restore, repair and strengthen itself. Here are some examples:

\*\*\* A double blind study found karate fighters on enzymes recovered from injury in 7 days. The karate fighters on placebos took 16 days to recover.

\*\*\* Dr. Max Wolf, who is a former Fordham University Professor of Medicine, tested 347 patients with circulatory disorders. His findings showed 87% completely free or almost free of any symptoms after taking enzymes.

\*\*\* A study in Germany on patients suffering from vein disorders were given oral enzymes. 94% were completely recovered or had significant improvement.

### **Car battery**

A new car battery can last a long time as long as it is hooked up to an alternator that puts more energy back into the battery as the stored energy is used up. The human body also needs energy put back into the body as stored energy or the enzyme reserves are used up. Eating dead food takes energy away from instead of giving additional energy to the body. Taking digestive enzymes with dead food gives the body the additional energy it needs to help digest the food and taking digestive enzymes on an empty stomach gives the body an additional source of energy in the bloodstream.

### **Enzymes are Energy!!!**

Every time we eat live food or take digestive enzymes with dead food the demands on the digestive organs are reduced... because much of the digestive work is already completed. Every time we eat cooked and processed foods (dead food) we must use our enzyme reserves to help digest that food. Since digestion always takes precedence over nearly everything else, many body functions requiring metabolic enzymes are often shortchanged during these times. The result is a lower disease-fighting capability and a general weakening of the body's ability to mend itself.

### **Most people need to play catch-up!**

More than 25 million people in Europe and Japan have been given enzyme supplementation or therapy with enormous success... all with no important side effects! Enzymes are food... not drugs! Unlike drugs that often unnaturally manipulate body chemistry, enzymes enhance nutrition and digestion because that is the way the body is supposed to function "naturally. Enzymes are a key piece in the puzzle of life because they make the other pieces work. Enzymes are the very life force that activates vitamins, minerals, proteins and other physical components within our body. Vitamins, minerals, proteins or hormones can't do their work without enzymes... and vitamins do not deliver energy by themselves... they require enzymes for energy. Enzymes unlock the energy in food and make it possible for the human body to function properly. Every time we add digestive enzymes to our foods... we give our body a serious amount of assistance instead of draining the body's power.

### **An Acid Reflux Testimony**

Since using the enzymes my acid reflux is a thing of the past. I have been using them for nine months and haven't had any problem since. Previous to using the enzymes I was on a prescription called Prevacid which cost \$132.00 per month. I thank the enzymes for providing this great product. Michael G. North Carolina

### **The Oatmeal test...**

shows what proper digestion looks like. Simply cook up a one serving size bowl of oatmeal, preferably in a glass bowl. The oatmeal should be solid (not runny). Let the oatmeal cool off to about body temperature or 98 degrees. Feel the bottom of the bowl and if it's warm to the touch (not hot) you're ready for the test. Letting the oatmeal cool off is very important, because if

the oatmeal was 110 degrees or higher... as soon as you poured the digestive enzymes into the oatmeal... the heat would kill the enzymes. Which is the same thing that happens when we cook and process foods. Take two of the digestive enzyme capsules, sprinkle one over the oatmeal and stir it in with a fork. Then take the second capsule and sprinkle it over the oatmeal again and continue to stir it in with the fork for 20 to 30 seconds. You'll see the oatmeal turn into liquid and it can easily be poured from one bowl to another. In other words... the oatmeal is significantly digested.

**SPEED OF DIGESTION** Is digesting food faster a healthier option? Sure is. According to Dr. Howell the source of most health problems can be traced back to improperly digested or not fully digested foods. Making sure your food is fully digested or properly digested is the key to the human body functioning properly. Undigested food particles ferment and breed bacteria that cause major problems to the digestive system, in the bloodstream, in the intestines and colon. Completely digested foods are the answer or solution to many health problems. The body can function properly if the food we are eating is being digested properly... on the other hand... it is impossible for the body to function properly if we are not digesting our food properly.

Why is 40,000 HUT of protease so important? In the early to mid 1990s there was an enzyme research company that did many before and after dark field microscope blood testing. They tested and tested to get the right amount of protease in a formulation to guarantee the after blood test would look great and the blood would be cleaner. With 2 capsules of 40,000 HUT activity and potency, they could feel assured that blood testing would look excellent... anything less than 40,000 HUT and they couldn't depend upon excellent results.

### **Why are other digestive enzyme products not as effective?**

Most enzyme formulations don't have enough activity and potency within the capsules to be as effective. Second, most companies only recommend 90 capsules for a month supply... and that just isn't enough. To help clean up the blood we recommend taking 3 capsules daily on an empty stomach at bedtime. That's 90 capsules a month just to clean up the blood... and 180 capsules monthly (1-2 capsules with each meal depending on the meal size) to help digest the food you're eating.

Why aren't there additional ingredients in this formulation? If we added additional ingredients to the enzyme formulation we would have to take out some of the digestive

enzymes to make room for something that might not be focused on digesting the food we're eating and cleaning up the blood stream during sleep. This would lessen the activity, potency and effectiveness of the enzymes. If we added super foods or antioxidants ... we would end up with a good nutritional product with a good delivery system... not a great digestive enzyme product.

## **INGREDIENTS and FUNCTION OF OPTIMAL DIGESTION'S SUPREME ENZYMES**

**ALPHA GALACTOSIDASE** is an enzyme derived from the fungus *Aspergillus niger*. It hydrolyzes the a 1-6 non-reducing galactoside residues from poly and oligosaccharides in an exo-fashion. These poly-saccharides (primarily raffinose, stachiose, and melibiosc) are typically found in legumes and are not digestible in the small intestine. As these sugars are not absorbed, they pass into the large intestine. In the large intestine, these sugars are fermented by native microbial flora and produce gas resulting in bloating, pain and general discomfort.

This is the enzyme that is in Bean-o for preventing gas. The deficiency of this enzyme leads to Fabry's disease:

Fabry disease is caused by the lack of or faulty enzyme needed to metabolize lipids, fat-like substances that include oils, waxes, and fatty acids. The enzyme is known as ceramide trihexosidase, also called alpha-galactosidase-A. A mutation in the gene that controls this enzyme causes insufficient breakdown of lipids, which build up to harmful levels in the eyes, kidneys, autonomic nervous system, and cardiovascular system. Since the gene that is altered is carried on a mother's X chromosome, her sons have a 50 percent chance of inheriting the disorder and her daughters have a 50 percent chance of being a carrier. Symptoms usually begin during childhood or adolescence and include burning sensations in the hands that gets worse with exercise and hot weather and small, raised reddish-purple blemishes on the skin. Some boys will also have eye manifestations, especially cloudiness of the cornea. Lipid storage may lead to impaired arterial circulation and increased risk of heart attack or stroke. The heart may also become enlarged and the kidneys may become progressively involved. Other symptoms include decreased sweating, fever, and gastrointestinal difficulties, particularly after eating. Some female carriers may also exhibit symptoms. Fabry disease is one of several lipid storage disorders.

**FOOD SOURCES.** RAW cucumbers, sprouted legumes, soy beans, cowpeas (black eyed peas)

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**Amylase** is required for digesting carbohydrates (polysaccharides) into smaller units (disaccharides), and eventually converting them into even smaller units (monosaccharides) such as glucose. Often used in pancreatic enzyme replacement therapy.

It is mainly a constituent of pancreatic juice and saliva, needed for the breakdown of long-chain carbohydrates (such as starch) into smaller units.

Amylase is also synthesized in the fruit of many plants during ripening, causing them to become sweeter, and also during the germination of cereal grains. Grain amylase is key to the production of malt.

It is involved in anti-inflammatory reactions such as those caused by the release of histamine and similar substances making it aid as a stress neutralizer.

These inflammatory reactions normally happen to organs which are in contact with the outside environment, such as your skin and lungs and would include problems such as psoriasis, eczema, hives, insect bites, allergic bee and bug stings, topic dermatitis, and all types of herpes as well as lung problems including asthma and emphysema.

Ptyalin (that is amylase found in your saliva) begins polysaccharide digestion in the mouth and the process is completed in the small intestine by amylopsin (amylase excreted by the pancreas).

### **Deficiency of amylase:**

If your diet is excessively high in refined carbohydrates, a deficiency of amylase may occur, since this enzyme would be used up by the body at a tremendous rate, and symptoms may include a diversified group of symptoms, which may include a skin rash, depression and mood swings (including PMS), hypoglycemia, allergies, general fatigue, cold hands and feet, inflammation, aches in your shoulders etc.

Another interesting point

It is also involved in digesting and getting rid of dead white blood cells (another name for pus) and for this reason you might be more prone to abscesses if you are deficient in this enzyme.

**Food sources.** RAW sweet potato; corn, barley, wheat, oats. rice and other grains, reishi mushrooms, beet roots, leaves and stems; banana, cabbage, egg, kidney bean; maple sap, Milk, Raw honey, sugar cane

**Bromelain** is an enzyme group which is used for digesting proteins. It is one of the few enzymes which is absorbed well by the body.

6 Natural Sources: Pineapple stem and fruit.

Useful in treatment of: athletic injuries, dysmenorrhea, episiotomy pain after childbirth, rheumatoid arthritis, sinusitis, surgical recovery, thrombophlebitis, urinary tract infections.

1. Bromelain is also an effective anti-inflammatory for treatment of minor injuries such as bruising and sprains.
2. It also appears to be effective in reducing post-operative swelling
3. Episiotomy pain after childbirth.
4. In addition, preliminary studies show that it may be useful in the treatment of sinusitis,
5. Arthritis and as a blood thinner.
6. It may help alleviate the symptoms of urinary tract infections.

**Contraindications:** Should not be used with blood thinners.

Bromelain was first introduced as a supplement in 1957. Since then it has proved an important aid to so many diseases that more than 600 research articles are now found in the scientific literature about this product.

It is a proteolytic enzyme, one that decomposes protein in the body. One of its first noted benefits was as a digestant. Bromelain is derived from the stem of the pineapple plant. This enzyme is effective not only in the acid present in the stomach, but also in the alkaline environment of the intestine. It is considered a substitute for the digestants pepsin and tryptin.

"Bromelain breaks down protein. It also has anti-inflammatory properties that have been scientifically shown to be effective in the treatment of rheumatoid arthritis."

"In a study by Dr. A. Cohen reported in the Pennsylvania Medical Journal, over 70% of the participants, some of whom had both rheumatoid and osteoarthritis, experienced excellent to good results of decreased pain and swelling and increased mobility." (AM pg. 175)

Many health professionals recommend Bromelain for pain, inflammation and swelling. Raw pineapple alone cannot provide sufficient amounts of this digestive enzyme. Bromelain must be obtained from supplements to be nutritionally beneficial for the joints.

Bromelain's effectiveness is due to its ability to reduce the harmful prostaglandins in the body that cause pain and inflammation and block the absorption of nutrients through the tissues. By helping to inhibit these pro-inflammation.

Bromelain is a safe and nutritional alternative for maintaining healthy joints. Bromelain also has a positive effect on the "good" prostaglandins. Common therapies, such as aspirin, inhibit all prostaglandins, including the "good" ones. (The Herbalist, Spring 1997)

A natural digestive enzyme in pineapple, helps counteract histamine which is a factor in swelling, joint aches and stress. Bromelain helps cells effectively shed fluids and fats. It aids healthy digestion by naturally breaking down fat from food.

Between meals, unless it is being used as a digestive aid.

## **FOOD SOURCE. FRESH RAW PINEAPPLE**

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### **CELLULASE**

Breaks down cellulose (in indigestible fiber found in many fruits and vegetables). Used as a digestive aid and in pancreatic enzyme replacement. **Food Sources.** Avocado, peas, oat sprouts, reishi mushrooms.

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**Invertase** (also known as sucrase or saccharase) breaks down carbohydrates, especially sucrose. It splits sucrose into glucose and fructose. Invertase is mainly used in the food (confectionery) industry where fructose is preferred over sucrose because it is sweeter and does not crystallize as easily.

A small amount was added to help offset sugar cravings relating to candida.

**FOOD SOURCES.** RAW Cucumbers, green plants, potato, sugar cane

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**Lactase** is required to break down lactose (a primary sugar found in mammalian milk) and is produced in the small intestine, which breaks lactose into two simpler sugars.

Lactase is required for the digestion of milk and milk products.

Some people do not produce enough lactase and are often referred to as lactose intolerant, and symptoms may include cramps, gas as well as diarrhea.

It has also been suggested that lactose intolerant people have a problem with calcium absorption, and this may also need to be checked, by a lactose intolerant person.

### **Deficiency of lactase**

If the intestines do not produce enough (or any) lactase, the milk sugar (lactose) is not digested and moves into the colon, where it is fermented by bacteria - producing hydrogen, carbon dioxide and organic acids, which can result in diarrhea, gas and cramps.

To test for lactose intolerance, drink two glasses of milk on an empty stomach and watch for any gastrointestinal symptoms. Do the same test but substitute the milk with cheese.

If you have any symptoms from the milk, but not from the cheese (which contains very little lactose), you might be lactose intolerant. If you have symptoms from both, it may indicate an allergy to dairy.

If you suffer from lactose intolerance, it might be helpful to have a lactase supplement before having any meal containing lactose.

Toxicity and symptoms of high intake

It is safe, and no toxicity or side effects have been reported when taking a dietary supplement.

When more may be required

A supplement may be beneficial to people suffering from diarrhea, indigestion, heartburn, irritable bowel syndrome as well as sufferers of migraine headaches, since certain studies indicate that migraine sufferers are deficient in lactase.

**FOOD SOURCES.** RAW Tomatoes, persimmons, apples, peaches, almonds, milk.

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**Lipase** is the enzyme required to break down fats and lipids (to give di- and mono-glycerides, glycerol and free fatty acids) and is produced in the pancreas, and is released in the small intestine. Pancreatin, produced by the pancreas also contains two other enzymes - protease and amylase.

Lipase is required for Digesting fats and lipids are more difficult since they have to be carried by a water based transport system - the blood and lymph.

Although fat digestion is not concentrated in the stomach, gastric lipase is the digestive to attend to this, and will digest egg yolk and cream, since they are already emulsified fats.

In order for fat to be digested properly, the liver starts this process emulsifying the large fat molecules, and bile breaks it down to small droplets, allowing the lipase to start its work.

Fat digestion in the small intestine is reliant on a pancreatic secretion called pancreatin containing lipase as well as protease and amylase.

In some vegetarian diets, very little bile is produced since the liver is not stimulated to produce bile, with the result that the large fat molecules are not properly emulsified, making it difficult for the lipase to bind, leading to incomplete or reduced fat absorption.

### **Deficiency of lipase**

A shortage of lipase in the body may lead to high cholesterol, difficulty in losing weight, a tendency to diabetes, high urine sugar levels - which some believe could lead to arthritis, bladder problems, gall stones, hay fever, prostate problems, heart problems etc.

With too little lipase, the cell membranes permeability is not at optimum, and nutrients cannot enter the cell, while wastes cannot leave the cell.

There is also a tendency amongst people suffering from being lipase deficient, to have a problem with electrolyte balance as well.

Muscle spasms and a spastic colon is also reported as being a symptom of lipase deficiency.

### **Celiac Disease**

Pancreatic enzymes have been most studied as part of the treatment for celiac disease. Celiac disease is a condition in which dietary gluten causes damage to the intestinal tract. Symptoms include abdominal pain, weight loss, and fatigue. People with celiac disease must consume a life-long gluten-free diet. Lipase, along with other pancreatic enzymes, may help in the treatment of this condition by enhancing the benefit of a gluten-free diet. In a study of 40 children with celiac disease, for example, those who received pancreatic enzyme therapy (including lipase) demonstrated a modest increase in weight compared to those who received placebo. The improvement in weight occurred within the first month of use; taking the pancreatic enzyme supplements for an additional month did not lead to more weight gain.

People suffering with a spastic colon may also be lipase deficient as well as the condition of vertigo (Meniere's Disease) which is dizziness made worse by movement.

Toxicity and symptoms of high intake

No toxicity or side effects have been reported.

People with a tendency to pancreatic insufficiency and cystic fibrosis may benefit from a lipase supplement as well as those with celiac disease, Crohn's disease, as well as those suffering indigestion and heartburn.

### **Enemy of lipase**

Betaine HCl or hydrochloric acid should not be taken with this in supplement form, as Amylase refers to a group of enzymes which break down sugars and starches.

**FOOD SOURCES.** Avocado, wheat germ, rice, maize, green plants, soybeans, coconuts, flaxseeds, rape seeds, corn and other germinating plants containing relatively large amounts of fats.

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**Maltase** is an enzyme that is the catalyst in the hydrolysis of disaccharide maltose to the simple sugar form - glucose, and is found in plants, bacteria, and yeast; and in humans

Although the enzyme can be ingested in the diet, it is thought to be able to be manufactured in the body by the mucus membrane lining in the intestinal wall. When starch is eaten, it is partially digested and transformed to maltose by both the saliva enzymes and pancreatic enzymes called amylases.

The maltase secreted in the intestines, then converts this maltose into a more ready usable sugar glucose, or the glucose could also be stored in the liver for future use.

*Toxicity and symptoms of high intake.* No toxicity or side effects have been reported.

**Enemy of maltase:**

Betaine HCl or hydrochloric acid should not be taken with this in supplement form, as it might destroy this and other enzymes.

**FOOD SOURCES.** Brewers' yeast, rice, barley, beet leaves, green plants, sugar cane, banana, mushrooms.

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**Protease** is responsible for digesting proteins in your food, which is probably one of the most difficult substances to metabolize. Because of this, protease is considered to be one of the most important enzymes that we have. If the digestive process is incomplete, undigested protein can wind up in your circulatory system, as well as in other parts of your body.

When you take protease in higher quantities, it can help to clean up your body by removing the unwanted protein from your circulatory system. This will help to clean up your blood stream, and restore your energy and balance.

One of the tricks of an invading organism is to wrap itself in a large protein shell that the body would view as being "normal". Large amounts of protease can help to remove this protein shell, and allow the body's defense mechanisms can go into action. With the protective barrier down, your immune system can step in and destroy the invading organism.

Additional amounts of protease are also helpful in fighting such things as colds, flu's, and cancerous tumor growths. Protease helps in the healing and recovery from cancer by dissolving the fibrin coating on cancer cells, and thereby giving your immune system a chance to do its job. It can effectively shrink these tumors by helping to remove the dead and abnormal tissues, and by stimulating healthy tissue growth.

Protease refers to a group of enzymes whose catalytic function is to hydrolyze (breakdown) peptide bonds of proteins. They are also called proteolytic enzymes or proteinases. Proteases differ in their ability to hydrolyze various peptide bonds. Each type of protease has a specific kind of peptide bonds it breaks. Examples of proteases include: fungal protease, pepsin, trypsin, chymotrypsin, papain, bromelain, and subtilisin.

Proteolytic enzymes are very important in digestion as they breakdown the protein foods to liberate the amino acids needed by the body. Additionally, proteolytic enzymes have been used for a long time in various forms of therapy. Their use in medicine is gaining more and more attention as several clinical studies are indicating their benefits in oncology, inflammatory conditions, blood rheology control, and immune regulation.

Contrary to old beliefs, several studies have shown that orally ingested enzymes can bypass the conditions of the GI tract and be absorbed into the blood stream while still maintaining their enzymatic activity. Commercially, proteases are produced in highly controlled aseptic conditions for food supplementation and systemic enzyme therapy.

**FOOD SOURCES.** Pineapple, papaya, figs, guava, kiwi, ginger root, green plants, mushrooms, soy bean, wheat, kidney bean.

### Quantities

<b>Amylase</b>	12,250	SKB
<b>Protease</b>	40,000	HUT
<b>Bromelain</b>	20	GDU
<b>Lipase</b>	100	FIP
<b>Cellulase</b>	250	CU
<b>Lactase</b>	600	LACU
<b>Maltase</b>	25	DP
<b>Invertase</b>	100	Sumner
<b>Hemicellulase</b>	225	HCU
<b>Alpha Galactosidase</b>	100	GAL

### Frequently Asked Questions

1. What are the benefits of taking “The Optimal Digestion Supreme Enzyme Formula ”?

These enzymes will help most aspects of digestion including

- \* Digesting proteins
- \* Stimulate the Immune System
- \* Assimilate fats
- \* Increase energy
- \* Breaking up Cholesterol Deposits
- \* Reduce bacteria
- \* Increase White Blood Cells
- \* Eliminate Yeast
- \* Break down uric Acid Crystals
- \* Raise T-Cell activity and production

2. What are enzymes? Enzymes are energized protein molecules. They are the human body’s life force and are involved in every function of the body. Vitamins, minerals and hormones must have enzymes to work properly. Life cannot exist without enzymes. Individuals who are enzyme deficient are subject to physical problems, disease and degeneration. Studies indicate that decreased enzymes levels are found in a number of chronic ailments, such as arthritis, diabetes, allergies, skin diseases, cancer, immune deficiencies and much more.

3. Are enzymes the KEY to better health? Yes! According to Dr. Howell: “Enzymes are a true yardstick of vitality.” Enzymes offer an important means of calculating the vital energy of an organism.” Enzymes are the key factor that determines the effectiveness of how your body functions. Having an ample supply of enzymes makes a lot of sense!

4. What is a good digestive enzyme formulation and why? A great digestive enzyme product should be designed to improve digestion of foods(raw or cooked) and to help **clean up the blood**. Approximately 95% of the food we eat is composed of protein, carbohydrates and fats. A great enzyme formulation will have substantial amounts of protease, amylase and lipase with high activity & potency. Protease digests proteins,

amylase digests carbohydrates and lipase digest fats. These are the three key ingredients in a great digestive enzyme formulation.

5. How many enzymes can I take? Enzymes are food. They are designed to help dramatically improve digestion. Enzymes are also energy. You have a choice: to use the energy in the enzymes to help digest your food or the energy in your body to digest the food. Using the digestive enzyme energy will conserve the body's energy and the body's enzyme reserves. There is one person on the Internet that was taking 60 to 75 capsules a day while going through chemotherapy. He never got sick during chemotherapy and he didn't lose his hair. Digestive enzymes are a food extract and it has been clinically proven the more enzymes you take the faster your body can repair, restore and strengthen itself.

6. When taking enzymes with meals is it OK to take them before you eat? Not the best time of you want the food best digested. But the non acid accompanied ones do go into the metabolic system and help there. If you take digestive enzymes before you eat and your stomach is empty - the digestive enzymes can be absorbed into the blood stream very quickly (in less than 3 minutes). To help digest the meal you're eating - its best to take the enzymes during or immediately after the meal. If the enzymes have acid in them then food should accompany them. Many open the capsules and sprinkle the enzymes on the food and then eat it. You can also sprinkle digestive enzymes over cat or dog food... they need help digesting cooked and processed foods too. No pet owner wants to see their pets get the same diseases as humans from eating cooked and processed foods.

7. How quickly can results be realized? Most people having acid indigestion, upset stomach, bloating or problems with digestion will usually see immediate results. People having problems with bowel movements will usually see improvement within a week or two. Many people will see increased energy within a couple of weeks to a month. The people that see the best results, are the people that continue to take digestive enzymes daily with food and on an empty stomach. Proper digestion is a must... if you want to see your human body to function properly.

8. Is digesting food faster better? Sure is. According to Dr. Howell the source of most health problems can be traced back to improperly digested or undigested foods. Making sure your food is fully digested or properly digested is the key to the human body functioning properly. Undigested foods can cause major problems in the bloodstream, in the intestines and colon. Completely digested foods are the answer or solution to many problems. The body can function properly if the food we are eating is being digested properly... on the other hand... it is impossible for the body to function properly if we are not digesting our food properly.

9. How important are digestive enzymes? In today's world, digestive enzymes are the most important health product a person can take. A person not taking digestive enzymes with meals and on an empty stomach is aging faster and getting older quicker... because they are using up their own enzyme reserves and more of the body's energy to help with digestion. Digestive enzymes help conserve the human body's enzyme reserves. Without digestive enzymes the protectors and repairers of the human body can be called into action to help digest food and to clean up the undigested food particles in the bloodstream. When the protectors and repairers are cleaning up the blood they are being distracted away from doing the job they are suppose to do. Plant enzymes can reduce the burden on the body's natural curative powers, thus allowing the body to perform its natural, healing function.

10. Can digestive enzymes reverse physical problems and disease? Only the human body has the power to heal itself, but even the amazing human body needs our help. In order for the human body to work correctly, you must support your body daily with vitamins, ionic minerals and digestive enzymes. Also, eat as many raw foods as possible (they are much better for you than cooked foods). The human body has the ability to heal itself when you give it the support it needs. But, if you don't give the human body the support it needs... more than likely, you will have deficiencies, physical problems and disease.

11. What is proper digestion? Back in the 30's and earlier proper digestion was eating raw foods that were full of food enzymes that would help digest approximately 50% of the food. This was proper digestion. If we cooked those raw foods... we would have improper digestion... because we would be using the body's enzyme reserves and the body's energy to help digest the food. The food would get digested, but how it was being digested... is not the best way for the human body. Today in the 21st Century, about the only way we can achieve proper digestion is with a great digestive enzyme product high in protease, amylase and lipase... all three with plenty of potency and activity. Remember, proper digestion occurs when the human body only has to digest approximately half of the food we eat.

12. How do enzymes give people more energy? Enzymes are energy... and when we take digestive enzymes regularly with food... we use the energy in the enzymes to aid in digesting the food. This will conserve the body's energy for more important issues... like protecting or repairing. People that do not use an effective digestive enzyme product with food and on an empty stomach can use up to 50% or more of the body's energy in the role of digestion and clean up. Take Thanksgiving for example: after eating that large Thanksgiving meal - how many people sit down and fall asleep? But, did they fall asleep or did the body shut them down? With the huge consumption of cooked and processed foods... the body has to focus most of its effort and energy toward digesting that big meal.

13. Will digestive enzymes help clean the colon? Directly, no! Indirectly, yes! Enzymes taken with food will help digest that food. Fully digested food doesn't cause problems in the colon like undigested foods. Most fully digested foods don't cause a problem for the human body at all. Enzymes when taken on an empty stomach will be absorbed into the bloodstream. Unless you're taking a huge amount of digestive enzymes, they will never reach the colon.

14. Can I take digestive enzymes if I am taking prescription drugs or medications? Yes. Digestive enzymes are classified as a food . . . by the Food & Drug Administration (FDA). If your doctor has told you not to eat food while taking medication, then do not take enzymes. Digestive enzymes can be a great help to your human body.

15. Why is it so important to have such high amounts of protease, amylase and lipase? First, 40,000 HUT of Protease, 12,500 SKB of Amylase and 500 LU of Lipase are not high amounts. They are sufficient amounts to get excellent results and truly help digest the proteins, carbohydrates and fats within the food and in the bloodstream.

16. Why is 40,000 HUT of protease so important? In the early to mid 1990s there was an enzyme research company that did before and after dark field microscope blood testing. They tested and tested to get the right amount of protease in a formulation to guarantee the after blood test would look great and be truly beneficial. With 40,000 HUT activity and potency, they could guarantee the after blood testing would look beautiful... anything less than 40,000 HUT and they couldn't guarantee the same results.

17. Why aren't there additional ingredients in the enzyme formulation? If we added additional ingredients to the enzymes we would have to take out some of the enzymes. This would lessen the activity and potency of the enzymes. 18. Is it possible to achieve really good health with digestive enzymes? Absolutely! The better we digest our food... the better the body can function. But, don't forget your vitamins and ionic minerals (in the E3live <http://www.breathing.com/e3live.htm> ). They are also a very important factor in giving the body the materials it needs for support. The 3-legged stool is a great example: If you were to sit on a 3-legged stool and each leg of the stool representing one of the essentials the body needs daily... vitamins, ionic minerals and enzymes. If you took one of the 3 legs or essentials away... try sitting on a two-legged stool that is designed to have 3 legs. Your body is the same way, without all three essentials... the human body will not have a solid foundation to stand or sit on!

19 Why are 270 capsules a month recommended? Even with the "Supreme Enzyme" formulation, if you only took 90 capsules a month or 1 capsule with each meal.... you wouldn't get as many benefits as you could. Two capsules with each meal will help twice as much and that's a good start. That leaves 3 capsules daily on an empty stomach to help clean up the blood... and cleaning up the blood adds so many benefits. Holiday and part feasting may well require even more. The body tolerates a fast much better than a feast.

20. Why are other digestive enzyme products not as effective? Two reasons: First, most enzyme formulations don't have enough activity and potency within the capsules to be very effective. Second, most companies only recommend 90 capsules for a month supply... and that just isn't enough. To clean up the blood we recommend you take 3 capsules before bed on an empty stomach. (If you are taking probiotics, the plant Supreme Enzymes will not harm them) That's 90 capsules a month just to clean up the blood and 180 capsules monthly (1-2-3 capsules with each meal) to help digest the food you're eating. That goes on until you no longer feel the need. You can stop them for a while and see if your energy or stamina goes down or not but make sure you kept some around so you do not have to wait until your order arrives to recommence your supplementation.

21. Do athletes take enzymes? Yes, especially in Europe. Taking enzymes has proven to help athletes recover from injury much quicker... sometimes twice as fast. Example: A double blind study with karate fighters... found the karate fighters on enzymes recovered from injury in 7 days. The karate fighters on placebos took 16 days to recover.

22. Can digestive enzymes help athletes excel and beat their own personal bests? We believe they will. Enzymes are energy, and when we take digestive enzymes regularly with food... we use the energy in the enzymes to aid in digesting the food. This conserves the body's energy for more important issues... like winning the 100-meter dash or having enough energy and endurance to win at any sport.

23. Some health products work and others don't because of body chemistry. Is this also true with digestive enzymes? No, the digestive enzymes are designed to digest the food you are eating. What will be achieved with "The Optimal Digestion Supreme Enzyme Formula" is much better digestion and a daily blood cleaning... and cleaner blood is a healthier person.

24. Why are some digestive enzyme formulations listed in milligrams? An enzyme product listed in milligrams, doesn't tell you the true activity and potency of the enzymes. For example: 150 mg of protease. What is the activity and potency of 150 mg of

protease? It could be ZERO. It could be 15,000 activity and potency... you just don't know. If a digestive enzyme product is really good and the people putting the formulation together know what they are doing, it will show the activity and potency on the label. It is very important to know what's in the health product your taking!

While most food comparisons are based on weight, with enzymes . . . the most important measurement is the activity and potency of the enzyme. There's only one national standard for the evaluation of enzymes and this standard is used by the American food industry... and it comes from the FCC... which is the Food Chemical Codex. Some companies promoting enzymes list measurements based on the dosage... which can be more than one capsule... and other companies use weights such as milligrams... and a few make up their own abbreviations. Again, there's only one national standard for the evaluation of activity and potency of enzymes... if the enzyme product you're taking doesn't say HUT for protease, SKB for amylase and LU or FIP for Lipase... its time to get an enzyme product that does have the FCC Labeling. This labeling certifies that the enzymes have been thoroughly tested for activity and potency. Then you'll know if your digestive enzyme product has the capability to truly help with digestion and take a huge burden off the human body.

25. I have a weight problem. Can enzymes help? Yes! Most people that are overweight are low on lipase within the body. Take a higher dosage of you want to use them for weight control or loss. The higher amounts of capsules with this formulation will help a lot of people with digestion, cleaning up the blood and weight problems. Another major benefit is that lipase that isn't used up in the role of digestion can be stored in the liver for future use and thus replenish the lipase supply in your body. One 400 pound client dropped 30 pounds in 30 days by adding the enzymes alone.

26. "I give my body vitamins, minerals, raw foods and even fruit and vegetable in a capsule... Isn't that enough?" ANY food processing will cause loss of synergistic nutrition, nutrition that in some ways we are not able at present to quantify. We DO however know energy is lost by this processing because we feel less energetic when we take the processed foods then when we take the fresh raw living foods. Read more about this in Green For Life by Victoria Boutenko <http://www.breathing.com/green-for-life.htm> First, we have to ask why are we giving the body these nutrients. The answer should be to support, nourish and help the body achieve great health. If the protector and repairers of the human body are in a priority mode of cleaning up the blood... many of the nutrients you are giving your body are not being utilized to protect, repair and nourish. To fully utilize the nutrients we give the human body, the protectors (immune system) and repairers (metabolic enzymes) must be in the priority mode of protecting and repairing. To accomplish this, we absolutely must digest our food properly. With the help of Supreme Enzyme Formula taken with food and on an empty stomach... the protectors and repairers can get back into the priority mode of protecting and repairing. In this mode, the vitamins, minerals, fruit and vegetables can be utilized to nourish, protect and repair the human body. But, first we must have proper digestion and clean blood if we want our nutrients to be fully utilized.

27. Within this enzyme formulation is ionic minerals. Why are they in there and will these minerals support what the human body's mineral needs on a daily basis? The ionic minerals in the Supreme Enzymes will not support the daily mineral needs of the human body. The ionic minerals are in the formulation to give the enzymes more energy, which

helps the enzymes become two to three times more active and effective. Ionic form minerals conduct and release electricity. Most colloidal and chelated minerals do not conduct electricity and will be ineffective in helping the enzymes to be more productive. Ionic form minerals give the enzymes more energy which makes it possible for the enzymes to be even more active and really help in the roll of digestion and cleaning up the blood.

28. Are ionic minerals better for the human body than colloidal or chelated minerals? Absolutely! Single ionic form minerals are hundreds of times smaller and can easily enter through the cell wall and be utilized. When we eat any living food source like meats or fruits and vegetables... the minerals within those foods are in an ionic form... and this is the natural form that nature intended us to use. Why would we use anything else? Chelated minerals trick the body into absorbing them and absorption doesn't mean utilization. Besides does tricking the human body sound like something natural? Colloidal minerals... colloids are made up of insoluble, non-diffusible particles that are mostly too large to penetrate or enter into the cell. The human body is designed to utilize ionic minerals and when we give our body minerals that aren't in an ionic form... like chelated and colloidal minerals... potentially we've created another burden on the human body and now, it has to get rid of these unusable minerals before they build up and create toxicity or metal poisoning. Ionic minerals are actually pure, living minerals which conduct and transmit electrical energies that keep living things alive and support regeneration and healing.

29. Why do the protectors and repairers of the human body get involved in the roll of digestion? The protectors and repairers have two priority modes. The first priority is protecting and repairing the human body. The second priority is cleaning up the blood of undigested particles. Cleaning up the blood carries a higher priority than protecting and repairing because the undigested particles are an immediate danger and can cause many problems in the human body. Every time the blood gets polluted with undigested particles, the protectors and repairers are called into action to clean up the mess we have created.

According to Dr. Paul Kautchakoff who talks about "digestive leukocytosis," that is, the elevation of the white blood cell level in response to the lack of enzymes in the cooked food in the intestine, being the major result of eating cooked foods. Because of his research, we understand what develops in the blood, when we eat cooked and processed food. Dr. Kautchakoff divided his findings into four classifications. First, raw foods produced no increase in the white blood cell count. Second, commonly cooked food caused leukocytosis. (which is an increased white blood cell count) Third, pressure-cooked food caused even greater leukocytosis. Fourth, man-made, processed and refined foods, such as carbonated beverages, alcohol, vinegar, white sugar, flour and other foods, caused severe leukocytosis... and eating cooked, smoked and salted animal flesh brought on violent leukocytosis consistent with ingesting poison. Every single day our body reacts this severely to cooked and processed foods... and we abuse our body's protectors and repairers by getting them involved in digestion. We can take all the immune enhancers or immune boosters we want, but, how much can they possibly help, until this problem is corrected... by supplementing with a great digestive plant enzyme product.

30. Are we given a limited amount of enzymes at birth? According to Dr. Edward Howell, we are given a limited supply of enzymes at birth. It is our job to give our body

as many live enzymes as possible, to replenish our body's enzyme supply. When we are born, most of us are like a brand-new car battery... fully charged and ready to go. The automobile has an alternator that puts energy back into the battery to extend the life of the battery. Enzymes are the human body's alternator. Giving your body live food enzymes or live digestive enzymes can help conserve and replenish your body's enzyme supply. Start giving your body some energy today with "The Optimal Digestion Supreme Enzyme Formula ."

31. Which is better for the human body - raw foods or digestive enzymes? Both can be very helpful to the human body. Raw foods have live food enzymes within them that will help break down that particular food. If you juice your raw foods you will get many additional benefits, but, not as many digestive benefits as you will receive with digestive enzymes. Digestive enzymes are more concentrated, potent and effective than raw food enzymes. Digestive enzymes can also help digest raw foods that no longer have as many live enzymes as they did 50 or 100 years ago. When live food is lacking in vitamins and minerals... it only makes sense that the enzymes are not as potent or active as they would be with plenty of vitamins and minerals.

32. Could the raw fruits and vegetables of yesterday, match up to the digestive enzymes of today? They would be much closer because there were more vitamins and minerals within the raw foods of yesterday. But the answer is still no, because the food enzymes within the raw food don't have the potency of digestive enzymes, especially in protease and lipase. This potency along with high activity is why a great digestive enzyme formulation is such a great help to the human body. It could take many bushel baskets full of fruits and vegetables to equal one bottle of The Optimal Digestion Supreme Enzyme Formula .

33. What about other health products from lands far away, what is their importance compared to a great digestive enzyme product? If we lived on this earth 500 years ago or 10,000 years ago... we wouldn't have been able to get these products from lands far away unless we lived there. They can be helpful, but they are not the real essentials the human body needs for support. No matter where we lived on earth... the three common elements that would be available to support the bodies needs are vitamins, ionic minerals, and enzymes. These 3 are the real essentials that support the human body's needs!

34. What does the oatmeal test prove? Oatmeal is mostly carbohydrates. Amylase digests carbohydrates. The oatmeal test shows whether there is enough amylase to help in the role of digesting carbohydrates. It does not show if an enzyme formulation has enough protease or lipase to be effective in digesting proteins and fats. Always check for the activity and potency on the label. Everyone should try the oatmeal test to see what proper digestion looks like!

35. What if I have a very sensitive system? If you know your body is sensitive to most products... start out slow with the enzymes. You might want to just take them with meals for a week or so, to allow your body to get used to the product and better digestion. 36. To get the real benefits that enzymes have to offer - what is the minimum amount a person should take? We recommend you take 9 capsules a day. Anything less in our opinion is not enough to give your body a serious amount of help and the great results your body deserves.

37. Other than raw living foods is there anything better for the human body than a great digestive enzyme product? That depends on your deficiencies but to have a properly

functioning human body... we MUST have proper digestion. Proper digestion should be the highest priority for anyone desiring the best possible health. The Pottenger Cats Study is a great example of what happens when eating cooked and processed foods over a long period of time.

38. When I go to the bathroom, my stool sinks. Is that bad? When your stool sinks... it is heavy... because there are still nutrients or undigested foods within it. It also shows that we are having a problem digesting food properly. When the nutrients within the food are completely digested and **YOU HAVE ADEQUATE FIBER IN YOUR DIET**. ... the stool will be light and fluffy and will float. With "The Optimal Digestion Supreme Enzyme Formula" most people will see their stool float within a couple of weeks to a month. It may take a little longer for some. Floating stool is a good sign!

39. Does stool with a foul odor indicate improper digestion? Yes, in the intestinal track and colon undigested proteins putrefy, undigested carbohydrates ferment and undigested fats turn rancid. When the stool has a foul odor, we are having digestive and elimination problems.

40. Why are plant enzymes better for the human body than animal enzymes? Enzymes from animals like trypsin, pepsin and pancreatin work in a very narrow pH range and work to a limited degree in the stomach and small intestines, but don't do anything for digestion in the upper part of the stomach... when the pH is too high, they are inactive. Papaya produces an enzyme called papain and this enzyme works best in temperatures considerably higher than the body. Plant enzymes are much more effective in the pH and temperature ranges of the body and they help digest the cooked and raw foods in the upper part of the stomach. This helps decrease and conserve the digestive enzyme secretion from the body needed for digestion.

41. How do digestive enzymes help improve aging skin? Enzymes can fight the aging process by increasing the blood supply to the skin. Better circulation helps bring nutrients to the skin and it also helps take away the waste products that can make the skin look dull and wrinkled. Grape seed and pine bark antioxidants can also help make the skin softer and more supple. Beautiful skin can be realized and enzymes can definitely help.

42. I take antacids for heartburn and indigestion. How can enzymes help? Enzymes will help heartburn and indigestion almost immediately. Antacids provide only temporary relief by neutralizing the acidity in the stomach, but will cause a much greater problem. Antacids stop the body from doing its digestive job... while enzymes help the body to do its digestive job. Plant enzymes are safe and effective... antacids are not!

43. Can digestive enzymes help bad breath? Digestive enzymes can help remedy this problem by assisting in the proper digestion of your food. Halitosis is often an indication of digestive problems, which may include harmful debris and bacteria in the spleen, colon and lungs. Breath mints typically only hide the problem, bringing temporary relief. A great digestive enzyme taken regularly can help eliminate halitosis.

44. What are some of the physical conditions associated with enzyme deficiencies? Here are some conditions associated with the decreased levels of each individual enzyme:  
Protease (digests proteins): anxiety, low blood sugar, kidney problems, water retention; depressed immunity, bacterial and viral infections, cancer, appendicitis, bone problems such as: osteoporosis, arthritis, and bone spurs.

Amylase (digests carbohydrates): skin problems (rashes, hives, herpes, and canker sores), liver and gallbladder disease.

Lipase (digests fats): high cholesterol, obesity, diabetes, cardiovascular problems, high blood pressure, chronic fatigue, spastic colon, and dizziness.

Cellulase (digests fiber): gas, bloating, acute food allergies, facial pain or paralysis, candidiasis (yeast infections).

45. What is the best way to evaluate what the digestive enzymes are doing for the human body? Before you start taking The Optimal Digestion Supreme Enzyme Formula, take a sheet of paper and write down the problems you are experiencing such as gas, reflux, acid stomach, constipation. Most people with physical problems including arthritis can see significant results within a month or two. Reflux however can be improved in a matter of a few days. People that already have high energy and look in good shape should wait about 3 months before evaluating the results. To re-educate the body's natural ability to repair and strengthen itself, it's going to take a little time. If you're patient... many rewards can be yours. Every day that we take digestive enzymes with our food and on an empty stomach, we give our body a serious boost toward functioning better!

46. How will I know if these digestive enzymes will really help me? There is only one real way to find out. Try them. Almost everyone will see dramatic improvements within 3 months... and there is a 30-day money back guarantee.

47. How can I build a strong healthy body? Continue to supplement with vitamins, ionic minerals and any additional nutrients you believe are very good building materials. When you add digestive enzymes to your supplementation, your vitamins will work better, the ionic minerals will work better and you'll get a lot more out of the nutrients you're taking. Enzymes are just as important as vitamins, minerals or any other nutrient, because enzymes are the workforce and life-force of the human body. Any plan designed to achieve the best possible health... must include a great digestive enzyme to be successful!

48. Chewing is critical to digestion. The mouth is the primary stage of digestion and a very important one. If food isn't broken down enough in the mouth it will cause the rest of the digestive tract to be unable to digest food sufficiently causing, indigestion, upset stomach and even mal nutrition due to poor digestion.

A new set of full upper and lower dentures only have 30% chewing power compared to natural teeth. Ill fitting dentures or worn down denture teeth can also be a major cause of indigestion. If a denture is loose, a denture wearer could have a difficult time chewing, because of the dentures moving around and causing pain. These people tend to chew there food insufficiently thus, swallowing bigger morsels that are harder for the rest of the digestive system to break down. Worn down denture teeth can't cut the food, leaving the denture wearer biting off more than they can chew.

### **About Pot Guts, Overweight, Obesity, Digestion, Breathing & Your Large Intestine (Colon)**

Studies show that being overweight restricts breathing. Being overweight and or obese causes restricted rib cage expansion and less space for the diaphragm to move downward and with less ease. The harder it is for the rib cage to expand the harder it is to breathe, even while sleeping and often even more so; sleep apnea can stem a lot from this last factor. Obesity also provides for storage of fat and waste material that creeps into the lungs reducing gas exchange. Obesity causes distortion of the autonomic nervous system balance and function.

How do you know you are obese or at least at risk for being obese? One of the easiest ways is by the presence of a "pot gut".

Many doctors prefer the gut as a marker for overweight then they do the Body Mass Index BMI because the waist measurement is quick and reliable. Many studies have reported that body fat distribution is a more powerful predictor than is BMI for risk factors, diseases, and mortality. You'll see why in a moment.

The American Journal of Clinical Nutrition January, 2001;73:123-126 ties in waist measurement with the onset of Type 2 diabetes regardless of age and that in women, the rate of heart disease rose as both BMI and waist circumference increased. But that is just the tip of the iceberg. Poor digestion plays a huge roll in accumulating excess body weight and waist measurement. Digestion is the body's first introduction to the food we eat and if the food does not get digested it accumulates in various forms such as fat and toxic debris. Without optimal digestion we set the stage for thousands, perhaps millions of negative chemical reactions, not the least of which is the back up of mucous and "sludge" in our lungs. To make matters worse we tend to tighten our belts or girdles as the weight increases and that forces the diaphragm to draw less and less air with each breath. This reduces our overall energy and the oxygen supply that we need to burn off the fat in the first place. The pot gut seems to be fatty tissue but in reality is also an area for storing massive amounts of toxic debris including in the transverse colon which is right behind the belly area. .

**POT GUTS??** Men over 40 inches and women over 35 inches waist size. Show clear signs of autointoxication. Many organs, including the stomach are forced into abnormal positions and sizes. The transverse colon droops and collects biophysical "trash". Nutrients cannot be absorbed through the intestinal walls because they are blocked with, junk and hardened mucous. Fungus is better able too invade, sustain and transform into parasites, within the body. Intestinal diseases, including polyps, are most often symptoms of a polluted colon, massive amounts of parasites and thriving unhealthy bacteria. Toxins back up into kidneys, liver, lungs and brain.

<http://www.breathing.com/pdf/colon.pdf> here is a very dramatic picture from a colon hydrotherapist showing how a large stomach can be ever so much more than just fat.

Erectile dysfunction more likely in men with large waists

<http://www.breathing.com/articles/erectile-dysfunction.htm>

The Erasmus University Medical School in the Netherlands is showing a correlation between type 2 diabetes and the risk of dementia and Alzheimer's disease. Apparently persons with diabetes have double the risk of developing dementia. The risk is especially high if they are insulin users. What to do? Handle the digestion, learn to breathe better, take E3Live, <http://www.breathing.com/e3live.htm>, exercise, use a good internal cleanser like [www.breathing.com/oxy-cleanse.htm](http://www.breathing.com/oxy-cleanse.htm) plus increase your percentage of raw living foods to at least 75% making sure that the majority is not rich and excessively fat-bearing.

My recommendation for weight loss <http://www.breathing.com/weight-loss-program.htm>

## **To order:**

Call Vision E3live at 888.233.1441 and mention Michael White of Optimal Breathing and receive 20% discount off of your first order at.

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If you just ant to help others without any compensation you can refer this article by sending them to the free download web page at <http://www.breathing.com/optimal-digestion.htm>

Blessings,  
Mike White [assist@breathing.com](mailto:assist@breathing.com)

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