

# The "Jeckyll and Hyde" Personalities of Minerals

## Part I - Minerals are Essential For Optimum Health

Everyone knows that minerals are very important to the biological well being of all living things. In fact, they have been proven to be MORE essential than we had previously believed. A mineral of some kind is involved in almost EVERY reaction in your body; a mind boggling thought to say the least! They combine with other nutrients to form complex enzyme systems necessary to digest and metabolize fats, carbohydrates, proteins and hormones.

Body levels of AVAILABLE minerals must be kept at optimum levels for effective and efficient feed conversion. In horses, we term "hard keepers" those whose digestive efficiencies are low. It simply takes more and better quality food to keep them in peak condition because they are absorbing a smaller percentage of it. They can be compared to a car with an engine out of tune that uses a lot of gas. With the high cost of fuel (and feed) these days, we all know that it is less expensive and better for the car to get it tuned up than to keep running it, so inefficiently and possibly putting undo stress on different parts of the engine. So too with the animal body, ourselves included.

A "tuned-up" horse with optimum AVAILABLE minerals in his body eats less food, has more efficient digestion of food he does eat (due to, the small size of his stomach), has less manure, and better overall condition than one who is "trying to fire on only three spark plugs". There is also less stress to other parts of the body systems which would normally try to cover for inefficient ones.

Many researchers place more importance on minerals than even vitamins, because they are not able to be synthesized in the body at all, whereas most vitamins are, either by the body itself or micro-organisms in the gut. Even more astounding, vitamins must be activated by minerals in a biologically usable form to be active in the body! Such is the case in Glucose Tolerance Factor of blood sugar regulation and insulin, with manganese and chromium. And, as the body ages, it loses its ability to absorb minerals from food eaten. This presents one good argument for proper supplementation.

Minerals occur in Nature in many chemical forms, some of which are able to be utilized by the body, and some not. It is generally the FORM that is most important in determining the chemical lactivity, rather than assigning a "good" or "bad" role to each element itself. An impressive example of the differences of chemical forms is ordinary table salt. Composed of the burning and poisonous metal sodium and equally toxic gas chlorine, when bound chemically together become not only harmless but absolutely essential to life!

Salt or rock forms of minerals (inorganic forms) naturally found in our earth are generally not able to be utilized by the body without being "processed". They must first be broken down and made soluble by stomach acids, then the mineral element surrounded and bound chemically to neutralize the mineral's electronic charge. If the mineral has been correctly surrounded (chelated) by the proper elements (amino acids or hydrolyzed protein), the total package (chelated mineral) is now able to be absorbed and used by the body in metabolism.

Unfortunately, this process occurs only at random in the body, and its efficiency is not high. Thus, is the case with ordinary mineral supplements in the form of oxides, sulfates and carbonates. Furthermore, some of these mineral forms can have deleterious side effects when used in feeds. They can't often be used in amounts great enough to overcome their chelation inefficiency, and still be absorbed in large enough quantities to satisfy the body's needs considering present soil depletion of our farm ground.

In the old days, these inorganic forms of minerals were suitable because our soils were not so deficient in necessary minerals as they are today, and far less supplements were needed if any at all. Amounts necessary for supplementation stayed well below toxicity levels and salt or rock forms did just fine.

But today, with much publicized decline of essential minerals in our farm ground, mineral supplements become important - especially in race and performance horses, and in ourselves as well! Farmers simply cannot afford to fertilize with copper, zinc, manganese, iron, magnesium, selenium and cobalt and still sell hay for the same competitive prices as farmers who don't fertilize. They can barely afford to use nitrogen, phosphorus, potassium and lime, and many have cut sown on these. Furthermore, since plants do not require the same minerals or amounts of minerals that animals do, one cannot see this aspect of nutrition with the naked eye. Plants can be deficient in the necessary minerals to produce healthy animals and yet be perfectly healthy themselves. The Ohio-Mississippi Valley, with its iodine and cobalt, is just one example.

Now for the good news! Modern scientific research in nutrition has, in recent years, been able to successfully chelate the essential minerals to amino acids and hydrolyzed proteins in the laboratory - making in effect, a "predigested", very nontoxic mineral supplement. Being better than sequestered or extracted supplements - they can now be blended in proportions and ratios that fit the nutritional needs of the animals they are designed for, rather than those that simply existed in the plant at the time of extraction. In addition, these amino acid chelates are absorbed up to 300 times better than typical inorganic minerals and do not change the pH of the digestive tract like the inorganic forms. This chelation protects the mineral from entering into unwanted chemical reactions in the gut and producing either chemical forms that are unwanted by, or unavailable to the body. They are really the "Cadillac" of supplements with much higher biological activity.

There are literally hundreds of chelating agents in nature. They take the names of

gluconates, ascorbates, citrates, saccarides, etc. The amino acid chelates, however, have been shown to be the best of the lot for supplementation. Many medicinal herbs owe their reputations to their abilities to concentrate certain chelated trace minerals formed by soil bacteria at their roots. Some common examples of chelates are: vitamin B12 (a cobalt chelate), hemoglobin (an iron chelate), and chlorophyll (a magnesium chelate).

When looking for the right supplement for your horse, consider the amount of work he does, his breed (some use more energy just standing around being nervous), his individual disposition, his age (is he growing), and what level of nutrition can be expected from the feed you give him. **READING LABELS IS A MUST!** Many supplements on the market today, unfortunately, are still using outdated and obsolete recipes when determining their mineral potencies. We need ever stronger and more potent formulas as our soil fertility continues to decline, just to keep breaking even!

And price wise, most of the time we have not been getting what we pay for in biological availability anyway. For example: iron oxide is nothing more than ground up rusty nails; iron (ferrous) sulfate can cause diarrhea; magnesium sulfate is just epsom salts, which irritates the intestine causing it to rapidly expell its contents. A great cure for constipation but hardly a good source of magnesium for the diet. Copper sulfate is an astringent, and calcium carbonate neutralizes the very stomach acid needed to digest it and other foodstuffs in the stomach with it at the same time. In fact, it is often prescribed by physicians for heartburn, acid indigestion and sour stomach. One of its brand names is **Alka -2®**. All that glitters is not gold.

## Part II - How They Function in Your Body

Minerals function in the body in a various ways. In too low a level, body systems suffer, we know, from ineffecient etabolism. But in too high a level, minerals can interfere with the metabolism of other minerals and do just as much damage, and sometimes more. They truly have "jeckyll and Hyde" personalities, and in more than one way. The calcium/phosphorus ratio is probably the most wellknown example. Too much calcium causes depression and excretion of phosphorus, and vice versa. We now know that magnesium plays a large part in theis ratio, regulating the amount of calcium that stays soluble in the blood. Without magnesium, one may suffer from calcium deposits, soft tissues and from kidney stones. It is also possible to have arthritic deposits and osteoporosis (softening of the bones due to a calcium loss) at the same time, formerly a baffling case of too much and too little occurring simultaneously. Calcium, magnesium and phosphorus form a triad, each influencing and attempting to balance the other.

Surprised? Minerals compete with each other for absorption, and an excess of one can cause a deficiency of another, or more. Peae take a look at these relationships in the [Mineral Wheel](#) that you can keep open as you read this. You can see the toxicity (excess) or deficiency (not enough) of one can upset the whole apple cart and possibly cause many others to be influenced and exhibit their own particular symptoms. Let's look at the minerals individually to see their effects.

Copper and iron also have a working relationship. They balance and regulate each other, as both are necessary for the production of hemoglobin, but too much or too little of either sets the ratio out of balance and can cause anemia. It is possible that too much iron with too little copper can actually cause anemia. I have seen quite a few race and performance horses with exactly this condition caused by over zealous trainers who went wild with iron shots, supplements, drenches and jugs. Iron alone is not the only factor. The whole picture becomes interestingly complex as we overlay the relationships of the other minerals, and see how they interact.

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Calcium is necessary for skeletal development, contraction of muscles, muscle activity, coagulation of blood, heart rhythm, decreasing cell permeability, and reducing nerve irritability. Excess calcium increases the need for phosphorous, Vitamin D and zinc, and decreases the availability of protein, phosphorus, iron, iodine, manganese and zinc. It causes birth paralysis, depression of estrous cycle, joint problems, skin disorders, prevention of coagulation, colic and digestive upset, retarded growth, and kidney stones. A vitamin D supplement given to horses exposed to sunlight who are already manufacturing vitamin D on their own can trigger these symptoms in mild to severe cases, depending on the animal and the amount. Vitamin D is a fat-soluble vitamin that aids in the use of calcium, and horses who are out in the sun several hours a day will manufacture all the vitamin D they need.

Calcium deficiency causes impaired bone growth, bowed legs, lameness, rickets, hemorrhage, poor growth, loss of appetite, low fertility, a craving for and consumption of abnormal materials such as wood and soil, heart palpitations, muscle cramps, nervousness, numbness in limbs, and tooth decay. Extreme physical exertion, such as racing or eventing, increases calcium excretion, so that more is needed in hardworking performance horses. Calcium and magnesium are carried in the blood by albumin (a protein). When a diet is low in protein so little albumin can be produced, much calcium and magnesium are lost in the urine. Since the stress of physical exertion also causes loss of calcium, it is important to see that an animal under these circumstances gets his necessary proportion of digestible protein.

Calcium ions are also known to exert a histamine release in the body, and are sometimes used in human therapy for mental disorders resulting from severe allergy. (Histamine is the product of allergic stimulus causing the itching and swelling we see in hives and the difficult breathing in asthma). I have achieved some spectacular results with highly allergic animals by giving a high protein diet, (balancing the amino acids, of course), and balancing the calcium/phosphorus ratio with calcium amino acid chelate. This "pre-digested" form of calcium is very readily available to the body, does not change the pH of the digestive tract, and seems to aid in a sort of desensitization. The trick is to keep everything in proper balance and proportion.

"Shotgunning" by an inexperienced individual is definitely dangerous.

Phosphorus is necessary for bone formation, fat and carbohydrate metabolism, cell growth and repair, production of energy, kidney function, calcium and sugar metabolism, muscle activity, and utilization of vitamins. (A low protein diet is also generally low in phosphorus, so that maximum biological activity of vitamins is not achieved). Deficiency symptoms include depressed conception rates, stiff joints, debility, osteomalacia, cessation of growth, poor bone crystal formation, muscle weakness, anemia, increased susceptibility to infection, appetite loss, fatigue, irregular breathing, nervous disorders, overweight or weight loss. The symptoms also include a whole host of others relating to calcium, since the two minerals so highly interact.

Magnesium, for me, is a "fun" mineral, because I have done more with it than with any of the others. Again, I am referring to using the amino acid chelated form because it is readily available, and moves swiftly through the body to ease some symptoms in as little as 45 minutes. I have also observed results with as little as 3 grams of the amino acid chelate that I did not see with as much as 1/4 lb. of magnesium oxide! Magnesium has been often called "the miracle mineral," necessary as a catalyst for starch digestion, and activation of many enzyme systems. It is essential for proper nerve and muscle function, the acid/alkaline balance, blood sugar metabolism, protein synthesis, memory, attention span (directly related to learning ability), and endurance and stamina.

Deficiency of magnesium can damage the blood capillaries, cause dilation of blood vessels, irregular heart beat, kidney stones (if excess calcium), loss of hair, rough coat, diarrhea, swelling and bloat, great excitability, convulsions, eye problems, muscle twitching, tremors, nervous fatigue, and irritability. Deficiency symptoms can be triggered, as mentioned before, by a low protein diet, by excess sugar, by diuretics such as Lasix, and also by excess calciferol (a synthetic Vitamin D) which binds with magnesium to make it insoluble and therefore lost. Excess magnesium, on the other hand, increases the need for phosphorus and calcium, depresses the estrous cycle, depresses the state of mind, and can cause diarrhea.

I had a hunter/jumper mare that had a high requirement for magnesium (as most blooded horses do). Without her daily supplement, she refused jumps that were easily within her ability, barnstormed dangerously down the road, stiffened at the poll to fight the bit, refused to bend, absolutely could not tolerate leg pressure of any kind, and would not walk but would run until she dropped. She would shiver in warm weather, quivering her muscles along the croup and flank, and have a sort of seizure, bucking in place...and with no one around. A hair analysis showed low magnesium, although several blood tests were normal. Yet with a magnesium supplement, she was a different animal within 72 hours, and now with constant supplementation, she would collect, relax, do lateral dressage movements well, and take any jump within her ability. There were no more shivers and quivers or other odd behavior, although within three days of discontinuing the supplement, her "Hyde" personality again reared its ugly head, (as has happened several times when my supplies ran low).

Again, I used the amino acid chelated form of magnesium because I got absolutely no results on this mare with as much as 1/4 lb. of magnesium oxide (the common magnesium supplement).

In diagnosing chronic deficiencies and toxicities, I use the hair analysis as my tool of preference. It is more accurate in showing a long-term look at overall metabolism than blood tests, which change everytime food is eaten or the body is subjected to stress. Blood tests are more accurate for acute problems that come on rapidly. Also the body tends to "rob Peter to pay Paul", so to speak, in that it will draw minerals from soft tissue and bones to keep up the levels in the blood needed to feed the brain. Complete blood tests, hormone studies, glucose tolerance and electrolyte tests completely missed this mare, who was compensating by sacrificing other parts of her body. Symptoms often occur in bones, nerves and muscles before the blood shows any decline at all. A hair analysis, however, will show the true picture. In the case of magnesium, studies show that normal blood, serum, and CSF levels may be maintained on a magnesium deficient diet because as much as half the magnesium in the bones may be drawn out before blood levels reveal a problem. The bones, in the meantime, suffer.

Since hair is growing all the time, it is like a computer giving us a continuous readout on the workings within it. Often, potential problems can be averted before symptoms appear. This mare was a sad case with a happy ending. I wonder how many innately pleasant horses are progressed to more and more severe training techniques and pain, when they simply do not feel well. A very sad thought, indeed!

## **Part III - Trace Minerals Disappearing and Being Ignored in Our Foods**

Trace minerals are called such because the actual amounts of them needed by the body in metabolism are quite small, as compared to major macronutrients like calcium, phosphorus and magnesium. However, this fact in no way reflects the severity of symptoms their deficiencies or excesses can cause, and some of the effects of trace mineral imbalance are much more devastating than those of the macronutrients. By this line of reasoning, then, they are in effect, much more potent, bringing changes with their smaller amounts.

Unfortunately, trace minerals have been neglected for years in nutrition research, partly due to our previous lack of sophistication in analytic processing. They are just now taking their rightful place on the nutritional stage. Their cast of characters includes: potassium, iron, chromium, cobalt, copper, iodine, lithium, manganese, selenium, silicon, vanadium, zinc, boron, molybdenum, strontium, nickel, sodium, and chlorine. This article will survey the best-known of these, beginning with iron.

Most everyone knows that iron is essential to regulate oxidation and produce hemoglobin (the red pigment in blood that carries oxygen to every cell in the body), but did you know that iron deficiency has also been a contributing factor in poor resistance to infections? The requirement of iron increases with stress, and like some

other minerals already discussed, iron utilization (especially in the production of hemoglobin) depends on proper dietary amounts of digestible protein. There are four globin molecules in one molecule of hemoglobin, and each globin molecule contains all the essential amino acids plus some nonessential ones.

In a test done way back in 1940 by the Mississippi Agricultural Experimental Station, legumes were found to be more effective in raising hemoglobin levels than leafy vegetables, such as turnip and mustard greens, collards, lettuce, tendergreens and even spinach. The legumes used were soybeans, cowpeas, lima beans, and pinto beans - all very high in digestible protein with balanced amino acids.

Since iron is one root of all biochemical systems needing oxygen (taking in almost everything going on in the body), the range of deficiency symptoms can be as varied as the tissues of the body to include everything from breathing difficulties, brittle hooves, anemia, fatigue, poor growth, lack of muscle tone, low resistance to infections and inability to concentrate. Iron is extremely important to be aware of in one's diet because only about 5 - 10% of it is actually absorbed into the body (copper must be present also for efficient metabolism to take place). Worms can deplete the body of enough iron to trigger deficiency symptoms as well.

Excess iron can have many of the same symptoms as a deficiency can, adding damage to the liver, pancreas and heart, plus arthritis. There are many kinds of anemias and iron level is only critical in some. Folic acid (a B vitamin), and copper can also be the culprits. Iron toxicity has become a problem in some race and performance horses, we have found, from overzealous trainers who think that iron shots, drenches and jugs are cure-alls for whatever ails their horses. The doses, in turn, create deficiencies in zinc, manganese, copper and possibly some others. Such great imbalances can be set up this way, and in the end, more damage is done than if the trainers had left the animal alone. Symptoms in such cases include shortness of breath, fatigue (ironic, since this is usually the symptom they are trying to cure), loss of weight, dizziness and stumbling.

Copper is necessary for blood formation with iron, as well as the formation of melanin (a pigment of hair and skin), healing, bone formation, the tensile strength of the coronary blood vessels, and reproduction.

Excess copper is considered of late to be a type of heavy metal poisoning with serious consequences. Copper moves through the body more slowly than do other elements, so it is harder to excrete excesses that are not needed or wanted by the body.

Symptoms range from poor utilization of nitrogen, degeneration of the liver (the liver contains the highest accumulation), psychosis (the brain contains the second highest accumulation), hyperactivity, and Wilson's Disease. Symptoms of copper toxicity can be triggered by acid water (often well water from deposits in shale and loam, such as found in parts of Connecticut, New Jersey, New York and Massachusetts) which leaches copper from plumbing; and by pregnancy (ceruloplasmin, a copper containing protein is elevated by estrogens to peak at term) if a high copper load is already flooding body tissues.

Among copper deficiency symptoms are anemia; reproductive failure, pronounced cardiovascular lesions, defects in pigmentation, hair structure and skeletal defects; degeneration of the nervous system, respiratory difficulties, abnormal hair growth, retained placenta, difficulty in foaling, depressed growth, bowed legs, enlarged joints, fragile bones, and fetal death and reabsorption. Deficiency symptoms can be triggered by a low protein diet, kidney disease, high molybdenum, zinc, iron and calcium in the diet.

### **Zinc, Manganese and Potassium**

Zinc, a most amazing mineral, has recently received lots of attention in the journals. Controlling the amount of water retention, it is required for protein synthesis, skin growth and healing, production of DNA, manufacture of insulin, carbohydrate digestion, prostate gland function and phosphorus and protein metabolism.

Some zinc deficiency symptoms are: skin disorders and lesions; swollen pasterns; swelling of cells at the joints; decreased growth rate; poor appetite and feed efficiency; eye disorders (cloudy or white eyes); infertility in males due to insufficient sperm or sperm with low motility; or failure of sex organs to develop; loss of or distortion of sense of taste; slow healing of wounds; atherosclerosis; congenital deformities; and arthritis type bone deformities.

Zinc excess (toxicity) is associated with skin bleaching (possibly because copper is depressed and driven out), ropey tails, interference with enzyme and lymph systems, and diarrhea. Zinc toxicity is rare and there have been few cases to study.

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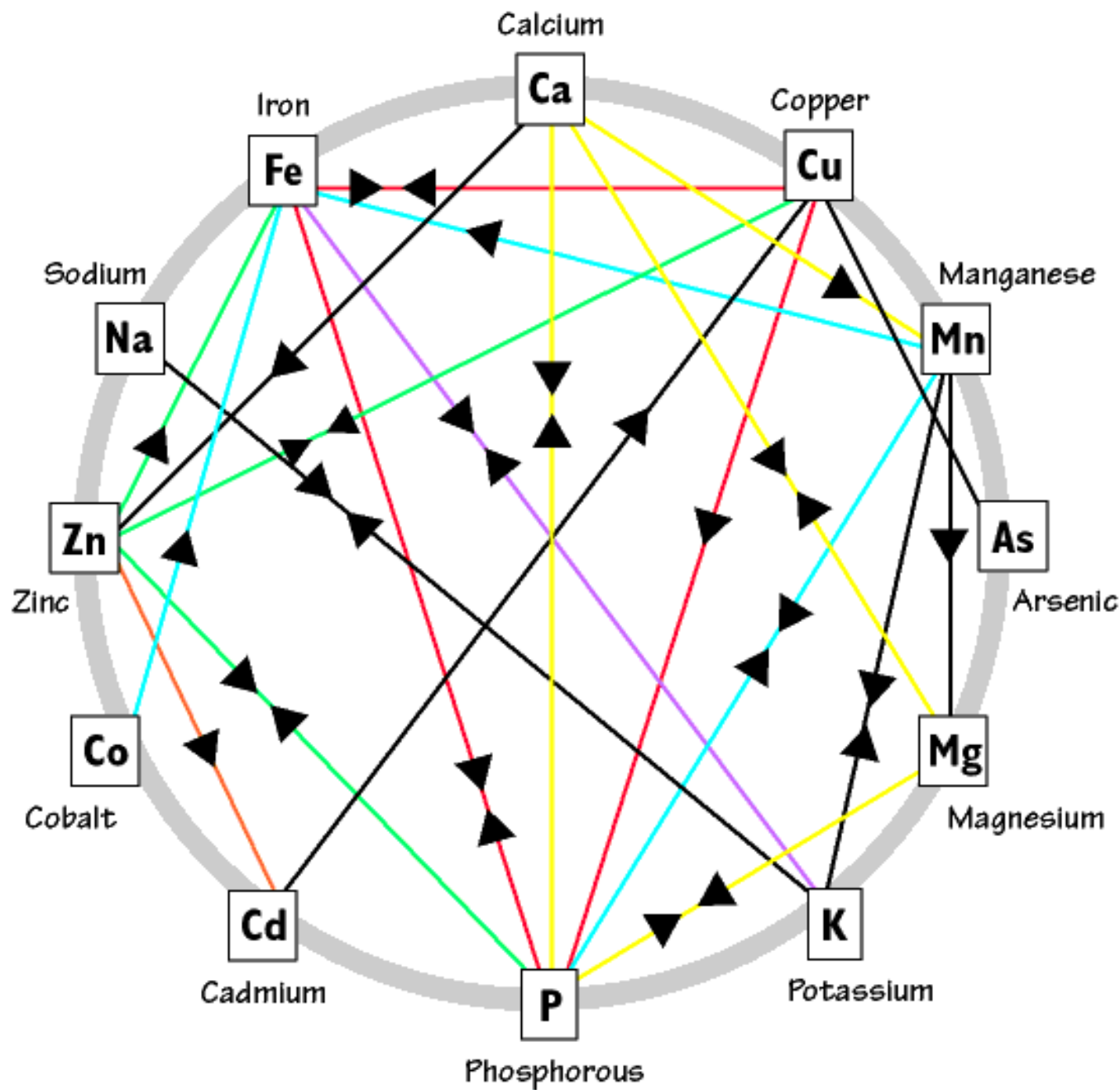
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# Mineral Interrelationships

Placements of arrows represents relative strengths of each mineral in balancing, antagonizing or opposing other minerals



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# Vita Royal Products, Inc.

## *Your Health*

**Linsey McLean's ongoing research** focuses on environmentally induced diseases of all types. Vita Royal's programs and products reflect our wholistic approach to modern health and are intended to empower individuals to take control of their own wellness. For more information, please see [About Linsey McLean](#).

**Vita Royal's programs specialize** in control of environmentally related illnesses including:

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- Mood swings
- Chronic Fatigue
- Blood Sugar Irregularities
- ADD, ADHD
- Depression
- Food Cravings
- Candida and Other Chronic Infections
- Allergies and Asthma
- Nervousness, Anxiety and Aggression
- Hormonal Imbalances
- Learning Disabilities
- Autoimmune Diseases Including Diabetes, Rheumatoid Arthritis, MS, Lupus, Fibromyalgia, and Others

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- [Menu Suggestions](#) for our Adaptive Advantages® Nutritional Program
- [Our New Basic Beginning Program](#) includes Everything to Get You Started

**Additional reading on our Adaptive Advantages® Nutritional Restructuring Program:**

- [Environmental Illness Syndrome: It's NOT All in Your Head](#)
- [We Can't Fool Mother Nature . . . Or Can We?...Real Help for Obesity](#)
- [Why Johnny Can't Read: How our man-made environment affects all of us](#)
- [Information for New Clients](#)

● [Linsey's "Detox Diet" as featured on "ABCNEWS.com"](#) which features only one component of her patented **Adaptive Advantages® Nutritional Restructuring Program**.

● [Environmental Health Conditions Involving the Thyroid](#)

● [Understanding Your Thyroid and How It's Affected by the Environmental Illness Syndrome](#)

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● ["Bugs" in the Blood](#) From the research archives of biochemist Linsey McLean are actual photo micrographs of blood smears from various species of animals, including man. Ideally, these organisms pass through a body's intestine and should not be found in otherwise sterile blood. This page takes a while to download, but it is well worth it.

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to better understand how our modern environment affects health and has created **The Environmental Illness Syndrome**.

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**This Site** is designed to help explain these concepts and provide a reference for better understanding of how today's environment affects us and what to do about it. We ask that you read on and [contact us via e-mail](#) or phone us at (810) 653-5478 from 10 a.m. to 4 p.m. EST, or fax us at (810) 653-2543 to inform us of your specific situation.

At this time, we prefer to have you call us to place an order so that we can maintain our level of personal service. *Thank You for visiting Vita Royal's web site.*

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# Vita Royal Products, Inc.

## Manufacturers of Highest Quality Supplements Since 1977

Vita Royal Products was started in 1977, incorporated in 1980 by Linsey McLean as a manufacturing source for pure, all natural vitamin and mineral supplements for humans, animals, and primarily horses that did not contain any fillers, binders, or extenders of any kind. In 1977, this was a "first" as the horse feed industry was the only animal industry which diluted actual vitamin & mineral ingredients with inexpensive feed ingredients, such as wheat middlings, bran, and alfalfa meal.

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Founder Linsey McLean, biochemist*

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# Environmental Illness Syndrome...

*It's NOT All In Your Head!*

Predisposing us to:

- Obesity
- Mood Swings
- Chronic Fatigue
- Blood Sugar Irregularities
- ADD, ADHD
- Depression
- Food Cravings
- Candida and other Chronic Infections
- Allergies & Asthma
- Nervousness, Anxiety & Aggression
- Hormonal Imbalances
- Autoimmune Diseases
- Diabetes
- Rheumatoid Arthritis
- MS
- Fibromyalgia
- Lupus
- Hashimoto's Disease (Thyroiditis)

Learn why **diets** don't work. What different foods do in your body. How 20th century eating makes you overweight, tired and hungry. Understand that these problems are "**NOT in your Head**" by reading [Understanding Your Thyroid and How It's Affected by Environmental Illness Syndrome](#), and [Environmental Health Connections- The Overview](#)

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*Many of you have asked for more information concerning the functioning of the thyroid glands, to better understand the monitoring of your thyroid blood tests, and why such regular monitoring is really necessary to the fine tuning program of your biochemistry.*

## **Understanding Your Thyroid**

### **and how it is Affected by "Environmental Illness Syndrome"**

To simplify a very complicated endocrine pathway for your understanding, we can say that the thyroid, with help from the adrenal glands, regulates the speed of biochemical reactions at the cell level, in every cell of the body. This means that, essentially all biochemical processes that go on in the body are regulated by these small glands in the neck.

By regulating the speed of all processes, the implications for treating such syndromes as chronic depression, chronic fatigue, poor energy metabolism resulting in obesity, and many other conditions emanating from low basal metabolism, can be successfully treated - if we also understand the other, interfering, mechanisms at work here in [Environmental Illness Syndrome](#). Conventional medicine, in years past, has tried, often without success, and with undesirable side effects, to simply "plug in" to the thyroid pathway with various and sundry combinations of synthetic T4 and T3.

Thyroid replacement therapy is now viewed with caution, and righteously so. Many patients suffered mental and physical side effects so severe so as to never want to touch the stuff again. I know from first hand experience; I was one of those. However, medicine went through the same growing pains with other hormone replacement therapy, namely, estrogen. My mother, and other mothers of her vintage some 20 years ago, quickly decided that the side effects of estrogen replacement therapy at that time, were worse than suffering through menopause unaided. Worse, she was left with a legacy of breast cancer.

Now, with state of the art laboratories and natural source hormone precursors available, I should be spared the horrors of hormone replacement that my mother suffered. New information is available to us about thyroid metabolism also, so that we no longer have to "throw the baby out with the bathwater".

#### **How Things Are Supposed To Work**

The thyroid glands manufacture the hormone thyroxine, from the bonding of two molecules of the amino acid tyrosine, with four molecules of the mineral iodine. This molecule is called T4, because of the four iodines and is commonly referred to as the storage form of thyroid hormone. The active form of the hormone that plugs into receptor sites of the cell membrane and "turn things on" is called T3. This form has had one iodine removed by an enzyme process to free up a bonding site for the receptor.

When there is too little iodine at the cell level, a message is sent to the hypothalamus area of the brain to release more TSH, thyroid stimulating hormone, which, in turn, goes to the thyroid glands and stimulates the glands to produce more T4. The pathways involve more chemical transfers than are shown here, simplified for easier understanding. But this is the basic premise, in a "normal" thyroid.

In "The Nineties Syndrome", many road blocks can make these normally biochemical highways nearly impassable dirt roads. Many of these roadblocks are unknown to the physicians trying to correlate your, sometimes strange, case history with your laboratory reports. Your physician may feel like "Alice in Wonderland", where nothing makes sense, or at least not from the perspective of his or her traditional medical training. That's because "Environmental Illness Syndrome" simply didn't exist in its full blown capacity when most of their textbooks were written.

Thirty years ago, when industry was burying barrels of bad stuff, burning bad stuff and dumping bad stuff in our lakes and rivers, nobody recognized that it WAS bad stuff. (Except, of course, some crazy and rebellious college kids back in the 60's who organized the first Earth Day, and who turned out not to be so crazy after all).

In order to understand what is happening to us with "The Nineties Syndrome", we all have to be like Alice, and learn how these relatively recent additions to our planet have made our biochemical world "curiouser and curiouser".

### **Looking Through The Looking Glass**

Identifying these potential roadblocks in normal biochemical pathways involves using not only laboratory tests, but also symptomatology, for which we may not have developed a lab test. This is very important, as we do not have a test for every compound, antibody or intermediary metabolite in the body. In fact, the more we learn and discover, the more we find out just how much we DON'T know. It's a humbling encounter, or at least it should be. This makes listening to the patient all the more important, as it was in the early days of medicine, when fancy lab tests weren't yet available.

Relying exclusively on lab tests, without understanding and recognizing their limitations, especially in mapping of the superficially appearing abnormal biochemistry of "Environmental Illness Syndrome", can lead to "the treating and diagnosing of the little piece of paper, instead of the patient." I say "superficially appearing abnormal biochemistry" because that is exactly what it is.

When the forces driving "The Nineties Syndrome" are understood, then everything makes perfect sense again like Alice when she finally figured out how everything worked in Wonderland. I can't tell you how many times I have heard people tell me that their doctors have told them that their blood tests, including their standard thyroid profiles, are all normal and that "there is nothing wrong with them." They then ask the doctor why they feel so bad, receiving the standard reply that it must be all in their heads and write a prescription for Prozac. Now let's look at some of the roadblocks in the thyroid biochemical highway and see how they can affect us and precipitate symptoms of "Environmental Illness Syndrome".

### **It's Not Nice To Fool Mother Nature**

Starting at the top, the first ingredient in the formula for thyroxine is the amino acid tyrosine. This amino acid is also a neurotransmitter, which means that it is also involved in carrying chemical messages in the brain. Tyrosine manufacture in the body can be interfered with and nearly shut down by exposure to certain herbicides, which are commonly used in agriculture, and often abused in lawn care. In fact, homeowners are, by far, the most rampant users and abusers of herbicides in this country by not following directions in the dilution of these lawn care products.

NTBC, a common agricultural herbicide, is being given for treatment of a genetic disease called hereditary tyrosinemia, which can cause liver failure and liver cancer from overproduction of tyrosine. This treatment is being used in 12 countries around the world. The implications for those of us not afflicted by this genetic disease - depression of tyrosine production in "normal" individuals that may affect supply of raw materials for the thyroid gland, are scary.

Another common deficiency is iodine itself. We all know of the "goiter belt", but do we remember that simple law of halogen replacement that we learned in high school science? Any of the lighter and more chemically active of the halogens in that family of elements, namely, fluorine, chlorine and bromine can and will, if given half a chance, replace iodine in any and all chemical reactions. This can cause havoc in trying to make a specific hormone molecule, designed to fit into a specifically designed receptor site, like a key into a lock. This spells trouble for the thyroid, especially, since our environment is so polluted with chlorine, fluorine and bromine compounds.

You may have heard about some of these culprits of modern technology in DDT ( an organochlorine ) pesticide, and PBB, (a bromine fire retardant that was accidentally mixed into cattle feed in Michigan), and gasses used in chemical warfare,(also bromine compounds). Exposure to any of these or any other halogenated compounds can really muck up our thyroid highways, and even give false normal lab tests, as other halogen clouds, ( the electron outer orbital configuration that is common to all halogens, and responsible for their chemical natures) mistaken for iodine, are read by lab indicators.

Here let me insert a really appropriate saying; "all that glitters is not gold". Imagine the implications of this little piece of insight in consideration of everyday exposure to

lower weight halogens, from bleaching of clothes, chlorinating water for drinking, languishing in heavily chlorinated and possibly brominated hot tubs and swimming pools, fluoride laden toothpaste every day and, not to be forgotten, the dioxins associated with chlorine bleached paper products that we down by the bucketsful every day from tea bags and paper coffee filters. The list goes on and on, and should send shivers down your spine.

Here it is appropriate to expound on this previously mentioned separate class of horrors, the dioxins. Yes, there are more than one. In fact there is a whole family of them, which is expanding all the time as we discover more of them. They are not commercial products, but contaminants. They are created during high temperature combustion by incinerators, during the chlorine bleaching of pulp for paper, and the manufacture of certain pesticides. (There's that chlorine again.)

We knew back in the 70's that Viet Nam War veterans who were exposed to Agent Orange (a defoliant later found to be contaminated with dioxin) exhibited problems with their endocrine systems by the symptoms they had. Recent research has shown that dioxin and thyroxine are chemical cousins, and that dioxin can plug itself into receptor sites meant for thyroid hormone and block the real thing. or worse yet, turn things off or to yet another function. To date, we are still learning about the family of dioxins, and they appear to be all bad apples.

At the lab in which I worked, we had many referred to us from Veteran's hospitals for various and sundry "Jungle Rots", many of which could not be cultured. It's also interesting that the horses I have worked with over the past 20 years, suffering from varied fungal infections are subject to the same low basal temps as the veterinarians studied. In my thorough research of body temperatures for one of my patents, I found that Nature has evolved in every species, an ideal basal temperature specific to them for a very important reason - that of protection from disease.

Each species, because of its unique metabolism, sources of foodstuffs and niche in its ecological environment, has its own inborn weaknesses, or shall we say, susceptibilities to different viral, bacterial and fungal invaders. This ideal and common temperature gives each species an adaptive advantage over its most commonly associated pathogen. It goes like this: birds, for example, may be thought to be Nature's enigma. Their basal temperature raises up to 106 degrees F, even outside during winter cold here in Michigan.

On first thought, this would seem like Nature goofed, expecting them to maintain such a ridiculously high temperature in such an extreme environment, with little access to food in the dead of winter. A sure script for extinction, you would think. Certainly not efficient as Nature is seen to be everywhere else - or is it? A bird's worst pathogen threat is Salmonella which bumps off at around 104 degrees F. So we can see that the ideal temp is just a degree to a degree and a half or so higher than the highest optimal temperature for threatening pathogens. As added protection, the body further has the ability to pump up even more heat with a fever mechanism designed to essentially "fry" these infectious critters out.

Our human ideal basal temperature of 98.6 degrees F also has a purpose. It is just a tad higher than the favorite of our old friends from the strep and the yeast families, namely, *Candida* species. Considering that most modern health practitioners rarely see 98.6 in routine physicals for healthy patients, many of these patients who feel feverish and come in for what they describe as acute illness often don't register such expectedly high fevers on the thermometer. The yeast and strep can be grown in the lab much better at slightly lower temperatures. Do you now begin to see the clinical picture? These lowered basal temps are predisposing us to chronic problems associated with overgrowth of yeast and strep in our bodies, which thrive at less than our ideal temps - which is, of course, the very reason that our ideal temp is just what it is.

### **Helping The Handicapped**

Now we come to a common problem exhibited commonly among the hypothyroid population, that of the inability to enzymatically convert T4, the storage form of thyroid, to the biologically active form T3, in any amount necessary to be truly effective. This common scenario results in the patient consistently showing a "normal" T4, even being treated with the common synthetic T4, by the name of Synthroid or Levothyroxine, and still feeling rotten.

For this group, changing to a natural form of desiccated thyroid, and starting with a low dosage of 30mg, increasing every two weeks by 15mg to normal basal temp, and normal range blood levels can make all the difference in the world. In fact, the generic forms of desiccated thyroid that weigh in at 65 mg per grain, are what I have found to be the best choice for sufferers of "The Nineties Syndrome", beginning by cutting the 1 grains in half, with a sharp non- serrated knife. The 65 mg one grains are standardized to contain exactly the same amount of T4 and T3 as the standard one grain of 60mg. The added 5 mg are more of the desiccated thyroid components known to contain, as yet, unidentified factors that help with such problems as water retention and possibly other things.

A common misconception with physicians in using a natural based product over a synthetic one is that so much more of the natural one has to be used, which, in turn, appears to lower its potency and therefore, its effectiveness. This is, I repeat, a total misconception. The one grain is standardized at 38 mcg T4, and 9 mcg T3. This amount of T4 is equivalent to 0.38 mg of a synthetic version. But is it really? Environmental Illness Syndrome sufferers who have been down the roads of synthetics, myself included, firmly resound a "NAY". There is just NO comparison in how you feel! And isn't THAT the real bottom line anyway? There would be no reason to challenge the current establishment and create unnecessary havoc for ourselves if the stuff really wasn't much better, if at all, since both are equally inexpensive, as prescriptions go.

The problem that just won't seem to go away in the minds of physicians, is that, in the early days of thyroid therapy, thyroid extract wasn't able to be standardized to be the same potency, batch after batch. This was a huge problem, as it depended on the

thyroid status of the pigs that the glands were extracted from. Those days are now, thank goodness, long over. Could this residual resistance be coming from the pharmaceutical manufacturers of synthetics, for which they are protecting patents? Yes, I own patents too, and I know how much work and dollars go into them. But protecting them with false advertising about questionable potencies of competing products is more of a business than an ethical policy, especially when standardization of every batch is now guaranteed by law.

### **Checking Basal Metabolism**

Monitoring basal temperature is more important than I can ever stress in words alone. It is the very best indicator of just how things are going in your body, since energy pathways work on oxidation and the burning on food sources chemically, heat is produced as a byproduct of that burning, just as if you were burning a fire outside. This heat in the body is important not only as an indicator of the amount of fuel being burned, but also the rate at which it is burned. Heat is also necessary to speed reactions of the body up biochemically, to add "fuel to the fire" so to speak. Remember from high school chemistry that you always added heat to speed chemical reactions? You also added heat to speed melting and dissolving of a substance in a solution. Like the old saying, "love makes the world go 'round", well, "heat makes the chemical world go around".

Many years ago, a now famous thyroid researcher, Dr. Broda Barnes, M.D. , PhD. , conducted batteries of exotic basal metabolism studies, and spent quantities of monies trying to determine the most accurate method of diagnosing low basal metabolism and subsequent hidden hypothyroidism. After 50 years of thyroid research, longer than anyone has ever studied the subject, his conclusion was that basal temperature tests were the most accurate (and by far the most economical!) of all. This is so simple! It even takes into account interfering roadblocks mentioned above, which Dr. Barnes did not have knowledge of back then. This further attests to this man's true genius, and it is fitting that progressive practitioners who continued to follow him named the test after him.

This test is performed by taking an axial (underarm) temperature first thing in the morning when you wake up, but before you get out of bed. These temperatures are recorded each day and correlated to menstrual cycles for women. In my nearly 20 years of research, I have seen very few "normal" axial temps, (about 97.6 F) anymore, and even less so where I live in the infamous " Michigan I-75 corridor" so noted for its terrible health statistics, toxic dumps and industrial pollution problems. In fact, body temperatures are going down more all the time. It used to be that a temperature in the 96's range was rare, now 95's and even 94's are becoming more common. I see low temps in animals as well, correlating them with known "normals" for their species'. In every case, the condition can be also associated with symptoms of the collection of ailments that I have identified as "Environmental Illness Syndrome".

I have carried the Barnes Basal Temperature Test to a higher degree still. Correlating these axial temps with oral temps, with certain food preferences that will fuel energy

pathways in most people, with food intolerances, and very importantly, with autoimmune disease, particularly that of Hashimoto's autoimmune thyroiditis. This is, perhaps, the most commonly underestimated, most overlooked, most misunderstood and most totally ignored "roadblock" in the thyroid pathway. Basal metabolism is, thus, probably the most significant contribution to "Environmental Illness Syndrome" that I have found. It also ties into the halogen and dioxin "roadblocks" as well. Let's examine why this is the medical orphan that it is.

### **When The Body Doesn't Like Itself**

The word "autoimmune" means that the body does not recognize its own tissues as being its own, and proceeds to attack them as it would any other foreign threat, such as a toxin, virus, bacteria, etc. To understand how such an important self-preserving function as the immune system could go "haywire", we must understand just how our immune system works. Again, let me describe this in the simplest way for ease of comprehension. Then, with this knowledge, and the new knowledge of driving forces behind "Environmental Illness Syndrome", it will be clear that the immune system has not gone "haywire" after all, but is just doing its job as it is supposed to do. It's just that some of the "roadblocks" to normal biochemical metabolism, produced by 20th century technology, to which our body has not had time to adapt, are proving to be formidable foes indeed.

The center of most immune functions is the thymus gland. *Not to be confused* with the thyroid glands situated on either side of the neck, which we have just spent a great deal of time discussing, the thymus gland sits behind the breastbone. It is responsible for "training" so to speak, of certain white blood cells previously made in the bone marrow. This is akin to the armed forces selecting their best recruits for specialized training for the special forces like the Rangers or the Green Berets. They give them specialized training for special missions. Some specialize in explosives, some are rescue personnel, and some assassins. The thymus gland does this kind of training too for specialization jobs for these white blood cells; let's imagine two scenarios that could put the protectees of both the thymus and these "special forces" into double jeopardy.

The first scenario is simple outnumbering. This is easy to understand. Too many of the bad guys can wear down even the most sophisticated of troops. On the biochemical model, this could come about by a shift in the environment or ecosystem, which allowed a much greater exposure to one or more pathogens. Diseases such as these are referred to as "dose related". Our common cold is such a disease. Cold viral particles are everywhere, but some "catch" a cold and others don't. Or at least not at the same time. Some are exposed to greater amounts of viral particles when someone who is actively infected sneezes on us. Thus, a simple case of the immune system being outnumbered.

But what about the differences in the strengths of the individual's "armies"? Doesn't that account for anything, you ask? It certainly does! And now we add another consideration, that of susceptibility of the host. Yes, all pathogens have different

strengths of invasive ability, but the door of the host must invariably open for them to gain entrance in the first place. Even in the most severe epidemics throughout history, there were always some who survived, and some who did not get sick at all. If this were not the case, all species would have been wiped out the first time some bad bug came along.

Now we come to the second scenario. This involves an indestructible enemy. Or I should say, temporarily indestructible, so far as our present evolution and sophistication of our immune force armies are concerned. Simply being outclassed, so to speak.

An example of this scenario would be the past situation in Bosnia. The opposition forces sent in to rid the city of the menace of snipers occupying some of the buildings, had a virtually impossible task. In the process, they had to virtually destroy the buildings themselves to get them. When our immune system identifies some foreign protein or element or other chemical compound that it knows does not belong there, it is stimulated to attack. The foreign element may be a separate entity in itself, a relatively easy target to search and destroy. But what if the enemy is only HALF foreign, or PART foreign? What then? How do we get the snipers out who are actually LIVING in the building with the PERMISSION of the owners, and even being supported and cared for by the unsuspecting owners? The trained assassins have no choice but to sacrifice the innocent but ignorant and unsuspecting owners, for the sake of the many others that need to be protected. ( I did not say that this was fair, I only report to you what actually happens.)

The best of assassins are trained not to feel, but to do their job "come hell or high water". Armies of the immune system do just that, and very well, I might add. So tissues and organs harboring foreign invaders, from all corners of the chemical and biological worlds, are attacked repeatedly and are eventually destroyed by the body's own forces in an effort to rid it of "snipers" who do nothing but muck up the biochemical pathways. Eventually, the immune "armies" tires in their efforts to eliminate an indestructible foe, and fall prey to more attackers and invaders, succumbing to every bug that comes along, or, worse yet, running out of good training personnel for the special forces. When this happens, as would happen if the budgets were cut, awesome assassins would be created, but there would be no one to teach them which uniforms to shoot at. A high percentage of allies would be senselessly lost. So too with the body, on a nutritional budget cut, common with today's Standard American Diet (aptly referred to as "SAD".)

Our thymus is not able to monitor the training very well of its premier assassins, to eliminate and weed out the improperly trained ones. These renegades then set up their own training facilities, cloning themselves and passing down the errors of their ways. They orient their attacks to different specific tissues and organs of the body, but all originate in the thymus gland, the seat of immune function. This describes "autoimmune disease".

### **A Rose By Any Other Name, Is Still A Rose**



So how do we medically describe this sad play of events? Traditionally, we have named the diseases after the targeted tissues or organs. This was useful because of the different sets of syndromes and symptoms that were elicited by the partial incapacitation and inflammation of the targeted tissues or organs. Some of the more common targets for autoimmune responses and their corresponding names for the "diseases" are as follows:

## **TARGET "DISEASE"**

**Pancreas -----Type 1 (often called "childhood")  
Diabetes**

**Thyroid-----Hashimoto's thyroiditis**

**Connective Tissue and other systems -----Systemic Lupus Erythematosus (SLE  
)**

**Skeletal muscles -----Fibromyalgia**

**Myelin sheath of nerves-----Multiple Sclerosis ( MS )**

**Joints-----Rheumatoid Arthritis**

You notice I have put the word "disease" in quotations. This is because these manifestations are not truly separate "diseases" per say. They are all a result of a weakened and or faulty thymus gland, and are really only different manifestations of ONE disease. Traditional medicine still calls them different diseases, however, and it was thought to be so until very recently, when knowledge of the importance of the thymus gland was discovered. In traditional medicine, diseases are described and identified by the combination of symptoms and manifestations called syndromes.

New Age medicine, like New Age everything else, seeks to integrate into the whole, showing how everything is connected to everything else, and that virtually nothing ever really stands alone. This style of thinking is the foundation of the holistic approach to medicine, which is so popular, and I might add, so effective, especially in treating conditions like "The Nineties Syndrome". This is the direction in which medicine is evolving ,and it is a most welcome thing. We have learned, finally, that the biological package that we call a "living entity" is not just a collection of its parts, like the parts of a car, that function independently from one another.

All tissues work together to bring about the healthy existence of the organism. Some even sacrifice themselves for others to provide nutritional support in times of crisis or life threatening situations. You certainly don't see this in a car! There have been times, when I thought about this, cruising down the expressway far from the next exit on an empty gas tank. I wished, then, that the oil and water would automatically kick in to the temporarily empty gas tank, but no such luck.

Our progressive physicians are finally realizing that they are not simply "medical mechanics", but really step-in "orchestra directors", trying to find out who is playing the wrong notes in the symphony!

Incidentally, information provided to you here is not commonly known to most physicians, not even to most of those who work so closely with this subject on a daily basis. So, in a way, you will be more knowledgeable in these subjects than the physicians you consult with. Please be patient with them. They do not have the time to pursue a 10 hour a day course of study for 30 years that it took me to comprise this research. They are too busy in their offices seeing increasing numbers of patients, and their increasing numbers of complaints. This schedule is certainly enough to frazzle anybody. They are practicing medicine with the body of knowledge that they learned in medical school, and this information, for the most part, wasn't in their books.

Today, it is only found in international research books, so expensive (\$150.00 to \$300.00 per book on average) that medical libraries only purchase one, and for reference only, not to be checked out. My favorite haunt, the University of Michigan Medical Library in Ann Arbor, where I began my research for publication some thirty years ago as a very sick student, still invites me, though.

Scanning shelves of well-filled stacks of recent acquisitions gives me further ideas on books to order for my own reference library, since it is not practical to copy an entire book that cannot be checked out. You would be surprised at the information known up to 100 years ago that has been lost. I am now presenting to you some of this "lost" information as "new", simply because many patients and health care practitioners are just now hearing it for the first time.

### **Resistance To Thyroid Hormone**

This is a newly recognized condition in the body that occurs when there is an adequate level of active thyroid hormones circulating in the blood, as measured by the standard thyroid profile, but the patient still exhibits symptoms characteristic of hypothyroidism, or low thyroid activity.

Many obese, clinically depressed, severely allergic, chronically fatigued, etc., patients suffer from this problem and have slipped through the cracks of conventional medicine for years. With the advent of the Prozac generation of medicine, your response to the symptoms may be addressed, but the disease process still goes on.

As many others before me have said, clinical depression, PMS, obesity, food cravings etc., are NOT Prozac deficiencies! They are problems with physiology and many are responses to twentieth century environmental chemicals. It is interesting to note behavioral, physiological, social and self-control systems that break down in a society when environmental considerations are recognized.

The industrial revolution had its problems, and Rome, itself, fell and its power disintegrated when ruling classes no longer could rule, due to lead poisoning they suffered from drinking from leaden goblets furnished through leaden plumbing. Of

course, only the rich could afford such luxuries. Aren't they the ones who exert controls on lesser classes in societies? Nero probably wasn't the only one who fiddled while Rome burned.

Back to our original topic, the more we understand physiological responses to environmental contaminants, the more we can see that our body acts in a very logical way. Then we can research ways to protect and eliminate these foreign substances from the body. After all, that is where it is all truly at, besides trying to clean up the environment and prevent exposure in the first place.

We simply do not have enough time to sacrifice generations of individuals the way Nature does, in adaptations for survival of the fittest, now do we? This is what Hitler had in mind in trying to create the perfect race, eliminating all the imperfections from the gene pool. Understanding the body's physiological responses to ANYTHING it is not used to is essential in trying to heal the body's disease process. When these responses are understood, like Alice traveling through Wonderland, everything becomes logical.

### **Seeing The Forest Through The Trees**

Incorporating all of this new information is crucial in interpreting the truly limited data we can acquire from our current laboratory tests. As mentioned previously, we don't have tests for everything and probably never will have, at least in our lifetime. So it would be a mistake to try to categorize every individual patient, each with his or her own collection of symptoms and syndromes and different exposures, and not to forget - their own set of genetics, into a "one size fits all".

It has been found that chemical compounds, viruses, bacterial infections and whatever else you can think of as foreign to the body, can set off an "autoimmune" reaction. It has also been discovered that these culprits can also cause genes to activate that normally would not. Add to this list nutritional deficiencies as well. Shocked? Well, researchers who worked with cats generations ago found, quite by accident, that the genetic anomalies resulting from nutritional deficiencies in only one generation, took a full THREE generations to correct on a good nutritional program. It makes you think twice about what we are putting into our and our children's bodies. See [Defusing the Genetic Time Bomb](#).

The current procedure for evaluating thyroid metabolism in the body is to first screen for a standard thyroid profile which measures circulating T3 (biologically active form) and T4 (storage form), plus a TSH (thyroid stimulating hormone). What happens to be circulating, however, often is not able to be biologically active, or can't plug into the receptor sites to do its job efficiently. Even though it is currently thought that this profile covers just about everything, you can see from new information being presented that it doesn't.

It would be much more representative if there were no "roadblocks" to consider, and if everybody's thyroid followed the rules we think must apply, but in "Environmental Illness Syndrome", The "Alice in Wonderland" principle applies. You have to know

the rules of the kingdom to understand the logic of how things work. Then the light of day shines down and things suddenly make sense.

Simply relying on one test like TSH to gauge the activity or dosage of thyroid replacement, can miss a lot of pertinent information, which can make a dramatic difference in how people feel (not to mention losing lots of business for physicians who treat these victims). If the thyroid had a normal ability to respond in the first place, then we wouldn't be facing certain of the thyroid metabolism problems.

We have to use as many of the testing abilities that we have, however, we must look at them with different eyes, now armed with the new information in "The Nineties Syndrome". And, word spreads like wildfire for those physicians who are progressive enough to dare to consider "Environmental Illness Syndrome". They quickly become swamped by people, that I or other successful patients, have referred.

I am always searching for new doctors to work with because of the complaints that will shortly come from patients, about one, two and three hour waits in the lobby, and three to five month waits to get in to see those doctors, once the word is out. It is my hope, that, with this site and my educational materials, more physicians will become interested in helping these people, so more will take a more active role in achieving their own state of health. This process will relieve the physicians of a great amount of responsibility which their patients should rightly assume.

There really is no little pill that will cure all, and allow us to abdicate responsibility for ourselves. Hopefully, as you read this page it will give you a sound background so that you can provide more pertinent information to your physicians to better help you. Then help the process to attain health, yourself, by taking responsibility for adjustments in unhealthy lifestyles such as smoking , eating and exercise. In fact, I make this point right up front with my clientele, that I cannot work with them unless they are actively making these responsible adjustments. One can be lead to the right road, but it is unfair to ask to be carried down it.

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[Return to \*\*Your Health\*\* Home Page](#)

[Also see \*\*Frequently Asked Questions on Equine Environmental Illness - Thyroid\*\*](#)

[Return to \*\*Equine Health\*\* Home Page](#)

[Return to \*\*Vita Royal\*\* Home Page](#)

# About Linsey McLean

Linsey McLean is a graduate of the University of Michigan with specialties in Biology, Chemistry and Clinical Microbiology. Originally she worked in a class 5 CDC reference lab in mycobacteriology and a clinical chemistry lab as a medical technologist.

As an active biochemist for Vita Royal Products, Inc., Linsey works in human research with chronic debilitating diseases and formulates new supplements for commercial use, blends custom supplements for special cases, consults individual clients, doing research and teaching.

Her research work includes neurochemistry and sports medicine physiology, with cases ranging from hyperactive children and violent behaviors, to Gulf War Syndrome, to competition performance horses.

In 1983 and 1984, Vita Royal Products was chosen as the official supplier of the United States Equestrian Team. Both custom and commercial supplements were formulated for the Olympic Team and they won a record number of gold and silver medals.

In 1986 Linsey was invited to represent the United States as a Citizen Ambassador in Scientific and Technical Exchange for the People to People Program to New Zealand and Australia. She was invited to represent the United States 1988 in Communist Bloc Countries. Then, in 1991 she spent one month in China traveling and studying Oriental medicine and acupuncture.

After eight years of clinical trials, she was granted two U.S. Patents in 1996 for environmental biochemistry. One was for the first nutritional diet program for weight loss in morbid obesity, normalizing blood sugar in Type II diabetes and lowering cholesterol using supplements and diet, without drugs. This is significant since there are over 28,000 diets registered in the U.S., none ever earning a U.S. Patent for efficacy.

A liquid composition with both nutritional and buffering abilities won her the second.

In 1999, an augmentation to the original program was awarded a U.S. Patent for treatment and control of all autoimmune diseases including Lupus, Fibromyalgia and Hashimoto's thyroiditis, as well as chronic fatigue and clinical depression.

Later that same year she was awarded three U. S. Patents for the formulations. One represents a dry formulation of her highly successful liquid Nutrient Buffer; the second addressed "leaky gut syndrome" with a special nutrient supplement blend, and the last defines a soothing, therapeutic bath salt compound.

In 2000, another patent was issued for "Leaky Gut Syndrome."

Linsey has also been honored as a Christopher Columbus Award finalist, an award given for the best discovery of 1998 for the benefit of mankind. In addition to these, she holds four other U.S. Patents, including one for the program that is so successfully restoring health to horses with EPM (Equine Protozoal Myelitis).

Linsey also plans to produce additional educational materials in her *Environmental Health Connection* series.

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[Return to \*\*Your Health\*\* Home Page](#)

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# TRADITION, and the INTELLECTUAL WARS OF STUPIDITY

Tradition always has, at its foundation, a purpose, a useful practicality, some thing, or some principle that applied to the problems or questions of life at some previous point in time. Tradition, then, by its very nature, cannot be expected to serve in the same efficient ways in a future world that is constantly changing. And we, as a human society, do not easily see that.

In fact, we strengthen Tradition to the point of unwritten law when it is challenged or threatened by observations that it is no longer relevant to the current society. Progressive thinkers, who do not limit their visions to the confines of Tradition, and therefore, are able to see the future possibilities of better quality of life or a deeper understanding of the world we live in, are often castigated severely, sometimes to the point of ostracism from society.

Then, many years, or centuries later, Humanity caught up with them and suddenly they are, posthumously, of course, heroes. We have many, many examples of this narrowness and destructiveness of thinking in our history books: Galileo, Jean D'Arc, and Einstein, to name but a few. After all these lessons in history, does it never occur to Man to learn these lessons as they are being taught, instead of so many years later?

Does it never occur to Man that perhaps his mode of thinking is in terms of the past (**Tradition**) that may not, and probably does not, apply to the present, or even the future? It seems that there is great security in Tradition. Using pre-formed walls of Tradition to surround one's thinking gives great security to the masses of those who do not *want* to think, who are too *lazy* to think, or maybe - too *scared* to think. For thinking, without pre-formed walls, is like cooking without a recipe. It takes guts, pure and simple. But look at the possibilities -awesome opportunities for invention! To see what few others will even gaze at!

Only those thinkers who can think beyond these walls, can see the other side - and sometimes that view can be scary. Sometimes tradition can be completely contradicted, such as the practice of putting butter on burns. It wasn't until an oil tanker burned and sank in the ocean, badly burning

its crew and leaving them stranded in icy water for 6 hours before being rescued, that we discovered cold water as the best treatment for burns. It was also discovered that butter was probably the *worst* treatment. Prior to that time, we even used butter in the hospitals!

Now, what if butter was near and dear to our hearts, and quite permanently locked into our Tradition thinking. What if the butter purporters refused to accept the fact that those crewmen with the severe burns were hauled from the icy waters in remarkably good shape, considering the severity of their burns? And what if future test cases on other burn patients with cold water also showed to be a better treatment than butter?

Now we have an *intellectual* war between the old butter lovers and the "new wave" cold water therapists. The butter lovers will continue to justify their obsolete beliefs with "evidence", probably gained from the sacrifice of current burn patients to butter therapy, when they could have had more healing benefits from the cold water, in addition to the reduction of pain. The intellectual wars go on, and on, and on, in all levels of our learning and knowledge, wasting valuable time, money and human and animal suffering in the maintenance of an obsolete "Tradition".

Now, we can see these *intellectual* wars for what they really are, *wars of stupidity!*

Why do we persist in the sustenance of obsolete knowledge? Why are we so antagonistic to change? To Learning? To expansion? To growth? Why can't we understand that the discovery of new knowledge never THREATENS Tradition, but only serves to enhance it, to expand it, to broaden it's application. It gives us, who incorporate the new knowledge, a greater depth of understanding of ourselves and the world around us, and broader minds to accept the next new package of information that comes our way.

This is the great gift that the "seers who look beyond the walls" give to those of us who don't - or can't, for some reason. We need to learn how to accept the gift of knowledge in the great spiritual way it was intended, instead of immediately rejecting it in a fit of narrow-minded human frailty. This only perpetuates the stupidity of intellectual wars in their all-out effort to preserve "Tradition" for its own, comfortable sake.

Humanity is like a bunch of nearly blind mice with glasses, who have fitted themselves with glasses. Only some have better glasses than others. Some see more and different things, even looking at the same scene, than others do. And then there are some who refuse to even look, for fear they see something that might challenge their currently held beliefs, their Tradition. And they argue and fight about what each other



sees, for what *IS* there to some, *IS NOT* there for others, no matter how much proof be shown.

Wars, traditionally in history, hinder the progress, of societal development, because everyone is not pulling in the same direction. Countries continually involved in war throughout much of their history and are not nearly as "developed", as we say, as those who were not. Intellectual wars cost dearly too. They cost us intellectual and technological advancement and spiritual development, and the price is dear. As history repeats itself in cycle after cycle, we are still trying to learn the same elemental lessons after thousands of years.

And the intellectual wars permeate all levels of thought, too. Physics, Philosophy, Geography, Sociology, Psychology or any other classification of knowledge, for that matter. And, nowhere are the intellectual wars of stupidity more sorely felt today than in Medicine, the subject matter of this book. Laws are even evoked to protect *The Tradition*, as individuals struggle to enforce their civil rights and their choices for treatments of diseases outside of "The Tradition." As a society, we continue to be our own worst enemy.

How should we deal with the "butter lovers"? The blind mice who *refuse* to see? The ones who war over Tradition? These are questions that must be solved by all human society in order to finally break the cycles of repeating history, and stay on the path of true progress.

This article is for those who are truly *willing* to see what they have not seen before. It was written for your empowerment, to help you understand the forces at work around you, and enable you to significantly improve the quality of your life.

So, if you can put your Traditional orientation to rest, in a respectable place of course, and follow me through the walls, I will lend you my glasses.

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[Return to \*\*Your Health\*\* Home Page](#)

[Return to \*\*Vita Royal\*\* Home Page](#)

# Nutritional Restructuring with Adaptive Advantages®

**Vita Royal's NUTRITIONAL RESTRUCTURING** program enables the most efficient metabolism of the thyroid endocrine system and its metabolic pathways. Additional nutritional support and enhanced metabolism of desired pathways is greatly helped by addition of our special nutritional supplement, ADAPTIVE ADVANTAGES®.

## Getting Started

You will need to order our Basic Beginning Kit, which consists of our Adaptive Advantages® tablets, a variety of vitamin and mineral supplements, a herbal parasite cleansing treatment, Nitrate Water Test Kit, along with our *Environmental Health Connections: The Overview* video, all for \$207.50. Together these provide a system designed to readily detoxify and energize your body over a short period of time. Biochemist Linsey McLean and her staff are available to answer your questions throughout your program.

Begin the program using one Adaptive Advantages® tablet after each meal, and increase by one tablet **per day** to bowel tolerance. Looser, softer stools, but not watery, are both common and desired. If diarrhea occurs, decrease by one tablet until several soft stools per day. You may have to periodically increase or decrease as bowel tolerance varies. Take other supplements as recommended in the information that accompanied our Basic Beginning Kit.

Also test your drinking water with our Nitrate Water Test Kit. It is important to view *The Overview* video as well as to understand the concepts of our program which addresses the effects of environmental factors, to which we are all exposed, on our health.

## Monitor Body Temperature Every Day

Body temperatures should be taken every day, both oral and axial (armpit) first thing in the morning before you get out of bed, or just

before bed if you sleep on a heated surface. Keep a log of these temperatures for both your and our records. Get a spiral notebook and record the date and the temps in the left margin, the foods you eat in the left side of the writing area, and your observations and menstrual cycles in the right side of the writing area, with supplement and hormone regimen. Send these records **weekly** to me. **This is most important, to help me help you in fine tuning your nutritional program.**

Most often there will be an increase of body temperatures by about 1 degree or more usually occurring between two and three weeks into the program or sooner. If this does not occur, or the program itself is insufficient for your symptomology, you may be affected by autoimmune disorder, and/or need supplemental thyroid medication from your doctor. Take your documentation with you on your visit.

### **About Thyroid and Thyroid Supplementation**

Most people who suffer the symptoms of clinical or sub clinical hypothyroidism that have either lower thyroid profile blood tests, or normal blood tests but with low thyroid symptoms (resistance to thyroid hormone syndrome where hypothyroid symptoms are present but blood profiles remain normal to low normal - a newly identified syndrome in research) are greatly helped by this program. Other symptoms and disease syndromes associated with this "Environmental Illness Syndrome" are: chronic sinus and allergy, sore muscles and joints, chronic fatigue, clinical and sub clinical depression, (it's no wonder, since every degree lowered that your body temperature is from 98.6 F represents an approximate 13% decrease in basal metabolism and energy levels), ADD, ADHD, interstitial cystitis, endometriosis, yeast and strep infections, falling hair, obesity, headaches, anger and aggression, chemical and environmental sensitivities, food bingeing and food and chemical addictions.

We have found that the commonly prescribed thyroid preparation Synthroid®, which contains only T4, the storage form and a synthetic form subject to stereoisomerism in manufacturing does not effect nearly as well as the natural dessicated thyroid preparation , which contains both T4 and T3 plus cofactors as yet unidentified. Some brands that we have had good experience with are TIM /TCL thyroid made by Time Cap in Farmingdale, NY., Jones, Rugby, and Forrest. The **65 mg** 1 grain tablet is superior in effectiveness, with more desiccated thyroid cofactors and not lactose filler, and far more inexpensive than the Armour® brand 60 mg 1 grain.

The most successful protocol of thyroid supplementation involves beginning with a 1/2 grain dose taken first thing in the morning, no food for 20 min. Often, nothing is noted with this dose, however, it is

necessary to begin with the lowest dose possible and then increase by 1/2 grain every 2 weeks until symptoms BEGIN to resolve, and then that dose is held until the body completes the healing. If progress plateaus and no further progress is noted after another month, then another increase by 1/2 grain can be tried.

It is important that one understands that more is NOT better when using thyroid supplementation. Too much can cause osteoporosis, heart palpitations, high blood pressure, and fatigue, in fact, many of the symptoms that are associated with TOO LOW thyroid. So, ALWAYS be conservative. You may have to increase the amount in the winter and decrease the amount in the spring and summer, to follow the natural hormone rhythms in the body. Normally, the maintenance dose for most people will be 1 to 3 grains, and over this, you should be closely monitored by your physician.

### **Foods to Avoid**

All breads, anything with sugar, flour, cereals, milk, cheese, junk foods, apples, apple products like apple sauce, grape and grape products like juice and raisins, pears and pear products, fruit juices that contain these fruits, cider and the like, large quantities of smoked meats like bacon, sausage, or ham, mushrooms, deli meats, lunch meats, peanuts and peanut butter, soy products, broccoli, Brussels sprouts, cabbage, cauliflower, coffee filtered by **white** paper filters, tea in tea bags, vinegar, artificial sweeteners, artificial colors and flavors.

### **Foods to Include**

Any **lean** meats, fish, poultry, most all other vegetables, butter, canola or olive oil, lemon juice for vinegar, some berries or kiwi, some brown rice, eggs, clear based soups, salads. Basically, just common sense good foods.

Probably the most important part of this program is the recognition that this is NOT a DIET. The term "diet" denotes a restriction of food quantities, calories, etc. We have learned from history that food restriction does not work. When food is restricted, the body simply adapts to the restricted regimen with a lower basal metabolism yet. It responds to conserve energy since it does not know when food sources will return to previous amounts. It "learns" to scrimp and live on less. When you become tired of "dieting" and return to old ways of eating, your now more efficient body just gets fatter, and fatter and FATTER!

So, too, with any style of appetite suppressant. Just because the "pain" of would-be hunger is shut off in your brain, this doesn't stop your body from plummeting your basal metabolism. So the trick here is to EAT

when you are hungry. Just eat small amounts of the foods that don't stimulate your storage pathways.

**A very important part of this NUTRITIONAL RESTRUCTURING program is to take olive or canola oil, a teaspoon to a tablespoon about every three hours, and generously use the oil every one to two hours if you have hyperinsulemia and food and carbohydrate cravings.**

For more information, consult [Menu Suggestions for our Adaptive Advantages® Nutritional Program](#) as well as articles listed on our [Your Health Home Page](#) relating to Nutritional Restructuring.

New clients should print off and fill in our confidential [Case History Questionnaire](#). Send or fax this to us at the address or fax number you see in the upper left corner of this window. This allows biochemist Linsey McLean to fine tune a personal health program for you.

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[Return to Vita Royal Home Page](#)

# Menu Suggestions for our Adaptive Advantages® Nutritional Program

## Breakfast

Eggs Best if the yolks are soft and whites are cooked. Never raw! The risk of salmonella increases and raw egg white contains a potentially toxic substance called "avidin" - which is an evolved protection response against egg eating predators. They become sick eating eggs and then stay away from bird nests.

Add lean ham, peppers, onion, fresh tomatoes and/or a few sprinkles of hard cheese.

You can also have: (with or without the eggs)

"Minute" steak

Ultra lean sausage without nitrates (You often can get your butcher to make you some out of trimmed lean cuts such as loin cuts.)

small piece of lean ham

Protein Shakes - many flavors

In a blender, put fruit juice (I think papaya juice works best but try many different kinds so as to add variety) or distilled water (about 1 cup), add several ice cubes, unsweetened frozen fruit, such as; cherries, blackberries, strawberries (not frozen strawberries from California, they have been treated with bromide which is toxic to the thyroid). Pineapple and banana are too sweet and raise the sugar content too high, but small amounts of them can be used to mildly sweeten bitter fruits. Kiwi is also good. Blend well. Add canola oil (2 tbs) and 1 scoop of 100% egg protein powder. Blend just enough to mix in the oil and protein powder. Too much mixing will cause the egg to get frothy. (NOTE: do not use soy based protein - it interferes with the thyroid).

Any leftovers from other meals that are approved for this program are acceptable. There doesn't have to be anything special about breakfast except that we need a higher protein meal to stimulate body chemistry and get us going!

## Lunch and Dinner

**BEEF LOVERS BEWARE! if we cook all of our fowl and pork well done (no pink) why do we continue to cook and eat our**

**beef rare or pink? Disease, parasites and bacteria are in beef just as much as any other type of meat. ALWAYS COOK ANY & ALL MEATS WELL DONE, NO PINK!!**

Chili - the spicier the better!

Roasts - any beef, lamb, pork, chicken, duck, turkey or wild meat. "Surgically" trim all white, solid fat off red meats. Remove all skin and fat balls off fowl. Check inside the carcass for fat balls too. Fat balls are also found deep in the hind quarter muscle of raccoon, which needs to be removed for taste purposes as well (if you eat this wild meat). Be sure to handle all uncooked, wild meat with rubber gloves or under running water to prevent disease and parasite transmission or possible contamination of your kitchen.

For juicier roasts, pour canola or olive oil over cooked meat before serving or during cooking. For fatty roasts, it is a good idea to cook the day before you want to serve it, in a covered dish or roaster with a little water in the bottom of the pan (1/2" - 1") Then refrigerate. This will cause the saturated fat that cooks out of the meat to turn white and rise to the top for easy removal. Heat, cover with oil and serve. This gives your roasts the mouth feel of fat, but eliminates the saturated fat and the hormones, pesticides and herbicides stored by the animal in the fat.

The canola and/or olive oil provides essential fatty acids to stimulate your own "saturated fat" metabolism. Olive oil is particularly tasty on beef. Flavored oils are great too. Be sure they are the correct oils to begin with though. No soy or corn oils should ever be used.

Chicken or Turkey - clean well (as described above) and brown at lower temps in a frying pan with 1/4" of canola oil (olive oil tends to burn). After browning, add dry seasonings like rubbing spices or cajun spice with a little water or seasoned sauces and/or marinades such as Lawry's Citrus Grill, Hawaiian, Lemon Pepper or Honey Dijon, and simmer until done. (These and many more flavored sauces are available in your grocery store.) You can also add vegetables toward the end of cooking. You'll be amazed at the many different tastes you can get from that "chicken? - again!"

## **Soups**

### **LENTIL**

in a 4 quart kettle, put 2 quarts of distilled water,  
1 lb. of lentils (red ones are preferred for their sweetness and their mild flavor),  
1 chopped or diced onion or 2 lg. shallots, or both if you like,  
1 or 2 peeled, sliced carrots,  
a dash of garlic powder, pepper and/or a dash of tabasco sauce,

add diced, lean ham for flavor

Bring to a boil. Reduce heat to a simmer until consistency is smooth and almost creamy, about 45 min. - 1 hr.

### VEGETABLE WITH MEAT

Chicken, turkey or browned ground beef with fresh or frozen vegetables; such as - zucchini, parsnips, carrots, green beans, yellow beans, tomatoes, small amounts of corn or brown rice (wild rice is great - lots of fiber and a non-digestible carbohydrate), onion, garlic, leeks, parsley root, fennel, peas, okra, spinach, Italian style beans and whole shallots, even some flowers! In China, flowers are served right along with the vegetable dishes or in them as flavor ingredients - particularly day lilies. You can buy them here at imported food stores. The food stores in Chinatowns of America are a gold mine for the gourmet hearted chef!

### MEATBALL SOUP

One of my favorites is a soup made with beef meatballs (1 lb. of ultra lean ground beef),


1/2 - 3/4 cup of steamed peeled eggplant, 1 lg. or 2 sm. eggs, seasoned with salt, pepper, garlic and dried onion flakes and wild rice as desired, some sliced Jerusalem artichokes\* and frozen spinach leaf pieces s desired. Flavor the broth with garlic; thicken if desired with small amount of cornstarch. Add canola or better yet, olive oil for heartiness.

\* Jerusalem artichokes can be substituted for potatoes in most any recipe. They add crunchiness as well, somewhat like water chestnuts.

### BOUILLABAISSE (Seafood Chowder)

- 1 qt tomato juice
- 1 or 2 fresh chopped tomato
- 1 small onion or 2 shallots
- 1 tsp celery flakes
- 1 tsp garlic
- pepper to taste (no salt)
- 1/2 lb. chunk haddock (or other white ocean fish, no great lakes fish, no bones
- 1/2 lb. Atlantic salmon fillets
- 1/2 lb. crab chunks (king is best)
- 1/2 lb. lg. shrimp in the shell (heads off)
- 1/2 lb. mussels\* (scrubbed first and soaked in the refrigerator in salt water with corn meal sprinkled over them to make them sweet and less sandy)
- 1/2 lb. sm. lobster tails in the shell.
- 1/2 lb. Cherrystone clams\* in the shell (optional)
- dash of tobasco sauce
- white wine to taste





Popular in the south of France. In a pot, make a base of tomato juice, fresh tomato pieces, onions or shallots, celery flakes, garlic, pepper but no salt, Chunk haddock and Atlantic salmon fillets and cook several minutes. Add crab chunks, large shrimp in the shell, mussels, and some small lobster tails in the shell. Cherrystone clams in the shell can go in too. You now have a wonderful and fun to eat stew. Add a dash of tabasco sauce and white wine. Expensive to make but a fun special meal. You can experiment with any combination of seafood and seasonings you want.

\*Be sure to only purchase shellfish with closed shells. Do not use opened shell clams or mussels as they may be spoiled.

**SALMON CHOWDER** - (or any kind of seafood) makes about five or six 2 cup servings

Cooked Salmon

1 can Campbell's Tomato Bisque soup

1/2 can water

1/2 can milk

1 pkg. frozen vegetables (any combination, if veggies contain broccoli, don't worry about it. A little, once in a while, won't hurt your program.)

1/8 - 1/4 fresh onion or shallots

2 lg. or 4 sm. tomatoes, chopped

1/4 - 1/3 cup olive oil

1 tsp. tarragon

2 tbsp. parsley more or less to taste

1/2 - 1 tsp. basil

Remove skin from cooked salmon and chunk up. Add remainder of ingredients and simmer until veggies are tender.

**SEAFOOD ALFREDO** - serves 10 hungry people, approx. cost \$30 (may be divided for smaller portions or fewer people)

1 lb. pkg. frozen cooked shrimp

1 lb. imitation crab

1 lb. imitation lobster or scallops (I prefer scallops)

1/4 cup olive or canola oil

1/2 cup garlic flavored olive oil

1 whole garlic clove (more or less to taste)


12 oz. sour cream

1 quarts half & half

1/2 tbsp. lemon juice (Real Lemon brand has additives, use Minute Maid 100% pure from concentrate)

1 cup of Parmesan or Romano grated cheese (possibly 2 if you like it)

1 cup white wine (use a dry wine like Chardonnay-never use cooking



wine)  
1 tbsp. freeze-dried chives  
1 tbsp. parsley flakes  
1 tbsp. onion powder  
carrots (as many as you want)  
fresh or frozen spinach (again, as much as you want)  
1 or 2 tomatoes

In this recipe you can add just about any vegetable you want, and as much as you want. Be creative! Open your freezer and throw in anything!

Put all oils in a 5 quart pot - add half & half and garlic cloves  
Heat on low until warm  
add sour cream  
stir until blended  
add lemon juice, spices and cheese  
stir and mix continuously for about 5 minutes (it is very important not to let this recipe sit unattended for any length of time-if you do, it will become scorched and/or burned on the bottom of your pot)  
add spinach, carrots and seafood.  
add wine just before serving

Mix well with cooked noodles - I use DeBoles Natural Gourmet Pasta. It is made out of Jerusalem Artichoke and contains no flour. It taste great. No one will notice any difference in this pasta unless you tell them. It can be purchased at the local grocery store.

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[Return to Vita Royal Home Page](#)

# Our New Nutritional Restructuring Beginning Program includes Everything to Get You Started

Updated 6/19/02

Our **Nutritional Restructuring Beginning Program** includes our specially formulated **Adaptive Advantages®** Vitamin-Mineral Supplement, Additional Supplements listed below, Organic Canola Oil, Cranberry Concentrate, Parasite Kit, as well as our ***Environmental Health Connections: The Overview*** video, all for \$195.00

Additional supplements may be recommended by biochemist Linsey McLean to fine tune your specific health program. Test your drinking water with our Nitrate Test Kit, too.

It is important to view the video immediately to understand how environmental factors interconnect to affect health and well being for both humans and animals in our technically advanced society. Learn why modern allopathic medicine does not recognize these factors, both in diagnosis and treatment.

## **Beginning Program Kit contents:**

Adaptive Advantages® - begin with 1 after each meal, increase by 1 per DAY to bowel tolerance = several small soft

stools per day. \$46.00

Vitamin B-12 - 2 under tongue mid-morning \$8.50

Vitamin A & D - 1 after supper \$5.00

Vitamin E - 1 after supper \$20.00

L-Tyrosine - take 3 on arising-no food for 20 minutes  
\$19.00

Magnesium\* - 4 before bed \$12.50

Canola Oil - 1 T. with and between meals \$7.50

Cranberry Concentrate - Follow instructions on bottle,  
drink three 8 oz. glasses daily \$17.50

Nitrate Kit - to test your drinking water \$10.00

Overview Video n/c

Parasite Kit - see instructions \$50.00

Total price for the program: \$ 195.00

Does not include shipping or Michigan sales tax, if  
applicable.

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[Return to \*\*Your Health\*\* Home Page](#)

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# We Can't Fool Mother Nature, or Can We?

## *Real Help for Obesity*

There is no group to be more pitied in this 20th Century than the genetically obese. What was once considered desirable in centuries past, is now considered grotesque. Even as recent in history as the Middle Ages, angels, virgins, cherubs, goddesses and even Buddah himself were depicted as decidedly more than just plump. They were downright obese by today's standards. The Mona Lisa in all her revered beauty is no Skinny Minnie either.

Fat people are now harpooned with jokes, and verbal as well as emotional abuse and assaults by society. They also suffer great pain in self directed guilt complexes, feelings of insecurity, inadequacy, despair, failure, and above all - the horrendous pain of the constant wars with their resistant bodies. With the gnawing, incessant, driving hunger so much a part of the traditional (and most often, unsuccessful) diets, some have even been driven to suicide.

Fat people are ridiculed for their obvious lack of motivation and laziness. No one came out of the concentration camps, they say, with a blubberous body. The fault must be in themselves. Just quit eating and watch the pounds melt away, they are told. Some of them actually do, and then some of them even die.

Twentieth Century society is awfully cruel, especially in the lack of understanding of the problem. Few population subgroups are as motivated as obese people who have tried every diet, every pill, every exercise and every gizmo, and even continue to do so until they find one that really works. This goes beyond motivation - this is DEDICATION.

So what happened? Why is fat not beautiful anymore? Where do the attitudes of society come from anyway? And, above all, why are some bodies prone to obesity and resistant to give it up? Is it really "all in the head?"

### **THE HISTORY OF OBESITY**

To answer the last question first is appropriate in understanding the propensity toward fatness. It's not all in the head, it's in the genes. You see, long ago, in fact, VERY long ago, pioneering groups of peoples migrated away from areas we call "Cradles of Civilization" where the

climate was mostly stable and nice, and food was most often available. These are areas of Africa, Asia, The Middle East and India.

These strong spirits move Northward into more inhospitable lands that were frequently subjected to periods of more comfortable weather suitable for growing crops. Since no one knew when the next glaciation would come, the natural law of the land was, in a nutshell, - he or she who could "pack it on " in a short period of time had the best chances for survival.

The propensity for obesity was thereby selected, evolutionarily speaking, to insure the survival of humanity in these more unstable areas of the world. Higher body fat also provided more insulation from the cold. A lower body temperature and lower basal metabolism were as also more desirable to conserve energy further.

These problems persist today among the obese. Most selected for all these traits were, of course, the females, who bore the major responsibility for procreation. People with these traits survived longer and bore more children who also were prone to these traits. This is how obesity worked its way into the human genome, and consequently into your life, if you happen to be so described.

People with ancestors from Northern and Eastern Europe , where periods of glaciation occurred over thousands and thousands of years, appear to be most afflicted. But if you are one of these, take heart, for you still show that pioneering courage of your ancestors as you bounce from diet to diet, and gizmo to gizmo, looking for success in this 20th Century of food sources for which you were not designed.

This strength of motivation will spell success for you, once you completely understand yourself and your genes.

### **WHY COMMON DIETS DON'T WORK**

Previously, professionals believed and (some still do) that obese people had essentially the same chemistry as more slimmer people. Their proof was that mildly overweight people would lose weight on most any restrictive program - the old concentration camp idea again.

These programs generally don't work for the severely or morbidly obese because they fail to consider the truly different chemistry of those individuals. Fasting simply lowers basal metabolism and keys in "ice age metabolism" of conserving to the hilt.

Well, we haven't had an ice age recently, and, in fact, food sources associated with an eternal summer have been quite plentiful. So the genetically obese just keep getting bigger and bigger in preparation for the next ice age. What was a beneficial adaptation for survival in

centuries long past, has become the genetic DISadvantage of the present.

Now, fat isn't beautiful anymore, because it serves no survival advantage, in fact, just the opposite. Nature tends to make beautiful to the eyes that which give Her greatest insurance for proliferation. This is why birds in the dense tropics are so brightly colored, to be able to spot mates.

### **WHY SOCIETY TURNS ON YOU**

Nature can also be very cruel in direction of procreation too. She fights to protect Her gene pools against undesirable, and hence, unsuitable body types and diseases. Societies of both animals and people are ingrained to ostracize and evict, or even kill individuals with non-desirable traits for environmental requirements, whatever that may be at the time. Individuals with the wrong coat color, body shape or disease may be killed by the mother in animals, or at least driven from the breeding population, lest they propagate their kind. Understanding the hostility towards fat people by society and from whence it comes, can help psychologically in these confusing times, and in our civilization today. We need no longer spurn otherwise productive people on the basis of what they are born with.

### **WHAT WE CAN DO?**

If Nature has prepared these special people for an ice age, then following the diets of people during ice ages past makes perfect sense as a weight loss program - for Nature intended body fat not to be locked up forever, but to be triggered to be released in such times as to insure survival. No, we don't move to the South Pole, but yes, we certainly avoid those foods known to stimulate weight gain that are mostly available during the summer months. These include the bane of modern man, refined carbohydrates, as well as, carbohydrate loaded natural foods like peas and corn, flour products and cereals.

Certain factors such as climate, are different than in days of old, and we have also, through scientific research, been able to adapt, update and perfect a weight loss program that specifically caters to the most resistant of bodies. This "[Nutritional Restructuring Program](#)" is designed to enhance those chemical pathways in the body involved in mobilization and utilization of body fat, and to increase levels of energy, and virtually eliminating that horrible hunger so predominate in other programs you might have tried.

Feelings of health and well being can also be enhanced with a vitamin/mineral supplement specially designed for compatibility with the program. Exercise, of course, will always increase weight loss and provide toning to help prevent sagging skin. Exercise should be part of everyone's regimen for health. Fast walking will do. Wearing light

weights on wrists and ankles can help greatly to increase "exercise" even when you don't have extra time.

## WHAT FOODS DO IN YOUR BODY

Basically, there are two main biochemical pathways acting in your body at different times of the day. The first is the storage pathway, which acts in the daytime by allowing a rise and fall of blood sugar, triggering hunger and eating about every three hours during your waking time. The body is storing food for your long sleeping hours when you will go without food for some 8 - 12 hours.

During sleep your other pathway, the energy pathway, becomes active, using what you have stored during the day to fuel rebuilding processes during the night. In most bodies, these processes may not be equal. You may store more than you use at night and continue to gain weight.

Exercise helps to equalize these processes mathematically. However, some bodies may be resistant to the energy pathways and in **need** of help. This is where **Adaptive Advantages**® - the **Nutritional Restructuring** Plan comes in. Utilizing all aspects of the program gives "pushes" from many directions on the energy pathway to continue in many ways, throughout the daytime hours, as well as, nighttime.

Certain foods, trigger the activity of one pathway or another - remembering the ancestral environments of our predecessors both between and during glaciations.

## THE STORAGE PATHWAY

Eating carbohydrates, we all know, elevates blood sugar to make you feel better, but only temporarily. After 20 minutes or so, you may feel worse than before you even ate the carbohydrate food. Initially, your blood sugar will go up, but this triggers an insulin release (a hormone produced in your pancreas to regulate blood sugar from getting too high). Some people produce more insulin than others, which can contribute to chronic hypoglycemia (low blood sugar).

Symptoms of this low blood sugar are constant fatigue, headaches, irritability, weakness, shakiness, or light headed feeling. Insulin lowers blood sugar by escorting it to storage tissues in your body as fat. In short, insulin can make you fat.

We want to avoid those foods that stimulate an insulin response in the body. We know that a low carbohydrate diet, calorie restriction and fasting will cause weight reduction in "normal" individuals with "normal" chemistry. This is, however, not true with morbidly obese individuals and persons with higher insulin response and concomitant



hypoglycemia.

These latter two methods only serve to lower overall basal metabolism and can be dangerous. Glucagon, the fat mobilizing hormone, is a mortal enemy of insulin. High insulin depresses glucagon and vice versa. Unfortunately, in our "feel good society" of "feel good" carbohydrates, the storage pathway works with awesome efficiency at the great expense of the energy pathway, the one we are all interested in.

We have also found that there are some things we can do to push the energy pathway along. The most common of these is, of course, exercise, and we strongly recommend exercise to help you tone, as well as use stored fat. But, in addition to all this, the oils containing essential fatty acids and our **Adaptive Advantages®** supplements are invaluable in pushing the pathway along.

The oil must be used according to the program to be efficient. Corn, soy or any other polyunsaturated vegetable oils will not give you the desired results. We recommend canola and olive oils most because of flavor and wide availability.

### **WHAT CAN I EXPECT?**

You can expect a sizable weight loss the first week or so generally in the 5-12 lb. range. Subsequent weeks usually average 2-6 lb. Men lose easier and faster than women, again because of the genetics of their chemistry. Plateaus are a part of every weight loss program and are normal. However, in this program, people continue to lose inches and may even drop a whole size during one lasting a couple of weeks. Pounds will begin to come off again as your body readjusts itself and you continue on your program. Generally, only the most severely obese encounter "plateau" problems, so it is not a common feature of the program.

### **IS THIS PROGRAM A CURE FOR MY OBESITY?**

**THIS IS A PROGRAM FOR LIFE:** There is no cure for genetics, there is only control of the desired expression of the genes. This method of catering to your individual chemistry and genetics is not a transient or short term program. You cannot ever be "cured" from the "disease" of obesity.

Genes are a permanent part of your make up. If you go off the program and back to your old diet, you will immediately switch into high gear chemically, the body thinking this is only a short time between ice ages, and quickly pack all the pounds on again, plus even more if it can. This program must be maintained for life if you are to maintain that trim body that you worked so hard to achieve. Once you reach your desired weight,

though, you may begin to carefully add small quantities of rice, potatoes or other vegetables several times a week as your body allows.

Breads, flour products, sugars and refined carbohydrates will always be dangerous because they produce such a strong weight gain chemistry in your body. If you watch yourself closely during this phase, you will know just how much is safe to keep the same weight and not begin gaining again. Everyone is different in their sensitivity.

## **THROWING THE BABY OUT WITH THE BATH WATER**

We know that, ounce for ounce, fats and oils contain more calories than carbohydrates. But the news is that all calories don't appear to be created equal - at least in terms of their activities in the body and their ultimate destinations. Only the central nervous system requires carbohydrate for metabolism. All other tissues of the body can burn either for energy. Muscle tissue has even been found to prefer fatty substances over carbohydrate. They fuel different pathways. When muscles use fatty substances for fuel, there is usually much less soreness produced upon exercise - a boon to race horses and human athletes who don't want much down time.

Experiments with obese people on this program who were not used to exercise at all, and who suddenly began a 30 - 50 minute per exercise program with our nutritional restructuring program, were surprised to feel no muscle soreness at all, even when they had complained of leg cramps and other such pains before they had begun. They reported that the companion supplements made a big difference here.

The current trend in today's diets is to throw the baby out with the bath water concerning fats. All fats were banned, even those including essential fatty acids required by the body. We used to think all fats were bad. We now know differently. Saturated fats such as those in meat are difficult to digest. But oils high in monosaturates like olive and canola oil are different. They actually enhance fat metabolism in the body, mobilizing fat storage areas and facilitating their utilization. Whole societies have demonstrated the benefits of these oils. Peoples of the Mediterranean area actually eat more "fat" than the average American, but as a whole, demonstrate less heart disease and lower blood fats. We now refine our earlier definitions of categories as such: fats are still fats, but oils are now oils

## **MEDICAL TESTS**

A thyroid profile including TSH (thyroid stimulating hormone) and an anti-thyroid antibody profile is very important in diagnosing hidden thyroid problems. Your conventional thyroid profile may be normal and

yet you may be producing antibodies to your own thyroglobulin (storage form of thyroid hormone).

New tests are now very accurate in exposing this disease, in which the immune system attacks the thyroid cells of your own body, destroying, over time, the thyroid gland and replacing those cells with lymphocytes to make the thyroid appear normal to palpation. Supplemental thyroid hormone, of desiccated thyroid, is the treatment if you have this disease, and may be very beneficial to your weight loss program.

Thyroid is necessary to the cells to "burn" the fat and glucose that provide energy. It has been our experience that the vast majority of our clients do much better with the natural thyroid extracts containing both T3 and T4 rather than the synthetics like Synthroid® which contains only the storage form T4. There have been problems reported in the literature with the manufacture of the synthetics and their potencies as well as efficacy or effectiveness in the body.

You should also chart your body temperature, both oral and axial (under the arm) every morning before you get out of bed. If you sleep on a heated blanket or pad, take your temperature just before you go to bed after you sit or lie quietly for 20-30 minutes. These temperature readings can help diagnose thyroid resistance at the cell level by measuring basal metabolism. Women should notice their temperatures lowest in the first of their menstrual cycle and highest in the last half.

Almost everyone with hypothyroid problems of one or another kind shows lowered body temperatures almost all of the time. Consult a doctor experienced with the large quantity of newly published international research on various hypothyroid diseases and their treatment if you suspect that you may be affected. Take your "**Nutritional Restructuring**" documentation with you for case history.

Exercise levels and types should be documented as well, to see which levels of intensity, lengths of time and types of exercise your body responds to best. Always change exercise programs weekly, as your muscles will become conditioned on the same program and will begin to burn less energy to do the same program.

Additionally, diabetic obese individuals must monitor their blood sugar carefully while on the program. Glucose tolerance is often so improved as to necessitate changes in medication. The same is true for hypertension and high cholesterol medication.

Until now, there has not been a complete study of all known data and relevant research incorporating knowledge from many areas of science. Information from Anthropology, Geology, Archeology, Ecology as well as Biochemistry, and especially Environmental Biochemistry is crucial

to the understanding of the development and treatment of obesity today.

Your health and well being are very important to us. Suggestions for strategies that may help others, as well as success stories are always welcome. We hope that over the next few weeks, you too will be able to give yourself straight A's with **ADAPTIVE ADVANTAGES®** and our **Nutritional Restructuring Program!**

### **WHAT EXACTLY DO I EAT?**

Our [Basic Beginner's Kit](#) provides the exact menu and foods selection is listed in our brochure information that comes with the supplements necessary to properly fuel normal body biochemistry pathways, opening the door to restoration of health. The kit includes these necessary nutritional supplements, an herbal parasite program (yes, we all have them) and a gallon of super ionized water to help fuel the detoxification of the environmental chemicals stored in the body, plus a video called ["Environmental Health Connections: The Overview"](#). This video shows just what those thousands of environmental toxins, to which we are all continually exposed, do in and to the body, from a physical, as well as psychological and even spiritual point of view. The recognition of the effects of environmental toxins is crucial today, because a significant portion of what we call "fat" really is not fat, but a storage depot in the body for these toxins that we cannot eliminate. Unfortunately, those genetically more prone to depositing true fat, will also be more prone to storage of these toxins. This program addresses this issue as well.

The [Adaptive Advantages Nutritional Restructuring Program](#) was created for **You**. We want it to be successful for you, as much as you do. It is helpful for a variety of other 20th Century problems including: chronic fatigue, stress, depression, mood swings, PMS, constipation, stomach distention, bloating, bronchitis, chronic sinus problems, all autoimmune diseases and other health problems.

Avoidance of exposure to as many chemicals as possible is also advisable. These are known to trigger or enhance many symptoms in an already nutritionally compromised body.

Thank you for your interest in this beneficial health program. We want to help you give yourself straight A's with **Adaptive Advantages®!**

Questions or comments call (810) 653-5478  
10 a.m. - 4 p.m. Monday through Friday, EST, or [e-mail](#) us.

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[Return to Your Health Home Page](#)

# WHY JOHNNY CAN'T READ

There has been a trend, the past twenty years, toward declining I.Q. and S.A.T. scores among high school graduates in all fifty states over previously increased scores which peaked in the 60's. Many research departments of even the higher class universities have had to be cut drastically or altogether eliminated in favor of new programs "Teaching Johnny to Read". Remedial reading was even taught at Harvard.

Also featured in the statistics trend are higher numbers of learning disabilities, hyperactive children, and attention deficit syndrome, as well as general stress levels resulting in increases in ulcers and suicides in children and teens. Higher levels of aggressiveness now show up as young as second graders who carry guns to school and shoot classmates they argue with.

Other depressing statistics report that some school systems report that 25% of the students are on Ritalin. Children now mature faster and earlier physically, but not necessarily mentally, than their parents did. Teenage girls become sexually active earlier now. Over 30% of fifteen year olds are sexually active now compared with 2% in 1979.

In chemically polluted environments animals are seen to age faster. Increasing levels of depression are reported over those of 20 years ago, and only 1 teen in 1,000 now say they learn because it makes them happy. Compare this to the students of the 60's who were into mind expansion and are the same generation who now seek "Smart Drugs".

## Who or What is to Blame?

The finger has been pointed at incompetent teachers, the Viet Nam war, looser laws, change of attitudes, more available money, spoiled children, drugs, and so on. Mind and mood altering drugs were very available during the 60's, but the competition for grades at the "tough" schools was not any easier than before. And the older teachers say that the kids of the "Baby Busters" generation just aren't as smart as the "Boomers" were, even in the elite schools where discipline is not lacking.

Chemical pollution has been shown to interfere with thyroid, causing problems of attention deficit, fatigue, memory, mental performance, poor

blood sugar regulations with resulting sugar and carbohydrate craving and obesity. The average teen now weighs 10 or more pounds in excess of what his parents did when they were teens. Is it any wonder that grade inflation is so prominent in schools today, so that fewer students get poor grades. Even the S.A.T., that revered standard of testing, has been "adjusted"?

There are 200 new toxic dump sites discovered each month in the United States, and of the 1,000 worse dumps, 4 out of 5 leak. Michigan is among the 4 top states for mercury contamination, and Michigan is home to 13 of the top toxic waste emitters. UPJOHN alone, in 1990, emitted 4.56 million pounds of toxic waste known or believed to cause cancer or birth defects. Gray Iron Foundry in Saginaw emitted 9.6 million pounds of toxic waste. The auto industries in Michigan are, and have been in the past, responsible for significant air and water pollution.

According to the Michigan Department of Natural Resources, Environmental Response Division, there are 69 known toxic waste sites in Genesee County and 353 sites of leaking underground storage tanks. Even though there has been attempted clean up at some of these sites recently, they were left to pollute the ground water some 20 to 30 years prior. Who knows how many sites are yet to be discovered.

The I-75 corridor reports the highest number of Ritalin and Prozac prescriptions per capita in the world. Hardly anyone living in the I-75 corridor and other known areas of chemical contamination shows a normal body temperature of 98.6 degrees F. Most show temps of 96 to 97 something degrees, indicating low basal metabolism. Since each degree low represents a 13% decline in energy levels over all, it is no wonder that student grades suffer.

Lead levels are rising in average populations in both hair and blood samples so dramatically that the HEW has had to raise the "normals" for testing laboratories because the general population's average are now what would have been considered "elevated" years ago. Statistics recently published say that 52% of all urban children in 8 major cities tested showed blood levels high enough to induce minimal brain dysfunction. Another study found one of six children nationwide affected similarly.

Could it be that these are several contributory factors of one common problem that is causing this "Why Johnny Can't Read" syndrome? Let us examine our scenario, the factors which have contributed to this syndrome and those factors over which we have no control. Then, with this new information, we can take control of other factors and very probably, change the outcome in more than a few instances.

### **An Unhealthy Man Made Mix**

First, we must understand what makes toxic elements so toxic. If we remember our high school chemistry and the electromotive series, we know that the lighter in weight and the higher up on the atomic table an element is, the more chemically active it is, and that it has the ability to substitute itself and replace other elements in its family that are heavier and further down the chart. This spells trouble for the thyroid, especially.

Our environment is so heavily polluted with chlorine, fluorine and bromine compounds, all in the same family (halogens), and lots more chemically active than iodine - the functional component of thyroid hormone. These elements are known to interfere with the receptor sites at the cell level where real thyroid hormone plugs in, as well as trigger autoimmune diseases in the body. In the latter, the immune system recognizes the foreign element as not quite right and attacks. Unfortunately, the immune system can neither destroy nor eliminate the wrong halogen, so the attack continues, eventually destroying the gland itself.

Since the tragic PBB contamination some years ago, Michigan now sets the record for the highest rate per capita of autoimmune diseases in the world. The active toxin in PBB is bromine. Chlorinating the water supply produces uncountable numbers and types of chlorinated hydrocarbons that have toxic capabilities. Hence, the warnings about drinking chlorinated water.

### **Diminished Essential Minerals**

The situation becomes more dangerous when an essential element or mineral is in short supply. The body will then, in desperation, take up look alikes- others from similar or same chemical families with similar outer orbitals. Without the real thing, though, this final enzyme or hormone will not work correctly, creating more body disfunction.

Other toxic mineral elements that will substitute or interfere with essentials and cause great bodily harm are the following: LEAD - which substitutes for calcium and interferes with magnesium and zinc; cadmium - 10 times more toxic than lead and found in cigarette smoke - substitutes for zinc; and mercury - for which Michigan ranks number 4 in toxicity of all states - substitutes itself for selenium. Selenium is essential for an enzyme necessary for thyroid hormone production and also as an antioxidant to help prevent cancer and aging, and to devitalize toxic substances. It is severely deficient in Michigan as is iodine.

This is why the new focus on minerals in health is now taking center stage. For every essential mineral, there is at least one toxic substitute. The following are some statistics on essential minerals that everyone should know about.

1. All 50 states are now reporting severely declining trace mineral levels in farm ground, making our crops deficient in these essential minerals. For many, these crops, our foods, are the only source of these essential minerals.

2. Farmers are not concerned about this decline because plants are very simple in their biochemistry compared to the animals who eat the crops, including man, and do not need any elements except nitrogen, phosphorus and potassium. In fact, fertilization of crops with the other trace minerals so important to animal and human chemistry, does not produce increase in crop yield and is not cost effective. They are also very expensive. Plants take up these extra minerals only incidentally when they are there. We took them for granted in the past because they were there, now they are not, and our foods are now deficient in them.

3. Acid rain and the newer superphosphate fertilizers further inhibit uptake of the low amounts of soil trace minerals that we have left.

4. The age of fast foods, high levels of refined carbohydrates like breads and flour products and colas, laced with phosphoric acids for improved taste, cause calcium and magnesium to be excreted from the body. There is also a high demand for minerals like chromium and manganese as well as others.

5. Minerals cannot be made in the body like many vitamins can. They must come from the outside. They also cannot be converted to any other mineral. If the body is deficient in zinc, for example, it cannot convert excess manganese into zinc. The ancient alchemists tried without success to change one element into another by trying to change lead into gold.

6. All of Nature is a balancing act. An excess of one mineral will block absorption of another. This is critical in considering exposure to toxic elements like lead, which interferes with calcium, magnesium and zinc. Also, most junk foods contain high levels of phosphorus, which can also interfere with calcium and magnesium. Phosphorus is a stimulant, and is used in different chemical forms as a preservative as well. It is no wonder, given the high levels of lead and phosphorus that we are exposed to now compared to 50 or 100 years ago, that our society is ever going faster and faster!

7. We used to believe that we could monitor our nutritional mineral status with a common blood test. We now know that this is accurate only in severe conditions, nearing possible death. It is not accurate in monitoring levels for optimum health or for correlating symptoms of deficiency that interfere in varying degrees with our quality of life. Physicians who specially train to read the body's language when it tells us of a problem through symptoms are now treating with minerals long



before the severe symptoms set in. Unfortunately very few physicians have this training, and most did not study the importance of mineral chemistry when they went to school because mineral levels were not in jeopardy then, and were just taken for granted.

### **Testing & "Normals" are often Misleading**

The truly insidious nature of the "Why Johnny Can't Read" syndrome and its connection to hypothyroidism is the problem with diagnosis here too. As with mineral nutrition, traditional blood tests often miss treatable cases. Our so called "normals" can vary 300%, and still be called "normal". And, many experts believe that we should have raised our "normal" range many years ago. This would put many patients testing in the low normal range into a truly "low" range, and therefore, warrant treatment. Autopsy studies define the "normal" adult thyroid gland to range from 9 grams to 50 grams. I can't help but wonder how the quality of life differed for the 9 gram individual as compared to the 50 gram individual, or even a more "normal" 30 gram individual.

Also, while visiting China in 1991, and being on thyroid hormone myself, I was cautioned by one of my teachers at the seminars I was attending at Beijing University, that I might have to adjust my dosage downward. I was told that there was so much iodine in their water, being a mountainous terrain, that that was the reason the Chinese invented tea - to mask that terrible taste. In America, we are iodine deficient and my thyroid may start to work on its own, causing an overdose. Further in the conversation, "normals" were discussed. The "normals" in China are higher than in the U.S., because, it was explained, our "normals" are based upon a hypothyroid population. The word "normal" just means "average". It really has nothing to do with optimum health. If you are one sick person in a population of sick people, then you are "normal". So if many Johnnies can't read, do we simply adjust our "normals" down, as we have been doing? I think there is a better way.

### **What You Can Do!**

Armed now, with this new knowledge, every child (and adult who desires a better quality of life) and who shows symptoms of this new 90's syndrome should be screened and tested for thyroid function and thyroid antibodies. These antibody levels can fool you too, as they can be high one week and quite normal several weeks later. I have watched mine float all over the board for the last 5 years. Tests for heavy metal exposure can be done using a hair sample and sent to a special laboratory. Supplementing your diet with mineral supplements is becoming more of a necessity now, than the luxury it was in the past.

Avoiding contaminated water sources like chlorinated water and well water in areas known for chemical dump sites like our I-75 freeway

corridor, is just common sense, as toxins in water are in their most bioavailable form - they are soluble. And, last but not least, changes in diet will produce dramatic results. This 90's syndrome affects our sympathetic nervous system in a depressing way. Allergies, sinus problems, fatigue and low energy levels, short attention span, memory problems, chronic muscle soreness, mood swings, low blood sugar with resultant cravings for sugar and carbohydrates like breads, are just a few of the symptoms that can be helped by a switch toward more energy stimulating proteins in the diet, particularly early in the day.

Broccoli, cabbage, brussels sprouts, cauliflower and peanuts and peanut butter contain compounds that interfere with the production of thyroid hormone, and should be eaten sparingly in those affected.

Monounsaturated vegetable oils, olive and canola oils, are energy pathway fueling, and should be used generously. They are also good for the heart.

Unfortunately, the standards for use in our school cafeterias today were established, for the most part, in 1949, long before we knew about any of the health hazards in our foods today.

Many children come to school with a poor breakfast of sugared, artificially colored and flavored whatevers or nothing at all. Trying to wake up is a real problem. No wonder. Then lunch comes loaded with breads, a small amount of high fat meat that children are reported to "degrease with napkins before they eat", overcooked, bland canned vegetables which they mostly throw away, and soft drinks from vending machines.

Carbohydrates with a high glycemic index, such as breads, raise blood sugar quickly, raising insulin, which reacts by escorting the blood sugar into fat cells. This is the "storage pathway". This is why these foods will immediately give you a lift followed by sleepiness, which again affects children trying to stay awake for afternoon classes. Dr. Lendon Smith, M.D., says that teachers should not be required to have to teach kids eating like this, who cannot bring a brain to class!

Protein foods, on the other hand, give a slow burn, so that stable energy levels and blood sugar levels are maintained. Unfortunately though, protein foods are the most expensive part of the menu and many school cafeterias don't think they can afford to change. But with the situation as it is for many Johnnies who can't read, and many other Johnnies who could read a whole lot better, this is one area where we can make a difference.

### **A Fresh Approach is Needed...Now!**

America is in danger of losing its superiority as a world power if we

cannot keep pace academically. We are the richest country, and one of the poorest fed. Our children are our future, and their brilliance must shine as a star brighter than any other. This report is also a prescription for help.

On a grand scale, the implications of this are absolutely mind boggling. With proper nutritional restructuring, one can foresee decreased violence as people feel better; decreased levels of stress, suicides and ulcers; along with increased productivity in our schools and industries, which hire a new generation of more able graduates. With our population more able to simply *get along and stay going* there will be great benefits for everyone. And who knows, maybe even food producers will better "fortify" our foods by adding more essential minerals, too.

Finally, we need a new generation of doctors who treat the individual patient in front of them more wholistically instead of just addressing their symptom. Some brave souls are already out there doing this, but not nearly enough. This, in effect, could change the entire personality of our planet!

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[Return to \*\*Your Health\*\* Home Page](#)

[Return to \*\*Vita Royal\*\* Home Page](#)

# Information for New Clients

In order to better map your biochemical pathways and fine tune your program, it is very helpful to have certain blood test results. Most of these tests will be new to your current physician, and he/she will also be unfamiliar with working with, and interpreting those results. These tests measure autoimmune response and endocrine functions - the two biggest targets in the body for environmental contaminants, and chronic debilitating conditions. I refer to them collectively as "The Nineties' Syndrome".

If your doctor is not willing or feels uncomfortable in working with such a new area of science, then I will refer you to a physician who does. To date, I have been researching this phenomenon since 1977 and have six U.S. patents relating to "The Nineties' Syndrome", which affects us all to some degree. Thus, since my collective research has not been made widely available to practicing physicians, as yet, it is unfair to expect your physician to be versed in this program I have developed. The blood tests needed are:

- CBC
- standard chemistry profile
- thyroid profile
- TSH
- anti-thyroglobulin antibody titre
- anti-microsomal antibody titre (renamed "thyroid peroxidase antibody titre" or TPO)
- thyroid binding globulins
- DHEA serum
- total estrogens
- testosterone
- progesterone
- ANA
- RA
- SED RATE
- estrdiol
- insulin

It is also very helpful to do a **hair analysis** as a screen for heavy metals. Some areas of the country have endemic metal contamination that is naturally occurring, but can cause or contribute to ill health. The most notorious in the Michigan area are high levels of arsenic and manganese in the water supply in certain communities.

Hair can be accurately analyzed for about 40 elements, all minerals and metals. It is not good for vitamins or organic compounds, but it gives us yet another look, through another window, to the inside of a body that we cannot readily enter. The more windows that we can look through, the better we can judge the inside layout of a house that we cannot readily enter.

This test is performed by taking small samples of hair from the back of the head. Crown down, cut at the scalp for females, just trimmings from the back of the head for males, if the hair is very short. Take the lock you have just cut at the scalp and trim again, saving two inches closest to the head. Try to take many small samples so you don't make a big bald spot. Keep taking samples until you get two packed tablespoons of hair.

My professional consultation is included, with e-mail communication preferred, as I keep a very busy schedule and prefer written communications. Consults are free for as long as you need, for a very good reason--**I WANT** you to communicate with me **REGULARLY**. I will usually respond to you within 24 hours.

Hair analysis runs \$60. This is not covered by insurance, unfortunately. Cost for your physician and lab tests should be covered, however, and it is best to check with your insurance company to make sure.

I make your physician's job easier by monitoring your program regularly. This is important in achieving the best results from you ever three to five days, especially in the beginning.

I teach clients how to function better in society and control their problems on their own. This gives them back control of their lives and makes them independent. This is the way it should be.

But this program is not for every one. If you are not interested in making the healthy lifestyle changes necessary to facilitate good health, like quitting smoking, junk food, increasing exercise and developing a better personal, emotional and spiritual outlook in life, then you are not really ready to feel better.

There is no magic pill, diet or gizmo that will do the work for a truly lazy person. By that, I mean lazy in all respects--emotionally as well as intellectually and physically.

Many syndrome affected people are too sick to participate in a rigorous

physical exercise program, at least at first. And, if they forced themselves into it, as some have done, they find themselves often severely worse. But a will and drive to help themselves emotionally will give them the motivation to follow the program, make those healthy changes and eventually be able to incorporate exercises that will raise them to another level of health.

Thank you for your inquiry into **ADAPTIVE ADVANTAGES®**, the program developed for the "**Environmental Illness Syndrome**". If you have other questions, please send us an [e-mail](#)., or you can reach me at (810) 653-5478 usually between 10 a.m. and 2 p.m., Monday through Friday. Our fax is (810) 653-2543.

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# Environmental Health Conditions Involving the Thyroid

- Osteoporosis ●Stress Chemistry
- Anxiety ●Anger/Violence
- Opportunistic infections, primarily Candida, strep and parasites

Autoimmune diseases including:

- Lupus ●Hashimoto's disease - thyroiditis
- Type I diabetes
- Rheumatoid arthritis
- Fibromyalgia ●Iritis
- Autoimmune response may attack any tissue or organ of the body.
- Mineral deficiencies - primarily calcium and magnesium ●Growth problems
- Deformed or crooked legs ●Retarded growth or development
- Sucking and/or swallowing problems - tongue appears too large for the mouth, children often play with the tongue, let their mouth hang open, sometimes drool from excessive salivation, spit when talking, can't chew gum quietly with mouth closed, sometimes choking, speech disabilities.
- Hearing disabilities - fluid filled ear canals requiring tubes, frequent ear and throat infections, large quantities of ear wax
- Lowered IQ or higher IQ with ADD or ADHD interfering with learning
- "Leaky gut syndrome" - allergies, food intolerances, digestive problems, bowel problems, constipation and/or diarrhea or irritable bowel syndrome.
- Asthma ●Ulcers ●Sinus problems
- Low endocrine function, hormone imbalances, PMS, progesterone deficiency
- Ovarian cysts ●Infertility ●Abnormal menstrual cycles
- Depressed liver function, hypoglycemia, carbohydrate and sugar cravings, binge eating, obesity or excessive thinness due to malabsorption syndrome
- Low basal metabolism ●Type II diabetes
- Poor drug clearance, more drug side effects ●Drug abuse - both prescription and recreational
- Alcohol abuse ●Chronic fatigue, weakness, cramps, low stamina ●Edema and bloat
- Clinical depression leading to relationship problems, feelings of hopelessness, poor self image, low personal responsibility

- Heart disease ● Poor fat metabolism ● Poor carbohydrate metabolism
- Atherosclerosis ● High cholesterol and triglycerides
- Unusual sensitivity to noise, bright light or touch - very ticklish
- Tics, twitches, tremors, restless legs syndrome ● Cold feeling, low body temps, cold hands and feet
- Excessively dry skin, psoriasis ● Coated tongue, sore tongue
- Frequent rashes, itching, susceptibility to fungal infections ● Moody, crying spells

For more detailed information about Thyroid function, see "[Understanding Your Thyroid and How It's Affected by the Environmental Illness Syndrome.](#)"

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[Return to \*\*Vita Royal\*\* Home Page](#)



# More on Thyroid Testing

## Understanding TSH-The Latest "Gold Standard" and Its Failures

### Fake "Normals"

Giving a human or mammal T3 (biologically active form), T4 (storage form) thyroid or desiccated thyroid will suppress TSH, Thyroid Stimulating Hormone, but who cares? TSH is a measure of **unsatisfied** peripheral cells. If the thyroid gland has been so damaged by autoimmune lymphocytes, it may not be able to produce a **proper molecule**, due to deformation by super halogens Chlorine, Fluorine, Bromine, or Radioactive Iodine that is completely **non-functional at the cell level and undecipherable from correct molecules in the blood**, giving us another fake "normal" to fool our testing.

This is not obvious because traditional medical testing looks from the wrong direction, see? TSH is, in traditional oriental medicine metaphor-"the baby crying". Since TSH is only a measure of a **feedback** mechanism, I take a low TSH as a measure of success!! If TSH is low, the cells are satisfied and are not crying out for more thyroid. TSH is an **indicator (and that's all)**, of our **success** with supplementation.

Traditional medicine looks from the wrong direction, see?

And, don't forget, there may be batches of thyroid that are bad, too - containing "faker" molecules w/ Fluorine, Chlorine, or Bromine or Radioactive Iodine halogens, since the animals thyroid which made from are subject to this exposure, and our testing cannot detect these in quality controls. We cannot help this either. Only our body knows for sure and it doesn't lie! To many damaged molecules may precipitate an autoimmune response as well and make TSH go up, even with "**supposedly adequate**" thyroid supplementation.

In many autoimmune cases like mine, all of the iodine in the world won't fix a damaged gland. I tried it. It will only stress the sick gland more by giving high doses, and this can itself precipitate another autoimmune response. Once you have clones in the thymus for one autoantibody, others pop up easily to other organ or tissue targets. It's a difficult balance to control - and different with every case.

If we could figure a way to rid the body of other unwanted halogens, we'd have a shot at a true "fix up job". Unfortunately, our body's "special forces end up destroying the city buildings to get to these snipers." This

is because these super halogens are biochemically locked in our tissues by virtue of their look alike halogen electron clouds - which are the true chemical binding activity in all chemical reactions. The body knows they are fakes, but can't rid it of them, so it ends up destroying the whole area. This is autoimmune response. See why it's a difficult problem?

## Supplementation

For most people and mammals, iodine in specialized vitamin/mineral supplements like those in Vita Royal's program will raise low temperatures significantly - in about two days to two weeks. Whatever temperature it can't raise might be made up in actual thyroid supplementation. My approach is to try to get the body to do as much as it can on its own, by supplying what it needs in the way of raw materials.

Then use the big guns last, and just make up for what the body can't do - not to totally replace and shut down the body's own ability, like conventional medicine does with drug intervention.

If you interfere with the body's natural controls and feedback mechanisms, generally you will make the body weak and lazy by doing things for it. This procedure also produces **dependence** - something that holistic medicine deplors. So - **supplemental** thyroid is just that. This is most often the case.

I have only seen two cases in 15 years that could go off thyroid, so I wouldn't bet on it anymore.

Thyroid supplementation is also required by low thyroid females humans and mammals who do not produce enough progesterone to balance their estrogen, resulting in many hormone symptoms. Environmental chemicals cause low LH and high prolactin suppressing LH, accelerating aging. This plus the action of additional xeno estrogens add up to retained follicles that are functional - and producing even more estrogen! These are ovarian cysts. I've personally experienced the relief that is the result of thyroid supplementation. Thyroid helps **a lot**. Many thyroid supplementation cases are also autoimmune cases.

## Dioxins - A KEY to Thyroid Problems

There is another major thyroid interference - that of dioxins. There are at least 200 in the family that are known. A by-product of chlorine bleaching of paper products is the most common source of this thyroxine look-alike. Dioxins are known to be able to plug in to thyroid receptor sites on cells as a key into a lock. Unfortunately, they act like skeleton keys. They can turn on some receptors, but cannot turn on others. Some they can't get out of, and stay there to prevent the real, functional molecule from plugging in - in effect, deactivating the whole receptor

site. Worse yet, it may be able to be bumped out and replaced by the real thing but leave the receptor site damaged, like a jigged lock that has its tumblers screwed up inside from a bad key, so that even the real key now will not work.

Or - if you get lucky, the receptor site can be bumped free by real thyroid and become activated. Compromised receptor sites that may be off or partially turned on (or even something else that we may not have yet observed) are responsible for the screwy results we get from blood testing. These tests really don't make sense out of T3, T4, TSH, basal temps and other measurements. These dioxins interfere with not only direct biochemistry pathways but also feedback and other regulatory pathways, really bugging things up.

## **The BIG Picture**

Xenoestrogens (and now discovered xenoandrogens) also work in the estrogen and androgen receptor sites like dioxins do thyroid sites. So you can see why the endocrine system is in deep trouble. It's the whole BIG picture that needs to be understood; it's complicated and becoming more so every day.

This whole thyroid problem has been so insidious, creeping in over the past 30 or so years, that labs have simply changed our "normals" to those of population statistics, now, rather than guidelines for optimal biochemistry! That's right.

Again, we need a new thinking process - a new operating system for our mental computers, so to speak. In a word - medicine is a MESS. That's why it's getting such a bad reputation, opening doors like never before to alternative methods that deal with more of the multidirectional and synergistic predisposing factors that respond to our tools, and not to orthodox medicine's "magic bullets". People are desperate and turning away to other methods because the old ones simply don't work any more.

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[Return to Equine Health Home Page](#)

[Go to Vita Royal Home Page](#)

# On Redefining Health:

## New Concepts, Perceptions and Evaluations

There is a revolution taking place in America and many other parts of the world pertaining to the philosophy of health. It is quiet and oh-so-subtle, but nevertheless very real in the minds and thoughts of medical, veterinary and health practitioners.

Nutritionists have long nurtured the idea that there was a great difference between actually being healthy and merely existing in a vegetative state, barely free from disease. The philosophy is now permeating all aspects of life, from sports medicine and competitive conditioning to the latest trend toward health foods, supplements and additive-free staples.

The "old" definition of health as being essentially free from disease was, and in some cases still is, the rule of thumb for many practitioners and for such regulatory agencies as the FDA and National Research Council. Never was a thought given to the vast area above a simple vegetative state. Everything was strictly black and white. Either a disease was present or not. No other state of health approaching the optimum range was even considered.

The revolution is now well upon us and we must all change our thinking, if not to keep up with latest research, then at least to understand new terminology popping up all around us. Here are a few definitions, as I perceive them, which will be discussed further on:

**TRADITIONAL HEALTH** - a state which exists just above the disease state in which no *severe* symptoms of disease are manifested. This is what I refer to as a simply vegetative existence.

**WELLNESS** - a state of better health where no symptoms of disease are present; the level of awareness and activity is higher and the body "feels good."

**OPTIMUM HEALTH** - the highest state of health attainable, usually sought by competition athletes and trainers, in which the body has become a perfectly tuned and fit engine capable of performing above average athletic feats with easy recovery.

**How Severe is "Severe"?** When talking about deficiencies, older textbooks described standard deficiency as a very severe problem causing blatant deformities, life threatening sicknesses and/or even death. Again it was black and white thing - either you had it or you didn't, with nothing in between. But now, with emphasis on quality of life and better and higher states of health, we are seeing hinderances of marginal deficiencies.

**Marginal Deficiency** - a deficiency of varying degrees of one nutrient or combination of nutrients not severe enough to invite death, gross deformities or uncontrollable sickness, but enough to contribute to chronic degenerative and debilitating diseases usually over a longer period of time. Symptoms produced by marginal deficiencies are not so dramatic as a true severe deficiency, and are often overlooked until the condition progresses to become "severe".

**True Severe Deficiency** - now the same as the old traditional definition "blatant deformity, life threatening sickness, death". As you can see, there is quite a degree of openness when describing a deficiency. Certainly what is considered "marginal" by some might be considered more "severe" by others - especially where heavy financial losses are concerned. A case in point: a marginal deficiency of manganese in a fine imported mare was preventing her from cycling properly.

Manganese is known as the fertility mineral and necessary for fertility in animals as well as seed production in plants. The same level of manganese in another mare might not have had such drastic consequences at all. But by supplementing this mare with a proper amount of manganese in a biologically usable form, she cycled normally and conceived on the first breeding. The mare's owner considered this deficiency "severe" enough potentially to ruin his shot at success in the breeding spotlight.

Competition gets tougher and the standards for health and performance get higher. The "edge" is fast becoming a working knowledge of latest advances in scientific nutrition. Preventive medicine, long-neglected by some in the orthodox establishment, is now being capitalized on by progressive veterinarians on staff at prestigious breeding and performance farms.

### **You're Only As Old As You Feel**

There's even a new method of defining age. We now look at "biological" age as the equivalent of how old the body really is, as opposed to chronological age measured in actual years of life. Horses, people, dogs and cats - all living things have their own rate of metabolism. Look around you. Some of your friends look and feel as though they are in their teens when chronologically they are 35 or 40. Then again, some teens look and feel as though they are 35 themselves. What makes the difference?

Since the rate of metabolism and, hence, aging is unique for each living thing, age in years may or may not correlate with expectancies of chronological age. Bodies living in a state of "wellness" and beyond can be expected to perform the same or better than those of a younger chronological age living in a simply vegetative state. They are a younger biological age, but older chronologically. "You're only as old as you feel" describes it perfectly.

### **Getting Down To Business**

The MDR's (minimum daily requirements) for individual nutrients were established as the smallest amount necessary to prevent severe deficiency and death. A good analogy would be the lowest octane gas you could use in your car and still keep it running without the engine blowing up. The RDA's (recommended daily allowances)

are the amounts of nutrients recommended to maintain a traditional state of health. Again the analogy: the lowest octane gas you could use and still eliminate spark knocks (obviously, there would be less engine wear as well). RDA's may be many times the MDR's, and requirements for Now optimum health may be many times beyond that. The new RDI's, (Recommended Daily Intakes) are often even lower than the old RDA's, so you can evaluate that one yourself! As the levels of trace and macrominerals continue to decline in our farming soils, so do they in our foods produced from them. Over time, commercial food packagers have to keep adding more and more nutrients to bring the amounts up to the same par that they had years before with less "fortification". Hence, the new RDI! It gives them a way to give us less without actually saying so, since you have no side by side values to compare to.

### **Striving For The Optimum**

Optimum health is not the sole result of super nutrition. It takes a lot of hard work and conditioning too. A most desirable state, it is not easy to maintain. It takes a superior mental attitude as well. There are many age-old formulas for conditioning, but supernutrition and megadoses are relatively new additions. Our analogy now becomes a finely tuned, precision running engine, running with a precision which allows it the highest gas mileage while competing successfully in the Indy 500.

But here comes an area of obscurity. How much supplementation can we safely use to push metabolism and health to optimum level without it becoming toxic? Much controversy exists in this area because not much in the line of quality research has been done on the subject. High doses--often called "mega doses"--may lose their original activity in the body to act like sheer chemicals, often unpredictably.

This is particularly true of the B complex vitamins and some minerals. Some may actually cause, in huge doses, the very symptoms they are known to prevent on lower doses. And too, individuality comes into play strongly at this end of the nutritional spectrum, as some brands are not as potent in the body as others of the same gram weights. The excipients (fillers and binders) not listed on the labels (they legally needn't be) may trigger allergic reactions too. Different companies may use different excipients and only rarely can you find one who doesn't use any at all, and that fact is usually advertised both in human and animal supplements.

But these problems don't negate the necessity of supplements in striving for an optimum state of health. A professional with experience in the field is really necessary when tinkering with the unknown, especially on a valuable animal or a person.

In using hair and blood analysis, I calculate the degree of severity of the symptoms expressed with the actual body levels of nutrients. High levels of opposing nutrients, revealed by ratios of each to the other in key combinations, can do different things with the same dose. By carefully observing and monitoring an individual at increasing doses and then adjusting the maintenance dose to just below the mild toxic level, the relatively "safe" optimum level can be determined. Age, breed, sex, activity and even color and environment are all factors that must be taken into consideration to achieve

the best results possible with animals. With humans, age, eye and hair color, sex, and environment are important too, as these factors can set their own "normal" variations. Constant feedback is always necessary.

Some laboratory tests for hormone and enzyme activity levels are based on the same principles. The individual is given progressively increasing doses of supplements known to be beneficial for the symptoms manifested, and the enzyme activity is measured by blood tests until there is no more dramatic rise. That becomes the saturation point, and the level of dependence for that particular individual is determined to be the previous dose level.

The trick with super-nutrition is to be able to recognize even the slightest evidence of too high a dose well before the actual toxicity appears. Some nutrients have synergistic effects with others, effects that can elevate biological activity in lower doses, even eliminating the need to use higher doses. In my opinion, this way is a safer and more preferable way to go. Constant monitoring is important, and I would never recommend the program for extended periods of time. The body should be rested periodically at the "wellness" level, both for physical and mental reasons. If not, the stress of constantly increasing competition will eventually take its toll if no let-down is given, no matter what the state of health. Bodies are still finite things.

### **Going, Going, Gone!**

With the new emphasis on the quality of life, more and more attention is being focused on stress as a factor in chronic debilitating and degenerative diseases. Stress may take many forms. In horses it may simply be confinement to a stall 24 hours a day or poor quality feed so that the body has a hard time maintaining itself, rather than racing or showing. In people it may just be functioning daily in more competitive world. Certain nutritional factors can make the same easily handled complication for one individual, a trauma for another. Many of these nutritional factors center around minerals.

The continuing depletion of our farm ground of minerals--particularly trace minerals--is a well documented case. Farm consultants are now testing for and recommending fertilization with added zinc for corn, manganese for soybeans, and copper for alfalfa, among others. Plants need substantially less of these elements for their growth and metabolism than do the animals who eat the plants. Previously, the scarcity of knowledge made it hard to trace a marginal deficiency in animals to the plants that grew lush in the pasture. Now we know differently.

Our soils have become so bad that it is frequently necessary to add trace minerals just to get plants to produce well any more. This addition does not usually correct the situation when feeding animals, however. Remember that since animals need more than the MDR's for plants, this also presents another expense in growing crops that farmers just can't handle. And it is a well known fact that most horse owners would not recognize a heavy oat from a rained-on light one anyway, making for ample opportunity to sell inferior quality grains at premium cost in horsefeeds. Some companies even add green coloring to their pellets to make up for the lack of esthetics

lost when their hay was rained on and could not be sold readily as bales.

Esthetics play a huge part in the grocery store too. Agents are commonly used on fruits and vegetables to impart, retain or restore color and texture that should be there if they were grown properly to begin with. And to top it all off, our sports have become more serious, the time keeps getting faster, the competition stiffer--and our soils, the source of our nutrition--worse!

### **It's About Time**

Label-reading and conscious and discriminating purchasing is more important now than ever before. Engaging ourselves in these activities can give us an edge over the average individuals who don't. Read primary research to see what is going on out there (it probably won't hit the textbooks for another five years yet).

Use common sense when evaluating fad diets and get proper help if considering megadoses of supplements. Take personal responsibility for your life and those you are responsible for, be they children or animals. Whose responsibility is it anyway? It's about time.

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[Return to \*\*Your Health\*\* Home Page](#)

[Return to \*\*Vita Royal\*\* Home Page](#)



# The ABCs of Vitamins:

## Deciphering the Alphabet Soup

About the turn of the century, it was realized that certain other substances besides proteins, carbohydrates, fats, water and certain inorganic salts were necessary for life and health. A researcher named Dr. Casimir Funk coined "vitamins" as the term for these elusive substances, the word meaning "vital amines". (We have since learned that most of these substances do not have amino groups at all and so we have dropped the final "e", leaving the word "vitamin".)

Initially, vitamins were given letter names in the order of their discovery. Later, it was found that there were other forms, closely related within the letter group, particularly of the B vitamins, and numbers were then attached to the letters. Today, there is a growing tendency to call vitamins by their chemical names rather than by the more confusing number and letter system.

Vitamins resemble hormones in many ways. Like hormones only small amounts are required to produce amazingly important effects, which affect every tissue of the body. But there is one major difference. The body is unable to make some vitamins on its own and other ones can only be made from certain substances called provitamins that must be present in the diet. Vitamins or their provitamins must therefore either be present in the diet or must be made by bacteria normally living in the intestine.

The two major groups of vitamins are divided according to their solubility. They are the fat solubles - vitamins A, D, E, and K and the water solubles - the B vitamins and vitamin C. Let's begin with the letters in their order and decipher the alphabet soup - both for our animals and for ourselves.

### **Vitamin A**

Vitamin A, which dissolves in fats but not in water, has been isolated in pure chemical form and has been synthesized in the laboratory. Vitamin A is manufactured in animals from substances called "provitamins", a class of pigments made only by plants. These carotenoid pigments, as they are called, consist of three kinds of carotene and cryptoxanthin.

Carotene, the most abundant and most studied, has been shown to be only one-half to one-fifth as active in the body as true vitamin A, so large quantities must be present in the diet. The conversion of carotene to true vitamin A is thought to occur in the liver, where it is thought to be stored in greatest quantities.

Since vitamin A is fat-soluble, it moves through the body much more slowly than the water solubles and is also much better able to be stored for future use. An animal body can store enough in a week to last for several months, unless certain liver diseases are present, the reason that care must be taken in supplementing with a true crystalline vitamin A commonly sold as supplements. It is relatively inexpensive as well, making it the perfect "window dressing" for many supplement companies, advertising huge numbers of international units that usually are not needed and may even be toxic as well.

Some symptoms of a vitamin A deficiency are: poor growth; night blindness, poor skin and hair coat, defects in teeth formation, tendency toward colds, flu, sinusitis and pneumonia, clouding of the eye's cornea, sterility, kidney stones, and fetal death.

Toxicity symptoms include many of the same symptoms as a deficiency, ironic but true, like minerals, so that merely looking at a symptom can be very misleading. They include: thinning of the hair and poor hair coat; sore, cracked lips, nosebleeds, itching skin, painful joints, jaundice, swollen joints, and weight loss. Vitamin A seems to have a relationship with zinc so that they work synergistically. Zinc is also related to skin and eye disorders.

Young animals have an increased need for vitamin A, both because their needs are greater for their fast-growing bodies, and because they cannot store as much as adults can. A vitamin A supplement for the average horse is probably unnecessary if enough green pasture is provided for at least several months of the year. And, all commercial grain mixes I have seen have a vitamin A supplement already added to them, too. I only use extra vitamin A for foals, nursing mares, horses on hay only all year long and horses under stress, primarily during the late winter when body reserves are waning.

## **Vitamin B Complex**

B complex vitamins are a tribe of their own. Being water soluble, they are not easily stored by the body. Toxicity is pretty much unheard of; it would have to be deliberate (and would be rather expensive as well).

The first of the lot is Thiamine (vitamin B1) a white crystalline substance containing a free amino group that can react with acids to form a salt. Thiamine hydrochloride, the salt form used in medicine, is more soluble than pure thiamine itself. It is the product of a reaction of thiamine in its natural state reacting with hydrochloric acid, the same acid found in the stomach. It is destroyed by moist heat, but stable to heat when dry. Thus, it may be killed in some pelleting processes but still be listed on the label. Sellers don't have to say whether the ingredients are really active or not.

Severe thiamine deficiency results in beri beri, a disease common in the Orient, characterized by polyneuritis. In this disease nerve sheaths degenerate and decompose causing pain along nerve pathways with heart enlargement. Sometimes swelling is also present. Other less-severe deficiency symptoms are: poor growth, little or no milk production in nursing animals, unusual gaits, paralysis of eye movements,

mental disturbances, poor appetite, poor memory, tiring easily, inability to concentrate, irregular heart beat, and shortness of breath.

Since thiamine cannot be easily stored by the body, deficiency symptoms usually appear in 10 - 30 days when thiamine is removed from the diet. It is rapidly excreted in urine, so the dangers of toxicity with normal doses are almost unheard of.

Riboflavin (vitamin B2) is a yellow-orange crystal, shaped like a needle. It is only slightly soluble in water, not easily destroyed by heat, but becomes inactive if exposed to light for long periods of time. Deficiency symptoms include: hair loss; cataracts, loss of weight, bloody diarrhea, muscle weakness, dermatitis, clouding of the cornea, cracking of the skin, collapse and death.

Niacin (vitamin B3) has been found in the liver and urine, except in cases of Pellagra, a disease characterized by skin lesions, loss of appetite, sore tongue, diarrhea, mental problems, and loss of taste. It is most common in human populations that rely on corn as their main staple, and has been produced in laboratory animals on the same diet.

Niacin can be made in the body from tryptophan, an amino acid. Niacin has been used with good results in megadoses by orthomolecular physicians for patients with mental problems. It is also being used for cholesterol problems.

Pantothenic acid (vitamin B5) is water-soluble and heat-stable. Deficiency has been reported to trigger convulsions, rapid heart beat, gastrointestinal problems, skin rash, poor growth, arthritis and mental imbalances.

Pyridoxine (vitamin B6) is a white colorless substance that tastes slightly bitter. It is very soluble in water. Signs of a deficiency are: anemia; skin rash, seizures (it has been used with success in many cases of epilepsy), sleepiness, irritability, increased susceptibility to infections, nausea during pregnancy, dental caries and bloat. Vitamin B6 works well with zinc, especially to combat nausea during pregnancy.

Cyanobalamin (vitamin B12) is a large organic molecule containing phosphorus and cobalt. The lining of the intestine makes an intrinsic factor (as yet, unidentifiable) which enhances absorption of vitamin B12. If pernicious anemia is present, then no factor is made and vitamin B12 deficiency becomes a problem.

Vitamin B12 is generally poorly absorbed by the body, so the most potent supplements are injectible forms made by bacterial synthesis. Lactobacillus and other beneficial bacteria make vitamin B12 as well as other B vitamins on a time release basis. Yogurt is good for people with pernicious anemia. Probiotics culture are fed to livestock for the same reason.

Horses even have a special section of their intestine, the cecum, to harbor these organisms in a favorable environment for their growth. Vitamin B12 cannot be manufactured in the laboratory and is almost exclusively found only in animal products. Since horses are vegetarians, Mother Nature has devised the cecum in horses and the rumen in cows to compensate.

Vitamin B12 deficiency symptoms are basically the same as those of other B vitamins with the addition of pernicious anemia. Mental problems, poor growth, poor circulation, depression and poor appetite are included too.

A closer look at these lists of symptoms shows that many overlap. Usually, if one deficiency is present, others are too, for the B complex vitamins work together and travel together, as in the foods they are found in.

## **Vitamin C**

Ascorbic acid (vitamin C) is a white crystalline substance, soluble in water. It is destroyed by heat in the presence of oxygen and alkalis, and copper oxides destroy it too. A severe deficiency of Vitamin C results in scurvy, where bones become thin and porous and the ends of the long bones become flared, gums bleed and swell, muscles become weak, and joints may ache and anemia may appear.

Marginal deficiency can cause tooth defects, increase in susceptibility to infections, slow growth and poor wound healing. Most animals, including horses, are able to manufacture their own Vitamin C (humans, apes and guinea pigs are not). Vitamin C is enhanced in its activity in the body by rutin, bioflavonoids and hesperidins, which are cofactors of vitamin C.

In certain types of diseases such as increased fragility of capillaries ("bleeders" in horses), addition of these cofactors will greatly help in controlling the disease. Bioflavonoids and hesperidins are extracted commercially from the peels of citrus fruits, not produced by horses themselves, and are becoming very popular with trainers as an alternative for treatment for race horses who bleed from the lungs (estimated to be as high as 90% of all horses that are racing).

Giving high doses of Vitamin C itself to animals that already make their own for extended periods of time can cause their own systems to stop producing it altogether. This can result in symptoms of a deficiency when the vitamin C supplement is discontinued. This has been shown to be true for people as well--mothers taking high doses during their pregnancy only to have babies exhibiting signs of scurvy a short time after birth.

## **Vitamin D**

Vitamin D exists in at least ten different known chemical forms, but only two are found in foods and used in medicine. Vitamin D works with the hormone of the parathyroid gland to maintain proper levels of calcium and phosphorus. It is always needed because a portion of bone is continually breaking down and replacing itself, even in adults. Vitamin D aids in retaining calcium and phosphorus that are normally excreted quite easily.

A deficiency of Vitamin D results in rickets, also accompanying a phosphorus deficiency, where the epiphyseal cartilage continues to grow but does not turn into bone. This causes enlargement of the wrist bones, knees and ankles, with bending of

longer bones subject to stress because they are soft. Growth is poor, as is muscle tone. A deficiency of vitamin D also can cause osteoporosis, unusual sensitivity to loud noises or sudden movements, and improper tooth formation.

Hypervitaminosis D (toxicity) can be severe, traumatic and disfiguring, and it takes only several times the ordinary amount for long periods of time to produce symptoms. Subclinical symptoms include: Slow liver growth; decreased appetite, elimination of calcium and phosphorus, nausea, diarrhea, drowsiness, headache, increased urine output, and excessive thirst with calcium deposits in the lungs, heart, kidneys and blood vessels.

Vitamin D is fat-soluble and well able to be stored by the body. The richest sources of vitamin D are fish oils and sunshine, which stimulates production of the vitamin in skin.

Horses kept outside at least two hours a day will produce all the vitamin D they need. Vitamin D is also added to all commercial grain mixes. The requirements for young animals is higher than for adults so reasonable supplementation for them is beneficial.

### **Vitamin E**

Vitamin E is also complex, consisting of many chemical forms. The alpha form is the most active and most abundant, so it's the form that composes most supplements. It is an yellow liquid oil that is chemically an alcohol. The letters "DL" precede the word "tocopherol" if it is synthetic and only the "D" appears if it is natural.

Vitamin E deficiency results in sterility; poor growth, muscle paralysis, underactivity of the pituitary gland, muscular atrophy and anemia. Recent studies have shown that it is also an antioxidant having a preserving effect, slowing the aging process and detoxifying and preventing free radicals recently indicated in tying-up syndrome. Wheat germ oil is the richest source, but palm oil, corn oil and cottonseed oil are good sources too. Green foliage is high in vitamin E, but milk is not, so the diet of foals should be supplemented if they are not on good pasture.

Although vitamin E is fat-soluble, there has been little or no toxicity shown with high doses, but that is no excuse to over-use it. About 2,000 I.U, supplemented for race horses and other horses under heavy stress is beneficial, especially in horses that tend to tie up. Vitamin E appears to prevent peroxidase radicals that actually do the damage from forming. Selenium helps too by binding up radicals that get away.

### **Vitamin K**

Vitamin K, the last on our list, is a fat-soluble vitamin, not easily destroyed by heat, and has been made in one form in the laboratory. The most common form is that made by intestinal bacteria. Synthetic vitamin K is also called "menadione". Vitamin K is necessary to have normal blood clotting, without which all animals can die from a minor wound. It cannot be absorbed from the intestine without bile, so in certain diseases where bile is either not produced or obstructed, vitamin K injections are used.

## The "Real "Things

Many debates are carried on each day about the differences between natural and synthetic vitamins. Many of the vitamins synthesized in the laboratory are identical to those found in Nature, but some are not. In recent years, though, we have found, isolated and identified many factors and cofactors that work synergistically with vitamins, increasing their biological activity in the body.

Much smaller doses of the vitamins plus their cofactors will give the same results as very large doses of the pure vitamin itself. Sometimes, the combination of vitamins and cofactors will even give results that are not obtainable with the pure vitamin in any dosage. A good example is the previously mentioned case of vitamin C, the hesperidins, bioflavonoids and rutin.

Synthetic vitamins are much cheaper, no doubt, as well as high in gram weight listed on the label. Natural vitamins, on the other hand, cannot be concentrated so highly and still retain the cofactors and unidentified factors that set them apart from synthetics.

We know that these "future vitamins" are there, we even know some of what they do, but as yet, have not been able to identify or name them. But more are discovered periodically as our laboratory procedures become more advanced. Mention must be made of the difficulty in isolating and studying vitamins, particularly of ones that are manufactured by the intestinal bacteria. These may include cofactors as well.

Most research is conducted by using diets that are free of the studied substance, and the symptoms recorded. One can understand how complicated the results can be if the animals have healthy intestinal flora and do not show the expected symptoms.

Also, it is difficult to know if the actual vitamin deficiency caused the symptoms or if it merely is necessary to stimulate some microbe to produce some other unidentified factor, which in turn prevents the disease. Feeding low levels of antibiotics to kill off the bacteria can also pose problems. Then it is not known whether the antibiotic itself is to blame.

These are just some of the problems hampering our research in nutrition and why it lags behind that of other fields. With this background in mind, one can appreciate the tremendous problems encountered in deciphering any of the alphabet soups we call "food".

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[Return to Your Health Home Page](#)

[Return to Vita Royal Home Page](#)

## *A commonly asked question...*

# What is the Difference Between Blood Analysis and Hair Analysis?

Blood and hair analysis offer different views of the body from different perspectives. Both are important, but in different situations. Blood is ever changing, reacting almost instantly sometimes, to things ingested or to physical stresses. It is our most valuable indicator of sudden onset or acute types of health problems, and can be analyzed in a relatively short period as well. That is why your doctor or vet will often take a blood sample in an emergency situation.

Hair analysis, on the other hand, does not show rapid onset problems because of the time it takes the hair to grow and the extra time necessary to analyse the hair. The body grows hair continually, and forms it from the nutrients (or toxic elements) available and biologically active. It is likened to a computer that gives a constant readout on the workings within it.

Hair analysis in people and animals can show problems in malabsorption and nutritional deficiency, as well as possible causes of chronic and long term problems such as: arthritis, anemia, allergies, asthma, diabetes, hypoglycemia, acne, heavy metal poisoning (lead, cadmium, arsenic, nickel, mercury), various sleep disturbances, some learning disabilities, many fertility problems, weight problems, depression, hyperactivity, headaches, chronic infections, abnormal graying of hair, nervousness, irregular heart beat, cravings for abnormal food stuffs, poor healing of wounds, and sometimes aggression.

Laboratory hair analyst cost from \$60 - \$80 through Vita Royal. Blood tests run from \$200 - \$800, depending on the amount of lab work needed.

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[Return to \*\*Vita Royal\*\* Home Page](#)

# Defusing the Genetic Time Bomb

When The Supreme Being set the world in motion, He also established universal laws of order were established by which all of nature would be bound. Those divine laws rule everything about us, and must be respected if that orderliness is ever to continue.

## The Genetic Code

In all living things, physical links between one generation and the next are genes, the most basic units of heredity. They arrange themselves in chains, like beads on a thread, to form chromosomes. These tiny packages control each and every enzyme system, cell growth and body formation with a most awesome accuracy, so that each species propagates physical forms like themselves.

In propagation, chromosomes and their genes replicate themselves chemically to create carbon copies of themselves. In simple animal and plants, that is all that is needed on the genetic end to form a new individual exactly like its parent, but in higher forms of life, sexes are divided, with each contributing only half of the genetic material of the new individual to-be. Mother Nature created this system to give a better ability to adapt and survive in a changing world.

More diverse genetic combinations can be made and, therefore, more diverse physical forms exist within each species. Each offspring is not exactly like the parents for two good reasons. It has been suggested that some races adapt and thrive better in hot tropical climates than others who are more at home in Arctic conditions. The same theory is true for other traits in both plants and animals. Each is best suited for a particular environment, but many can live comfortably elsewhere by making adaptations.

Secondly, some genes are stronger than others; that is they exert a dominance over others, controlling the same trait. We call the strong ones "dominant" and the weaker ones "recessive". In man, for example, brown eyes are dominant over blue eyes. If you get one gene for brown eyes from one parent and another gene for blue eyes from the other parent, you will probably have brown eyes. Your brown eyes are the physical expression of your gene type called your "phenotype". Your "genotype", or actual gene type, is really "brown/blue", as you still carry



the genes from both. If you got two brown genes from your parents, your genotype would be "brown/brown", and your phenotype, or true physical expression would be brown eyes too.

Looking on the outside, we can't usually tell just what gene combination an individual has, but we can make a good guess by looking at the parents and grandparents. Genotype is very important, even though we can't see it directly, in coping with genetic flaws as we shall see later.

### **When Things Go Awry**

Since each gene is responsible for an enzyme system or set of systems, one seemingly minor change occurring during replication of a gene can have devastating effects. Indeed, over 99% of all mistakes that happen, which we call mutations, are for the worse, meaning that the end result of those mutations is some sort of harm to the resulting individual.

Many mutations cause death of the embryo even before birth, while some that live develop crippling birth defects. Many others are not even bothered, except in certain situations, stresses or environments. A few familiar types of man's severest genetic flaws are mongolism, cystic fibrosis and cerebral palsy.

Some mutations carry both good and bad effects, such as the one that forms blood cells into a sickle or half moon shape. The bad effect, of course, is sickle cell anemia, but the good effect is a partial resistance to malaria. In the tropical areas around the Mediterranean where malaria is present, the frequency of finding this gene is higher than in other parts of the world, because its benefits are felt and have survived.

### **The Practical Application**

The genotype of an individual is pretty much a permanent, unalterable record of inheritance. But knowing and understanding the chemistry proceeding to the physical expression of that genotype, its phenotype, can help in controlling its severity if the trait is harmful.

A genetic flaw is like a time bomb, permanent and unalterable, but it cannot explode until something or someone in the environment lights the fuse. It is only a tendency, not an absolute. It just so happens that in many of the most severe cases, the damage is already done before we have the time or have acquired the knowledge to intervene. There are some interventions that help control the effects of genetic flaws.

Let's use diabetes as an example. Diabetes is considered hereditary, because genes that predispose faulty sugar regulation tend to run in families. But they tend to be weak genes, which is why they are difficult to chart or follow, and also why everybody who carries them does not develop the disease.

Now, suppose you do carry them. Yes, you do run a higher risk of becoming diabetic, but now that you know you carry them, you can control the bomb by watching your diet. You know you may be more sensitive to sugar "junkie" diets than others who don't carry those genes. You have now taken steps to a sophisticated intervention and reduced or maybe even eliminated the chances of your time bomb going off. You are, in a way, practicing genetic intervention, and in a positive way.

Another example is cancer. Many years ago, the World Health Organization determined that 80% of all cancers that affect man are environmentally produced, meaning that they could have been prevented. Some cancers tend to run in families, the reason why some people get cancer when exposed to only fractions of the dose of the same carcinogens that leave others unscathed (the former people have genetic predispositions, shorter fuses on their time bombs).

But just because you may carry this genetic time bomb is no excuse to panic. You simply become more aware of carcinogens in your environment, avoid what you can avoid, control what you can control, and take responsibility to prevent your fuse from being lit.

### **One, You Buy 'Em, Two, You try 'Em . . .**

If you've ever spent much time at race tracks, you've probably heard a jingle that's as old as the hills. Most of the "good ole boys" sing it in their sleep: "One, you buy `em - Two, you try 'em - three, you pass 'em - but four white feet with a snip on the nose - cut off his head, and feed him to the crows!"

We know that coat color in horses, affected by many pairs of genes, is not always predictable. We also know that white skin and white feet are not particularly favored by Mother Nature in the wild, as evidenced by the low gene frequency of white feet, skin and other white markings in purely wild herds. Some studies have also been done on tame horses that escaped to the wild out West and were monitored through succeeding winters. A significantly higher proportion of dark colored horses, bays and blacks, survived.

What made the difference? Since white markings are flashy, they are more visible to predators. Some also say white feet are softer. White skin is definitely more sensitive to the sun and to allergenic responses from eating alsike and other white clover. With coat color being affected by so many genes, it may be that the degree of white expressed is proportional to the amount of albino type genes the animal carries. Albinos are very sensitive and weaker in any species (the genes are recessive, making them difficult to follow, and unpredictable too).

I have observed that 87% of all the horses that are brought to me for

consultations about, have two or more white feet with white on the face, and by far, are also chestnut. Yes, there are exceptions, as there always are, but this seems to be the trend. I believe that chestnuts, with their white markings, much favored by man who controls their breeding artificially, are the blue-eyed blondes of the horse world. They are just more sensitive to abuses from the environment. Since man likes the "flash", he does not necessarily select positively in breeding for the same traits that Mother Nature would, and the gene frequencies of the sensitive types are allowed to build up.

### **So, Does It Really Matter?**

Most horses now have comfortable barns, nice hay and rich grain that are not provided in the wild, so that animals that would have been weeded out by Nature are now thriving in their adapted environments. Pleasure horses, many show horses and pets that have come to expect the comforts and protection of man, no longer have to worry about their genetic fuses being lit. The excessive stresses of racing and performance horses, however, are a different story. The athletic expectations approach the limit, and sometimes, sadly, go beyond what any performance horse can achieve.

Does this mean that chestnuts with "four whites" and a blaze are worthless? Heavens, no! Not any more than a blue-eyed blonde; but you would probably think twice about hiring such a blonde to work as a lifeguard in the hot Florida sun daily. Sure, there are exceptions to every rule, there always are, but most of them just couldn't take it. This is probably why that "One, you buy 'em" jingle is mostly restricted to the track and other severe stress environments, and why many pleasure horse owners have never even heard it. One of my favorite trainers recently coined a phrase for herself; "Red horse plus white feet equals blue trainer", or the "red, white and blue syndrome." Apparently she has noticed the same phenomena in her standardbreds.

I have also noticed that quite a few Quarter horses of the Three Bars line seem to have a higher requirement for magnesium than other lines. Some research has been done on Thoroughbreds that has shown higher need for this mineral in particularly nervous horses.

The Three Bars horses with that particular time bomb all show hyperactivity, short attention span, difficulty in training for pleasure, and difficulty in relaxation. They are also very sensitive to sudden noise and movements, are worse in late winter and spring, are not mean in the least, but can be dangerous in their unpredictability. Many are simply labeled "crazy". Supplementing these horses with elemental magnesium as an amino acid chelate and lowering the carbohydrate intake from grains by providing a high protein grain without alfalfa, has produced the

most amazing results in as few as three days. Of course, we have to also provide a balanced supplement of the other minerals too, to prevent deficiencies because of imbalance, particularly calcium. (See "[The Jekyll and Hyde Personalities of Minerals](#)").

Since the inherent sensitivity does not change, it should be recognized that horses will relapse in the same short amount of time, if they are taken off the program. With this supplemental intervention, the Three Bars horses can now perform up to the quality expected of their superior breeding with a simple adaptation that we can control. (Incidentally, this sensitivity has absolutely no relation to color. The worst cases are often bays with no white at all.)

Some horses born with the greying gene, particularly Arabs, seem to be sensitive to copper in the same way that the Three Bars horses are to magnesium. Loss of pigment is the manifestation, and we have had a fair amount of luck controlling, stopping and even reversing the problem. Since copper is so much more toxic than magnesium, I'm somewhat hesitant about using very much of it without constant monitoring through hair analysis.

Some lines of all breeds tend to retain potassium and are chronically bloated, appearing fat, usually with fertility problems. Broodmares with this time bomb are helped by restricting alfalfa (high in potassium and antagonistic to manganese, the fertility mineral). Sometimes manganese supplements are constantly needed to keep the high potassium in check.

Some horses retain phosphorus, which causes arthritis, so high protein grains are definitely not for them. Stallions during heavy breeding may deplete themselves of zinc, making them more prone to various skin problems. Color seems to be a factor in sensitivity here.

There are just no perfect bodies, in any species. We can only breed to get the maximum numbers of good genes and traits while we hope that the bad ones that also pop up are something we can work with, or that we can breed out. We're all still learning. If you have observed any traits that you think are heritable, I would be interested in hearing about them. They may plug into other factors already discovered, like missing pieces to a puzzle, to give us a better view of the genetic time bomb and ways to diffuse it.

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[Return to Your Health Home Page](#)

[Return to Vita Royal Home Page](#)

# Insights into the Politics of "Drug" vs "Food"

I really would hate to have to be in their shoes-policing position that must draw the line, determine the gray area, and decide just what is a drug and what is not. I really would hate to be in their shoes.

We all know, or think we know, just what is a drug and what is not. What is it that constitutes a drug? If it is manufactured in the laboratory? If it is totally synthetic, a creation of man's biotechnology? If it produces desirable effects? Is it a drug if we use it only a certain way? Is baking soda a drug if it is removing odors from your refrigerator, or only so if fed to swimmers, runners, and racehorses? Just what constitutes a label of "drug?"

The Food, Drug, and Cosmetic Act defines the word "drug" as a substance intended for use in the diagnosis, cure, mitigation, treatment or prevention of disease. If we get really technical, then all vitamins, minerals, proteins, carbohydrates, and even water itself qualify because there is a "disease" defined and diagnosed for deficiencies of them all for which they can treat, prevent, and cure. Does that make them all "drugs?"

The FDA further complicates the semantics by ruling vitamins and minerals as "foods," but then certain brands of vitamins and minerals are still prescription - often with the same ingredients at the same potencies that OTC supplements have. There is, however, a difference in the script pills - their price - the script ones being more expensive. Since they require a prescription from a doctor, they are covered by health insurance like other medications. Does this make Rx vitamins and minerals "drugs" and OTC ones not? It's so confusing, it's crazy.

The FDA has ruled OTC vitamins and minerals as "foods." Webster's Dictionary defines "food" as protein, carbohydrates, fats, minerals, vitamins, and other supplementary substances that nourish and sustain life. Indeed these all do. Each of them creates a "disease" in the body. Well, then, according to philosophical principles of logic that I learned in college, a food can indeed be a drug - and vice versa. But these two are supposed *not* to be the same thing. We see now that the problem lies in our semantics; our laws are not clear.

Many supplements fall under the grey area and are subject to different interpretations of the law, depending on who is doing the interpreting,

and where his perspective is coming from. It's sad that some people have ever gone to jail over this.

This situation is really the crux of sports medicine today. Trainers of both human and animal athletes are very much aware that essential nutrition from common food sources is less than optimum for truly superior performance. Well documented studies have been informing us of the continuing depletion of trace minerals in our farm ground in all 50 states. The problem is compounded by the fact that plants (our ultimate source of nutrition) don't require the same minerals or amounts of minerals that the animals who eat the plants do. They uptake them only incidentally. The availability of trace minerals and calcium and magnesium is compromised by the new superphosphate fertilizers. Farmers can't afford to fertilize with high levels of trace minerals toward the ultimate nutrition of animals and people they will feed. There is just no payback as measured in accordingly larger crop production.

Since minerals cannot be synthesized in the body like most vitamins can, the bottom line reads "our foods are just not as nutritious now as they have been in the past." Mineral supplements are becoming more important day by day, to treat and prevent marginal mineral deficiencies that may interfere with the quality of life on a daily basis, and certainly do for an athlete trying to pump out more energy than the athlete in competition next to him. Minerals are necessary to fuel enzymes and drive biochemical pathways in the body. A mineral of some kind is necessary for nearly every biochemical reaction in the body. So, considering these environmental conditions, does this make mineral supplements "drugs?"

Here we go again...

I would like to address the question of Health Messages and "Drug vs. Food" status, particularly in the area of mineral supplements. Most consumers as well as industry leaders feel that there is a great need to completely revamp the traditional ideas on "drugs" vs. "nutrients". Many years ago when the F.D.A. was founded, there was limited knowledge of what anything did due to the limited technologies of testing. Contributing to that was the ignorance of benefits of "nutrients" assumed to be in our food sources and corresponding lack of interest on the part of the general public and researchers, particularly of minerals.

Nowadays, the opposite is true. With new concern about chemical contaminants, pesticide residues and soil mineral deficiencies documented in every state, we are coming into an age where we will have to be more conscientious about food and nutrition and have to supplement increasingly more just to make up for what we now lack compared to 10 or 20 years ago. It is well known that our plants, our food sources, do not have the same mineral requirements for health as the

animals who eat those plants - man included. Therefore, agriculture itself is not affected as much as we, ourselves, are, and our animal food sources.

More and more, as we shift our medical attention from **quantity** of living years toward the **quality** of life, we are shifting medical focus of treatment to fine tuning the biochemistry of both our animals as well as ourselves. This new knowledge will enhance efficiency at all levels of our economy.

For ourselves will now, and in the future, be dealing with subtle medical problems that are triggered by marginal (sub-clinical) mineral deficiencies in susceptible segments of our population. These problems may not be life threatening, but can significantly alter the **quality** of life for significant portions of our population. These problems may not be life threatening, but can significantly alter the **quality** of life for significant portions of our population. With education on **proper** supplementation great quantities of dollar savings in government funded health care can be realized, and we can teach the public how to be more responsible in their own health care. Thus empowering the people so that they can control the quality of health care professionals by only patronizing those who are educated in holistic complementary medicine.

The obsolete allopath will go bankrupt or change. Miracle cures (often used in multilevel marketing via testimonials) and not on placebo generated by hype meetings that more closely resemble religious revivals than educational information seminars. (Incidentally, the average productive life of these products and companies is usually only three years. These products of multilevel marketing are also overpriced up to 17 times, due to the many levels of payout that is built into them.

The price to consumers is beyond extraordinary compared to conventional marketing, and the few at the top get rich quick and then move on to another set up, while the company fades away, leaving "distributors" with cases of unsold and poorly salable goods in their basements. Watch these programs. I have personal experience several times over. Productive hype of these products and companies is usually only 3 years.

Determining whether a product is a food or a drug also needs to be addressed. Does it stimulate or shuttle body processes toward biochemical pathways not normally found in nature?

All elements do something. Legitimate biochemical activity reporting must be allowed. Wild claims that extrapolate real data to the point of ridiculousness should not. If a chemical or product is legitimate, then it will stand on its own merit by way of its biochemical activity in the body.

Determining whether a product is a food or drug also needs to be addressed. Does it stimulate or shuttle body processes toward biochemical pathways not normally found in nature?

Just because a product has an action - and **every** product of industry has an action or it wouldn't have been produced, should not qualify it as a drug. Psyllium, for example, has an action that be used as therapeutic in the case of bowel regulation. However, it is a natural agricultural product and should not have been listed as a drug in the first place unless we also listed prunes, apples, etc. Removing products in categories such as this from the drug status would solve many headaches for the F.D.A. and save taxpayers many dollars just in lawsuits such as that with cereal companies, alone.

Nutritional, vitamin/mineral supplements should be allowed to educate the public responsibly on how they can help improve the quality of life for those who choose to purchase them. These allowances will also make better quality foods and supplements more competitive in the marketplace against the hype of poor quality junk food and its mega dollar advertising. Consumers have never before in history been more interested in learning to help themselves and better the quality of their lives.

The F.D.A. should continue to be the protectorate watchdog of the consumer, but needs to revamp its guidelines to better serve the needs of todays consumer and allow more quality education of the actions and uses of industry products. Manufacturers should be allowed to make health claims if they are backed by scientific studies and should be required to produce such documentation if the question arises. These recommendations should incorporate the scientific data with the dosage reported to provide actions stated.

If we are going to continue breeding practices that reduce our gene pool, we are bound to see some of our "best" and possibly inbred horses exhibit eccentric chemistries that may prevent them from expressing their "best" genes.

Can our already economically depressed industry afford to junk all those born not so perfect and keep only those so perfect that they need no help at all?

Let's get real here. There is no body born so perfect that it can do it all alone. The semantics thing has got to be resolved, for the health food industry as well as sports medicine. It is only a matter of time before another great discovery is found, research by a university published, and the focus of attention will be hit by all the same old rhetoric. The story is always the same - for everything that works, that is. As I said before, I wouldn't want to be in their shoes.



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[Return to \*\*Your Health\*\* Home Page](#)



# The Scourge of Industrialization: Heavy Metals and Other Toxic Contaminants

In my home state of Michigan as well as other areas of the country, more and more seemingly unrelated symptoms and nebulous diseases are being attributed to heavy metal poisoning, pesticide residues and fertilizer contaminants. Some common mineral supplements are also known to contain undesirable fractions. As society becomes more and more industrialized, waste products become more numerous and more poisonous.

Big business generally doesn't want the responsibility that goes with these pollutants along with the expense of proper disposal and tends to play down the toxic effects of exposure. It is common knowledge that some of the most poisonous substances ever created on Earth have been dumped deliberately on freeways by tankers driving down the road with open drains, in streams and rivers when it is cheaper to pay the pollution dumping fines than treat the wastes, or even left half buried in corroding barrels in various "legal" dumpsites.

Sometimes they are even pumped into the ground under the guise of "brine wells" or such and show up polluting ground water may miles away. I myself was forced to dump many gallons of toxic wastes down the drain when I worked in medical laboratories. That is common practice, and no one thinks much of it. Besides, there is usually no other place provided to put them. Since then, I drink no other water other than distilled water I make myself.

Chemical pollution is going to be with us for awhile, and ready solutions to this environmental problem are not within easy reach. For most of us, all we can do is to be aware of the problem, recognize possible sources of contamination, and be wise to the fact that little research has been done on the toxic wastes as far as directly associating clinical symptoms of disease and suboptimal health. Testing for this type of poisoning is often not available until after the damage is done, whether to livestock or humans, and few clinicians would recognize a case enough to order the proper testing, or know what to do with it if they did.

Since the toxicity levels (the amounts necessary to produce symptoms) are different for each individual, animal or human, a broad range of symptoms can occur at different levels of exposure. And, to complicate matters, since these are often concentrated waste products, they can occur in multiples, with many metals in many chemical forms. They may even react among themselves to form whole new unknown compounds. The picture quickly becomes mind boggling.

As of now, most of the attention to chronic health problems associated with heavy metal poisoning has been at progressive cancer clinics where complete diet analysis, blood and hair analyses are done. The popular metabolic therapies for cancer, heart disease allergies and asthma, etc. aim at reducing contaminated sources in the diet. No water but distilled, no seafood from polluted waters and no spices grown outside the country where banned pesticides, often heavy metal based, are still being used. It seems ironic that it is even legal to import such products that have been treated with chemicals banned for use here, but many of these chemicals have been manufactured here in the U.S. Coffee, teas, chocolate and spices are good examples.

I work with as many people as I do animals and am finding that many health problems virtually disappear when toxic metal sources are identified and eliminated. They can even be pushed out of the body by other dietary supplements which will be discussed later. Let's look at the heavy metals individually and see what observations have been made about them.

## **Lead**

Probably the most famous toxin is lead. The bones of ancient man had but traces in them. Modern man has many thousands of times that amount. Lead is everywhere and we can not escape exposure to it. We can only be aware and stay away from heavier sources of contamination. It is in printer's ink, gasoline, paints, solder, piping, ceramics, polluted air, and a common contaminant of fertilizers and the mineral supplements dolomite and bone meal. Pastures, grain crops and rivers can be contaminated by rain washing polluted air downwind from cities and factories.

Symptoms include fatigue, anemia, bone deformities, retardation, autism, hyperactivity, aggression, learning disabilities, muscle pain, loss of appetite, constipation, diarrhea, poor muscle tone, wakefulness, restless sleep, irritability, stomach pains, colic, miscarriage, growth retardation, spasms and twitches, blindness, rheumatoid arthritis, death and has been incriminated in muscular sclerosis.

Lead mimics calcium in the body and can be deposited in bones in the same pattern as calcium, causing a weak spots. Since young mammals

have high calcium requirements for their growing bones, lead exposure poses an added threat. Young animals and babies will absorb substantially more lead than will adults at the same level of exposure. Consequently, toxic effects are at their worst for youngsters. Lead is a cumulative poison which means that the body stores it continually at a rate proportional to exposure. Lead is best excreted in urine. In high exposure situation, the body just can't expel enough to keep up. Children and young animals are most susceptible to brain damage because the blood/brain barrier has not had time to develop enough to filter out poisonous lead salts.

One race horse I worked on had paralysis of several nerves in the throat causing food and water to return through the nose. She was sick all over as well, anemic, tied up with extremely sore muscles, she almost sat down when her back or hind quarters were touched, and exhibited a very dour disposition.

Her race performance also reflected her poor state of health. We did a standard hair analysis and blood tests and supplemented accordingly, but obtained little results. When we did a special hair analysis for heavy metals, the lead level was very high. We used sulfur bearing amino acid methionine to chelate or "bind" with the lead in the body to enable excretion with a high protein/low carbohydrate diet of 4 lbs. of 25% digestible protein grain and hay.

High calcium and magnesium as amino acid chelates were used to push the lead out, acting as antagonists; and a potent bioflavonoids and hesperidins complex supplement. The latter are part of the vitamin C complex and boost the biological activity of the vitamin C normally manufactured by the horse itself. We did not give a pure vitamin C supplement to the horse, because if given over a long period of time, the normal ability of the animal to produce Vitamin C can be lost and when the supplement is discontinued, scurvy-like symptoms may appear.

Vitamin C and its complex have been shown to be very beneficial to protect the body from heavy metals as well as aid in excretion and detoxification. Lead salts are not very soluble in the body and therefore do not move very fast, making detoxification a time consuming process. Vitamin C complex, vitamin E complex, B complex vitamins, the sulfur amino acids methionine, cystine and cysteine, calcium and magnesium all appear to have beneficial effects in stimulating elimination and minimizing toxic effects.

Sodium alginate and pectin appear to bind with lead in the gut to form insoluble products that are not absorbed, but pass on out with the feces. These supplements aid in preventing further absorption from a contaminated food source.

The race horse we treated also had a calcium and magnesium deficiency which triggered pica (craving for abnormal materials) and she virtually ate the barn down, both at home and at the track, where numerous pesticides were sprayed in the paddocks. We began supplementing this horse in June and the following March she returned to the track apparently well. Time will tell. It may be that the damage left is too severe for her to hold up under the stresses of racing. Research says that much of the damage may be permanent.

I have a personal vendetta against lead. I began using a formula with fresh "certified organic" goats milk for my newborn son as soon as he came home from the hospital. We have allergies in our family to cow's milk causing mucus which he exhibited in the hospital on traditional formula. Everything was beautiful for three weeks, then colic set in. After six months, bowed legs were becoming apparent and at nine months he was hospitalized for dehydration when vomiting and diarrhea became uncontrollable. By this time, he would sleep only 20 minutes at a time and have nightmares when he did sleep, cry for no visible reason and had to have his crib padded with pillows as if he had a constant backache.

All the while, three pediatricians kept telling me the same chauvanistic song: "you're just an overworried mother upset with her first baby". They refused to waste my money on needless lab tests and didn't know what to test for in the first place. At nine months, he finally had enough hair for a sample to have analyzed and I was horrified to see a lead level of 67ppm. I immediately had blood samples tested, which confirmed the high lead levels.

Normals for blood in children are the child's numeric age, in this case, should have been less than one. Since I.V. chelation therapy with EDTA or other artificial chelating agents is admittedly risky for an infant, we chose to try natural methods first. We used the same supplements as we did for the horse adding high B complex vitamins, vitamin C and Algin.

On the fifth day, he slept through the night without waking up crying for the first time in his little life, and after six weeks, he began to play by himself with his toys which he had never done. By three months, his lead levels were down to zero and showed absolutely no effects of his traumatic past. The culprit? Our "certified organic" fresh goat's milk at \$6 per gallon! It tested out as high as 15ppm by an independant lab certified by the USDA, and high levels were also confirmed by another private lab. The average lead level found in fresh cow's milk is .04ppm and the legal limit for canned milk meant to be diluted is .5ppm. Worse of all, this goat's milk is **still** on the market because the state lab, with its own admissable obsolete testing equipment can not seem to find any lead. They admitted that they can not test for twice the legal limit with

any accuracy.

These lactating goats are fed straight oats and hay with no calcium supplements to balance the calcium/phosphorus ratio to meet the heavy needs of lactation. I suppose they became contaminated when their cravings led them to eat whatever was handy. That same old song . . . The next convict on our lineup is Cadmium.

## **Cadmium**

Cadmium is considered to be even more toxic than lead. It is a white, pliable, tin-like metal that is also difficult for the body to expel. It is used in steel making, oil paints, pesticides, rubber tires, plastics, gasolines, hardware such as screws, batteries, silver solder, etc. It is a common contaminant of soft water flowing through worn galvanized pipes, paints, auto exhaust, industrial smoke, coal burning and wastes and the mineral supplements dolomite and bone meal.

It has been estimated that 70% of the cadmium present in cigarettes comes out in the smoke. For you smokers and coffee and tea drinkers -- cadmium is high in these (acid solutions make it more available). Heavy metal based pesticides that are banned for use of food crops are perfectly legal for non-food crops, which, in one way or another, may find their way into our bodies after all.

Symptoms of cadmium toxicity are: loss of sense of taste and smell, antibody suppression - reduced resistance to disease, protein and sugar in the urine, weight loss, poor appetite, dry and scaly skin, decreased milk production in nursing animals, decreased male hormone production and/or decreased sex drive, loss of hair, sore joints, lowered blood hemoglobin, atherosclerosis, hypertension, heart disease and the famous "Ouch, Ouch" disease which afflicted a city in Japan. Their water supply was contaminated by discharges high in cadmium from a mining and metal company. The disease got its name because the mere touch to the body brought pain so great that the people would cry out.

Good protection from cadmium and therapy for cadmium toxicity includes a high protein diet which decreases cadmium retention, selenium, the sulfur amino acids, vitamins C & E, manganese, copper, calcium and the star of the show -- zinc, its natural antagonist. Our third convict is mercury.

## **Mercury**

Mercury, that beautiful, luminescent liquid in thermometers called "quick silver", is really a wolf in sheep's clothing. In the body, Mercury has an affinity for the unborn, causing cerebral palsy and retardation. Other toxic symptoms are unusual timidity, memory loss, lack of attention, low intellect, small skin tumors, intestinal and kidney

problems, various brain and nervous disorders, birth defects, excessive salivation, tremors, loss of teeth, vision and hearing, poor coordination, hyperactivity, loss of appetite, anemia, hypertension, allergies and asthma.

The treatment for Mercury poisoning is the same for all the heavy metals and mentioned previously. Mercury responds slowly to treatment like lead and cadmium. Like the others, the best protection is a good diet and avoidance of known high sources. Mercury contamination can be found in paints, industry wastes & run off from golf courses or other agricultural areas using Mercury based fungicides. Inorganic mercury salts are less able to be absorbed -- only about 50% - than other organic forms - about 80%.

Methylmercury is the most dangerous of the organic forms, and is produced by bacteria in riverbeds from industrial wastes. Both organic and inorganic forms are cytotoxic (able to kill cells) in very small amounts. Selenium has been shown to be effective in studies with animals in counteracting Mercury poisoning.

## **Aluminum**

Not much is known about the metabolism of Aluminum in the body. It has been with us for a long time with very few apparent true toxicity cases. It is commonly used in foils, baking powder, antiperspirants, cookware and antacids. Unlike the other heavy metals, I have seen many hair analyses showing high levels of Aluminum without symptoms, but here I must qualify.

One area of Michigan appears to have extremely high levels of Aluminum. The suspected source is ground water near deep "brine wells" used by a local chemical company for deposition of who know's what. People and animals living in this area show evidences of encephalopathy (brain disturbances, depression, hyperactivity, memory loss, moodiness, lower intelligence and learning disabilities) and body aches and pains. Some of those reports show up to 487ppm Aluminum in the hair samples. I have seen pictures of deformed geese and ducks, foals born with founder, foals with little or no brain who were given autopsies after they died.

In human cases where Aluminum containing antacids were routinely used, and no brain or nervous disorders were apparent, body aches and pains ceased when the Aluminum source was eliminated. In more advanced cases where it was obvious that the brain was affected, no mental improvement took place after six months. Body pain subsided but I believe the brain damage is permanent.

One race horse with this condition was very sore to the touch when I

began to work on her. Her body is now well but her mind is poor. She goes well behind another horse, but quits when she's out alone. Her disposition has become very sour even with the gentlest treatment. She rears in harness, has temper tantrums and the darkest of moods. She also was raised in an area where the other cases came from.

Unfortunately, Aluminum does not form a chelate. It is chemically impossible for it to do so, so chelating agents are not particularly helpful here. Calcium, Magnesium and Vitamin B6 are thought to be helpful in elimination, along with decreasing the phosphorus intake. Aluminum is very poorly absorbed so that exposure must be great to do real damage. If you live in an area where you suspect Aluminum or any other metal contamination, it is very important to properly balance the calcium/phosphorus ratios in the foods that you eat or feed. Also, be sure to keep animal pastures and hay fields well limed.

We are living in a cramped world and are continually making trade offs of one kind or another for easier living and leisure time. When those trade offs take the form of health hazards polluting our environment, then it's time to take inventory. It's unfortunate that the indiscriminate dumping and various forms of pollution are not stopped voluntarily by the offenders when potential health hazards become known.

The only cases I ever hear about are those where many people must get sick, bear deformed children, suffer miscarriages and lose family income before measures are taken to stop it, and even then, compensation is meager - if at all. But how do you compensate for a retarded child or your first newborn pet or livestock with little or no brain?

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[Return to \*\*Your Health\*\* Home Page](#)

[Return to \*\*Vita Royal\*\* Home Page](#)



## "Bugs" in the Blood

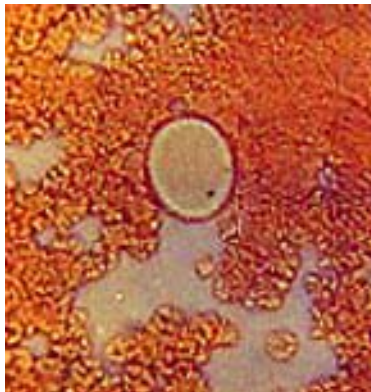
From the research archives of biochemist Linsey McLean, these are actual photo micrographs of **blood smears** from various species of animals, including man. Ideally, these organisms pass through a body's intestine and should not be found in otherwise sterile blood.

They are made by simply putting one drop of fresh blood on a slide with a coverslip and observing under a microscope at 43X, high dry power. No staining is necessary.

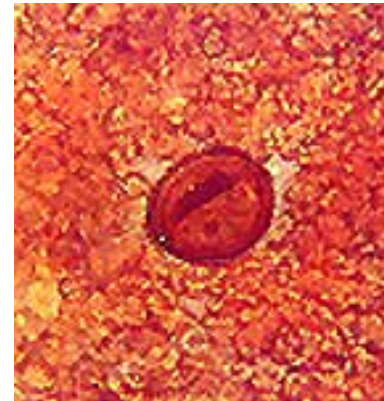
*Note: Download may take a minute or two, but well worth the wait.*

### Human Specimens

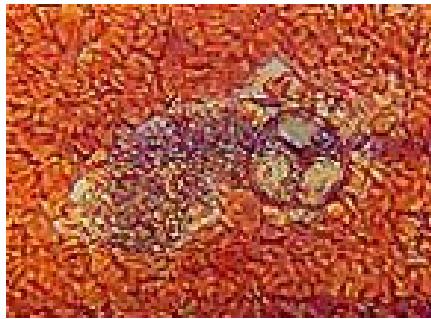
Subject and description of disease symptom(s) at right



51 yr. old man with Chronic Fatigue Syndrome and accompanying symptoms, identical to those commonly seen in horses with Equine Protozoal Myeloencephalitis



ALS Patient, male, heavy long term exposure to PCBs and industrial solvents, no other cases of ALS in his family, similar to that seen in Equine Protozoal Myelitis horse



51 year old man, same person as above picture, similar to that seen in Equine Protozoal Myeloencephalitis



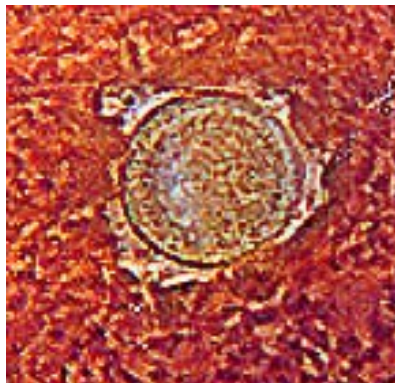
19 year old man who says "knew he had worms" and farms pigs



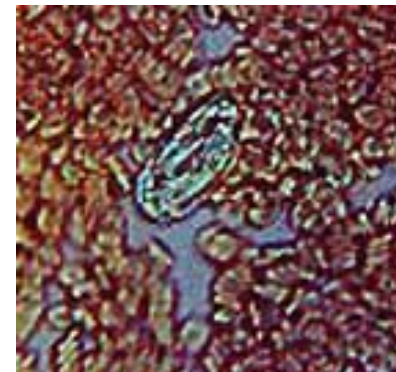
50 year old man with Gout, Obesity, Environmental Illness Symptoms



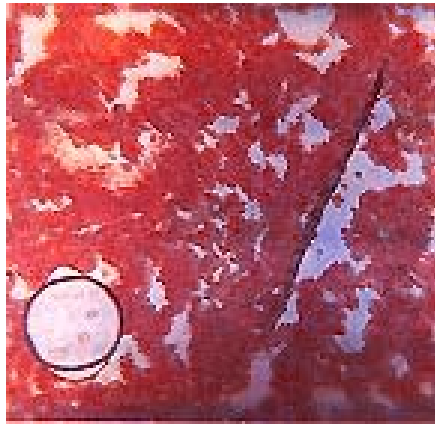
53 year old woman with Lupus (SLE) an autoimmune disease of connective tissue



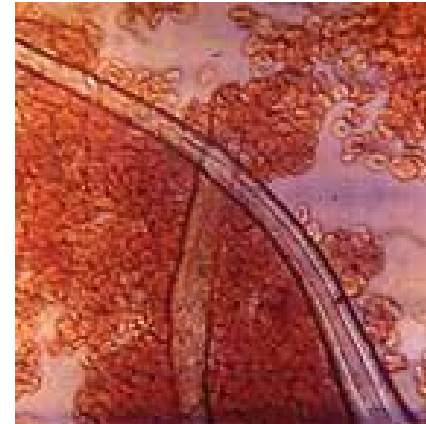
31 year old man with iritis (auto immune disease of the eye)



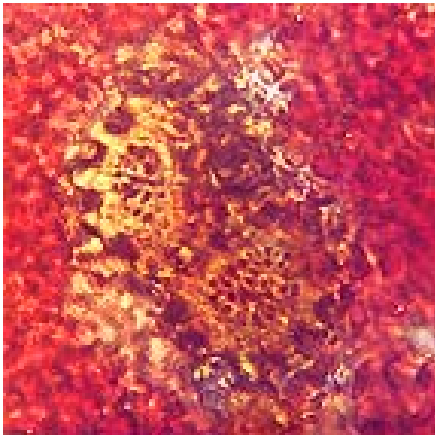
17 year old boy with obesity and fatigue



11 year old boy with brain tumor



Migrating worm with gut tube clearly shown, in same as above 17 year old male with obesity and fatigue



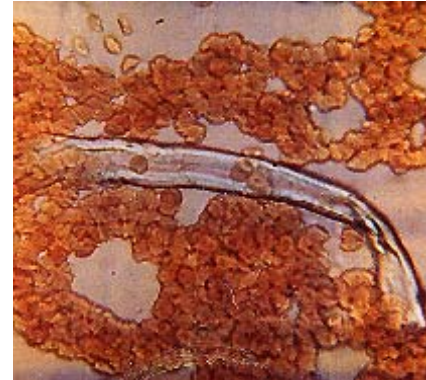
11 year old boy with brain tumor, same person as above



Food particle of the type commonly seen in "Leaky Gut Syndrome" in both humans and animals. Appears very similar to worm, but has no "gut" tube.



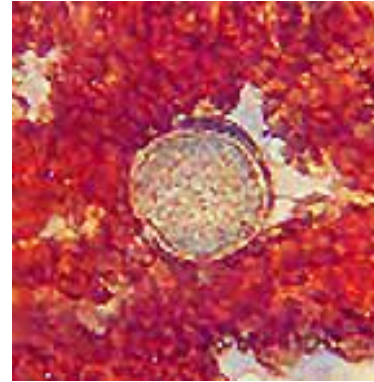
11 year old boy with brain tumor, same person as above



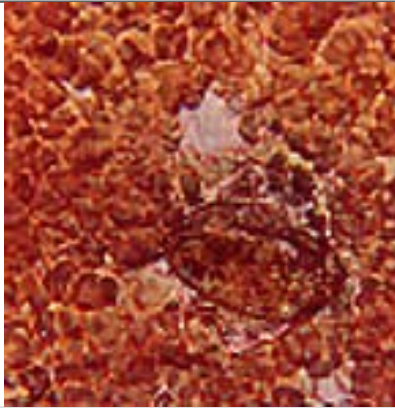
Worm with gut tube clearly shown, in same 17 year old male with obesity and fatigue



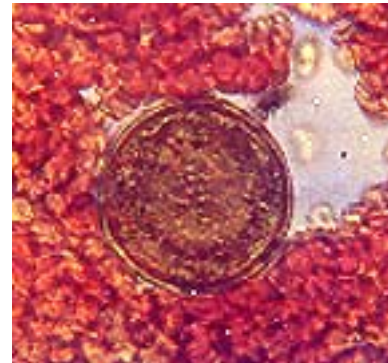
71 year old woman  
Environmental Illness  
with Congestive Heart  
Disease, Kidney Disease,  
Gout, Clinical Depression  
and Several Autoimmune  
Diseases, identical to  
those commonly seen in  
fecal smears of horses  
with Equine Protozoal  
Myeloencephalitis



51 year old woman with  
Chronic Fatigue and  
Environmental Illness



Middle age human with  
Lupus



same 44 year old woman  
with Visceral Larval  
Migrans

[click here to see specimens of other species](#)

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# "Environmental Health Connections" Videos Now Available

"Understanding the effects of environmental pollution and its continuing build-up in all living things will give you the advantage in controlling and preventing all newly emerging opportunistic infections, particularly EPDS (Environmental Parasitic Disease Syndrome) in all species of animals, including man," states Linsey McLean of her fifteen years of research on this subject.

This informational video is a "*must see*" for today's health-conscious individuals and health professionals.



## *Environmental Health Connections: The Overview* (\$24.95)

Amazing Answers to REAL Problems. In this groundbreaking video, learn how environmental pollution predisposes all living things to a variety of "[Environmental Illness Syndrome](#)" diseases and ill health conditions including **EPDS (Environmental Parasitic Disease Syndrome)**.

Includes illustrative graphics, photomicrographs of "Bugs in the Blood" and recommendations for breaking the vicious cycle of modern allopathic care, combining it with the best integrated/alternative approaches, to **discover the "cause of the cause" we seek for lifelong optimum physical and mental health.**

© Linsey McLean

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**NEW - Two Stage Portable Water Purifier** now available through Vita Royal produces up to 12,000 gallons of water on a set of filters. For home or barn, this heavy duty purification system can be even be hooked to a hose for outside use or installed in line. Priced at only \$149.00. Set of replacement filters are \$37.00.

A double filter system, one for sediments and the other, a carbon filter for organic chemicals and heavy metals, comes in a heavy duty plastic housing of about quart size each. This is the most economical and convenient system for farm use we have found. Calculate how many gal you use per day to determine when to change. If your water is heavily contaminated, then reduce that time appropriately. You can open the housing to check the filters.

For more information, contact Vita Royal Products, Inc.

## *Announcing...The Finest Skin Care Products*

A fantastic hard-to-find line of all natural skin care products containing **natural flower essences and extracts** added to the healing properties of a **pure coconut or babaçu nut oil base** is now available through Vita Royal Products.

- No animal products or testing
- No synthetic hydrocarbon scents
- No artificial additives

- Longer lasting than other skin care products, with a pure, natural fragrance.

### **Scented Coconut Oils**

*Made of Coconut-based oils scented with natural tropical flower extracts. Made in Tahiti.*

Use as a ●Skin Moisturizer ●Before or after shampooing for dry hair and scalp

- As a bath oil
- As a subtle perfume
- Dark tanning oil (with no sunscreen)

*Available in Frangipane (Tropical Lily), Jasmine, Gardenia, Ylang-Ylang scents*

Priced at \$11.00 per 4 oz. bottle.

### **Scented Shampoos**

*Available in Coconut, Jasmine, Gardenia scents. Priced at \$10.00 per 8 oz. bottle.*

### **Foaming Bath**

Priced at \$11.00 per 8.5 oz. bottle.

### **Face, Body and Massage Lotion**

*Available in Ginger Blossom and Plumeria scents. Priced at \$9.00 per 8 oz. bottle*

### **Scented Coconut Soap Bars**

*Available in Coconut, Jasmine, Gardenia, and Ylang-Ylang scents.  
Priced at \$4.00 per 4.55 oz. bar.*

### **Babaçu Cream Soap Bars with Honey**

*Brazilian Babaçu nut oil base combined with 100% natural essential oils  
and honey. Hand made in the Brazilian Rainforest.*

*Available in Lavender, Lancaster, Rainforest Flowers, and Violet scents.  
Priced at \$4.25 per 3.5 oz. bar.*

Please call us at 810-653-5478 to place your order or inquire about these  
exciting skin care items. You can also fax us at 810-653-2543.

[Return to \*\*Your Health\*\* Home Page](#)



# Check out these links for health related information

*Note: Some links may not work with your internet server. [Let us know](#) if you come across an interesting site so that we can share it with our readers.*

## Environment and Pollution:

[Friends of the Earth](#) is a national, non-profit advocacy organization dedicated to protecting the planet from environmental degradation; preserving biological, cultural, and ethnic diversity; and empowering citizens to have an influential voice in decisions affecting the quality of their environment -- and their lives. <http://www.foe.org>

[Scolnick Report](#) Founder/Chairman, public-interest group, CITIZENS' COMMITTEE TO CLEAN UP THE COURTS.  
<http://www.skolnicksreport.com>

[The Scientific World](#) Search SciBase of 11 million articles, updated daily. Create a Personal User Profile, publish everywhere with your submission, explore WorldMeet to find conference and event information you need. You can also receive personalized daily feeds through NewsLink. <http://www.thescientificworld.com>

<http://www.safe2use.com/ca-ipm/01-02-08a.htm> Superweed-Canola Invades Farm Fields of Canada.

<http://www.safe2use.com/ca-ipm/01-02-08b.htm> FINALLY PESTICIDE-FREE ON L'ILE-BIZARD. Small Canadian town does away with pesticides to protect its children.

<http://www.safe2use.com/ca-ipm/01-02-08.htm> The cost of the food we eat. Padma Rajagopal of SEED Trust writes of the cost of pesticides and environmental damage.

<http://www.econsumer.gov/english>

This new site deals with consumer issues that arise across international borders. You can read up on other countries' consumer protection laws and file complaints about your own international online transactions gone bad.

<http://www.getipm.com/government/fifra-laws/gao-rpt.htm> GAO report on Pesticides and Prohibited Safety Claims.

<http://www.safe2use.com/ca-ipm/00-12-27a-comment.htm> Low doses of common chemical have science in a quandary.

<http://www.safe2use.com/ca-ipm/01-01-24.htm> Dioxin Makes the List of Known Carcinogens

<http://www.safe2use.com/ca-ipm/01-01-25.htm> Top Health Agencies Urge Testing to Protect Child Development from Toxins

<http://www.scorecard.org/> Maps showing environmental contamination, descriptions etc. An excellent site!

<http://nadp.sws.uiuc.edu/isopleths/maps1997/phlab.gif> US map showing areas of acid rain.

<http://www.carnicom.com/contrails.htm> Chemtrails and Crimes Coverup. Documented - about chemical trails left by airplanes.

<http://www.nexusmagazine.com//fluoridebomb.html> Toxic Secrets-Fluoride and the A-Bomb Program.

<http://www.cogreslab.demon.co.uk/sickbuild.htm> Sick Buildings and healthy Homes. The health effects of positive and negative ions.

<http://www.dhmo.org/facts.html#FACTS> Information on DHMO, an environmental chemical.

<http://www.purefood.org/Toxic/pestaggression.cfm> Pesticides and Aggression.

<http://www.purefood.org/Toxic/rach660.cfm> Pesticides in the Environment.

<http://www.safe2use.com/ca-ipm/01-01-25a.htm> New York City Pesticide Spray Truck Drivers Sickened by Pesticides Go Public

<http://www.safe2use.com/ca-ipm/01-01-25c.htm> No Protection staying indoors during pesticide spraying.

<http://www.safe2use.com/ca-ipm/01-01-25b.htm> Skeeter Spray Nightmare.

[http://www.ag.ohio-state.edu/~ohioline/b744/b744\\_3.html](http://www.ag.ohio-state.edu/~ohioline/b744/b744_3.html) Nitrate in the Drinking Water.

[http://www.environmentaldefense.org/pubs/Newsletter/2000/Sep/d\\_fred.html](http://www.environmentaldefense.org/pubs/Newsletter/2000/Sep/d_fred.html)

Mercury Poisoning in the Environment by Electric Power Plants.

<http://www.promedmail.org:8070/promed/promed.home> Fish deformities in the US.

<http://www.atsdr.cdc.gov/tfacts91.html> Information on MTBE

<http://www.ewg.org/pub/home/reports/DPRweb/dprweb.html>  
Information on Methyl Bromide.

<http://www.unep.org/> The United Nations Environment Programme...what they are doing, what they have done, what they are planning and links to legal help

<http://mapping.usgs.gov/www/gnis/gnisform.html> National Mapping Database.

<http://www.nap.edu/browse.html> Books on science, environment, health, etc.

<http://actionnetwork.org/campaign/arctic3> Take action and check out what is at stake if the Arctic Refuge to be opened to oil and gas drilling.

## **Genetically Engineered Crops:**

[http://www.truefoodnow.org/inside\\_scoop/archives/010207-tf-dcdump.html](http://www.truefoodnow.org/inside_scoop/archives/010207-tf-dcdump.html)-Story: New Bush EPA: Don't Approve StarLink Corn.

[http://truefoodnow.org/bin/takeaction.pl?action\\_id=26](http://truefoodnow.org/bin/takeaction.pl?action_id=26) If you haven't already, make sure Administrator Whitman and the EPA know how you feel about approving StarLink corn.

[http://www.truefoodnow.org/inside\\_scoop/archives/010117-tf-fda.html](http://www.truefoodnow.org/inside_scoop/archives/010117-tf-fda.html)---FDA Genetic Food Policy Denies Americans the Right to Know What We are Eating.

[http://www.truefoodnow.org/bin/takeaction.pl?action\\_id=29](http://www.truefoodnow.org/bin/takeaction.pl?action_id=29) Take action on the FDA.

[http://www.truefoodnow.org/inside\\_scoop/archives/011223-tf-trader\\_joes.html](http://www.truefoodnow.org/inside_scoop/archives/011223-tf-trader_joes.html)  
---Trader Joe's: Drop the GMO's. Whole Foods and Wild Oats have pledged to remove genetically engineered ingredients from their products. Shouldn't Trader Joe's do the same?

[http://www.truefoodnow.org/inside\\_scoop/international.html](http://www.truefoodnow.org/inside_scoop/international.html)  
INTERNATIONAL RESPONSE TO GMO FOOD. It is becoming more and more clear that the United States is behind the rest of the world. Soon, we may be the only country that does not require labeling of

genetically engineered foods.

[http://www.truefoodnow.org/speak\\_out/index.html](http://www.truefoodnow.org/speak_out/index.html)---You've got questions and we've got answers. Q & A section contains a weekly column to answer your questions about genetically engineered food. There are also "Frequently Asked Questions" about shopping for true food, StarLink corn, and general questions about genetic engineering.

<http://www.ucsus.org/agriculture/gen.market.html> List of Genetically Engineered Crops Allowed in the US Food Supply.

<http://www.bma.org.uk/public/science/genmod.htm> from Natural Food News -- Summer 2000 Study Shows Genes Jump Species. News from the Campaign to Label Genetically Engineered Foods.

<http://www.house.gov/kucinich/info/consumers.htm#Labeling>  
Legislation on labeling genetically engineered food to give consumers additional health and safety related information.

<http://www.safe2use.com/ca-ipm/01-02-05b.htm> Expert Panel Raises Serious Questions About the Regulation of GM Food.

<http://www.safe2use.com/government/genmod.htm> Labeling of Genetically Modified Foods Should be a Fundamental Consumer Right.

## **Analytical Laboratories:**

[Avecon Diagnostics Laboratories, Inc.](#), 405 S Main St., Coopersburg, PA 18036. Contact: 1-800-249-5875. Lab for tetanus titres

[Litchfield Analytical Services](#) [litchlab@qcnet.net](mailto:litchlab@qcnet.net) , 535 Marshall St/PO Box 457, Litchfield, MI 49252 USA , phone: 517.542.2915 Complete Agriculture Testing Services.

[West Virginia Rumen fermentation Profiling Laboratory](#) This new laboratory service offers economical rumen fermentation profiles of feeds, additives and fermentation modifiers, as well as conventional feed analysis. For more information on analytical services click on "Sample Analysis".

[Nutritional & Environmental Analytical Services \(NEAS\)](#) is a service facility in the Department of Population Medicine & Diagnostic Science in Cornell University's College of Veterinary Medicine. NEAS offers a full range of chemical testing for the food, feed and fertilizer industries. Cornell University - NEAS 777 Warren Road Ithaca, New York 14850, phone: (607) 257-2345, fax: (607) 257-5041, email: [jh119@cornell.edu](mailto:jh119@cornell.edu)

Analytical services of the [Oscar E. Olson Biochemistry Laboratories](#),

South Dakota State University offers an extensive variety of testing.

[Servi-Tech](#) operates two laboratories. The Dodge City, Kansas laboratory began operation in 1977 and a steady growth in volume resulted in building another laboratory in Hastings, Nebraska which opened in November of 1988. Further growth required expansion of the Dodge City laboratory in 1990 and 1997 . We do nationwide and international testing.

USDA Center for Animal Biologics, PO Box 844, 1800 Dayton Ave., Ames Iowa 50010. Contact: 515 663- 7331. Lab for tetanus titres.

## Mad Cow Disease

[http://www.safe2use.com/media/mad\\_cow.htm](http://www.safe2use.com/media/mad_cow.htm) Physician writes to his patients about Mad Cow Disease.

<http://www.whale.to/w/purdey2.html> Following links about BSE (Mad Cow Disease) and dairy farmer Mark Purdey's paper.

<http://www.profarmer.com/newsroom/followup/purdey.cfm>

<http://www.bse.org.uk/witness/html/stat023a.htm>

[http://www.mad-cow.org/~tom/nov99\\_news.html](http://www.mad-cow.org/~tom/nov99_news.html)

<http://www.nhm.ac.uk/zoology/home/brownd.htm> Dr. Davis Brown, who's run some experiments on Mr. Purdey's theories.

## General Health:

<http://www.909shot.com> Comprehensive information on vaccinations for children.

<http://www.nlm.nih.gov/pubs/cbm/prevnih.html> Disease Prevention Research at NIH, a compendium of research journal articles on every health subject and every disease known.

<http://pw2.netcom.com/~zeno7/durksand.html> Durk Pearson and Sandy Shaw's story of how they beat the FDA in health claims for natural products.

<http://www.ncf-net.org/library/glass.htm> Article: The Human/animal Interaction of Chronic Fatigue and Immune Dysfunction Syndrome: A Look at 127 Patients and their 463 animals.

<http://www.chinahealthways.com/products.html> Information about the CHI Machine, an infrasound machine for use in pain and acupuncture points for humans and animals.

<http://ipn.intelihealth.com/IPN/ihtIPN?st=23883&t=7223&c=299909> Information on Metabolic Syndrome, Type 2 Diabetes, obesity,

hyperlipidemia, hypertension etc.

[http://www.rpf.org/rpf/therapies/I3C\\_DIM.htm](http://www.rpf.org/rpf/therapies/I3C_DIM.htm) Information and research on DIM, Diindolylmethane, a natural cabbage extract for estrogen management, very helpful for detox of xenoestrogens, and estrogen dominance syndromes, including migraine headaches, fluid retention, PMS etc.

<http://vm.cfsan.fda.gov/~mow/intro.html> Foodborne Pathogenic Microorganisms and Toxins from the FDA.

<http://www.agric.gov.ab.ca/livestock/horses/hbo0003.html> Do Vaccines Work?

[http://www.environmentaldefense.org/pubs/FactSheets/s\\_fishchoices.html](http://www.environmentaldefense.org/pubs/FactSheets/s_fishchoices.html) Which Fish is Best.

[http://www.environmentaldefense.org/pubs/NewsReleases/2000/Sep/c\\_acidrain.html](http://www.environmentaldefense.org/pubs/NewsReleases/2000/Sep/c_acidrain.html) Information on acid rain.

<http://www.environmentaldefense.org/pubs/Filings/UnhealthyAir.html> Information on Air Pollution

<http://plaza.environmentaldefense.org/dispatches.nsf> Environmental Defense information on many subjects.

<http://www.lternet.edu/> US Long Term Ecological Research

[http://www.sciencenews.org/sn\\_arc99/3\\_6\\_99/bob2ref.htm](http://www.sciencenews.org/sn_arc99/3_6_99/bob2ref.htm) Information on Dioxins.

[http://www.rpf.org/rpf/therapies/I3C\\_DIM.htm](http://www.rpf.org/rpf/therapies/I3C_DIM.htm) Information on DIM, Diindolylmethane.

<http://nadp.sws.uiuc.edu/mdn/> Information on Mercury Pollution

## **Thyroid:**

[reports@wilsonssyndrome.com](http://reports@wilsonssyndrome.com) Explains the importance your body temperature plays in solving some health problems.

## **Vaccinations**

Below are url's to various sites that discuss vaccinations, both in animals and people, immunizations, the differences between the two, and how the whole mechanism of vaccinating works: (referred from Environmental Health Connections Forum member)

[http://members.tripod.com/HokusPokus\\_2'shouldwevaccinate.html](http://members.tripod.com/HokusPokus_2'shouldwevaccinate.html)

<http://www.iahf.com/20000222b.html>

<http://www.curezone.com/art/read.asp?ID=32&C0=1>

<http://vest.gu.se/~bosse/Mercury/Misc/cafmupdates/CAFMR0009.html>

<http://www.health.org.nz/vacgen.html>

<http://conspiracy.itgo.com/custom2.html>

<http://conspiracy.itgo.com/custom.html>

<http://www.vaclib.org/news/scare.htm>

<http://www.vaclib.org/index.htm>

<http://www.thepetcenter.com/exa/vac.html>

<http://www.unhinderedliving.com/animalvacc.html>

<http://www.catpeople.org/newslett.htm>

<http://advance8.tripod.com/share/id14.html>

## **Homeopathic Treatment for Gulf War Syndrome and Illnesses**

<http://www.geocities.com/HotSprings/7776/GWI-1.HTM> Remedies may be appropriate for a number of toxic exposures besides GWS. There is a brief summary of the agents they think were involved in GWS.

## **Urine Therapy:**

<http://www.hps-online.com/hurine1.htm>

<http://www.nexusmagazine.com//urine.html>

<http://ares.csd.net/~amm/med.htm>

<http://www.auto-urine.com/english.htm>

<http://urinetherapy.listbot.com> Urine Therapy Email List:

<http://users.knoware.nl/users/cvdk/urinetherapy/bibliography.html> A

Chronological List of Books on UT:

<http://www.beekman.net/healingbooks/urinetherapybooks.htm>

<http://www.ultranet.com/~jkimball/BiologyPages/U/UreaCycle.html> The Urea Cycle.

## **Chemical Toxicity and Multiple Chemical Sensitivity:**

<http://www.monitor.net/rachel/rehw-home.html>

<http://www.herc.org>

<http://www.mcsurvivors.com>

## **Sustainable Growth:**

[www.greensense.com](http://www.greensense.com) Resources for Sustainable Living.

[www.o2.org](http://www.o2.org) o2 is an international network of designers. We challenge you to engage in sustainable design. Interesting sources, ideas and people.

## **Off The Grid Energy:**

<http://www.getoffthegrid.com/index2.html> Off the grid products for sale, generators, inverters, etc.

<http://www.AltEnergyStore.com> The on-line store for Solar and Wind Energy Goods.

<http://www.solarelectric.com> Over 20 years of experience in providing renewable energy solutions.

<http://www.soldardyne.com/windgenerators.html> Wind generators for sale.

<http://www.cetsolar.com> Catalog of energy efficient and environmentally friendly products.

<http://www.bitterrootsolar.com> Solar electric power systems, wind power generators and hydro electric turbines and components, inverters, batteries, solar panels, solar water pumping, diesel electric generators. Everything for your off-grid, remote, grid intertie or back-up emergency power needs.

<http://www.renewable.com>. Provides design, engineering, sales, installation, and service of alternative energy systems, including solar, photovoltaic & thermal, wind turbines, Proton Exchange Membrane, (P.E.M.), fuel cells, back up power systems, stand-by generators, inverters, hydro-generators and batteries.



## Non-Toxic "Green" Building Construction

<http://www.crest.org/sustainable/greenbuilding-list-archive/index.html>

Searchable Green Builder's List.

<http://www.txinfinet.com/sourcebook/WoodTreatment.htm>

<http://www.greenbuilder.com>

<http://www.buildinggreen.com>

[www.ebuild.com](http://www.ebuild.com)

[www.oikos.com](http://www.oikos.com)

[www.crest.org](http://www.crest.org)

## Equine and Animal Health:

<http://www.ca.uky.edu/lddc> This is a link to Univ of Ky lab for antibody titres for Lyme disease and Herpes 1 and 4 and others you might be interested in.

<http://members.screenz.com/gretchenfathauer/> Treating Founder and Chronic Laminitis Without Shoes.

<http://www.animalchiropractic.com/> Dr. Daniel Kamen and animal chiropractic.

<http://www.TribeEquus.com/> Everything you want to know about various feed and supplement ingredients for horses.

<http://www.phys.uts.edu.au/HyperNews/get/Acupuncture-1-50/28.html> Equine/Horse Acupuncture, discussions and diagrams.

<http://www.ansci.cornell.edu/plants/toxhorses.html> Plants that are toxic to horses.

<http://thyroid.miningco.com/health/thyroid/blletter.htm> Information on synthetic thyroid vs natural thyroid extract, a most excellent letter from a patient to her doctor.

<http://www.nap.edu/browse.html> Nitrates in Livestock Poisoning

<http://www.ucsusa.org/agriculture/gen.market.html> List of Genetically Engineered Crops Allowed in the US Food Supply.

<http://www.aginvestor.com/GM%20Foods.htm> Information on Genetically Modified Foods.

<http://onslow.ces.state.nc.us/AG/hay/nitrate.html> Nitrates in Hay

<http://home.jockeyclub.com/graysondb/index.html> Equine Medical Research Database.

<http://www.angelfire.com/az/clickryder/sheath.html> How To Clean a Horse's Sheath.

<http://www.ansci.cornell.edu/plants/toxicagents/selenium/map1.html> Selenium and Livestock Map showing Selenium Status in United States.

## **Human and Pet Food, Livestock feed:**

<http://attra.ncat.org/attra-pub/livestockfeed.html>. Organic Livestock Feed Suppliers - HTML

<http://attra.ncat.org/attra-pub/PDF/livestockfeed.pdf>. Organic Livestock Feed Suppliers - PDF

<http://www.nexusmagazine.com//Petfood.htm> Polluted Pet Food, a horror story of what goes into pet food.

[www.purefood.org](http://www.purefood.org) The BioDemocracy Campaign is a public interest organization dedicated to building a healthy, safe, and sustainable system of food production and consumption.

<http://www.soyinfo.com/haz/gehaz.shtml> Health hazards of genetically-manipulated foods. How to avoid genetically-manipulated (GMO) food ingredients.

[www.ethicalinvesting.com/monsanto/news](http://www.ethicalinvesting.com/monsanto/news) Ethical Investing Monsanto Stock Investment News.

## **Government and Political Action Offices, Announcements**

<http://netvet.wustl.edu/law.htm#vet> Government and Law Resources, links to EPA, and other govt offices.

[www.armscontrol.ru/start/](http://www.armscontrol.ru/start/).-Problems of Strategic Nuclear Arms Reductions.

[www.stimson.org/rd-table/2nunn.htm](http://www.stimson.org/rd-table/2nunn.htm) - Statement of Senator Sam Nunn on Ratification of START II Treaty.

<http://www.house.gov/kucinich/info/environment.htm> Kucinich has offered several amendments to each nuclear waste bill providing for

unnecessary nuclear waste transportation.

[www.clw.org/pub/clw/coalition/](http://www.clw.org/pub/clw/coalition/) This site contains information on the Coalition to Reduce Nuclear Dangers -- Reducing Arsenals/ Preventing Proliferation/Building Cooperation.

[www.cdi.org/](http://www.cdi.org/) The Center for Defense Information. The Formost Independent Military Research Organization.

[some more links to check out](#)

**Find a great site? [Contact us](#) so we can add it to our list. Thanks!**

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# Vita Royal Products, Inc.

[Click here to E-Mail us](#) with your questions, requests for more information on any of our products or programs, as well as your comments on how we can improve our service or web site.

If you have questions, *please* check *all* related information on this site along with our growing data base of [Frequently Asked Questions](#) first, so that we are able to answer everyone's questions as quickly as possible. We'll update our site regularly for your reference.

When submitting your e-mail, be sure to give us your complete name, e-mail address, and telephone number as well as what time of the day to reach you, so that we can best respond to You, our valued client or future client. You are also welcome to call us at 810-653-5478 from 10 a.m. to 4 p.m, E.S.T./E.D.T., Monday through Friday or fax us at (810) 653-2543 any time. We are located at 4267 S. State Road, Davison, Michigan 48423.

*Thank You for Your Support!*

[Return to Home Page](#)

# Frequently Asked Questions - Equine

*Questions and Answers are divided into the following groups for easier navigation*

**[Equine Environmental Illness](#)** Answers to questions on Vita Royal's program and research. *Highly recommended reading for new clients.*

**[Vita Royal Feed Program and Protocol](#)** Answers on how to best use our successful health program, including questions on our feed recipe, supplementation and worming. *Highly recommended for new clients.*

**[Thyroid](#)** Answers that provide a better understanding of identifying deficiencies and implementing thyroid supplementation, if needed.

**[Colic, Herpes, Tying Up, Allergies, Uveitis](#)** Answers to their cause and what to do restore and maintain your horse's health.

**[Blood, Hair and Fecal Testing](#)** Explanations of how these can help you better manage your horse's health by identifying imbalances and environmentally driven opportunistic infections.

**[Return to Equine Health Home Page](#)**

**[Return to Vita Royal Home Page](#)**

# Vita Royal Products, Inc.

## Equine Health

**For over twenty years** our field and laboratory research has made us the leader in manufacturing pure, all natural vitamin and mineral supplements for today's horses. Our supplements have never contained any fillers, binders, or extenders of any kind. In fact, we have always used the same USP ingredients found in the highest quality human supplements. In 1977, this was a "first", as the horse feed industry was the only animal industry which diluted actual vitamin & mineral ingredients with inexpensive feed ingredients, such as wheat middlings, bran, and alfalfa meal.

**Vita Royal's tradition of quality** continues today with an extensive line of equine health products and programs that have gained national recognition for their success in controlling a wide range of conditions. Ongoing research insures that products are constantly updated to address environmental changes that affect all living things.

● [\*\*HOW TO USE VITA ROYAL'S PROGRAM: Protocol for General Health Maintenance and Environmental Illness Program, including EPM, with Grain Recipe\*\*](#) - Step by step instructions to return your horse to health using our specialty supplements. **Required reading** for anyone interested in using our very successful program.

● [\*\*Concurrent Symptoms contribute to the ENVIRONMENTAL ILLNESS process.\*\*](#) Here are all currently known related symptoms, from colic to abnormal behavior to eating habits that are signs that your horse might be affected, many of which are not yet recognized for their association with Environmental Illness.

● [\*\*Acupuntural Sensitivity, Diagnosis and Treatment of Environmental Illness, Auto Immune and Herpes Syndromes\*\*](#) Illustrations of diagnostic acupuncture points for EPM, Autoimmune and Rhino Pneumonitis Neurotrophic Herpes Syndromes along with explanations for your reference as well as treatment recommendations for your veterinarian.

● [\*\*About Linsey McLean, Biochemist\*\*](#)

● [\*\*Vita Royal Equine Health Products Catalog\*\*](#)

● [\*\*"WHYS" and "WHY NOTS" of Vita Royal's Nutrition Program\*\*](#) explains why bi- products, cooked and extruded feeds, fillers, and high fat content don't belong in your horse's daily diet. Vita Royal's easy to use feed program was developed to provide owners with highest quality nutrition for 40% to

50% **less cost** than most commercial bag feeds with all the "extras"!

*To follow below are our special **Environmental Illness/EPM**, **Equine/Environmental Health** and related **Equine & Human Health** sections designed to provide you with comprehensive reference reading.*



## **Environmental Illness / Equine Protozoal Myeloencephalitis**

Vita Royal's critically acclaimed, scientific program restores health naturally, **without toxic drugs** as featured in "*Controlling EPM From The Inside Out*" in the July, 1999 issue of the **HORSE JOURNAL**, our comprehensive program has now restored normal health to hundreds of horses across North America. Step by-step protocol and a wealth of information have developed through extensive research by biochemist Linsey McLean.

The program calls for adding our **EPS FORMULA** and **LIQUID NUTRIENT BUFFER®** to a special hi-protein grain mix and low alfalfa hay while monitoring basal rectal temperatures.

Complete instructions accompany every order, along with related information to help you manage your horse back to full health. Starter horses will also require at least a two to three week supply (one gallon) of **NUTRIENT BUFFER®** to help restore upper gastric function while **EPS FORMULA** helps to restore the lower gastric function. We highly recommend that you also purchase our set of four *Environmental Health Connections Videos* for \$89.00 (a savings of \$21) to understand why all living things, including horses and humans, are getting sick, and what to do about it.

**EPS FORMULA** is available in a 10 lb. box for \$160 or 50 lb. pail for \$700. A 1,000 lb. horse will need approximately 10 lb. per month. Larger horses will need more.

**LIQUID NUTRIENT BUFFER®** is available in gallon containers for \$49.50 per gallon, or \$44.00 per gallon for twelve or more gallons. A gallon will last about three weeks for a 1,000 lb. horse. ● [\*\*Nutrient Buffer® Works Differently Than Traditional Antacids\*\*](#)

**NEW - XENO DETOX** is an herbal/mineral/probiotic combination that is known to aid in detox and restoration of normal biochemistry. Use daily for one or two months, then several times weekly for maintenance. **One month supply is \$45.**

Please check out related topics listed here for more important information related to this debilitating neurological disease that can be controlled **without**

**drugs** using our proven, scientific approach. Thank you for your interest.

**Read these articles to better understand how you can control many manifestations of Environmental Illness, including EPM, with our program that addresses the REAL cause of the disease:**

● [Founder, Cushings and the Allergy Connection, With Suggestions for Management of Cushings and Hypothyroid Horses](#)

● [Environmental Illness and EPM From a New Perspective](#) Understand how addressing the "cause of the cause of the cause", or bottom domino, works to control this parasitic environmental disease in your horse.

● [A Diagnosis of Environmental Illness/EPM](#) Is it really a death sentence? This condition is easily controlled and dealt with, without toxic drugs in early to moderate stages, before a lot of damage has been done to the Central Nervous System.

● [Environmental Health Conditions Involving the Thyroid](#) as they relate to tripod stance / environmental cow hocks, autoimmune diseases, and difficult to train horses.

● [Understanding Your Thyroid and How It's Affected by Environmental Illness Syndrome](#) To simplify a very complicated endocrine pathway for your understanding, we can say that the thyroid, with help from the adrenal glands, regulates the speed of biochemical reactions at the cell level, in every cell of the body.

● [More on Thyroid Testing](#): Understanding TSH-The Latest "Gold Standard" and It's Failures.

● [Environmental Illness Rehabilitation Centers](#) - Now, for the price of conventional drug treatment, you can get Vita Royal Products' natural, alternative program PLUS board and exercise rehab that has been shown to restore health, even when conventional drug therapies have not. Average stay is two months.

● [Environmental Illness From A Birdseye Point of View](#) Environmental Illness is really the end result of many years of environmental onslaught to the combined and individual systems of the body. Therefore, I prefer to re-name this syndrome **EPDS - Environmental Parasitic Disease Syndrome**, since it is multiple parasitic organisms affecting multiple species. It's not just equine anymore! Here is a list of predisposing environmental factors and how they affect ALL living systems, be they human or horse, most notably, the thyroid-master regulator of all cellular metabolism in the body, producer of Thyroxine. Describes six major classes of environmental chemicals and their effects.

● [Environmental Illness/EPM Protocol Viewpoint - Trying to Fix a 1999 Ferrari with 1956 Chevy Parts](#): A new paradigm exists which means we



must rethink our approach to health (our own included) to address environmental factors that have accelerated their influence over the past thirty years.

● [Comparing Aggressive Drug Therapy With A Holistic Approach - The SWAT Team and the Carpenters](#), is an analogy that explains the logic behind our successful program. Find out why drugs are NOT the answer if you are truly aiming for the REAL CAUSE of this and other manifestations of Environmental Illness.

● ["Bugs" in the Blood](#) From the research archives of biochemist Linsey McLean, these are actual photo micrographs of blood smears from various species of animals, including man. Ideally, these organisms pass through a body's intestine and should not be found in otherwise sterile blood.

● [For Best Results, Use Our Worming Routine](#) With this wormer rotation program, the best use of chemical classes are used to kill off intestinal worms at the optimum time. Worm every 30 days. It's easy to remember if you think of worming with paying bills on the first of each month. Mark your calendar accordingly!

● [Rehabilitating Environmental Illness/EPM Horses](#) Helpful pointers for retraining and maintaining your horse as it recovers from the effects of this syndrome.

● [About Vita Royal's Ongoing Equine Clinical Trials](#) Vita Royal's equine products are the result of ongoing research and feedback from our customers. We conduct ongoing Clinical Trials on unusual equine health cases as well as those not successful with traditional, orthodox medical therapies. Find out how you and your horse can participate.

● [Alternative Methods That Help and Hinder](#) Incorporate modes of treatment that have a POSITIVE effect on your horse's life force, and not a toxic one. Any alternative or otherwise common sense support that you can give will only enhance effects of this EPDS program of restoring the biochemistry of life and normalizing basic life force, or Qi.

● [Environmental Health Connection Videos](#) - A "*must see*" for today's health conscious individuals and equine owners, trainers and professionals, The Overview, For The Equine, and Equine Case Histories are loaded with information that will benefit you and your horse. We offer the set at a special discount...over seven hours of reference information. **Special Limited Offer...only \$25.00 for all three Videos !!**

● [Frequently Asked Questions on Environmental Illness/EPM, Vita Royal's Program](#). Questions from our clients are answered by Linsey McLean for your reference. Required reading for new clients and interested owners, trainers, and veterinarians.

[NEW - Two Stage Portable Water Purifier](#) now available through Vita

Royal produces up to 12,000 gallons of water on a set of filters. For home or barn, this heavy duty purification system can be even be hooked to a hose for outside use or installed in line.

**FEEDBACK:** [From Despair to the Winner's Circle](#)

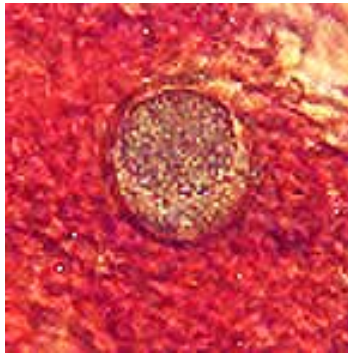


***Click items below to Access Essential Reference Reading for Equine and Human Health:***

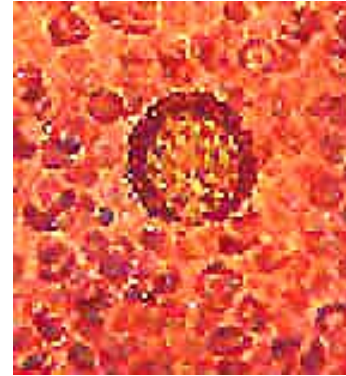
- [Label Wars: What They Tell You and What They Don't](#)
- [The Scourge of Industrialization - Heavy Metals and Toxins](#)
- [Links for Informative Reading on a Variety of Health Topics](#)
- [Return to Vita Royal Home Page](#)

## Specimens of Other Species

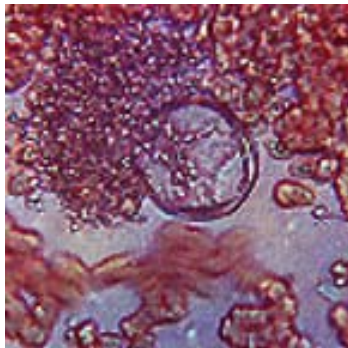
Subject and description of disease symptom(s) at right



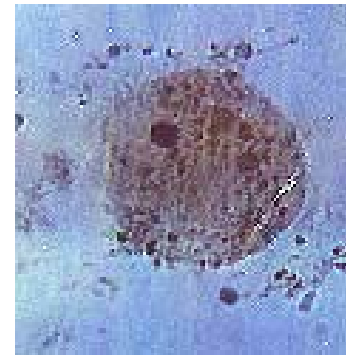
15 year old mare horse with  
Equine Protozoal  
Myeloencephalitis &  
Autoimmune Disease



Commonly seen in horses with  
Equine Protozoal  
Myeloencephalitis



Same organism as above after  
three hours



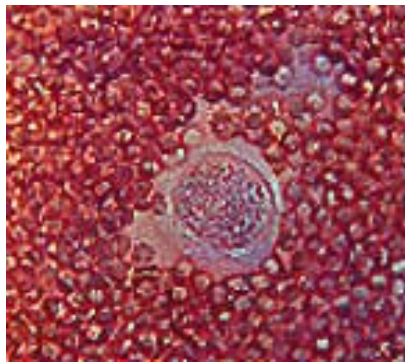
Commonly seen protozoa from  
fecal smear in horse, enlarged



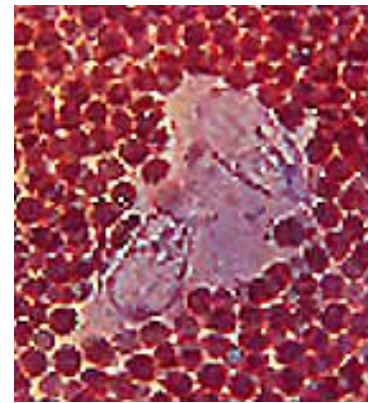
Another organism in same 15 year old mare horse with Equine Protozoal Myeloencephalitis & Autoimmune Disease



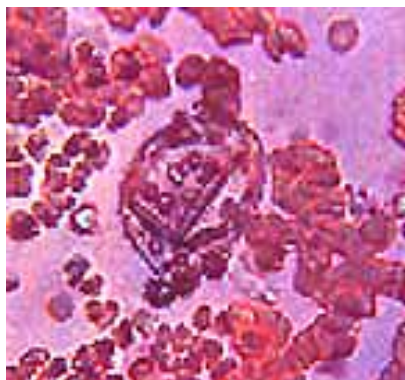
Fecal from horse, blown up with water to about four times normal size



Organism in blood smear from wild rabbit



Organisms in blood smear in wild rabbit



EPM & autoimmune horse



Older quarter horse believed to have been bitten by a brown recluse spider that developed drainery fistulous withers. It had been unsuccessfully treated for nearly a year.

Return to [Equine Health](#) home page

Return to [Your Health](#) home page

Return to [Vita Royal](#) Home Page