

- FORWARD -

In this small book, **The Root Of All Disease** Mr. Heinrich clearly addresses the need for mineral supplementation to our daily diets, and he expressly describes the necessity for choosing hydrophilic minerals over hydrophobic minerals. If we are to achieve a maximum state of wellness, we must supplement our diets on a daily basis with hydrophilic minerals as outlined in this book.

B.P.Loughridge, M.D.

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# THE ROOT OF ALL DISEASE

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U. S. NATURALS INC.

1-800-845-4153

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This book is about minerals and their importance for a healthy and stable life. The material herein relative to metallic minerals has been researched extensively. The portions relative to plant minerals has not only been researched, much of it comes from the experience gained from personal and customer use of a full spectrum of plant minerals. To begin, I want to address minerals in general.

Minerals, as we know them, are locked in the earth's crust. As land dwellers, our main link with minerals is through a diet of plants that are able to extract and assimilate metallic minerals from the soil as they grow. Our secondary link is from meats of animals that eat plants. Minerals are extremely important for our well being, yet they have always been taken for granted, and few of us have given them a second thought. Until a few years ago, no one knew of or cared about the importance of these essential building blocks that are the fundamental source of life. Now that minerals are enjoying tremendous success in the marketplace, it is only prudent that users learn more about them. Mere knowledge of minerals and their differences may shed new light on the

## The Root Of All Disease

controversy coming from the marketing departments of various firms attempting to cast aspersions on competing products. Thousands of mineral salespeople misrepresent minerals and falsely tout minerals as being the answer to all health problems. True, minerals are probably deficient in nearly 100% of the world's population, but minerals are not the total answer to all health problems. Without them nothing else, including vitamins, would benefit. We must remember that in order for minerals to provide their utmost benefit, we may need to make some lifestyle changes. Extending your life and growing biologically younger is now a rational desire, because we clearly have reasonable processes that will do just that. These changes may include a food selection change, better drinking water, more stretching and exercise, less stress, more rest, less smoking and drinking, and the intake of considerably more usable oxygen. *A complete spectrum of minerals is the benchmark for ultimate and total nutrition, but not the total answer to excellent health.*

During the last ten years, the publicity about minerals became overwhelming, so we saw a number of articles appear about colloidal minerals. I'm sure many of you shared my experience in reading some of this material. Most of the articles were written by individuals who were assumed to be experts in nutrition or at least knowledgeable about nutrition. Some were chiropractors, others were medical doctors, certified nutritionists, and even others who take great pride in stacking all sorts of impressionable capital letters behind their names.

Most of the authors created doubt or made outright statements about the danger of toxic metals in what they called colloidal minerals. In my opinion, few, if any of these writers

## Elmer G. Heinrich

knew enough about their subjects to make a distinction between the so-called “colloidal minerals”, “metallic minerals”, and “pure plant minerals.” Many of these authors downgraded the so-called “colloidal minerals” saying all sorts of things, which obviously are not true. When you investigate these people, it is interesting to note, that by mere coincidence, most of them sell metallic mineral products.

In order for us to understand the importance of minerals, we need to first understand how minerals are composed. Vitamins, carbohydrates, proteins and lipids are all compounds of the chemical element known as carbon. Minerals from the earth are elements which are not carbon and which are not bound to carbon. These minerals participate in a multitude of biochemical processes necessary for the maintenance of health in human beings and animals that inhabit our planet. Nearly everything on earth is comprised of minerals. Your lampshade, stove, wallpaper, flooring and your automobile would not exist if there were no minerals. God made man from minerals and man requires minerals for his mere existence. Every other living creature has the same requirement. There would be no life without minerals! Minerals control millions of chemical and enzymatic processes which occur in the human body at all times. The same is true for animals. This knowledge should make us aware of the importance of minerals for mankind's survival.

Although some are very rare, there are more than 100 mineral elements found on earth. Four of these, oxygen, hydrogen, carbon and nitrogen, make up 96% of our body. The remaining 4% of our body is basically made up in part of the other 70 or more minerals, most of which are no longer readily available to us as I will demonstrate further on.

## The Root Of All Disease

Our government and scientific community have grouped minerals into two categories. Those that are considered to be required in our diets in amounts greater than 100 milligrams per day are called major minerals. Those that are considered to be required in our diets in amounts of less than 100 milligrams per day are called trace minerals. These minerals are in the same class. The only difference is the name and the daily amount required according to the World Health Organization. **There are only seven major minerals.** They are calcium, magnesium, potassium, phosphorus, sulfur, sodium and chlorine. Our bodies should contain significant amounts of each! Trace minerals, on the other hand, are present in the body in very small amounts. It is thought that each makes up less than one-hundredth of one percent of our body weight.

The nutritional experts who represent world governments point to 12 or 13 minerals as being necessary for average health and to another 8 or 10 minerals as possibly providing some benefit. I have always wondered why we have never studied the probable necessity of the other 70 or more minerals on earth! Is it possible these other minerals were, and continue to be overlooked because they just aren't available from the soil in any kind of quantity? In my opinion, this is a very interesting question and one that could be answered with a positive "yes"!

Most physicians and many persons live with the mistaken notion that the average diet somehow magically supplies all the nutrients essential for a healthy life. If you believe that, you will die prematurely and never enjoy the good health God intended for you to enjoy. Several times in the past, I have offered a reward to any physician or person who can

## Elmer G. Heinrich

supply a diet averaging 2000 calories per day that also supplies all the RDA of essential nutrients. I was never challenged because it cannot be done!

When you think about it, minerals are bound to play an important part in our lives. After all, rocks are the parent material for soil that is the main source of nutrition for plants, animals and ultimately humans. While deficiencies of a single mineral are quite common, what happens if we are marginally low in a number of minerals? We have less energy, we are run-down, we feel bad and we appear haggard. These effects can be easily seen when studies are conducted on those persons who are pure vegetarians, those who consume a large amount of junk food in absence of adequate mineral supplements, or those with poor diets in the absence of adequate mineral supplements.

Also, it is a known fact the absorption of many minerals declines with old age. As the body ages, the assimilation process slows down. Additionally, extreme exertion, stress and exposure to environmental pollution raise our requirements for minerals, especially zinc, calcium and iron. In my own personal research I found and am amazed at the number of people who are not aware of the importance of minerals relative to good health. Most of them seem to have resigned to the fact that you've lived a full life if you die at the average age of 76 after suffering from several diseases for years prior to death. This is a pity!

In my estimation, a very small percentage of the people in the world are aware of the important part minerals play for ultimate health and they are likely not getting an adequate amount without consuming a full spectrum of mineral supplements.

## The Root Of All Disease

This stems from the lack of minerals in our present day foods. To grow and reproduce, plants take up minerals from water and soil, as plants have done for millions of years. According to science, millions of years ago the soil near the earth's surface was saturated with dozens of minerals. At least 84 minerals were available nearly everywhere and some areas of the planet did possess 100 minerals. Science has proven the plants of prehistoric times were rich in minerals because there was an abundant supply for them to feed upon from the soil.

When a plant grows it draws the available minerals from the soil reached by its roots. If the soil contains only a few minerals the plant will only draw a few minerals. We now know the mineral content of plants has been severely altered throughout the last several million years and drastically altered during the last 100 years. When man began to till the soil, wind and rain erosion began to take its toll along with continuous cropping which gradually caused the soils to possess fewer and fewer minerals.

Unfortunately, these millions of years of erosion and centuries of unwise farming practices have made good, mineral rich soil a scarce commodity. Soil tests from all over the world have revealed that our soils are severely lacking in minerals. This in turn leaves us with mineral deficient plants with very little food value for us humans or the animals we eat.

Man developed chemical fertilizers in the early 1900's by making or mining concentrated forms of nitrogen, phosphorus and potassium rather than using living compounds as they exist in nature. These living compounds include manure or humus, a rich variegated blend of bacteria, fungi, molds, yeasts, algae, worms, insects and other tiny organisms.

## Elmer G. Heinrich

Without an abundant supply of these compounds, which survive only with adequate minerals, our soils become barren and can barely sustain life. The health and survival of all plants, domestic or wild, depends on the health of the soil and its ability to provide a constant supply of minerals. If there is a lack of minerals in the soil, few of the necessary components of good soil exist so plants become stunted, sick and devoid of much of the food value they contained in pre-historic times.

When man began using artificial fertilizers containing nitrogen, phosphate and potash, it was learned that crop yields could be greatly increased. But what appeared to be a blessing has turned out to be a curse. According to the Complete Book of Minerals for Health by Rodale Press, man-made fertilizers upset the delicate balance of minerals and organisms in humus rich soil by killing off the beneficial bacteria, and lacking in the naturally occurring minerals they are less available to plants. Chemical fertilizers can also saturate plant roots with too much of one nutrient making it difficult for plants or crops to pick up and absorb other minerals they need so badly. If minerals are not available to be pulled from the soil by plants, the nutritional value of our food is drastically diminished.

Where can we get the minerals we need if they are not available in our food supply? Well, about the only method available is to initiate a program of mineral supplementation. That is, take food supplements containing a large number of minerals. Various mineral supplement formulations can be purchased from hundreds of suppliers under literally thousands of labels. However, what the industry considers a large

## The Root Of All Disease

and adequate supply of minerals usually is no more than 16 or 18 minerals at best!

Most of the more popular mineral formulations available today contain no more than 10 to 15 minerals because they are derived from clay, ground up rock and soil and ancient seabeds like the Great Salt Lake in Utah. This type of mineral is known as a **metallic, hydrophobic mineral!** Basically, it will not interact with water because it is not water-soluble. The type of mineral that comes from a plant and has been assimilated or digested by the plant and is known as a water-soluble, **plant derived, hydrophilic mineral.** This is the type of mineral that is most beneficial for all living creatures.

The few metallic minerals that come directly from the earth are hard to digest or assimilate. Many nutritional experts, doctors and food chemists believe no more than 5% or maybe up to 8% of metallic minerals are actually assimilated by the human body. This lack of assimilation occurs because the hydrochloric acid in our stomach isn't strong enough to totally dissolve metals during the normal 15-hour human digestive cycle. The balance, or up to 92%, merely passes through the waste system without benefit.

Minerals, even if they are metallic, are of significant value to balance and metabolize our bodily functions. However, you could not live on soil or rock because it is not alive or enzymatically active like plant derived minerals from raw plants. Plant derived minerals that have not been altered by man-made chemicals are, from a medical standpoint, enzymatically active or living minerals.

What about vitamins? Most of us have been hearing about vitamins since we were children. And even today we

## Elmer G. Heinrich

hear authoritative sources say, be sure to take your vitamins, but seldom do you hear anyone say be sure to take your minerals. Your mother probably reminded you to take your vitamins, but I doubt she ever mentioned minerals. Vitamins are sometimes expected to do more than they are capable. Our bodies can go far longer suffering with a deficiency of vitamins than they can with a deficiency of minerals. Did you know all the vitamins in the world would do us little good without minerals? The minerals in our bodies are so important that the body goes to complicated, even desperate lengths to maintain their balance. If a cell is deficient in a single mineral, it will suffer from a loss of several minerals.

A vitamin can be broken down into its basic elements that are carbon, oxygen and hydrogen. Basically, vitamins are a group of chemically unrelated organic nutrients that are essential in small quantities for normal metabolism, growth and physical well being. Vitamins must be obtained through diet since they are either not synthesized in our bodies or are synthesized in inadequate amounts. Many people have a misconception about vitamins. Thousands have told us they will only use food supplements with "natural vitamins." The so-called natural vitamins do not exist in supplements. Natural vitamins only come from plants. All supplement vitamins are synthesized in a laboratory. Therefore, they cannot be called "natural vitamins." Don't believe anyone who tries to convince you otherwise.

There is a harmony between vitamins and minerals and even though vitamins are nearly ineffective without minerals, they both are necessary. Minerals are quite different from vitamins in their structure and the work they do, but the two

## The Root Of All Disease

enjoy an excellent working relationship. According to Rodale's Complete Book of Minerals for Health, "minerals create a healthy environment in which the body, using vitamins, proteins, carbohydrates and fats, can grow, function and heal itself." It's a known fact that a complete spectrum of minerals raises the acid level of bodily tissues. **What is a complete spectrum of minerals?** I believe a mineral composition or a mineral solution cannot be considered a "complete spectrum of minerals" unless it contains at least seventy minerals. This large number of minerals has to include many of the "rare earth" minerals or there would not be a total of seventy. These rare earth minerals are necessary, in addition to the more commonly known minerals, to raise the acid level in tissues. **Most all bacteria and viruses thrive in and prefer an environment of high pH or alkaline nature.** A complete spectrum of minerals lowers the pH, which raises the hydrochloric acid level, thereby inhibiting bacterial and viral replication. Both extra and intra cellular fluids function properly only because of a carefully maintained ratio of minerals, in conjunction with vitamins, in an acidic solution. The interaction of the two enables the body cells to take in nutrients and dispose of toxins that are the by-products of that metabolism.

A lack of minerals inhibits detoxification. Detoxifying occurs whenever the body begins to expel and eliminate anything that causes the body to be toxic. This can and does occur naturally but if you lack minerals the detox will never be thorough and complete. The poisons will only be completely expelled if you have many more minerals than what most commonly known and nationally advertised brands contain.

## Elmer G. Heinrich

A strong immune system depends on a clean detoxed body and this can only be obtained from thorough excretion of wastes and anything that is not fully compatible with your bodily functions. Normal detoxing at a physical level can range anywhere from extremely mild bowel or kidney movement, skin rash, aches and pains to very intense discomfort. In the area of detoxification, a complete spectrum of at least 70 minerals makes an incredible difference.

Recently, we've begun to hear a lot about enzymes and anti-oxidants and their importance. Enzymes are extremely important for our metabolic functions, but again they do us little good without minerals. Conversely, some enzymes and vitamins are helpmates to minerals. Some minerals are eager workers, but to perform best they need an enzyme or a vitamin or two to stir them into action. As an example, vitamin C can triple iron absorption. Calcium absorption is impossible without Vitamin D and some magnesium. Many minerals act as coenzymes, the so-called catalysts in chemical reactions with vitamins. This means they function as spark plugs, starting chemical actions where billions of chemical reactions take place every day.

At this point you may ask yourself a question. Is all this publicity about mineral deficiencies and the lack of minerals really true and if so, which minerals and what kind of minerals should I be using? In my opinion, at least part of your question can be answered with this little story.

Many movies have been made about the migration of the American settlers in the early 1800s. We all know they had to cross the great plains of the United States. What we don't know or realize is that few of these people settled in one place

## The Root Of All Disease

for a long period. Every few years, they would have to pick up and move. They'd start a small farm in the Midwest such as Iowa, Missouri, Kansas or Nebraska with a milk cow, a couple of pigs, maybe some sheep and a few children. After a few years, Dad would always be constipated and the cow would quit giving milk. The cucumber plants, tomato plants and farm crops would not grow, so they would almost starve. If they were lucky enough to make it through the winter, they'd load all their belongings into a covered wagon and move west with the milk cow in tow. When they found a suitable place they started another farm. In a few years both Mom and Pop would be constipated all the time. The crops, cucumbers and tomatoes would quit growing and the cow would again quit giving milk. And, if they survived the winter, they'd load everything in a wagon and move farther west again.

What was the problem? The soil was being depleted! If they didn't have enough land to allow some to be idle from time to time, the land would become barren due to a lack of minerals. Crops and plant growth took minerals out of the soil. The only way to eliminate this problem was to own a piece of bottomland near a river. Only the lucky farmers lived on the bottomland. When it flooded, they'd get new topsoil and silt and additional minerals from miles upstream. So, if they were fortunate enough to have bottomland they didn't have to move. Why? The fertilizer would come to them during the flood. But if they were out on the prairie with no river or bottomland they would be required to move, otherwise the entire family would become malnourished and nearly starve.

This settling and moving process occurred many thousands of times during the last 200 years. This was necessary

## Elmer G. Heinrich

because the early settlers were actually strip-mining the nutrients from the soils. And if there were little or no nutrients in the soil, their crops and gardens could not grow due to a lack of nutrients and minerals in the soil. Depleted soils cannot possibly supply adequate nutrients to our food chain and our soils are becoming more depleted every year.

Commercial fertilizers were introduced in 1908. Was the soil depletion problem solved? Not by a long shot! Study any commercial fertilizer by reviewing the ingredients listed on the package. You will see nitrogen, phosphorus and potassium (NPK) and most times, nothing more. It's a known fact that you can raise most crops and plants with what little nutrients are still in the soil, and NPK. Most farmers never put back more than 4 minerals. In the first place, more than 4 to 6 minerals would be nearly impossible to obtain. Secondly, if they were obtainable and if farmers attempted to put that many back into the soil they would soon be bankrupt. We now understand no more than 12 or 13 minerals are required to raise large, red, juicy tomatoes, but many times if you were blindfolded while eating, you would have trouble identifying the tomatoes due to a lack of taste. The lack of taste is due to a lack of minerals that causes a lack of Brix. Soil depletion is the only reason today's plants contain no more than 16 to 20 minerals, on average, compared to more than 70 minerals thousands, and maybe millions of years ago.

According to research in the animal husbandry field and The National Science Foundation, animals require at least 45 minerals, 12 essential amino acids, 16 vitamins and 3 essential fatty acids. According to Gary Price Todd, M.D., the human body requires at least 60 minerals for optimal health and basi-

## The Root Of All Disease

ally the same other essentials as animals. But, only about 15 minerals are available in any kind of quantity in most of the food we eat today. We know plants can make vitamins, amino acids and varying amounts of fatty acids if they are healthy from being grown in soils containing abundant minerals. If the soil lacks minerals, the plant is stunted because a plant cannot make minerals. Dr. Gary Price Todd says, "Sick soil causes sick plants, which causes sick animals, and ultimately sick human beings."

If at this point, you still do not grasp the fact minerals play an important role in our lives, you might ask the question – What are minerals like calcium, copper and iron from rocks in earth's crust doing in our living, breathing, active bodies? – a lot – Let me mention a few examples. Calcium is essential for all organisms and is found in the cell walls of plants, all calcareous tissues and the bones of all mammals. Calcium is the fifth most abundant mineral element in the earth's crust. Calcium is also the most abundant mineral in the human body comprising approximately two percent of the adult body weight.

**Calcium** is a construction worker so to speak. It is a builder. Calcium gives bones and teeth their strength and rigidity, and also helps nerves to function properly. As a construction worker, it builds strong bones. It is important to know that calcium, to be absorbed, must be in water-soluble form by the time it reaches the small intestines. Calcium needs acid for proper assimilation. Without the proper strength acids, calcium is not dissolved and cannot be utilized. This is one reason a complete spectrum of minerals, with a low pH, is so important. But even more importantly, if

## Elmer G. Heinrich

utilized properly and in early stages after the foundation is firm, calcium will help build strong bones that will endure a life of havoc. **To save your daughter or granddaughter from bone crippling osteoporosis in old age, you should begin giving her extra minerals and especially calcium between five and ten years of age.** That startling advice comes from new research by pediatrician Steven A. Abrams at Children's Nutritional Research Center in Houston, Texas.

It's critical that young girls get lots of minerals and extra calcium several years before they reach 11. That's because "most bone-forming activity occurs in the years just before and just after the start of puberty," which on average is age 10, says Dr. Abrams. Menstruation begins two or three years later. By age 15, most bone-forming activity has come to a halt, he says. **The higher the bone mass, the lower the odds of osteoporosis later in life.** As we get older and become less active, bone density becomes a problem. Being inactive accelerates bone loss contributing to osteoporosis. Although it's regarded as a woman's condition, 20% of osteoporosis sufferers are men. Men tend to develop osteoporosis a few years later than women, because initially they have more bone mass. So extra minerals are necessary for everyone at all ages. Remember to supplement your calcium intake with adequate amounts of Vitamin D because calcium absorption is nearly impossible without Vitamin D. Incidentally, some very creditable sources say chromium picolinate, used along with a complete spectrum of minerals, can really benefit the user. In my opinion, nothing can produce more results in this area than a complete spectrum of minerals.

## The Root Of All Disease

**Iron** is part of a substance called hemoglobin, which carries life-sustaining oxygen to our cells. Iron, along with copper, appears to have participated very closely together in the evolution of aerobic life, maybe as long as three billion years ago! Iron is rather poorly absorbed and the condition most commonly associated with iron deficiency is iron deficiency anemia. Personally, I believe iron is very important regardless of what some health officials and the media reports say, especially if the iron comes from plants. Iron is stored in the bone marrow and liver. Symptoms of iron deficiency include listlessness, fatigue, memory problems and heart palpitations.

**Copper**, zinc and cobalt, among other minerals are necessary for enzyme activities such as food digestion. Copper also plays a significant role in respiration. Copper may help prevent cancer, especially of the liver. Copper, like zinc, is involved in healing. It is necessary for hair, skin and cell growth. Copper deficiency is widespread and numerous diseases caused by a copper deficiency are quite common. Copper deficiencies have also been linked to loss of hair and lowered resistance to colds.

**Sulfur** may be one of the most important minerals for humans. It is a non-metallic mineral, widely distributed in nature. It is an important structural atom in many proteins and small organic molecules. Sulfur is involved in the quality and maintenance of many types of tissues and structures within the body including hair, fingernails and skin. It combines with nitrogen, carbon and hydrogen and oxygen to build protein, a main ingredient of muscles, skin and organs. It has been called the "beauty mineral" because it enhances those body externals. **Sulfur also plays an important role in the production of insulin. Diabetics**

## Elmer G. Heinrich

**should consume lots of sulfur.** We know of many Diabetics who have virtually eliminated the disorder after consuming a mineral composition containing large amounts of sulfur for six to twelve months. Sulfur has also been used with favorable results in treating arthritis because it is an integral part of the amino acid, cystine. It aids in healing surface wounds and skin disorders such as psoriasis and eczema. I'm convinced none of us get enough sulfur and I believe the RDA should be increased by at least thirty times. Look for foods and mineral products that contain high amounts of sulfur.

**Sodium** and **potassium** regulate water balance and aid in digestion. If it were not for these two minerals we would bloat or swell up with water or we would dehydrate, dry out or die. Potassium is an extremely important mineral.

**Phosphorus** is also an extremely important essential major mineral, but it receives little attention from many nutritionists because, supposedly, it's abundantly available in all foods. Due to soil depletion this is not necessarily true today. Our bodies contain about two pounds of phosphorus that, when tied to calcium, helps give strength and rigidity to bones and teeth. It also controls energy release. Phosphorus has more functions in the body than any other mineral. A lack of phosphorus causes us to overeat. In fact, according to the Complete Book of Minerals for Health, if our body has too little phosphorus we'd have to eat practically nonstop just to maintain basic metabolism. Maybe this is a reason for so much obesity around the world! I have been studying overweight people for fifteen years. I believe most are overweight because they are minerally deficient in general and severely deficient in phosphorus. They continually eat more and more

## The Root Of All Disease

attempting to satisfy a craving, which is caused by a lack of phosphorus and other minerals. The excess food makes them become overweight, which in turn requires more minerals to function, thereby requiring more food in an attempt to satisfy an even larger craving. This can continue to perpetuate. Most overweight people have a toxic body and a complete spectrum of minerals can greatly reduce that toxicity.

I have witnessed thousands of people lose weight naturally after they began to consume a full spectrum of 70 or more minerals on a daily basis. People don't eat as much when they get more minerals. They detoxify and they digest their foods much more thoroughly as well. Better digestion means less constipation, more energy, less sluggishness, more motivation, better attitude, etc. Minerals make it happen! The proof is as obvious as sunlight.

Our body is made up of about 100 trillion cells, each one bustling with activities that depend on magnesium. **Magnesium** is essential to all living creatures and has electrochemical, catalytic and structural functions. In fact, next to potassium, magnesium is the most plentiful mineral inside each cell. Magnesium is closely related to calcium in regulating and controlling nerve impulses, especially the heart beat. Magnesium helps deliver energy by activating the production of a special substance called adenosine tri-phosphate which extracts energy from the foods we eat and delivers it to each and every one of those billions and billions of cells in our bodies, whether they are in the heart, lungs, kidneys, brain, blood or bone. Magnesium is one of the most important major minerals, and a deficiency in it appears to be the basic cause of atherosclerotic calcium deposits.

## Elmer G. Heinrich

**Chlorine** is another one of the major minerals! Chlorine's intended use from Mother Nature was not to disinfect our water or swimming pools, but to help digest our foods. Chlorine is found in virtually all of our foods. As a part of hydrochloric acid, chlorine rallies the digestive juices of the stomach to help digest proteins. A combination of hydrochloric acid and powerful digestive enzymes gobbles up food particles, mashing them into a semi-fluid pulp called chyme, which is squirted into the upper intestine for final digestive breakdown. Chlorine helps detox the liver and it's a terrific stomach anti-parasitic. It helps eliminate anaerobic bacteria. Here is something of importance relative to chlorine. Chlorine in water is entirely different than chlorine in food. The chlorine used to disinfect water is an activated form of chloride with absolutely no nutritional value and the chlorination of water may, in fact, cause some serious health problems.

The previous review of some of the more recognizable minerals is important, but we must think about some of the rare earth minerals most people don't recognize. Just because few, if any, tests or studies have been conducted, they should not be overlooked. I truly believe these "unheard of" minerals play a very important part in overall good health. Try to look for mineral supplements with most, if not all, of the following minerals: Boron, Barium, Beryllium, Bismuth, Bromine, Carbon, Cerium, Cesium, Cobalt, Dysprosium, Erbium, Europium, Fluorine, Gadolinium, Gallium, Holmium, Indium, Iodine, Iridium, Lanthanum, Lithium, Lutetium, Neodymium, Niobium, Osmium, Palladium, Praseodymium, Rubidium, Samarium, Terbium, Thallium, Thorium, Vanadium, Ytterbium, and Yttrium.

## The Root Of All Disease

We could have written much more about major minerals, but what about trace minerals? According to our government, the trace elements that are required for human health are iron, iodine, copper, manganese, zinc, molybdenum, selenium and chromium. My experience with minerals over the last twenty years has basically proven we need many more minerals than those proposed by our government. I believe all of the rare earth minerals mentioned in the previous paragraph are extremely important for protracted health, especially if they were available from plants.

Minerals initiate, regulate and control every organ and function in our bodies. Proper breathing depends on minerals. Mental and physical ability depend on minerals. Heart and blood pressure stabilization is directly related to minerals. Although other factors play a part in high blood pressure, minerals are the key to regulation. When the body or any organ becomes stressed out, it will require more nutrients and oxygen to keep it going. Minerals help the body better utilize the oxygen it receives. When stressed, the heart has to pump blood more forcefully to supply enough blood to the organ that needs it. The stronger the heart is required to pump the higher the systolic blood pressure will be. The diastolic pressure may also go up. To get a true reading, medical professionals require you to be relaxed or at rest. The blood pressure in a relaxed or rest state is called "basal" blood pressure. People in the hypertension state usually have the average systolic pressure above 140 and the diastolic pressure above 90.

When a person takes in excessive amounts of salt, the body may have to remove the excess to avoid poisoning. The body will need to collect more water because the salt has to

## Elmer G. Heinrich

be dissolved in liquid. The kidneys will have an additional workload in order to get rid of all the excess salt and water. This means the kidneys will need more energy and nutrients, especially minerals to keep them functioning properly. During the salt and water elimination process the systolic pressure will go up because more blood has to be pumped out of the heart. If the kidneys cannot perform properly due to a lack of nutrients, even when the blood pressure is raised, the body stores the salt water and the ankles or legs will swell. Also, all the excess body tissue, especially fat, will require more energy to feed the extra fat in the body. This is the main reason obese people should give strong consideration to losing weight and consuming more minerals. A full spectrum of minerals will help them lose weight.

Mineral-insufficiency and trace-element-insufficiency problems are actually more likely to occur than are vitamin-insufficiency situations. Those at increased risk of such insufficiencies include people who eat low-calorie diets, the elderly, pregnant women, people on certain drugs (such as diuretics), vegetarians and those eating foods from areas where the soil is extremely deficient in certain minerals. The soil of Alaska, for example, is very rich in selenium, while the soil in certain parts of China and New Zealand is very poor in selenium. Thus, you can eat foods from those areas, eat a perfectly "balanced" diet, as recommended by most medical doctors, take the average mineral supplement, and still develop severe mineral deficiencies or trace-element deficiencies that can only be averted through dietary change and supplementation with a complete spectrum of minerals.

Sub-optimal intake can be due to factors other than soil

## The Root Of All Disease

depletion. These factors are as diverse as the effects of acid rain and the over-refining, over-processing of foods.

Our vulnerability to even minute dietary imbalances in minerals can be appreciated by comparing, to begin with, our daily mineral intake (about 1.5 grams) with our total intake of carbohydrates, proteins and lipids (about 500 grams). Thus our mineral intake represents only about 0.3 percent of our total intake of nutrients, yet minerals are so potent and so important that without them we would not be able to utilize the other 99.7 percent of foodstuffs and would quickly perish.

There has been a strong tendency on the part of some dietetic and medical professionals to discourage people from taking more than the RDA's (Recommended Daily Allowances) daily values of minerals that can be obtained, they say, in the typical American and European diet. Unfortunately, numerous studies have shown repeatedly that this is very poor advice. It is a proven fact that many, possibly most, people on earth are not getting the RDA's, even for the recognized minerals in their daily diets. Again, this is because most of our raw foods contain a minimal number of minerals and even become more superficial when they are over processed and over cooked. A lack of minerals can place stressful situations upon our resistance to disease. Supplementation, therefore, not only seems advisable, it is advisable!

Evidence is accumulating from recent studies that mineral/ trace-element supplementation may help prevent various forms of some degenerative processes. Proper supplements can eliminate many of these processes, even after they are detected. Minerals are especially important in this area to make vitamins more beneficial.

## Elmer G. Heinrich

As you've already heard, plants can make vitamins and naturally from our mineral experienceduring the last twenty-five years, I believe we should be using plant minerals. However, as stated previously, *plants cannot make minerals!* So, where do we get them? One source could be The Rockland Minerals, now more commonly referred to as TRC Minerals, because plants do synthesize minerals. I am the Chairman of the Board of The Rockland Corporation and TRC Nutritional Laboratories and U. S. Naturals, Inc., all of Tulsa Oklahoma. I am also the Chairman of the Board of TRC Minerals, Inc. of Emery Utah. TRC Minerals is the World's largest producer of plant derived minerals for human consumption. The TRC Minerals are utilized to make numerous private label products around the world. Naturally, the TRC Minerals are used in many Rockland products and in U.S. Naturals' fabulous product known as **Sizzling Minerals**. We know for certain TRC's Minerals provide the best overall "source of pure plant derived, water soluble minerals on earth." Many major companies apparently believe this as well because they have tested most if not all the others and they wouldn't think of substituting the TRC minerals with any of the others on the market.

As a company we have studied the effects of our minerals for more than twenty years. The results were amazing! I had personal experiences that would nearly make one believe in miracles. We have received thousands of phone calls and letters from our mineral customers who proclaim unbelievable cures, alleviations and astonishing benefits from the use of plant minerals. However, we are not allowed to publish this information. By law, it must be suppressed or we

## The Root Of All Disease

could be accused of practicing medicine without a license. Isn't this ridiculous? You could have the best health improvement product on earth but you aren't allowed to publish its merits if you're not a member of the drug society. I believe the suppression of information that might prove useful is contrary to the maturity and health of any free society.

Even though we are not allowed to tell people the truth, our trial and error tests and observations of the reactions and testimonials from thousands of people have convinced us that nothing is more beneficial than a complete spectrum of pure plant derived minerals, especially a plant mineral composition with a low pH and lots of sulfur. The TRC minerals are very acidic which helps raise the acid level in the digestive area, which in turn promotes better food assimilation. As mentioned previously, a high acid level inhibits anaerobic bacteria and viral replication. In my opinion, the main reason the TRC Minerals provide such tremendous benefit is because they contain an unusually high amount of sulfur. Sulfur also aids in the utilization of calcium. As an example, many middle-aged women have reported some interesting facts. They were severely calcium-deficient when they began to consume Rockland or TRC Minerals. After using the liquid minerals at two ounces per day for more than a year, they were no longer calcium-deficient. This occurred without the aid of additional calcium intake. Maybe this occurred because of the high amount of sulfur. Incidentally, it is my opinion that we may not require nearly as much calcium as assumed if we supplemented our diets with a complete spectrum of minerals that come from plants. I truly believe this to also be true with respect to the RDA of other minerals.

## Elmer G. Heinrich

We may not need nearly as much as previously assumed if we were using a complete spectrum of plant minerals.

Have I captured your attention, relative to minerals, since the beginning of this book? If so, maybe you can help answer this question. Just how important are minerals for good health? And, do minerals prevent disease? Let me recite a now famous statement from Dr. Linus Paling, two time Nobel Laureate. He said, in his opinion, **“One could trace every sickness, every disease and every ailment to a mineral deficiency!”** If his statement is true, and I believe it is, **“The Root of All Disease”** is a lack of minerals! I have been monitoring and studying thousands of mineral deficient people for twenty-five years. In my opinion, heart disease is a direct result of a mineral deficiency! Did you know we lose more people in the United States every year from heart disease, than we have lost in all of our wars combined since the signing of the Declaration of Independence? This is staggering and the number is increasing each year!

The heart surgery industry in America is booming. We have the statistics from several years ago and I'm sure they are even more staggering now. According to the statistics of the American Heart Association, in 1995, 1,460,000 angiograms (the diagnostic procedure that starts the ball rolling) were performed at an average cost of \$10,880 dollars per procedure. This resulted in 573,000 bypass surgeries at \$44,820 dollars per surgery and 419,000 angioplasties (the balloon procedure for opening up arteries) at \$20,370 dollars each. The total bill for these procedures was over \$50 billion dollars that year. Now, if you have trouble grasping the magnitude of \$50 billion dollars a year, try

## The Root Of All Disease

\$137 million dollars per day, or \$5,700,000 per hour or \$95,000 every minute.

According to Julian Whitaker, a medical doctor, other than their costs, the only thing definitely known about these procedures is that they do kill people. Roughly one in 25 patients having bypass, and about one in 65 patients undergoing angioplasty die from the procedure. I am not a doctor, but from my experience of watching and studying thousands of people, I am convinced heart disease would be dramatically reduced if everyone consumed a full spectrum of plant-derived minerals every day.

Nearly everybody, especially so-called nutritional experts, misunderstand or don't appear to know anything about plant-derived minerals. They group plant-derived minerals with metallic minerals that come from oyster shell, calcium carbonate, limestone, soil and clay and sea salts. Supposedly too much of some of these metallic elements have toxic effects on the body. Again, according to Dr. Todd, the human body is not designed to absorb or assimilate and use metallic minerals. The health food industry recognized the metallic mineral absorption problem, of no more than 8%, in the mid 70's. Chelated minerals were developed in the laboratory. This process involved wrapping amino acids or protein around metallic minerals to help the body metabolize them. This did help the problem because these added dissolvers did increase the assimilation to about 40%. However, chelated or not, the fact remains, they are still metallic minerals.

Don't be misled with this newly formed Ionic Mineral jargon. Someone just found a new name for an old metallic element solution that really doesn't contain many minerals

## Elmer G. Heinrich

but it does contain a lot of sodium. The definition of an ion is “an electrified atom or group of atoms.” This could describe nearly anything on earth.

We all know about toxic metals (toxic metallic minerals) and most people have been led to believe the so-called toxic minerals are bad regardless of their source. This is not necessarily true. Let's take aluminum as an example. Aluminum, as found in the earth is a metallic mineral. It has always bothered me to learn that so many of our supposed leaders, intellectuals, doctors and nutritionists know so little about this element. It has been criticized beyond belief. Granted, metallic aluminum, like that which can be dissolved or leached from aluminum pans or utensils may be extremely harmful and I truly believe it is. But, what about aluminum from food? You're probably asking yourself, “Did he indicate foods contain aluminum?” Don't be surprised because the answer is a resounding YES!

Foods also contain other supposedly toxic minerals. Questions have been raised about the presence of Aluminum, cadmium, lead and mercury and other possibly toxic minerals in TRC's plant derived liquid minerals and Sizzling Minerals. These questions are certainly reasonable and there are theories on both sides of the issue. However, experimental trials with measurements of toxic mineral levels over time are a more accurate way of answering these questions than theories, however reasonable they may seem.

Gary Price Todd, M. D., an ophthalmologist practicing in Waynesville, North Carolina conducted such a trial. Dr. Todd worked with TRC's liquid minerals for more than five years. He asked his study group to take three ounces of the TRC liq-

## The Root Of All Disease

uid minerals each day, a potent dose, (equivalent to twelve wafers of Sizzling Minerals) along with three grams of vitamin C and a multiple vitamin/minerals supplement. He chose to “follow” aluminum, cadmium, lead and mercury levels in hair specimens over time. He said hair levels of potentially toxic minerals are more accurate than blood levels, as our bodies “clear” these minerals from the bloodstream relatively fast.

Dr. Todd reports that at three months time, levels of aluminum, lead and cadmium had all risen slightly. Mercury was not significantly changed. At four to six months time, levels of aluminum, lead, cadmium and mercury had all decreased dramatically. In a different group of individuals, measured before treatment and at eight and sixteen months, levels of aluminum, cadmium and lead all declined. Mercury in this group was not at detectable levels either before or after treatment. Dr. Todd points out that successful clearing of potentially toxic metallic minerals (as well as other potentially toxic substances) from our bodies, first requires “mobilization” of these minerals from the “storage” sites such as bones, teeth, etc. If this “mobilization” is successful, the potentially toxic minerals are then cleared from the body and measured levels decline over time. This occurred with every individual in Dr. Todd’s study.

Dr. Todd actually wrote a paper entitled “Toxic Mineral Elimination by Mineral Substitution”. He stressed the need for Plant Minerals to detoxify the body in order to remove the toxic metallic minerals.

Let’s get back to aluminum. All aluminum that comes from food is pre-assimilated by the plant, and it is naturally

## Elmer G. Heinrich

tied to hydrogen in the form of sulfate. Plant derived minerals are naturally rich in sulfate. Naturally occurring aluminum sulfate minerals are called alums, which are used in styptics and antiseptics. We all know aluminum hydroxide is used extensively as food additives throughout the world. Therefore, if aluminum is harmful, why have you lived so long, and why is it used in food processing or as ingredients in deodorizers, antacids, and face makeup and nearly without exception in many municipal water systems throughout the world? Alum sulfate increases stomach acidity and improves digestion and the absorption of nutrients, stimulates gastric and pancreatic secretion and has a mild diuretic effect. Incidentally, the World Health Organization estimates that the average adult dietary aluminum intake ranges between 10 and 15 milligrams (mg) daily. See if you agree after reading the next several pages.

Aluminum is one of the most abundant minerals on earth, second only to silica. It is in virtually everything we touch, most of the air we breathe, most water we drink and in most food we eat. I am particularly alarmed to learn government officials in some countries either are not aware of or want to suppress the fact that aluminum is also one of, if not the most abundant minerals in many of our foods! One Scandinavian country says it is unlawful to consume more than 2 mg of aluminum per day, regardless of the source! We spoke to several well-known laboratory and food chemists about this country's legal limits. Needless to say they all had a belly lurching laugh over this. Can you imagine an entire country, in this advanced age, being so uninformed about food? Apparently, the U. S. government is aware of alu-

## The Root Of All Disease

minum in food because the U.S. does not have an established limit. If we did, we would have a hard time staying alive. This makes me wonder what foods people in this Scandinavian country eat.

We were able to obtain copies of the results of lab tests for aluminum in certain plant foods. The results came from the A & L Laboratory Agronomy Handbook used by many agronomists worldwide. The page headings state "Plant Analysis Guide Nutrient Sufficiency Ranges." I understand the tests are made on plant petals, vines or even the fruit or nut, depending on the type of plant bearing the food. The amounts are listed in parts per billion (PPB). Before I go any further, let me say that PPB and MCG/L (micrograms per liter) are considered one and the same. The test results have a low amount and a high amount that were obtained from different tests on the same food or plant species. I am listing the averages below.

<u><b>Plant Or Food</b></u>	<u><b>Aluminum In PPB</b></u>		<u><b>Plant Or Food</b></u>	<u><b>Aluminum In PPB</b></u>
Bananas	97,000		Peas	45,000
Coffee	97,000		Peppers	75,000
Pineapple	100,000		Potatoes	100,000
Oil Palm	98,000		Root Crops	140,000
Asparagus	90,000		Tomatoes	90,000
Beans	165,000		Corn (at tasseling)	140,000
Brussels Sprouts	65,000		Mint	140,000
Celery	190,000		Peanuts	75,000
Cucumbers	90,000		Small Grains	135,000
Head Crops (lettuce)	90,000		Soybeans	75,000
Leaf Crops	50,000		Wheat (high yield)	140,000
Melons	65,000			

I suppose you are surprised as I was the first time this was brought to my attention. I was even more astounded recently when we were visited by one of our Japanese distrib-

## Elmer G. Heinrich

utors and their Ph.D. food chemist. He gave us a book published by the Japanese FDA (JFDA), listing the minerals found in every conceivable food. (This book is available. Contact your local bookstore and ask for ISBN #1-56959-904-1). The categories in this book include many species of fish, fowl, all edible animal meats, nuts and berries, fruits, vegetables, and all types of beverages. All total, there are more than two thousand listings and every one contained aluminum. A total of only twenty-eight combined minerals were found, in these two thousand edible foods. This is a good example of the mineral deficiencies throughout the world! Many of these foods also contain arsenic and lead. Below you will see a few of the listings that were not included on the previous page. The amounts in this book are relative to micrograms per only three and one-half ounces (3 1/2 oz.) of each food item.

### JFDA Aluminum Amounts in (3 1/2 oz) Foods

<u>Plant Or Food</u>	<u>Aluminum In PPB</u>	<u>Plant Or Food</u>	<u>Aluminum In PPB</u>
Round Herring Sardines	34,000	Bologna	1,900
Scallops	6,900	Pork Products	2,400
Shrimps	1,300	Liver Paste	1,100
Condensed Skim Milk	670	Green Asparagus	610
Skim Milk Powder	1,200	Turnip	1,200
Cheddar Cheese	2,000	Pumpkin and Squash	1,500
Sugukina	3,600	Royal Fern	19,000
Radish	1,500	Eggplant	13,000
Apricots	1,000	Avocados	390
Figs	1,600	Sencha Tea	100,000
Chili Powder	6,000	Bancha Tea	332,000
Curry	23,000	Oolong Tea	247,000
Cocoa	17,000	Allspice powder	7,300
Clove Powder	14,000	Black Pepper	8,100
Horseradish powder	3,900	Cinnamon Powder	7,900
Sage Powder	64,000	Nutmeg	113,000

## The Root Of All Disease

It is interesting to note that a glass of skimmed milk contains as much aluminum as one week's supply of Sizzling Minerals wafers or TRC's liquid minerals that are leached with only pure, contaminant free water. Please review tea again. Today, everyone is touting the benefits of tea. Note that three ounces of Bancha Green tea contains more aluminum than a 60-day supply of Sizzling Minerals. The most interesting fact is all of the consumables listed contain minerals that are negatively charged by Mother Nature. All metallic minerals, including those "washed in" minerals, like those from the Great Salt Lake, have a natural positive charge from Mother Nature. This zeta potential is easily verifiable and indisputable.

The way I calculate the amounts listed on the JFDA Report, people allowed no more than 2 mg per day could not eat more than one thin slice (cut off the end) of a banana each day. People allowed 4 mg could eat no more than a small potato each day. And what about salads? Review the list again and make your own decision. Apparently, plant derived aluminum is not harmful, don't you think?

I had the opportunity to speak to many people while participating in a National Health Foods show in Anaheim, California in early 1995. I directed a simple question to more than forty people on an individual basis. Several had Ph.D.'s in food chemistry, at least eight of them were certified nutritionists, two were medical doctors, four were chiropractors and the balance were health food store owners. My question to each was "would you eat food if you knew it contained aluminum, arsenic, lead or nickel?" Without hesitation each person replied "absolutely not!" I was shocked to learn that so many supposedly well-schooled nutritional people were unaware that these

## Elmer G. Heinrich

minerals can be found in nearly all the foods we eat. To prove my point we contracted a well-known reputable laboratory to perform a spectrographic test for total mineral content on several well-known foods. The lab purchased these food items from a Midwest supermarket. The test results are listed below.

<p><b>Broccoli</b>            Aluminum            Boron            Calcium            Chlorine            Copper            Iron            Magnesium            Manganese            Nickel            Phosphorus            Potassium            Silicon            Sodium            Strontium            Sulfur            Titanium            Zinc</p>	<p><b>Grapes</b>            Aluminum            Barium            Boron            Calcium            Chlorine            Chromium            Copper            Iron            Lithium            Magnesium            Manganese            Nickel            Phosphorus            Potassium            Rubidium            Silicon            Sodium            Strontium            Sulfur            Titanium            Zinc</p>	<p><b>Almonds</b>            Aluminum            Barium            Boron            Calcium            Chlorine            Chromium            Copper            Fluorine            Iron            Magnesium            Manganese            Nickel            Phosphorus            Potassium            Rubidium            Silicon            Strontium            Sulfur            Titanium            Zinc</p>
<p><b>Apples</b>            Aluminum            Arsenic            Barium            Boron            Calcium            Chlorine            Copper            Fluorine            Iron            Lead            Magnesium            Manganese            Nickel            Phosphorus            Silicon            Sodium            Sulfur            Titanium            Vanadium            Zinc</p>	<p><b>Carrots</b>            Aluminum            Barium            Boron            Bromine            Calcium            Chlorine            Copper            Fluorine            Iron            Lithium            Magnesium            Manganese            Nickel            Potassium            Phosphorus            Rubidium            Silicon            Sodium            Strontium            Sulfur            Titanium            Zinc</p>	<p><b>Tomatoes</b>            Arsenic            barium            Boron            Bromine            Calcium            Chlorine            Copper            Iron            Lithium            Magnesium            Manganese            Nickel            Phosphorus            Potassium            Selenium            Silicon            Strontium            Sulfur            Titanium            Zinc</p>

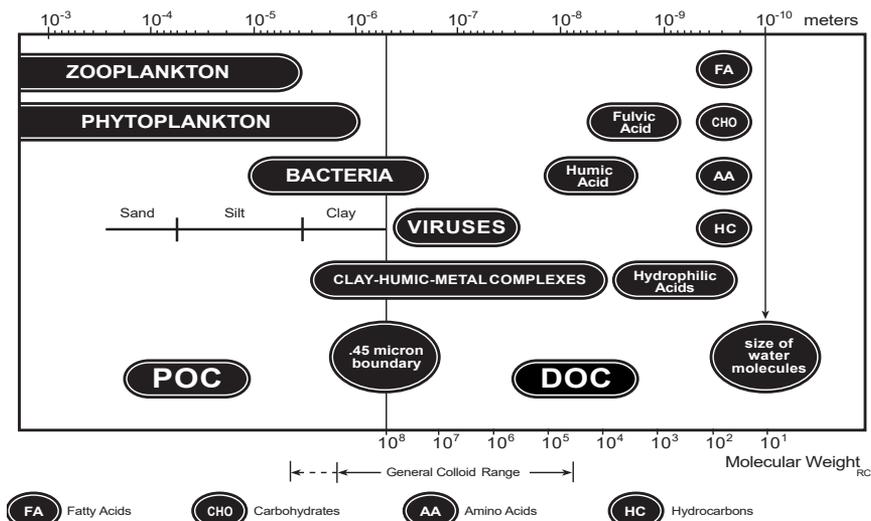
## The Root Of All Disease

Nearly all plants contain aluminum, and if your mineral supplement contains little or no aluminum, it is not plant derived. If it is not plant derived, it is also not negatively charged. Therefore, it probably is not very well assimilated or absorbed. According to food chemistry, plant derived minerals are 100% absorbable. If this is true, comparing any metallic mineral to a plant-derived mineral would be like comparing sawdust to oatmeal. Pure plant derived minerals are the result of plants converting hydrophobic metallic minerals to hydrophilic (water soluble) minerals through the root system by a process known to science as assimilation through plant synthesis. By this process the metallic mineral is assimilated or digested by the plant, therefore it can be more easily assimilated by the human body. This natural process basically side steps the normal digestive time of about 15 hours as required for the small amount of metallic minerals actually utilized.

Plant minerals like those obtained from tomatoes, broccoli, potatoes, oranges or any other food grown from the earth are different than metallic minerals. Their size and molecular weight is much smaller than metallic minerals and in most cases the plant minerals are attached to an additional molecule even though they possess the same name. I predict that the scientific community will change the name of plant minerals in the future. I believe this will occur after they eventually realize plant minerals are composed differently and function differently than metal elements.

The Rockland Minerals were particle sized by Dr. Ranville of the Colorado School of Mines. Please review the logarithm scale on the following page. Dr. Ranville supplied this to us.

# Elmer G. Heinrich



Basically, the scale reveals that clay, silt and hydrophobic metallic minerals, on average, are considerably larger than hydrophilic acids or hydrophilic plant minerals. The figures at the top from left to right are measurements in microns. As an example,  $10^{-4}$  is 10 times smaller than  $10^{-3}$ , and  $10^{-9}$  is 10 times smaller than  $10^{-8}$ , etc. The exponents of 10 clearly indicate that bacteria, viruses, clay and humic metal complexes are considerably larger than hydrophilic complexes such as hydrophilic plant derived minerals. Pure plant minerals can be pumped through a pharmaceutical grade, .01-micron (absolute) filter. Most metallic minerals will not pass through this small membrane. Only the water passes through. As indicated, a water molecule is only slightly smaller than hydrophilic complexes. The small size and water solubility is one of the reasons so many nutritionists believe plant minerals are much easier to assimilate or absorb than metallic minerals. The small size of a plant mineral gives it much more surface area. Therefore, the Hydrochloric Acid in the

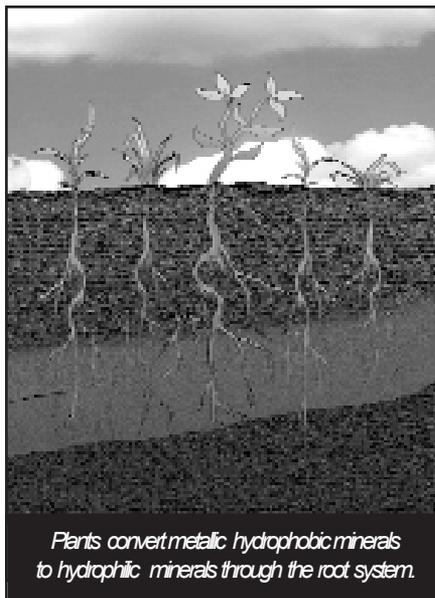
## The Root Of All Disease

stomach comes in contact with considerably more surface area allowing for much more and possibly 100% assimilation. The bottom portion of the scale relates to the weight of the particle, which is measured in atomic mass units or AMUs or Daltons. A Dalton is a measurement of molecules and atoms. When reviewing the scale it is plain to see that the molecular weight of hydrophilics is considerably less than metallic complexes. In short, this clearly indicates there is as much difference in, generally known, "colloidal minerals" and "plant derived minerals" as day and night. When you study the organic carbon continuum (logarithm scale) it is easy to understand why water-soluble plant minerals are much more effective than metallic minerals.

In addition to being water-soluble, plant derived mineral extracts that have been predigested by the plant are naturally acidic. This alone makes important elements like calcium and iron more easily absorbable. As revealed in the preceding logarithm scale, a plant mineral is as much as several thousand, and with some, at least a hundred thousand, and others as much as a million times smaller than the smallest metallic mineral. The average plant derived mineral is less than 0.00001 micron in size that could conceivably be 1/10,000th the size of a red blood cell. Their small size gives them an enormous surface area. It has been calculated that the plant derived minerals in one ounce of TRC's Liquid Minerals or two Sizzling Minerals wafers, would have a total surface area of approximately 55 acres of land. That's billions of tiny electrically charged minerals. And tests have proven that TRC's Minerals (like all plant minerals) have a natural negative zeta potential or natural negative electrical charge.

## Elmer G. Heinrich

All plants, fruits and vegetables contain converted or assimilated metallic minerals, which become negatively charged through the plant's synthesizing process. In order for minerals to be quickly and properly absorbed through the intestinal membrane, they must be negatively charged. When you eat plants or a plant's fruit you are eating plant



derived minerals in an already combined and electrochemically neutralized form. These negatively charged water-soluble minerals from plants are non-toxic in reasonable dosage. For example, iodine in plant-derived form is one of the elements for good health. And this is really interesting; if you drank even 2 grains of free iodine, it would kill you. But in its plant-derived form, iodine is not only harmless, it is beneficial. The same is true for plant derived arsenic, lead, aluminum and other minerals considered toxic in their metallic form.

Hundreds of people continually seek information on TRC Minerals. Therefore, I believe it is appropriate to include as much information as possible in this book.

According to science, the surface of the earth has changed significantly since its inception. One of these changes apparently occurred approximately 70 million years ago in an area of the United States that is now known as Emery County, Utah. Supposedly, a glacier or other causes of

## The Root Of All Disease

earth movement buried a large quantity of vegetative matter that may have been a dense growth or a washed in bog of numerous plants that, according to Scientists, accumulated more than 70 million years ago. Today, The Rockland Corporation, a 25-year-old company, through a sister company known as TRC Minerals, Inc., controls three leases that encompass more than 800 acres of Senonian Compost. You might ask, "What is Senonian Compost"? This is TRC's branded name for the organic plant humus, others, and we have always referred too as humic shale. Generally, shale produces OIL for petroleum in the eyes of geologists and that thought prevails with the TGA in Australia and other Federal Food regulators around the world. The Humic Shale description was given to us in 1983 and we wrongfully carried on this name since that time.

After careful study of ancient history we found that the period between 70 million and 90 million years ago is referred to as "The Senonian Period". The compost in the TRC Mine accumulated during that period so therefore our trademarked name, Senonian Compost™. TRC's three Senonian Compost leases are registered with the State of Utah as lease #45716, Lease #42844-A and Lease #45717. The property is leased from the State of Utah, Board of State Lands and Forestry and Division of State Lands and Forestry, Department of Natural Resources. All mining from the sites is controlled and inspected by the Federal Bureau of Land Management (BLM). On average, the Senonian Compost in these leases is about 30 feet thick, providing reserves of approximately 32 billion metric tons that is sufficient to produce at least 1 trillion gallons of TRC's Liquid Minerals. This

## Elmer G. Heinrich

amount would provide enough plant mineral powder to make 304 trillion (304,000,000,000,000) Sizzling Mineral wafers. "Basically, this humic matter is a prehistoric deposit of plants which was or still is under great pressure from the earth. All of the moisture has been compressed out of the Senonian Compost and what remains is nothing more than prehistoric plant derivatives."

According to scientists, this vegetate was formed when earth's fertile, mineral-rich soils produced lush green forests and wholesome, succulent, wild fruits and vegetables. This was the era when the soils near the earth's crust contained at least 84 minerals. The numerous mineral elements available at the time may explain why the plant eating Brontosaurus reached a body weight of 70,000 pounds, yet had a mouth no larger than a horse.

The Senonian Compost deposit was discovered in 1926. By 1930, trial and error tests revealed that minerals could be extracted from the humus with water through a natural leaching process. Continued tests over the years also revealed that the compost contained numerous minerals that came from plants rather than normally recognized metallic minerals that come from ground up rocks and soil. These plant minerals have been sold to millions of satisfied customers since 1931. This 60-year track record of safety and customer satisfaction, at the time, convinced our company to introduce this great mineral supplement to the retail market in 1983. We chose to introduce the product under the name "Body Toddy." Body Toddy was later changed to Mineral Toddy. The Mineral Toddy name was sold and the pure original product is now sold under numerous names including, Body Booster, Senonian Juice and Sizzling Minerals. Initially or beginning in

## The Root Of All Disease

1983, Rockland purchased the minerals from the Clark family which controlled a lease(s) of approximately 20 acres in Emery County, Utah. Records indicated the lease(s) were in the name of an Aunt to the Clark brothers who continue to produce their own minerals. We discontinued purchasing from the Clarks in 1985 when it became apparent they could not consistently provide us a liquid product with more than 27 minerals.

Rockland opened the original "Rockland Mine" in 1986. It was later discovered that this mine contained a considerable amount of coal mixed with the humus. This always bothered us because you cannot leach any minerals from coal! Eventually, we had a dispute with Dave Taylor, our mining and leaching contractor due to improper leaching and sanitation practices and undesirable business tactics that led to his termination. A later dispute occurred when he, in my opinion, basically asserted squatters rights to our property. This motivated TRC to move to an improved mine location in 2001 which contained a much higher grade of vegetable.



The new TRC mine contains only pure Senonian Compost with no coal mixture. This mine portal is about one mile from the original Rockland Mine and two miles from the Clark mine.

## Elmer G. Heinrich

Initially, or beginning in 1986, all of the Compost that was mined from The Rockland Mine was transported 1,150 miles to Tulsa, Oklahoma. We spent two years learning how to leach (by trial and error testing) more than 70 minerals with nothing other than pure water. This was a tremendous challenge! Hundreds of different leaching techniques or methods were utilized in an effort to improve the product. We knew people received reasonable benefit from the 27 minerals we had been selling. As a matter of common logic, we anticipated much additional benefit if we could increase the number of minerals in the product. This was accomplished by 1988, and I am happy to say the overall benefits reported more than tripled after the 70 plus mineral product was produced. After opening the original Rockland Mine in Emery County, Utah we moved the leaching operation from Tulsa, Oklahoma to the Emery location.

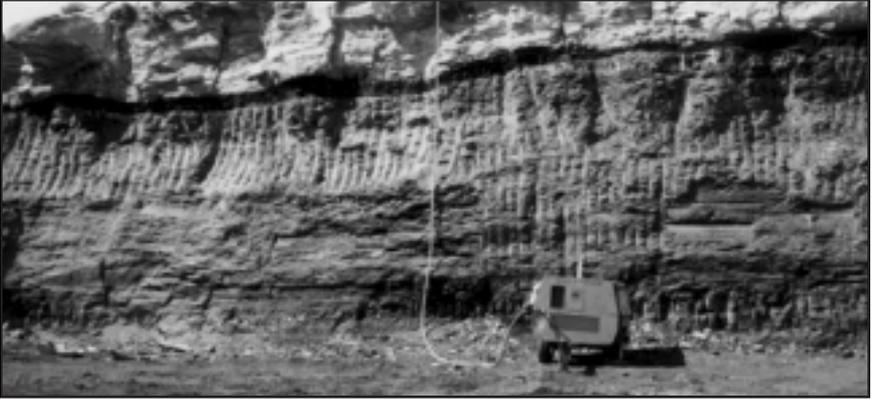
We have spent more than \$400,000 testing Rockland Minerals during the last 20 plus years. These included microbiological tests, zeta potential, particle sizing, total dissolved solids, pore size entry and exit, and others to substantiate our purity.



*Pictured are four of the sixteen-3000 gallon food grade leach tanks located in the Utah Facility*

Each quart of TRC's Liquid Minerals contain approximately 38,000mg of 7 major minerals and more than 63 trace minerals. Our numerous tests during the last ten years revealed as many as 80 minerals, but never less than 70 minerals. The total number of minerals in the TRC Minerals is in no way

## The Root Of All Disease



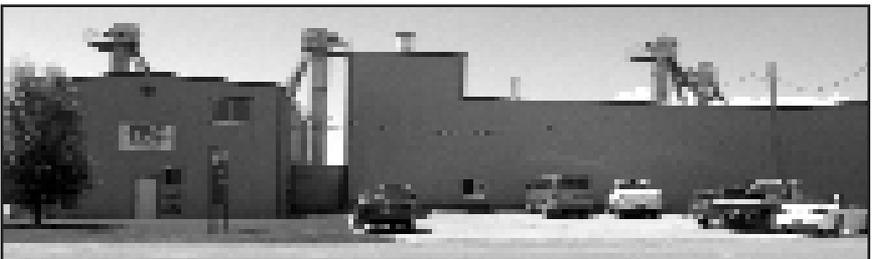
*This is a picture of the original, 30 acre, Rockland Mine which is now operated by the contractor we terminated. Note that the exposed high wall of plant humus contains a significant amount of coal, not a pure formation of plant humus as found in the New TRC Mine.*



*All minerals are transported exclusively in TRC's food-grade stainless steel tankers.*



*Sign identifying the TRC leaching facility, utilized for plant derived mineral production.*



*The TRC Mineral Leaching Facility in Emery County, Utah consists of four buildings, 16 leach tanks and 150,000 gallons of finished liquid mineral storage capacity.*

## Elmer G. Heinrich

proportionate to the 15 to 20 minerals found in today's fruits, vegetables and grains.

Many credible people have studied and analyzed the TRC Minerals during the last eighteen years. Dr. Gerhard N. Schrauzer was one of these people. Dr. Schrauzer is a researcher, inventor, author, chemist and scientist. When he was younger, he was considered to be one of the top twenty scientists in the world. He is the founder of the World Biomedical Selenium Society and he basically introduced selenium and its benefits to the world. Dr. Schrauzer had previously analyzed the Clark minerals and numerous other minerals from around the world. Here's what Dr. Schrauzer said about the (TRC) Rockland Minerals.

*Dr. Schrauzer: TRC minerals are, without a doubt, the purest of the plant derived mineral extracts that we have analyzed so far. We found them to be essentially free of organic products such as humic and fulvic acids and other organic soil compounds because the deposits from which TRC produces them are especially mineral rich. When these deposits are extracted with water, the minerals dissolve, while organic materials such as humic acids and other polymeric decomposition products of organic plant matter remain undissolved. Humic acids tend to bind some mineral elements, rendering them less bioavailable. In some regions of China, where people have to drink water contaminated by humic acids, mineral deficiency diseases have been observed with higher incidence. The deposits are especially mineral rich and have a consistent strength. Of course, because we are dealing with a natural product, there is somewhat of a variation of mineral composition, but we found the overall strength to be remarkably constant. When the extracts are evaporated, mix-*

## The Root Of All Disease

*tures of crystalline mineral salts are obtained which are so pure that we at first could not believe that they were coming from a natural deposit! The TRC plant derived minerals therefore are not colloidal. They consist primarily of sulfates of different elements. Such salts or solutions thereof were known already to prehistoric man, and became some of the earliest known sources of life-essential minerals.*

*Most scientists and agronomists generally conclude that a healthy, vigorously surviving plant can adequately defend itself against any of nature's attacks, including insects and worms. This can occur only if the plant has numerous minerals available to draw from the soil. ■*

I highly recommend you begin a daily supplementation program of pure plant minerals for your family. You don't have to purchase TRC's product. Any competitive mineral product will help. However, take my advice! One should be very careful when selecting a mineral. There are many "so-called" liquid colloidal minerals on the market and the majorities are labeled as containing 70 or more minerals. Unfortunately, after testing numerous brands we found that none of them contained 70 minerals. When Rockland began selling its own liquid minerals years ago, we labeled our product as containing 40 minerals because this was the total number of minerals it contained at the time. As other liquid minerals began to appear on the market, our competitors began labeling their minerals as containing 40 minerals. Liquid minerals became extremely popular a few years ago. Numerous minerals were introduced to the marketplace beginning in 1990. Several years prior to this Rockland had perfected its leaching procedures to obtain 60 or more plant minerals out of the Senonian Compost from

## Elmer G. Heinrich

The Rockland Mine. As soon as we labeled our product as containing 60 minerals, most of the other companies began to label their brands as containing 60 minerals. When we reached 72 minerals, all of the other brands were immediately labeled as having 72 minerals. Many of them were metallic minerals, yet some were labeled as being plant derived.

In early 1998, we purchased more than 30 different liquid mineral products, most of which were touted as containing anywhere from 70 to 75 minerals. We purchased some from health food stores, multi-level companies, some from mail order, and even from the Internet. All sealed containers were sent to Coors Analytical Laboratories in Golden, Colorado for testing. Coors is a certified mineral testing laboratory. We spent considerable money to obtain all of these tests. The results were as we had anticipated! Although most were advertised as containing 70 or more minerals, the test results revealed that none of them came close to having 70 minerals. In fact, the average was 32 minerals. Several contained no more than 18 minerals. One of the most popular liquid minerals sold on Christian television and in many GNC stores in the United States contained only 27 minerals, according to Coors. However, it is clearly advertised as having more than 70 minerals. We knew from previous testing that many health food products were mislabeled. However, after receiving the Coors tests, we believe most U.S. liquid minerals are mislabeled.

My biggest disappointment relative to these tests was simply that it appears no one really cares if they are misbranded. I wrote the following letter to the president, CEO or national sales manager of each company that sold one of the 32 mineral products tested.

## The Root Of All Disease

**Dear Sir:**

**I am enclosing a copy of a certified laboratory test of your company's mineral product known as \_\_\_\_\_. This product (Batch #865509XX) was purchased from a store at Woodland Hills Mall in Tulsa, Oklahoma. It was then sent to Coors Analytical Laboratories in its original sealed container. Please note that the certified lab tests revealed your mineral product only contained 33 detectable minerals when tested down to parts per billion (mcg). The literature, which you circulate, clearly states the product contains 70 minerals. There may be some explainable reason for this dramatic difference. I would be pleased to hear the explanation. Please call me as soon as possible.**

**Yours sincerely,**

To my amazement, only one person responded. This person said he would check into the allegations and get back in touch with me. Seven years have passed and I have heard nothing from him. I believe no one responded because they knew they could not refute the test results. However, they continue to label their mineral product in the same manner today. The mislabeled problem may be the result of ignorance in some cases. Many consumers and especially those in multi-level marketing with whom we have had contact about the problem are adamant that the product they sell or use does contain 71 minerals. They vigorously defended their stance by supplying us a copy of a mineral test which they received from their supplier company. A copy of one of the actual mineral tests is listed on the following page.

# Elmer G. Heinrich

Sample 10: [illegible]

Element	Concentration	Element	Concentration	Element	Concentration
Aluminum	1.100	Iron	2.0	Vanadium	0.1
Antimony	0.1	Lead	0.10	Zinc	0.1
Barium	0.1	Magnesium	0.1	Chromium	0.10
Bismuth	0.1	Manganese	0.1	Cobalt	0.10000
Boron	0.1	Mercury	0.1	Copper	0.1
Bromine	0.1	Nickel	0.1	Fluorine	100.000
Calcium	0.1	Phosphorus	0.1	Gold	0.1000
Carbon	0.1	Potassium	0.1	Hydrogen	1.000
Chlorine	0.1	Selenium	0.1	Iodine	0.1
Chromium	0.1	Silver	0.1	Iron	0.1
Cobalt	0.1	Sulfur	0.1	Lead	0.1
Copper	0.1	Tellurium	0.1	Mercury	0.1
Fluorine	0.1	Vanadium	0.1	Nickel	0.1
Gold	0.1	Zinc	0.1	Phosphorus	0.1
Hydrogen	0.1	Antimony	0.1	Selenium	0.1
Iodine	0.1	Barium	0.1	Silver	0.1
Iron	0.1	Bismuth	0.1	Sulfur	0.1
Lead	0.1	Boron	0.1	Tellurium	0.1
Magnesium	0.1	Bromine	0.1	Vanadium	0.1
Manganese	0.1	Calcium	0.1	Zinc	0.1
Mercury	0.1	Carbon	0.1	Chromium	0.1
Nickel	0.1	Chlorine	0.1	Cobalt	0.1
Phosphorus	0.1	Copper	0.1	Copper	0.1
Potassium	0.1	Fluorine	0.1	Fluorine	0.1
Selenium	0.1	Gold	0.1	Gold	0.1
Silver	0.1	Hydrogen	0.1	Hydrogen	0.1
Sulfur	0.1	Iodine	0.1	Iodine	0.1
Tellurium	0.1	Iron	0.1	Iron	0.1
Vanadium	0.1	Lead	0.1	Lead	0.1
Zinc	0.1	Mercury	0.1	Mercury	0.1

Submitted by [illegible] on [illegible] 1980-000

Submitted by [illegible] on [illegible] 1980-000

Submitted by [illegible] on [illegible] 1980-000

  
 Elmer G. Heinrich, analytical chemist

In every case (some companies excluded) the people pointed to the test and said, "Here's proof!" Our product does contain 71 minerals. They believed this because they did not know how to read the tests and their company had not told them how to interpret the test. I can understand why the company did not tell them. Simply, if the people knew how to interpret the test they would know the product did not contain the number of minerals listed on the label. If one does not understand how to interpret the test it does appear that 71 minerals were detected. Please review the test carefully. The second column identified, as "concentration" is the column used by the laboratory to list the amount of a specific mineral detected. A layman or the average consumer who has no scientific background is led

## The Root Of All Disease

to believe the test actually detected 71 minerals. However, this is not the case. All of the inverted alphabetic letter V's (those that appear next to the standard in the position <) indicates that the specific mineral was not detected. Basically, if it is not detected, it is not in the liquid complex! When you subtract all of the inverted V's (<) you can easily see that in this test only 33 minerals were detected. However, when reviewed by an unsuspecting layman, it appears 71 were detected. We all know nearly everything on earth contains oxygen, hydrogen, and nitrogen. So, when you add these 3 minerals to the actual mineral product tested you see it only contains 36 minerals (33 + 3), not 71 or 74 minerals as advertised. In many cases I truly believe some of the mineral suppliers deliberately failed to tell their dealers or consumers the correct way to interpret the test. I also believe some of the companies did not know how to interpret the test results themselves. If you have your minerals tested, instruct the lab to supply you the standard detection limits and to also supply you an extra page that clearly sets out only the specific minerals detected. If you request a certified lab test from your company, make sure it comes to you on a certified laboratory letterhead and signed by the certified chemist who performed the actual test. Don't consider the test legitimate if it comes to you on the letterhead of the supplying company!

Body Booster is TRC's liquid mineral formulation that is much more concentrated than the original Body Toddy. This liquid mineral, in its pure form has been sold in thirty countries throughout the world. This product is also used in and as a part of many private label formulations that are sold in numer-

## Elmer G. Heinrich

ous countries. It is used in various recipes and formulations of several of the largest companies in the United States. All of this is the result of TRC's reputation for producing the most micro free, purest and most comprehensive plant derived mineral in the world.

The pure plant liquid mineral has a very unpleasant taste to most people. This has been a challenge over the years. This is the reason Sizzling Minerals was born. This product utilizes a base of powder that contains approximately 75 plant-derived minerals. This powder comes from the TRC Liquid Mineral. The mineral powder remains after the water is evaporated from the liquid mineral solution. It is formulated along with various ingredients and flavoring to make Sizzling Minerals Wafers. Each wafer contains 600 milligrams of the 75 minerals. The wafers are effervescent in form and dissolve quickly in hot or cold water. They are sized so they can be inserted through the neck of a standard drinking water bottle. Best of all, the taste is delightfully smooth and delicious!

The Sizzling Minerals are easy to demonstrate, sell and are readily accepted by nearly every person. The reorder rate is incredibly high because the wafers, like the liquid, produces easily recognizable benefits to the users. The delivery system for Sizzling Minerals is unique. The packaging is also unique for this type of product. The wafers are bubbled packed, so a month's supply can be carried in a small purse or your shirt pocket. I recommend you try Sizzling Minerals. You won't be sorry, and remember, according to Dr. Linus Pauling, **"The Root of All Disease"** is directly related to a lack of minerals.

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The words "Senonian" and "Senonian Compost" are Trademarks of TRC Minerals, Inc. and "Senonian Juice" is a Trademark of U. S. Naturals, Inc.

# Eat All You Want

The Sizzling Minerals Cleansing Diet  
Not Just Another Diet Fad!

How many “Bio-engineered” diets have you tried in your attempt to lose weight and keep it off? Was it two, six, or maybe ten? Some people have tried as many as sixteen and they are still overweight. Not only have they spent a large amount of money, they have also suffered through a great deal of anxiety and frustration.

Anyone can lose weight if they quit eating or drastically reduce their food intake. However, this sort of action promotes fatigue and increases cravings, which in turn promotes nervousness, tension, and many other abnormalities.

## **Would you attempt a diet plan that allows you to eat normal foods and to eat as much as you want?**

This type of diet plan is now available to you. Best of all, while your dieting you are also improving your health.

Many diets burn off excess weight but lack the ability to stimulate the body to properly discard the wastes and toxins created by dieting. The Plant Derived Mineral diet will not only help you lose weight, it will cleanse your system because the food eaten requires more calories to burn than it releases in calorie value. You may eat as much of the recommended food as you desire so long as you consume three (3) Sizzling Minerals wafers daily as outlined. It is important that you follow the plan as closely as possible in order to flush your system of toxins and impurities that circumvent a nutritionally responsible body and an enthusiastic and motivated feeling of well being.

## **Begin your weight reduction now!**

**Monday or Day #1:** Eat only fruit today – You may eat all the melon and other fruits you want with the exception of bananas. (Do not eat bananas.) Be sure to consume 1 Sizzling Minerals wafer with breakfast, lunch and dinner. Always consume 1 wafer, 3 times each day of the diet, and you may eat 4 or 5 times daily if you prefer.

**Tuesday or Day #2:** Eat only vegetables today – Don’t forget your 1 Sizzling Minerals Wafer at breakfast, lunch and dinner. Eat your favorite choice of all the fresh, raw or cooked vegetables you want. Stuff yourself! If you eat cooked vegetables, we prefer they be prepared in a microwave

oven. If necessary, use salt-free seasoning. Avoid corn, peas and salad dressings other than vinegar and oil.

**Wednesday or Day #3:** Eat fruit and vegetables today – You should stuff yourself today, as often as you desire, with your favorite fruit and vegetables with the exception of bananas, peas and corn. Restrict the salt, and if salad dressing is necessary, use only vinegar and oil. Be sure to consume your **Sizzling Minerals** the usual 3 times today. This will supplement your nutrition with 63 trace minerals and 7 major minerals. You should consume at least 10 glasses of hot water with lemon throughout Day #3.

**Thursday or Day #4:** Drink low fat milk and eat only bananas today – During the 4th day, your body will need an extra portion of carbohydrates and proteins which are supplied by bananas, low fat milk or cottage cheese. Eat all you want! Don't forget your **3 wafers** today.

**Friday or Day #5:** Eat tomatoes and lean beef today – Day #5 is slim day. Take your normal [Sizzling Minerals Wafers](#), eat as many tomatoes as often as possible while eliminating salt. Eat no more than 12 ounces of lean beef such as roast or unbasted grilled steak. Beef may be substituted with baked or broiled fish.

**Saturday or Day #6:** Eat vegetables and lean beef today – Eat as many vegetables as possible today, avoiding salt, salad dressing, potatoes, peas and corn. You may actually eat as much lean beef as you desire. Beef may be substituted with baked or broiled fish, or eliminated altogether. Remember to take 1 [Sizzling Minerals Wafer](#) 3 times today.

**Sunday or Day #7:** Eat vegetables only today – Eat as many fresh, raw or cooked vegetables as often as possible today. Don't be afraid to stuff yourself! Yes, don't forget your [Sizzling Minerals](#).

**\*Water:** During the cleansing diet, you should drink at least 6 glasses of chlorine free water each day. Hot water with lemon is by far the best if you want excellent results.

**Other Beverages:** Do not consume any kind of alcohol during your diet. If you must drink coffee, make sure it's decaffeinated and unsweetened. Any tea without sugar will suffice. If fruit or vegetable juices are consumed, make sure they are unsweetened and then only consumed on fruit or vegetable days.

The Sizzling Minerals diet may be repeated as often as you like. You may experience nausea, weakness and other unusual feelings during the cleansing and detoxification. This is normal and expected if a chemical change occurs within the body.

# THE ROOT OF ALL DISEASE

Published under agreement by:

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