"The joy of life depends on a sound stomach whereas bad digestion inclines one to skepticism, incredulity, breeds black fancies, and thoughts of death." – Joseph Conrad

Why do we die? Why do we age? Why do things wear out? Do we just live our lives and then all of a sudden out of the blue a disease bug comes floating in from who knows where and causes an illness that kills us? Unless of course the right drug can be found to "kill the bug."

Do you believe this? The majority of people in America actually do, but their numbers are shrinking steadily. People are now becoming aware that lifestyle has everything to do with susceptibility to disease. Lifestyle: you know – diet, stress level, mental outlook, daily physical movement, or lack thereof. Non-bug issues.

Many of us today are becoming disconsolate about seeing our parents die of the same diseases our grandparents died of. Despite all the "breakthroughs" we’re constantly reading about in the popular press, our health as a nation is not improving in the least.

In Chapter One (www.thedoctorwithin.com) we saw the 10 major killers of Americans:

Heart Disease ........ 726,000  
Cancer ................ 539,000  
Stroke .................. 159,000  
COPD .................... 109,000  
Accidents ..............  95,000  
Pneumonia/Flu ..........  24,000  
Diabetes ................  62,000  
Suicide .................  30,000  
Kidney Disease .......  25,000  
Liver Disease ..........  25,000  


Except for accidents and suicide, these illnesses are largely preventable, in the sense that they are caused or aggravated by years of bad dietary habits. These diseases don't just fly in on the night air and invade our pure, innocent bodies. Loading up on indigestible, devitalized foods slowly kills the body's cells and tissues, week by week, month by month. Whichever particular organ gives out first – that's what we say someone died of: he had a bad heart, he had a bad liver, he had a bad stomach, he was a lung-er, etc.

NAME YER POISON

Incontrovertible evidence that has been around for 75 years is now being brought forth and substantiated that the determining factor of health and long life may correspond to one simple condition: blood toxicity. Toxicity means poison.

You may think of poisons as things like arsenic, or cyanide, or rat poison, or things that secret agents in James Bond movies bite in capsules just before they're captured. As every good ninja knows, there are many levels and types of poisons. The best ones kill you the slowest and are undetectable. So let's consider the slowest poisons of all: the food we eat.
Most modern food which the American diet comprises, is poison. Why do I say that? A good poison will:

1. block the flow of blood,
2. decrease the amount of oxygen to the tissues
3. interfere with one or more major systems of the body,
4. actually cause addiction to the poison itself
5. eventually kill the subject without ever being detected

No poison in history has achieved these goals on the scale that processed food has.

**ACTION OF ENZYMES**

So what are enzymes? We are surrounded by examples of enzyme activity every day. Take a banana. A green one. Put it on a windowsill for a couple days. It turns yellow and ripens. That's enzymes working.

An alligator kills you in a swamp. But he doesn't eat you right away. Instead he drags you off to some pile of brush and lets you rot for a few weeks. Then when you're seasoned enough, you become an entree. What made the change? Enzymes.

A dog buries a bone. It was too hard. Two weeks later he digs it up. Nice and soft. Yum-yum. That's enzymes at work.

"Without enzymes, seeds would not sprout, fruit would not ripen, leaves would not change color, and you would not exist."

– d’Raye, p.3

Very simply, enzymes are properties of all living cells that bring about changes. Enzymes are specific proteins that are active in every cell of your body every second. Enzymes change things into usable forms.

As Dr. Royal Lee said long ago, enzymes

"... are the most important unit in the human body, because every chemical change that takes place to repair tissue or to assimilate food involves the activity of enzymes. Without enzyme activity there is no life. No plant or animal can live without the activity of its enzymes."

– Conversations, 1955

Biologically, we are nothing more than collections of living cells. What happens to our cells happens to us. Life functions of cells are mediated by enzymes.

**DIFFERENCE BETWEEN ENZYMES AND ENZYME ACTIVITY**

The car sitting in your garage is useless until you put some gas in it and start driving. Same with enzymes. By themselves enzymes are just pieces to the puzzle. For enzymes to actually perform the thousands of tasks they do, helpers are necessary. Doctors call these helpers co-factors. Most co-factors are vitamins and minerals. The enzyme and the co-factors orchestrate themselves in an ultrasophisticated biochemical symphony called a complex. It is the enzyme complex that brings about enzyme activity – without all the players, the game doesn't happen.
"Nutrients cannot work in isolation .... Absence of any one of these essential nutrients is enough to destroy our health."

– Erasmus, p 73

An enzyme supplement should contain these co-factors. If it doesn't, the body itself must provide the missing nutrients. If the patient is vitamin or mineral deficient, taking an isolated enzyme supplement won't have much beneficial effect. Enzyme activity is a major team effort.

"An enzyme is a functioning mechanism, not a chemical..... an enzyme itself is a living principle."

– Conversations in Nutrition

The vitamins we're talking about here are not the synthetic ones you usually see in the grocery store. Only natural whole food vitamins can collaborate with enzymes. Dr. Lee wrote almost 50 years ago:

"When you take a vitamin out of this group and crystallize it and put it in a bottle, it becomes a ... chemical. It is no longer part of the living substance. It is no longer a part of the living mechanism we call an enzyme."

The big idea here is that vitamins, minerals, and enzymes need each other, like the three legs of a stool. In the wacky marketplace of today's food supplements, it's like we're assaulted on all sides by people screaming Vitamins!, others yelling Minerals!, and others hollering Enzymes! as though each one alone were the Magic Bullet that can cure anything. The real ideas are cooperation, synergy, and co-factoring. Nothing exists in isolation in the body. An enzyme without co-factors has no enzyme activity.

SPECIFIC SHAPES

Enzymes are known to have very specific jobs to do. Their activity is compared to keys that must fit certain locks. Enzymes are long-chain proteins held together in very specific shapes by hydrogen bonds. Think of a ball of string which is held in a very weird shape by tiny strips of Velcro. If anything happens to the Velcro-like bonds, the enzyme protein unravels, losing its shape. Without the shape, the key can no longer fit the lock. Then it's no longer an enzyme – just another foreign protein. And what do foreign proteins cause in our body? Right – inflammation. Immune response. And that's exactly the meaning of auto-immune. The body now attacks itself because it senses there's an alien on board. Self has become not-self.

If the bonds are broken, the enzyme collapses, and can no longer do its specific job. Such a collapsed enzyme is said to be denatured. Several things cause an enzyme to become denatured:

- heating above 118 F (cooking)
- drugs
- alcohol
- fluoride
- free radicals
- food processing
- canning
- irradiation
- genetic engineering

COOKED VS. RAW
Edward Howell MD, world authority on enzymes and human nutrition, talks about how enzymes are denatured above 118°F. Since water boils at 212°F, you can see how cooking is detrimental to most foods. That's why when it comes to vegetables, steaming is much better than overcooking. Overcooking destroys enzymes and vitamins.

Another expert in this area was Dr. Francis Pottenger. His famous experiments with cats in the 1930s are just as relevant today as ever. He took two groups of cats and for years personally supervised their feeding. One group was given exclusively raw, uncooked food. The other was given only cooked food. Results were overwhelmingly clear: the raw food cats all lived a long, disease-free life. Cooked food cats became sick and died much younger. (Bieler, p 192)

Also notable was that cats who became sick on a long-term all-cooked diet could not regain their health even when placed on a raw foods diet. Irreversible damage. Cooked food cats produced only two sickly generations, the second of which was invariably sterile. Natural selection.

Fad diet recommendations that ignore this basic premise are all the more flawed. Raw foods before cooked, steamed veggies before boiled, poached before hard-boiled, rare meats before well-done: the more intact enzymes still in the food, the less we tax the body's own enzyme stores.

SAVINGS ACCOUNT

We have two main types of enzymes in our bodies. Dr. Edward Howell, in his masterwork Enzyme Nutrition, tells us it's as though we are given a bank account of enzyme energy at the beginning of our lives. The bank account contains two types of enzyme currency:

- metabolic enzymes
- digestive enzymes

The more of that bank account we have to use for digestion, the less is left over for the thousands of other tasks which the metabolic enzymes have to perform in our bodies. Minor details like thinking, breathing, walking, seeing, cell life, etc. – all depend on enzymes. So think of people grossly overweight. Do they perform all these other functions well, or do they seem impaired? Obvious. Reason: they have to expend too much of their enzyme bank account trying to digest all the heaps of indigestible food that keeps coming down the hatch. So there's not much left over for basic life functions.

METABOLIC ENZYMES

Metabolic means having to do with operating the body's specific systems. Cell life, nerve transmission, brain signals, hormone distribution, oxygen exchange, liver function, acid-base balance in the blood, stuff like that. All these jobs require specific enzymes in order to happen, on a second-by-second basis. Metabolic enzymes are the worker protein molecules that keep this whole biochemical circus going all day long.

Metabolic enzymes are what actually utilizes the nutrients that have been broken down by the digestive enzymes, provided that normal digestion has taken place. So the direct interrelationship between the two types of enzymes – digestive and metabolic – is not really a big subject for debate.

DIGESTIVE ENZYMES

The class of enzymes you're probably most familiar with is the one that involves digestion. The mouth, the stomach, the pancreas, the liver, and the intestine produce various enzymes whose job is
to break down any food we eat into usable components. No matter how greasy, no matter how much extra cheese, or how much white sugar, how many chemicals, no matter how indigestible a food is, your body will try to break it down by means of enzymes. Now some foods are very easy on the body. Turns out, those are the ones which contain within them all the enzymes necessary for complete digestion. Examples: apples, corn, watermelon, green peppers, pears, celery, etc. Raw fruits and vegetables. These foods don't require that the body waste energy producing a lot of powerful digestive juices in order to change them into a usable form.

THREE FOODS

We all know that human food comes in three varieties:

- fats
- protein
- carbohydrates

Each is a large molecule made of smaller units. Since the body prefers the smaller units, these large fat, protein, and carbohydrate chains must be broken down. Fats are broken down to fatty acids; proteins are broken down to amino acids; carbohydrates are broken down to glucose molecules. The process of breakdown is called digestion.

Each food type has a special enzyme to make this breakdown happen:

- Lipase is the enzyme that breaks down fat.
- Protease breaks down protein.
- Amylase breaks down carbohydrates.

Now many doctors and others with no background in nutrition will say that we can eat anything we want because the body's digestive enzymes are designed to break the food down. This would be true if we were eating an 80% natural diet. By that I mean a diet in which most foods contain within them the enzymes necessary for complete breakdown. The natural diet leaves behind no residue from the digestive activity. That is normal digestion.

But we don't have a natural diet. Most of us have a SAD diet – the Standard American Diet. You know – burgers, fries, pizza, beer, chips, donuts, coke, etc. These are non-foods, new to the human species in the past century. Our digestive systems were never designed to break these chemical bizarros down. So the stuff doesn't get digested – it just sits there, rotting. Abnormal diet = abnormal digestion.

TOXEMIA AND VICARIOUS ELIMINATION

Toxemia means blood poisoning. Way back in 1926, a famous Colorado healer, JH Tilden MD, wrote a book which was the culmination of a lifetime of clinical experience, Toxemia Explained. Dr. Tilden was radical. He didn't believe drugs cured disease. He had one simple thesis:

"... every so-called disease is a crisis of toxemia, which means that toxin has accumulated in the blood above the toleration point. ... the crisis, the so-called disease – call it cold, flu, pneumonia, headache, or typhoid fever – is a vicarious elimination. Nature is endeavoring to rid the body of toxin." – Toxemia Explained p. 49

A disease is named for where the toxins accumulate so much that that body part starts failing. This concept of disease, known as vicarious elimination, has never been disproven. What happens is, the normal avenues for expelling waste – liver, kidneys, colon – are overwhelmed by the amount of poisons being accumulated. As a survival instinct, various other organs of the body which were not
designed for elimination of toxins become enlisted to help get rid of wastes. They try desperate measures to expel the indigestible, rotting poisons, often becoming inflamed or diseased themselves in the attempt.

One obvious example of this idea is acne. Acne is not a skin problem. It is a vicarious elimination: the blood and the colon are so backed up with poisons that are accumulating faster than they can escape that the body tries an extreme solution: expel the poisons through the body's largest organ: the skin. An alternative escape route. As the poisons leave, they irritate the normal skin and cause rash, redness, or pustulated eruptions, like pimples or boils. This is why skin creams and lotions don't work in such a scenario. It's not a skin problem. It's a problem of chronic blood poisoning by means of an indigestible diet. Third World people rarely get acne. Acne is a disease of excess, a consequence of the fast food lifestyle.

Chronic "incurable" eczema and psoriasis often fall into the same category. People suffer needlessly for years with these diseases, under the direction of their well-intentioned but clueless dermatologist who has convinced them that their only hope is to find the right medication for their "skin disease." Same with the kidneys. Their original job was simply to maintain water and electrolyte balance within the blood. But with the advent of modern foods of commerce, suddenly the kidneys find themselves spending all their energy trying to filter out these new manmade chemicals from the blood — a function for which they were never designed. Result: kidney disease today is the #9 cause of death in the US. (Historical Statistics)

Dr. Henry Bieler offers another example of vicarious elimination: the lungs take over for the kidneys. When the level of toxins in the blood exceeds the kidneys' capacity to eliminate them via the urine, the lungs try to take up some of the slack. The lungs secrete some of the blood's toxins through their mucous membranes. Such toxicity irritates and inflames the delicate lung membranes, and can be the initial cause of pneumonia, bronchitis, asthma, edema or virtually any other lung problem. (p 164) Same with a cold. A cold is simply the body's way of saying that the level of toxicity has now surpassed the body's ability to get rid of wastes through the normal avenues: colon, kidneys, and liver. So it will try alternative or vicarious routes: nose, mouth, throat, eyes, lungs.

Bieler uses this same model to explain dysmenorrhea and pelvic inflammatory disease: irritation of female organs when they are used as alternate routes of toxin removal from the blood, every month. At menopause, when this avenue of detox falls into disuse, various new problems may occur as a result. Vicarious elimination: an organ of reproduction being used as an emergency organ of detoxification.

Again, Tilden's theory of vicarious elimination is that many diseases are really just an organ's emergency attempt to discharge excess poisons because the primary avenues are overloaded. If that body part is overwhelmed in the process, it becomes diseased and we pretend that that organ, in isolation from the rest of the body, is the problem.

Such thinking is more than just simplistic and disingenuous; if medical decisions are based on false perceptions characterizing the diseased organ as the disease, the results can range from ineffective to fatal.

Dr. Tilden felt that undigested food in the intestines and in the blood was the primary cause of all disease. His ideas are now being substantiated in most gastroenterology journals, which explore in great detail the 'modern' phenomenon of …

**LEAKY GUT SYNDROME**
The reason the food remains undigested is lack of enzymes.

Here's what happens: We eat trashy food. We can't digest it. It remains in our intestines in a rotting form for weeks on end. Eventually the protective intestinal lining weakens and allows some of the rotting, undigested food to enter the bloodstream. Once in the blood, the toxic debris can settle just about anywhere. As a foreign protein, the debris can then initiate an inflammatory reaction at the particular location where it happens to end up. The snap diagnosis is that we have a problem at the site of the inflammation – the joints, the muscles, the liver, the kidneys, the intestines, the stomach, whatever.

Then we are given drugs to cover up the symptoms. Doctors pretend they can treat that single 'problem' part in isolation from the rest of the body. That's why it doesn't work. According to Dr. Tilden, these types of chronic, mysterious illnesses almost always have toxemia as the underlying cause.

Dr. Tilden was ahead of his time. His ideas are far superior to modern drug remedies. In most chronic disease situations, especially one that has baffled all the medical geniuses, Tilden's approach should be tried first, if one is to have any hope at all of a complete, permanent recovery.

Thomas Sydenham, the most famous English physician of the 17th century, long ago supported Tilden:

"Disease is nothing else than an attempt on the part of the body to rid itself of morbific matter."

– Bieler, p 40

Morbific – that means dead and rotting.

THE SHELF-LIFE BUSINESS

Let's talk about processed foods. How did all these artificial, devitalized foods become the main components of the American diet in the first place?

Long story. In 1910 Harvey Wiley, MD was the first head of the original FDA. Dr. Wiley was a big critic of food adulteration. He was against bleached flour, refined sugar, and the sale of adulterated, devitalized foods. He once tried to prevent the Coca Cola company from shipping Coke across interstate lines because it had white sugar in it, which Dr. Wiley correctly described as an adulterated food. Then Wiley actually began seizing shipments of bleached flour. A legal battle ensued and went all the way to the Supreme Court in 1913. Wiley won. Bleach was proven to be an empty filler whose main purpose was to kill bugs and bulk up the flour. This law has never been enforced, or reversed either. Soon thereafter the huge financial interests controlling food processing banded together and got Wiley thrown out of office. Ever since we have had white flour, which has no food value whatsoever – no vitamins, no minerals, no enzymes, and which often contains large amounts of bleach. (Bealle, Royal Lee) That's what bread labels even today are talking about when they state "unbleached flour." Like it's some hot selling point that the bread doesn't have bug-killer in it.

Food processing has only been around for about the last 90 years or so. Food processing came about mainly during wartime when we had to figure out how to transport large quantities of food to the WWI soldiers without spoiling on the way. Scientists found out that the more efficient were the methods of removing enzymes from foods, the better it transported and the longer it lasted. After the war, the techniques that had been learned were applied to the grocery business. The supermarket industry soon found out that profits could be greatly increased if foods can be made to last longer
without spoiling. If that meant that they were also removing most or all of the nutrition from the food along with the enzymes, hey, too bad. The manufacturers weren't in the health business; this was the Shelf-Life business.

Scientific methods of enzyme removal and food preservation then became more and more sophisticated continuing to the present day. In addition, chemical additives came in, which do nothing to nourish the body – it's just about the money. And now the two new buzzwords are irradiation and genetic engineering. Do you think any of these methods has anything to do with increasing the nutritive value of foods? Dream on. This is big business, driven by one motive only.

GOOD LIVER – GOOD LIFE

One of the first organs to be overwhelmed by the constant deluge of toxic fast foods is the liver, the most important organ of the body. Bieler feels that if the liver were able to keep up with cleansing the blood of all the indigestible debris we shove down our throats, we would live more or less indefinitely. (Bieler, p63) Before it gets into general circulation, digested food from the intestine goes first through the liver via the portal vein. The liver is then supposed to choose what to do with the digested food:

i. make new body tissues
ii. release energy
iii. store nutrients for future use

Unfortunately in an enzymeless diet that consists of 80% hard fats and refined sugars, the liver hardly has time to get around to these standard life functions. Instead it wastes most of its energy and power just trying to tread water in a sewer of chemicals. Liver cells die, cirrhosis results, and this is today the #10 cause of death in the US. (Historical Statistics)

The human liver evolved from 60 million years of animal liver evolution. For all but the last 100 years of man's 200,000 years, the human diet was simple fruits and vegetables, with a little animal protein. Thus was the liver allowed to develop normally and concentrate on its main tasks, which did not involve toxic waste breakdown. Modern processed foods are a shock to evolution.( Food Is Your Best Medicine, p 183)

Bieler explains the idiocy of trying to force the liver and kidneys to work harder by falsely whipping them into action by adrenal-stimulating steroid and diuretic drugs, which is the standard medical approach. This is a short-term solution and will ultimately result in organ destruction. The simple fact is, the liver and kidneys were never meant to work this hard, spending all their metabolic energy trying to deal with enzymeless processed food chemicals from our horrible diet. (Bieler, p 142)

WESTON A. PRICE

Once there was a dentist named Dr. Weston A. Price. In the 1930s, he and his wife went around the world, gathering data from dozens of countries. He was looking for the healthiest people on earth. That is, the ones with the longest lifespan, no degenerative disease, no tooth decay, the strongest bones, and best physiques.

Everywhere he went, Dr. Price would check the bones and teeth of various tribes and civilizations, including:

- Swiss Alpine villages
- Fiji
- Eskimos
What Price found was startling and undeniable: across the board, those primitive civilizations and cultures enjoyed sound teeth, strong bones, and lives generally free from degenerative disease, provided there was adequate natural food and a mineral-rich water supply. Then invariably, as soon as the enzymeless foods of commerce became available to these simple people, within a few years, their teeth would be rotten, their bones would soften, and they would experience the onset of epidemic degenerative diseases, just like the ones that prevail in America today. Like Royal Lee and JH Tilden, Price is talking about white flour, white sugar, and processed, devitalized adulterated foods.

The common factor in the new foods which infiltrated and corrupted the diets of these primitive societies, again, was lack of enzymes.

Dr. Price also examined ancient skulls from the burial grounds of many of these civilizations. He was looking to correlate the amount of tooth decay with the formation of the dental arches, as well as the formation of the facial bones and the nostrils. Location after location, Price's findings were overwhelmingly consistent: when the isolated people had a primitive diet consisting of fish, whole grains, raw dairy, and a mineral-rich environment, the people enjoyed perfect teeth, and a very low incidence of infectious and degenerative disease. Price correlated beyond a doubt the exposure of primitive people to white flour and white sugar with all the following:

- Bone thinning
- Facial deformity
- Mouth breathing, because the nostrils did not develop properly
- Rampant tooth decay
- Tuberculosis
- Arthritis

Price shows how physical degeneration of a group of people who may have enjoyed nearly perfect health for centuries – how this situation can be destroyed within a few years of being exposed to the foods of commerce – white sugar, white flour, and processed devitalized products.

Dr. Price's book is called Nutrition and Physical Degeneration, and is still in print. No nutritionist or dietician can claim to be well-informed without a thorough understanding of this landmark work. Remember, those are the ones who design hospital food, airline cuisine, and school lunches.

**THE IDIOCY OF THE HIGH PROTEIN DIET**

Because of advertising, and "soft" advertising in which scripted information is made to look like hard news, food fads are as rampant today as ever. Eat for your blood type, eat for your body type, eat for your horoscope, eat for your recovered memories, eat what your muscle testing says, eat according to your ethnicity, eat according to the results of your hair analysis – junk science is at its zenith in America today. Not the least unscientific of these is the currently popular high protein diet.

Riding high on the cholesterol/heart disease myth, and the Dangers of Carbos spectre, the high protein diet is the new messiah – the ultimate healthy diet. Nothing could be farther from the truth.
Obviously if someone is pounding fries and ice cream and coke all day long, and suddenly he trades up to the high protein diet, there are going to be some immediate improvements in the way the patient feels. But the same effect would probably have been obtained by an all-citrus diet, or Price's diet of raw milk and rye cakes. A long-term high protein diet exclusive of good fats and natural carbohydrates is very detrimental to the kidneys, the liver, and the blood.

The breakdown products of processed artificial protein are highly acidifying to the blood. This sets in motion the whole calcium buffering program in which the pH of the blood is saved from all this dangerous acidification by pulling calcium out of the bones and teeth. The body's next effort is uric acid crystal deposition in joints and organs, osteoporosis, and total disruption of kidney and adrenal function which further try to regulate blood pH. Too much protein in the diet putrefies in the digestive tract, setting up blockage, leaky gut syndrome, and a whole host of intestinal disorders. Excess nitrogen in the system from all those excess amino acids further stresses the blood.

The food advertisers pretend that we need more protein and less fat. The more protein and the less fat, the better. The truth is, Americans average 125 g of protein per day, while only requiring 25 g. (McDougall) We are not protein deficient in this country. That only happens in Third World starvation countries. The reason for this Protein Religion is simple economics: high protein foods are expensive. It's a sales job. At stake are billion$ in foods and billion$ in advertising.

The high protein diet is of course aggressively promoted by the entire soy-pandering contingent. Having perpetrated the lie that soy is a complete, safe protein, far superior to those fat-laden animal proteins, the soy sellers are enjoying huge success by means of consistent and ubiquitous persuasion methods in all media. This concept is just as false and as dangerous as the high protein diet itself.

Food faddists like to complicate things, deriving rules and patterns out of thin air. Usually for the end purpose of book or supplement or food sales. A reasonable proportion of fats, protein, and carbohydrates is just common sense. Less important than the proportion of fats, protein, and carbohydrates is the form in which each is presented. Digestible or indigestible? Natural or processed? Raw or cooked? Sprayed or organic? Cleanse or clog? With or without enzymes? These are the real issues that determine the value of a food. These are the questions we should be asking.

The other major misconception is the fat-free phobia that has taken hold in this country. Controlled by advertising from huge food interests, false information is everywhere about the dangers of fat and cholesterol and how this causes heart disease, etc. The solution? Processed soy, a toxic indigestible non-food containing the worst possible type of fat: altered fats. The irony is that Americans are now actually fat deficient, having been tricked into thinking that all fats are bad. We need good fats, essential fatty acids, and we're not getting them.

**MILK – A DEVITALIZED ENZYMELESS FOOD**

Here's an example: The absence of enzymes in modern dairy products exists by definition: milk is pronounced 'pasteurized' only when all the enzymes have been removed by heating. From pasteurized milk we then get butter, ice cream, cheese, yoghurt, and milk chocolate. Problem is, all these foods can't be digested. Undigested food goes all over the body and causes chronic low-grade inflammation. And blockages. That is why holistic nutritionists generally agree that milk is the #1 cause of allergies. Don't believe it? Take away all dairy for 60 days from the allergy or asthmatic patient. The operative word here is all. See what happens to the allergies.

Yes I know what you're thinking – where will we get our calcium from then? Big surprise: milk is not
a good source of calcium because the enzyme phosphatase, which is necessary to absorb calcium, was destroyed by pasteurization! (Douglass) The only reason we think we need milk for calcium is that we've heard it all our lives – on TV, in school nutrition programs, from dieticians. But guess who paid for all that advertising and promotion?

Starting way back in the 1950s, the American Dairy Association spent millions providing 'educational' materials for American grade schools in which dairy products are presented as one of the Four Food Groups. This never had anything to do with science – this is marketing. There's no such thing as the four food groups. They made it up! (McDougall)

So, as for the calcium requirements of children:

"... pasteurized milk is incapable of rebuilding or maintaining bones and teeth."

– Royal Lee, 1955

And as for digestion:

" commercilly modified milk and baby foods are all foreign to the baby's liver digestion and may produce diarrhea, milk allergies, and constipation."

– H. Bieler, 1965

It is not just Africans who have lactose intolerance – all humans have lactose intolerance when it comes to pasteurized milk. But it's still a word game: lactose is milk sugar. We're not allergic to milk sugar; we're allergic to milk. No enzymes = junk food. (Twogood) Milk is a junkfood. Think your baby needs it? Think again. Pasteurized cow's milk is sensitizing your baby to an unnatural non-food allergenic protein. Consider this:

• man is the only animal who figured out how to remove enzymes from milk

For the whole story on milk, read Twogood's No Milk and Dr. Ron Schmid's' The Untold Story of Milk . Milk is a very common example of an artificial, manmade food about which a century of advertising has created the illusion of a healthy staple.

The same ideas apply to other processed foods. That means one that has been devitalized by the food industry by removing all the enzymes. Problem is, only the enzymes made it a living complex in the first place.

The above comments about milk refer only to pasteurized milk. Raw milk from cows living in a natural mineral-rich environment is another story. Dr. Price thoroughly documents the health of Swiss Alpine villagers, isolated from processed foods. Some of these healthy people lived on a diet centered around raw butter and raw cheese, from cows and goats. Their health was far better than most of ours today. The point is that natural, unprocessed, unpasteurized dairy products could be a superlative nutritional staple, because it is loaded with the fat soluble vitamins A, D, and E, minerals and enzymes.

What destroys milk is civilization: killing the enzymes by heat, adding antibiotics and hormones to the cows' diet, keeping the cows in a mineral deficient environment, and artificially preparing it for long periods of storage. (Price)

EATING IN AMERICA: A CONDITIONED RESPONSE
Let's talk about the food we eat. Now most of us know what we should eat. But when it actually comes down to it, which it does several times a day, many of us simply eat food that "we're hungry for." We can't really be blamed for this, right? Billions of dollars are spent conditioning us about what we should feel hungry for. Look at TV, billboards, radio, newspapers – what are we constantly assaulted with? Images of burgers, fries, ice cream, chips, Pepsi, candy, donuts, milk, cheese, MGD, etc. Just hearing these words makes our Pavlovian mouths water. These are the best poisons ever made. Not only do they contain little or no nutrient content; even if they did there's almost no chance of our getting to it because these foods have no enzymes in them. All those were taken out during processing. Therefore the entire burden of digestion is placed on our body's own enzymes. Foods are being broken down only partially, or not at all, by our own digestive enzymes, because many foods are so foreign, so processed, have so many chemicals and preservatives, and are so new to the human race that they overstress our body's ability to metabolize them.

Natural and raw foods contain nutrients, such as vitamins, minerals, and enzymes. Processed food can be described as devitalized – not much in there we can use. The 'foods of commerce' are made to be sold, to last on the shelf a long time. This has nothing to do with human nutrition.

**GARBAGE IN, GARBAGE IN**

So what happens to all this undigested food? Where does it go? Well, what happens is, a lot goes in, but never comes out. A little vague? The average 35 year old has between 4-22 lbs of undigested food in the intestine alone, even according to the FDA. (Anderson) John Wayne on autopsy was found to have closer to 44 lbs. of it! Elvis had more than 20 lbs.

As noted above, this rotting debris doesn't just stay in the intestine, but can make its way intact into the bloodstream, to be deposited in practically any location of the body. Such food is foreign and may cause inflammation in any area where it becomes lodged. Gastroenterologists call the condition Leaky Gut Syndrome. It can be the mechanism for just about any -itis you can think of: arthritis, gastritis, colitis, hepatitis, nephritis, myositis, bursitis, etc. As well as allergies. Such floating debris triggers the immune response. If it's always there, the body's always reacting to it. Symptoms of that reaction are:

- fatigue
- stuffy nose
- asthma
- sneezing
- blocked sinuses
- skin rashes
- fibromyalgia
- chronic fatigue syndrome

**ALLERGIES!**

Reaction to undigested food has been implicated as the cause of over 90% of allergies. All these conditions usually don't just pop up for no reason, or because of some genetic tendency. People pretend they're allergic to dust, pollen, dog hair, cat fur, horse feathers, phases of the moon. But why look for an exotic cause when the obvious is staring you in the face? Years of eating food that cannot be broken down has predictable and definite physical consequences. Diet does not affect your health; diet determines your health.

Know anyone taking allergy shots and pills for years who still has allergies every year? Why would
the allergist cure them? Job security, Vern. Ten to one the missing piece of the puzzle is enzymes. Try the 60 Day Program.

**ENZYMES AND AGING**

A very clear chain of events connects enzyme depletion with the aging process: undigested food clogs the digestive tract. The stuck food rots there, and creates toxins and free radicals. Free radicals destroy cells, causing premature aging of tissues. Free radicals attack the cell membrane causing them to shrivel up and dehydrate, and subjecting the DNA to alteration from outside forces. Large undigested molecules seep into the bloodstream from the intestine, gumming up the blood, blocking normal oxygen distribution to the body. Cells are starved, causing premature cell death. This is not even controversial — any pathology text documents Leaky Gut Syndrome, hypertension, and chronically blocked circulation as the result of undigested fats.

Worse yet, much of the immune system depends on circulating white cells. When the blood gets all backed up with undigested sludge, these cells can't circulate. Result: depressed immune function. Aging.

Fifty years ago embalmers at funeral homes had to prepare the corpse immediately after death because it would soon rot. Today there's not such a hurry. After a lifetime of preservatives, spices, artificial additives, hydrogenated oils, and hard fats the modern corpse can sit out for a few days without going bad. It's pickled. As Bieler says, with modern processed foods, today we have effected the mummification of the living. (p 220)

**SICK ANIMALS**

Dr. Howell makes the observation that humans are the only animals who, in their natural environment, live their lives with disease. Think about it: how many human diseases are there in the pathology textbooks? 1000? What other animal in nature gets even 5 diseases? Why? Dr. Howell explains that humans are the only animals that eat processed foods, the only animals who subsist on enzyme-less food:

"All wild creatures get their enzyme supplements in the raw food itself." — Enzyme Nutrition p7

The saliva of horses and cattle doesn't even contain enzymes, like ours does. The work of digestion is largely aided by the enzymes in the grass or hay they eat. A whale that had 32 seals in its stomach was found to secrete no digestive enzymes! (Howell) Digestion took place by means of enzymes contained within the seals themselves. Think of the burden this removes from the whale's digestive system during his lifetime. Or more accurately, since we're the exception, think of the burden enzymeless food places on our systems. We must expend great quantities of energy producing and maintaining digestive enzymes that Dr. Howell describes as "pathologically rich." What a waste of energy. At what a price.

Over 60 years ago, France's finest surgeon noted the ill effects of commercial foods given to pedigreed dogs:

"In successive generations of purebred dogs, nervousness is often observed to increase. This phenomenon occurs in subjects brought up under artificial conditions, living in comfortable kennels, and provided with choice food quite different from that of their ancestors, the shepherds, who fought and defeated the wolves."

— Alexis Carrel, p 106
BLOOD: THE INTERNAL MILIEU

Going back to the blood now, and the idea of toxicity, remember that the blood was the carrier which deposited all the undigested food debris in various locations throughout the body. But this type of debris also has observable effects on the red blood cells themselves. Undigested fats and protein in the diet commonly cause a condition known as erythrocyte aggregation, which is simply clumping of the red cells. This causes circulation problems and may be the primary cause of chronic fatigue. It stands to reason – if the blood cells are all stuck together like globs of motor oil, they cannot flow very easily through the blood vessels. Circulation is the only way that the body's cells can obtain oxygen, which they need every second. Clumping of red cells graphically decreases the amount of oxygen that is being carried to the tissues. We're not just talking about fatigue any more; lack of oxygen spells tissue degeneration, premature aging, and early death.

Almost 100 years ago Alexis Carrel demonstrated how the longevity of cells is largely determined by two things: their ability to take in oxygen and nutrients and expel wastes. That's it. Longevity of cells obviously determines longevity of the body. Clumping of red cells from daily processed foods diet prevents both oxygen in and waste out. It's not rocket science.

OXYGEN AND CHOLESTEROL

Those shooting pains down the legs or arms are sometimes simply the result of muscles being forced to operate without sufficient oxygen, screaming in protest. Again, lack of available oxygen can cause degeneration and dysfunction of any organ or system of the entire body: arteries, heart, lungs, skin, kidneys, digestion, you name it. The cholesterol crystals that precipitate out of solution in the blood because of dangerously high levels of blood cholesterol – these crystals classically lodge in joints and muscles, and cause gallstones, gout, fibromyalgia, and arthritis. These and many other problems started out with a diet that lacked enzymes – a devitalized, processed diet that remained unchanged for years. How many of us in our 40s still eat the same way we did when we were teenagers? It's the road to ruin. We're just flesh and blood after all.

CHRONIC FATIGUE

Ever get food poisoning? Or maybe you know someone. Every single day in America 200,000 people get food poisoning, 900 of them are hospitalized, and 14 die. (Schlosser) Usually we think of food poisoning as being violently ill, throwing up, and being incapacitated for a few days, because of having gotten some bad food at a restaurant. But there's another type of food poisoning that is much more common, in fact, epidemic. This is the type of disorder the doctors and hospitals just can't quite put their finger on. The tests are all negative. But the problem just goes on and on: no energy, intermittent sharp pains in the stomach area, bad skin, bad breath, chronic low-grade allergies, constant feeling of impending disaster – like things are just 'not right.' The catch-all diagnosis is Chronic Fatigue Syndrome.

This type of food poisoning results from years of eating a diet deficient in enzymes, vitamins, and minerals. All those snacks and fast food and dairy simply can't be broken down. The body is starving from lack of nutrients. Holistic doctors call this phenomenon malnutrition of the affluent. Funny to think how someone 70 or 80 lbs. overweight can be starving, but that's exactly what's going on. Their constant hunger is a never-fulfilled craving, always hoping that some real nutrients will actually come down the hatch. But instead, pattern eating takes over – the sweet, soft foods, hydrogenated fats and oils, seasoned to taste with a ton of white sugar and salt. Yum-yum. Comfort foods. And that is why obese people can't lose weight – if they cut down their eating the body actually thinks that it is starving and tries to conserve as much of everything as possible because it's in Survival Mode.
CHRONIC INDIGESTION – TAPING THE OIL LIGHT

Gas, bloating, heartburn, stomach ache, feeling full when beginning to eat, abdominal cramping, unsatisfied hunger – these are common symptoms of enzyme deficiency. But most doctors treat such problems as though they were signs of drug deficiency! Perfect examples are Tagamet and Prilosec – standard drugs given for indigestion and heartburn. Now the main reason there is pain is simple: blockage. All that pizza and fries and tacos and yoghurt is devitalized food: no enzymes. As a result, once in the stomach, it just sits there. The stomach produces more and more acids and digestive enzymes trying to break down this overcooked, chemical-laden sludge we mistakenly refer to as food. But it can't do it. All that digestive juice sitting there unable to do its work is uncomfortable. It burns the stomach. On swallowing, the acid splashes back into the esophagus causing a painful condition known as reflux esophagitis, or heartburn, or for the really clueless – hiatal hernia.

So first the geniuses try Tagamet, with the idea that all the excess acid needs to be absorbed. When that doesn't work, enter Prilosec. The shrewd rationale behind this brain-child is to stop all digestion by halting further production of digestive juices! Short-term, the discomfort is postponed, but what about the underlying cause – the sludge sitting there in the stomach? It now begins to rot (go rancid, putrefy, or ferment, depending on whether it is fat, protein or carbohydrate). Then we have intestinal blockage, which promotes diseases like peptic ulcer, Irritable Bowel Syndrome, Crohn's Disease, chronic colitis, Leaky Gut Syndrome, and colon cancer. This is how anti-digestive drugs like Prilosec can set the stage for a condition doctors call auto-intoxication.

FADS AND TRENDS

Dieticians and nutritionists go to all this trouble categorizing foods according to content, telling you that this food has so many mg. of calcium, that one has so much protein, or they talk about calories, or food combining, or Carbs, or eating for your blood type, or body type, or some Zone, or any number of trendy notions. But it actually matters much less what's in the food as it does how much of the nutrients eventually ends up in your cells.

Don't get caught up in the Milligram Game. Or the Calorie Game. Start with the basics. If the food was never broken down in the digestive tract, well then, it went right through you. Or worse, it's still in there. It doesn't matter what we eat; it only matters what we digest.

HOW FAT WAS SHE?

Had to go through a revolving door in two trips? High school picture an aerial photograph? Hog farmers learned long ago that hogs get fat twice as fast if they are fed cooked food. Cooking destroys what? Right. Enzymes.

Only two years ago, statistics on obesity indicated that about one in eight Americans was obese. The definition of obese is that a person weighs 30% more than his normal weight. The Centers for Disease Control in Atlanta now says: one in three Americans is obese! For anyone who doubts these figures, empirical verification may help: go to the mall and sit on a bench in the concourse for half an hour.

People get fat because they eat cooked and processed foods – enzymeless foods which cannot be broken down.

THE BIGGIE NATION

Even more than the quality of food, it's the quantity that makes fat Americans.
Consider this: for normal nutrition, humans need about 25 grams of protein per day. Our average intake is 125 grams! (McDougall) As for white sugar, we consume an average of 160 pounds per person per year. How much do we need? Zero! White sugar has no food value.

As for fats, that's a whole story in itself. The body requires essential fat for optimum health, but only natural fats – like in avocados, raw nuts, flaxseed, coconut, and fish. These foods contain the fat enzyme lipase – which breaks them down. But that's not what we eat. The fats we load up on are artificial, manmade fats like in chips, fries, and margarine. These artificial fats are non-foods, indigestible, and are bioaccumulative. Manmade hard fats make for clogged arteries, cellulite, and spare tireage; once in the body they become rancid trans fatty acids. Rancid trans fatty acids are a major producer of free radicals. And that means aging, cell breakdown, and DNA mutation – confirmed reservations for an eventual all expense paid vacation in sunny ICU.

Then look at the quantity of hard fats we take in. Maybe you've noticed in the past couple of years the push toward eating more and more. In fast food restaurants the customer is offered a regular portion of fries that is indigestible by itself. But for an extra 25¢, you can get a hog-size portion, which guarantees overconsumption, and obesity. Same with soft drink sizes – white sugar overload turns to more fat. People are pushed into buying these ridiculous portions because they think they're getting a better deal. We've forgotten the universal principle: trash at a better price is still trash.

One of the worst experiences reported by the survivors of the Bataan Death March at the end of WWII was when the American doctors would not believe the starving prisoners when they told the doctors what they had been eating in order to survive. Just to survive, we actually need very little food. For good health, obviously we need considerably more, but the point is – most of our health problems in this country result from an excess of food coupled with an a lack of nutrients.

Most sick animals refuse all food until the healing power of nature (vis medicatrix naturae) has the opportunity to excrete the poisons. Often the greater part of the poison is undigested, rotting food which has somehow become blocked in the digestive tract. To eat in such a situation is only compounding the problem. Nature knows better. So forget about the old saw Feed a cold; Starve a fever. Starve both until the patient is hungry. Listen to the innate wisdom of the body; it's usually right.

PUT IT BACK!

So what's the solution? Same as the problem: enzymes. Either eat a 80% natural foods diet full of natural enzymes, or else put back into the food the enzymes that were taken out by food processing. Put back into the body the enzymes that can detox the blood and the tissues, where all this half-digested residue has taken up residence. Want to detox the system? That's your choice: whole foods or whole food enzymes.

Natural whole food enzyme supplements take away nothing from the body and require that no energy be expended by the body to get rid of them after they've done their job. Natural whole-food supplements contain within them exactly what a perfect food should contain: all the enzymes necessary for complete breakdown and absorption by the body, with nothing left over.

ENZYMES: MODERN BIomedicine

Only in the last ten years have powerful whole-food enzymes been available. Dr. Howell himself, having died in 1988, would certainly have welcomed a supplement as clean and powerful as the natural whole-food enzymes available today, which can be taken along with meals and can serve to help replace the enzymes removed in food processing.
Enzyme supplements are such a simple solution to a whole spectrum of health challenges, many of which are life-threatening, that they are generally not considered by mainstream practitioners. Most MDs are taught to look for the dramatic rescue, the quick-acting drug, the heroic procedure that can snatch the patient from the jaws of death, or whatever. That's more sexy; it’s "real medicine." The first problem is that most medical doctors don't even know of the existence of whole-food enzymes, because such supplements are too inexpensive to be sold by the pharmaceutical companies. Yet. The second problem is that medical doctors have a very limited exposure to enzymes in medical school. The only concept they usually have is what is found in Guyton's Physiology, the standard text. They learn that enzymes are "catalysts," which means substances that cause things to happen but are themselves unchanged in the process. Dr. Howell, who was himself an MD, proved not only was this idea inaccurate, but that there was a grand and dynamic interchange between the enzymes of digestion and the enzymes of all the other life functions, which are called enzymes of metabolism.

Less than 20 digestive enzymes have been discovered; but there may be as many as 5000 metabolic enzymes. Enzymes are in a constant state of flux and re-organization. If this were not the case, many of us would have been dead long ago, because we wouldn't have been able to borrow from our metabolic enzymes to help out our overwhelmed digestive enzymes. Interlocking adaptation: survival. There are several high quality enzyme supplements on the market today. There are also many mediocre or worthless enzymes available. How do you tell the difference?

**WHOLE FOOD ENZYMES**

The best enzymes supplements contain all the necessary vitamins and minerals necessary as cofactors for enzyme activity to take place, as explained above. Without these cofactors being included, the necessary vitamins and minerals will be drawn from the body's reserves, thereby causing an overall negative effect. Remember, by themselves enzymes, vitamins, and minerals are worthless. The only way they function is in each other's presence.

**ENZYME THERAPY**

So once more, unless the patient will eat an 80% raw foods diet, he must take enzyme supplements in order to insure complete breakdown of foods and unclumped red blood cells. The trick is to find an enzyme supplement that will

- be absorbed easily into the bloodstream
- be taken up readily by the cells
- and leave behind no metabolic residue as a result.

Holistic nutritionists have found that there are two obvious benefits to beginning a simple program of enzyme therapy:

- digestion
- blood detox

When enzyme supplements are taken with a meal, most of the enzyme energy is expended in digesting that food. When enzyme supplements are taken on an empty stomach, they are absorbed into the bloodstream and work to break down undigested debris in the bloodstream.

Both these functions are vital to optimum health. The body is the same as the cells – when wastes can't be removed, aging and breakdown occur.
NAME OF THE GAME

With no background in nutrition, the family physician may not be the best source of information when it comes to whole food enzymes. Why? Because the patient is taking the first step in the dangerous direction known as I Can Be Responsible for My Own Health. As Dr. Mendelsohn explained, most doctors don't support this idea, because it tends to take away their control of things. And if you don't think the name of the whole game is Control, just observe any TV channel with a stopwatch and tell me how long you can sit there without someone telling you to take some type of medication. Five minutes? Ten? Your job is to need as many drugs as possible between now and the day you die. Their job is to sell them to you. Does this have anything to do with health? Rarely. This has to do with pharmaceutical economics. Health is an entirely different topic altogether.

Most medical doctors tell patients that diet has very little to do with their particular disease. Ever hear of a medical doctor doing a thorough analysis of a patient's diet before diagnosing him as a diabetic and putting him on insulin for life? Of course not. This is sales and marketing. Occasionally doctors might say that diet may have contributed to a disease, but almost never will they say that diet can cure a disease. Curing disease comes from only one thing: drugs.

GLOWING HEALTH OR MERE SURVIVAL?

A human being is not a static mass of cells, but a living process. Each day we have a chance either to improve overall health, or else just to survive for another 24 hours. Each day, each meal, is an opportunity to strengthen the immune system, to shore up the body's reserves through nutritional choices. At any given moment in time, our health is simply the cumulative result of all these past choices.

Three opposing forces are constantly at work, trying to control our food selection:
1. our informed brain
2. the advertising skills of the food industry
3. non-nutritive food additives whose only purpose is addicting us to certain foods by stimulation of the taste buds and the nervous system

Eating when we're not hungry, or else just enough to get through the day, choosing the most conveniently available foods, the ones with that quick jolt of sugar, or processed fat – this will allow us to survive.

But there's another option available to us – choosing foods that will detox the body, build our immunity, unclog our blood, and optimize the quality of life. Our ability to make rational choices based on the body's real needs rather than on the programmed urges from the food industry – this ability will determine our total health potential.

Look around you. Go shopping, or to the mall. How often do you see an example of this Glowing Health, even among young people? Where is it? Or rather do you see bloated, slovenly, unhappy people with bad skin and blocked colons? Processed foods become our cells. We become processed food. Never underestimate the forces at work 24 hours a day to make us consume as much processed dairy, hydrogenated soybean oil, white sugar, and white flour as possible. We are addicted to the things that poison us.

40/20 If you've hit 40 and are still eating the way you did at 20, chances are you're aging much faster than necessary. You're wearing out, filling up. The body has exhausted its efforts to break down all those chemicals, all those preservatives, all that hydrogenated oil. Since you still take it in, it has to end up somewhere. It does – inside you. With rare exceptions, at 40 you simply can't eat the way
you did at 20. Not if you’re going to be healthy enough to avoid doctors and hospitals. Comfort foods? You need your comfort foods? Poor baby, baby, baby. How comfortable will you be in ICU?

THE MASTER KEY

The best course of action would be to eat a diet consisting of more than 80% enzyme-rich raw foods. No arguments there. But most of us simply can't resist all that conditioning and advertising, and we rationalize to ourselves how "life was meant to be lived and the hell with the rest," etc. And that line of reasoning brings most of us to processed foods. Luckily, today we have a way at least to minimize the clogging, toxifying residues of undigested food.

Everything we put in our mouths is a decision, even if it's an unconscious one. Each food choice poses two questions:

– will this nourish the body? or – will this clog the body?

The cumulative effect of these decisions determines whether we are toxifying or detoxifying day by day – whether we are getting sicker or better, building our immune reserves or using them up, promoting degeneration or slowing it down, moving toward life or toward death …Aging or anti-aging.

ONE SIMPLE STEP

Whole food enzyme supplements can be the key to health, without changing one single other thing. Detox the blood. What's the alternative? The toxins accumulate in the blood. Result: allergies, autoimmune stuff, arthritis, or any type of disease that starts with a chronic low-grade inflammation of something or other. Almost sounds too simple. But that's the hallmark of the classic cure – simplicity. We're not adding anything new. We're simply replacing something that has been artificially removed by food processing: enzymes. We allow the body to find its normal equilibrium. Mainly that just means stop poisoning it.

Unless we take in sufficient enzymes to completely break our food down, we eat too much. Year by year, we balloon up – check out the mall! Even for those of us who are not overweight, we still have a decision to make. If we insist on sticking with the modern American processed food diet, our only salvation from "digging our graves with our teeth" is this: whole food enzymes.

The importance of this chapter can scarcely be overemphasized. No matter what the diet, no matter what the drug program, no matter what condition the body is in, if this issue of enzyme intake is not meticulously addressed on a daily basis, you're wasting your time. And you're really not serious about getting better. Which actually is very common – so many people use illness or the trappings of illness as a power base, a means of getting love/attention/sympathy. Unable to fill these needs as a normal individual, they find their niche, their angle, their leverage in sickness. The more dramatic and life threatening, the better. With any illness or chronic degeneration, a program of enzymes is the starting point, the minimum, the foundation of any healing regimen that has the slightest hope of success. Not vitamins, not soy, not drugs, not Zango or algae or grocery store multivitamins – just simple whole food enzymes.
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