

Nutrient support in Viral Infections:

INFLUENZA, SWINE FLU, MONONUCLEOSIS, HEPATITIS, HIV

Dr. Dana F. Flavin, M.S., M.D.

2 Contents

Chapter I – The Mechanism of Toxicity in Viral Diseases	3
Chapter II - Acute Viral Diseases	5
Major Manifestations in EBV:.....	5
Case Studies	6
Patient 1:	6
Patient 2:	7
Patient 3:	8
Conventional Treatment for EBV:	10
Swine Flu Support: (For all types of influenza illnesses and prevention)	12
Chapter III – Chronic Viral Infections.....	13
Epstein Barr Virus.....	13
Major Manifestations:.....	13
Clinical symptoms:	13
Differential diagnosis:	13
Case Studies	13
Patient 1:.....	13
Patient 2:.....	14
Patient 3:.....	15
Nutritional Supplements for Chronic Viral Infections.	15
Chapter IV – HIV/AIDS	17
Major manifestations:.....	17
Clinical symptoms:	17
Differential diagnosis:	17
Case Studies	18
Patient 1:.....	18
Patient 2:.....	19
Conventional Therapy for HIV/AIDS:	20
Nutritional Supplements for HIV Patients:	20
Chapter V – Diet with Treatments.....	22
Chapter VI - Summary	24

Chapter I – The Mechanism of Toxicity in Viral Diseases

The toxicity associated with viral diseases is somewhat similar to the autoimmune disease at least in some of the basic cytokine toxicity. That is, the substances called interleukins are elevated, including IL1b, (for fever), IL2, IL6, TNFa (Tumor Necrosis Factor) and of course antibodies like in autoimmune diseases. The difference is in that the antibodies are not directed against the surface of a tissue, cell or membrane that is native to the host, but rather against an antigen (foreign protein) that is from the virus itself. The other problem in viral diseases is that the virus replicates, sometimes much faster than the body can fight against it. This is seen particularly in immune suppressed patients, which is why I prefer to avoid cortisone derivatives whenever possible in autoimmune diseases. The other problem is in patients who have allergies. There are two basic groups of lymphocytes (immune white blood cells) and those are the Th-1 group that contain killer cells, and fight against cancer and viruses, and the other is the Th-2 cells that contain the cytokines IL-4 and IL-10 that are responsible for the allergic reactions as seen in asthma for example. When the Th-2 cells are activated, the Th-1 cells go down. What this means if you have Mononucleosis, and allergies, in the Spring, most likely your mono will be activated as soon as you start sneezing and having runny eyes. This is why I encourage my viral infected patients to avoid allergens, either with room filters, staying always from the pollens, or dogs, or cats, etc. if possible, as that at least decreases the chance of reactivating a viral infection when it is chronic. In some cases, the treatment is enough, and the fish oil helps in allergies too, so one is killing two birds with one stone, so to speak, but none the less, if and whenever possible, please avoid allergens.

Prostaglandins are also elevated in viral diseases and add to the toxicity. They are also shifted with Vitamin E, an antioxidant. Another very important toxicity in viral infections is from oxygen radicals. These come from an enzyme called xanthine oxidase and some from another enzyme called NADPH oxidase. What they have in common is that they both release oxygen radicals to fight against the virus. Sometimes this goes very quickly and there is minimum damage, and the virus is rapidly released from the damaged cell, allowing a quick processing of the viral surface antigens and then the development of the corresponding antibodies to neutralize the reaction. This is why when you have a cold, for example, you end up with a runny nose. The body is getting rid of the viral infected cells as fast as possible. Normally in a general cold, this is all rather short lived. The White blood cells, called macrophages gobble up the virus particles, process them, like little packages to be presented to the T-lymphocytes, and they give all this to the B-lymphocytes which then make the antibodies. It is like placing an order at the drive in hamburger stand, driving through and one person tells the next person who puts it all together, and at the end someone else hands you the product. Sounds pretty simple doesn't it? Of course it is not that simple, in all cases, as I will try to explain.

Sometimes, the body over reacts and tries to destroy everything in the way of getting to the virus. This can mean an entire liver, or lung, or even heart is destroyed in the body's ambition to fight against the enemy. This is what we call a fulminant disease. Some people have an incredible immune system that does overkill, so to speak. Others have the possibility of two different reactions. Either the body slowly but surely gets rid of the virus, also sending out natural inhibitors from the T-lymphocytes and other cells in the body to block viral replication in addition to the usual antibodies that destroy any viruses floating around, or the immune system is suppressed. The last reaction is a chronic infection which can be chronic toxic, or chronic non toxic. The latter are what we call carriers, and they run around healthy, unless something triggers their virus to be active. Viruses replicate best when the immune system is suppressed, as in AIDS, or in some fulminant viral infections, where strangely enough the toxicity is high, but the virus keeps replicating. I always wondered if there was not some other viral inhibitor in the body responsible for viral inhibition. It doesn't seem to be one of the interferons, which

4 increase the viral defense, but rather some other, maybe a polypeptide in the white blood cells. This is seen in bees, moths and pigs, so why not humans? There is another factor playing a role in viral replication, called NF kappa b, which can be down regulated by antioxidants, so that is another reason to keep up your vitamin C etc.

Another interesting factor in viral infections is the enzyme Nitric Oxide Synthase (NOS). There are actually three classes of NOS, but in general, nitric oxide (NO) can be toxic, when it combines with superoxide radicals from xanthine oxidase, especially when iron is floating around or brought in by other cells and carriers. NOS can also be non-toxic and protective. This latter effect plays a role when a substance called biopterin (BH4) is reduced and stable and bound to the NOS enzyme. When BH4 is oxidized, again from oxygen radicals, or used up too quickly, the NOS can then generate oxygen radicals instead of NO. I know this is a lot of chemistry here, but let us just summarize, when the radicals are active, the whole system goes haywire. Sounds like politics, doesn't it?

So, what do we do first in a viral infection? We reduce the radicals. Then, we try to decrease the cytokines that are toxic, and finally, we increase the immune system to stop the viral replication.

This sounds pretty easy, I guess, and with the results I have been getting it isn't as tough as I thought, after 25 years of research, but it is a lot of balancing and reducing at once in the body and that is just what the doctor ordered.

There is one other sort of strange phenomena that exists in viral infections such as HIV, EBV, and HBV, and that is an increase in an Interleukin, IL10. This interleukin suppresses the immune system allowing the virus to stay and not be destroyed, and indeed may play an important role in the development of cancers in these particular viral patients.

What I found essentially in the treatment of viral infections was that one could decrease the cell substance called NF kappa b, which helps in viral replication, by applying antioxidants like vitamin C, E, and even Zinc. Then one could increase the Interferon gamma and T-killer cells which fight viral infections with thiol groups such as methionine, flavinoids and glycyrrhizic acid from licorice root. Licorice has been used for thousands of years for flu's and colds. It has only one side effect that can be dangerous over a long time, and that is an increase in sodium retention and a decrease in potassium. If the patients take licorice for a week or two and eat oranges or bananas for the extra potassium this is not usually a problem, however, in chronic diseases, it is best to have a pause between the second or third week and then wait two weeks before taking licorice again. This is to make sure one does not have an electrolyte imbalance that could affect the heart. In high blood pressure, licorice is indeed a problem, and should be cautiously taken only under a doctor's supervision.

By combining the various viral inhibitors and immune stimulators one can keep a virus at bay, or in acute infections eliminate it quite rapidly, as I shall explain in the next chapter. When I first started treating viral diseases I was very skeptical but sure enough, the mechanisms paid off, and my HIV patients went from zero T-cells to 60 in a week, my EBV (mononucleosis) patients were healed in 24 to 48 hours, and the Hepatitis patients stayed in remission, with no liver toxicity. These were all pluses, that I did not expect to be so powerful, as I was so used to our conventional medicine having specific inhibitors to viral replication as one sees for example in herpes infection and acyclovir. This whole mechanism was complicated and new, and at first I could only hope and pray it helped. Well, it did, and is still helping patients around the world to live healthy normal lives.

Major Manifestations in EBV:

Pharyngitis, fever, malaise, myalgia (muscle pains)

Clinical symptoms:

1-2 weeks fatigue, malaise, myalgia, fever, sore throat, lymphadenopathy, headache, pharyngitis or tonsillitis. In severe cases, abdominal pain, nausea or vomiting, splenomegaly, hepatomegaly periorbital edema (swelling around the eyes), jaundice.

Differential diagnosis:

Cytomegalovirus, Toxoplasmosis, HIV, human herpes 6, hepatitis viruses (HBV, HCV), rubella, acute infectious lymphocytosis, lymphoma or leukemia.

For the most part I am going to discuss my patients with acute mononucleosis (EBV) infections. These are predominantly children and although many people do not realize that mono can be deadly to children, I shall explain a little about it.

EBV is a virus that belongs to the herpes virus family. It is worldwide and most first infections are seen in childhood. The symptoms are usually similar to a flu at first with sore throat, fever, and lymphadenopathy. This disease was called the „kissing disease“ as it is transmitted from oral secretions. In fact, running around kissing friends, babies etc. when one is infected spreads it very rapidly. The problem is, one doesn't always know when one is infected. Most often children that are infected show only mild symptoms, but this is not always the case. I have experienced toxic infections in little boys, more than girls, at around the age of 5. Whether or not this has to do with the growth phase in children with an increase in testosterone at this age in little boys is not established, however, testosterone increases the toxic enzyme xanthine oxidase, which is already elevated in EBV infections. If you remember what I mentioned earlier, xanthine oxidase generates toxic oxygen radicals.

When this disease is at its peak, and if the child over responds, one can see a rash on the trunk and arms in some cases, an enlarged spleen in almost every case, and sometimes an enlarged liver with an increase in liver enzymes seen in the blood from toxicity. The reason that the spleen is increased in size has most likely to do with the increase in nitric oxide being generated from the infected cells in the spleen. This nitric oxide slows down the movement of the lymphocytes, causing an increase in the spleen size. This can either slowly reduce itself, as the diseases slowly, over months, decreases, or it can lead to a rupture of the spleen. The rupture is most often responsible for the death in these patients, although when the virus is fulminant in the brain and/or liver, it can also lead to death if not stopped.

Most patients have symptoms for at least 2-4 weeks, when it is not fulminant, but malaise and difficulty in concentration stay for months without treatment. Immune suppressed patients have a very difficult time with EBV, and this is one of the complications seen in transplant patients and AIDS patients. Rarely one can see cardiac complications in EBV patients with myocarditis or pericarditis (inflammation of the heart or the sack around the heart). Sometimes one sees kidney or lung involvement, but these are

Often rare, fortunately. In Africa, there is a malignancy called Burkett's lymphoma associated with EBV, this is only about 15% of the lymphomas in the USA.

The differential diagnosis of EBV includes cytomegalovirus, toxoplasmosis, HIV, human herpes 6 and hepatitis virus as well as drug hypersensitivity reactions.

The serum tests indicate the antibodies for this virus, and allow a clear diagnosis, but sometimes everything is shut down and cause a difficulty in differentiating the disease from others. Most of my nutrients work in immune suppressed patients, although sometimes with a little difference in the response, but a clear cut similarity in the improvement.

My first case goes back several years, and was the reason I began all of my work on applying the nutrient treatments in diseases. I had known for years what toxicities played a role in viral and inflammatory diseases, and I had known what could inhibit these toxicities, but I had not put them together to actually stop toxicity until this little boy was presented with a toxic EBV infection.

Case Studies

Patient 1:

Jacob was 5 years old when I first met him. I met him at his parent's house at a Christmas party. The father was a director of a drug company, with an advanced education in medicine and in pharmacology as I have. The mother is a charming attractive blonde with excellent taste in clothes, and how to throw an excellent party. In addition, she has a Masters in Business, which certainly doesn't hurt nowadays. They are both wonderful people, and I was delighted to meet their lovely children, Jacob and Patty. The little boy and I played on the steps with his trucks and airplanes and I got to know him. For a 5 year old he was pretty smart, and a real character. He was perfectly healthy and happy when I met him. Six months later, I ran into his mother at a festival. She told me he had been ill for three weeks, and that he was still not feeling well, but that most likely it would be okay, as her husband was a physician anyway. I told her if they needed me, perhaps I could help. She reassured me that he was in good hands.

That night, I received a phone call about 9:P.M.. it was Karl, the father of the little boy. He said he had heard I might be able to help his son. I was surprised, as I thought the child had improved. He told me the boy had been ill for three weeks already, and that he had fallen off of his little motorcar in the driveway. He was very weak and had a high fever. He told me that he was not doing well at all. It turned out his liver and spleen were considerably enlarged with toxicity, and the father was afraid he might have to have the spleen removed, or he could die in his sleep, if it ruptured. He was much worse off than I had been lead to believe from the mother. I knew if they removed the spleen the child would be susceptible to dangerous bacterial infections the rest of his life.

I told Karl, I had just published a new theory a few months earlier, and if my theory were correct, I DID have a treatment. Then I gave my wonder list of magical ingredients, to the father, explaining the mechanism of each and every substance in its biochemical activities. I told him to watch him carefully and pray. He said," We could patent this for a new treatment." I told him the most important thing here was to save his son's life, and we could discuss business some other time.

Then I waited. I did not hear a word for days. I prayed. I worried. I prayed some more. My biggest fear was that perhaps I had suppressed the toxicity but allowed the virus to replicate during the suppression, as one often sees in steroid therapy for fulminant viral infections. Sunday came and went. Monday came and went. Tuesday came and went. Finally on Wednesday I was such a wreck I phoned the house. Margery, the mother, answered the phone.

„Hello“, I began, „how’s Jacob?“ I asked. I was practically trembling. Then Margery said, „Oh Jacob is fine. Karl went out on Saturday night and bought all of the nutrients you suggested and he shoved one pill after another into Jacob, and on Sunday he was well“ I could not believe my ears. This was a disease that could kill the child, in a fulminant state, and it takes at least one or two months to heal. This child was well? I asked again, „are you sure?“ „Oh yes“ she answered in fact Karl has flown off to the USA for a meeting on Sunday since Jacob was doing so well.“

I cannot tell you if I floated, or just thought I was dreaming. I could not believe anything could work so fast, and so successfully in a disease like mononucleosis, especially when the child was so ill, and for three weeks already. She assured me he was fine, and his fever was gone since Sunday morning, and the pediatrician said his spleen was normal and everything seemed okay. This was too much for me. I phoned the max Planck Research Institute to talk to a friend who has been in viral research for years. I told him what happened and asked what he thought. „Well, „ he said, „once is a miracle. If you can repeat this in several children then it is biochemistry.“

One year later, I finally published the case on Jacob in the New Zealand Medical Journal. I wanted to be absolutely sure he was completely cured. He was.

The irony in all this was that the laboratory that Karl’s company funded was the laboratory for my chairman of Internal Medicine at the University where I had studied Medicine. I am sure the Chairman could not believe this at first, nor could I for that matter, but he began to see over the years that indeed I did have something that worked even where there was no known treatment before.

Patient 2:

Johnny was 12 years old. His mother was a dentist and his grandfather a retired chairman of Anesthesiology at the local Community hospital, now a teaching hospital for the University. I received a phone call from the mother. She had known Karl and his son from the School, and knew of my success in his treatment. Now, her son was very ill. He had an enlarged liver, and spleen, with an incredible fever and pains all over his body and joints. We took sonogram photos and measured his spleen and liver. Then we tested for anything and everything that might cause the illness. It was not EBV, but rather a herpes 6 infection that was causing the illness. I told the mother what I thought might help, and she began treating him with the nutrients.

The grandfather came over and palpated Johnny’s spleen. He said it was as hard as a rock and the size of a small soccer ball. The sonogram showed it was tremendously enlarged. Then we waited. The next day his grandfather palpated the liver again. This time it was as soft as a sponge, and had partially reduced its size. Two days later the child went back to the pediatrician. The spleen was now normal. He was still very weak and somewhat slowed down from being so ill, but he was certainly on the road to recovery.

It took a few days before Johnny was back to normal. His grandfather said to me, „Dana in fifty years of medicine, I have never witnessed anything work as fast as your treatment. “ I was pleased to receive such a compliment from a respected colleague.

One difference in the slower response of a few days, rather than 24 hours in total recovery of Johnny was that the dosage was actually almost half that of Jacobs dosage, considering the size of a 5 year old and the size of a 12 year old. Also, the younger children have a faster metabolism than the older children or adults. This is why for example; fish oil works in 24 hours by a child, but 5 days in adults.

The other compounds combined seem to work very quickly in general, regardless of the age.

8 Patient 3:

This next case is again a 5 year old named Stephan. His father, Dr. Steiner, is a physician for Family Medicine in northern Germany. He had been given my name from a colleague in Switzerland, who was familiar with my work. He phoned me one afternoon, to tell me who he was and explain the situation of his little boy. He said the child had been ill for three weeks. This is a danger point for children in this disease. He said it had been confirmed that he had mononucleosis, EBV, and that the child had a VERY large spleen and toxic liver. He was not in a hospital, as they couldn't treat him anyway, and there was no real treatment for EBV. He said he was desperate, and asked me to help him.

I am always happy to help a colleague, especially when I know that through my teaching them the mechanisms and their seeing the excellent results, they in turn can help many, many more patients than I could ever treat myself.

I gave him the list of nutrients and asked him to carefully record the sonogram and lab data for my records. I like to keep all of my treatments on record to confirm my findings and should I try anything new, I can always compare the results. He said he would and that he would phone me back as soon as the child improved. I heard from him the next day. He said the fever was gone, the child was playing and laughing again, but that the liver and spleen were still enlarged. I asked him if he had given all of the nutrients to the boy, and he said, „NO,“ It seems he had not been able to procure all of the nutrients, as the licorice was on order, and the other substance would come that day. I told him to let me know as soon as the child had everything and to call me if he needed anything else.

I didn't hear from Dr. Steiner for two days. Then he phoned me back and told excitedly, that the boy was totally out of danger, the liver and spleen were normal and that it was very curious that after he gave one nutrient he had ordered, the spleen began reducing in size immediately. He told me the licorice helped the liver, and after three days everything was back to normal. I told him he probably should keep the child on the treatment for a week, and that should do it. It did. In a week he phoned me back to say the child had remained improved since the second day when he had finally received all of the nutrients to give him, and that he would be taking him off the whole treatment. I suggested he do a follow up on the antibodies and the blood values in general, if he can, and we could look at the whole story. Everything remained normal on the little boy and he never had any signs of mono again after that. Now Dr. Steiner is treating EBV patients in northern Germany, and his patients are all improved in record time.

I was actually going to publish this last case, until my colleague had some personal problems that disrupted his life, and family, and since he had moved into his other house, he could not find the case for his son in his files. It was sort of like the saying, „lucky in cards, unlucky in love!“ I certainly hope his life has improved since then, but at least I saved his son, and that was my job.

As you can see, the rapid improvements in viral infections is like a miracle, but in truth it is merely the application of pharmacological principles in a pathological setting changing the biochemistry of the body. In other words, it works fast. In adults, it is not as fast, but my cold treatment sends everyone back to work the next day. Some would rather stay home, I suppose, but at least it works.

The mechanisms of these substances will be elaborated in my chapter on diet with treatments, to give you a little insight into the whole balance of it all. Let us just say that by increasing the immune system and decreasing the toxicity one can accomplish quite a bit in medical situations. I had one little boy who mother was a countess, and she insisted he had EBV. No one believed her, but myself, and I ordered the tests. Sure enough, that is what he had, and since they were in Austria on vacation, I had to phone her druggist there in the ski resort and try and convince him to order the nutrients for this child. He did, but he told me later, he thought I was nuts. He said he did not believe any nutrients could make a

9 difference when a child had mono. Now, however, after seeing the rapid improvement in the boy, he recommends the nutrients for viral infections too.

10 Conventional Treatment for EBV:

Rest, supportive measures and analgesics.

Herpes and HBV/HCV have made new progress with acyclovir for acute Herpes disease, and Hepatitis responds well to ribavirin plus interferon (PEG), even in late stages with cirrhosis. The following can be used with or separately in these diseases depending on the severity and progression of the disease. A physician must be consulted to follow the patient's progress during these treatments.

No known treatment for EBV has proven as successful as the nutritional supplements.

Nutritional Support for acute viral infections:	EBV/Herpes/Hepatitis
Fish oil (omega-3 fatty acids)	3 grams/day
Succus liquiritiae (licorice root syrup)	1 tsp/2x day Adults (tablespoons)
Methionine	1 gram/day, later 500mg
Vitamin C (with rose hips)	2 grams/day
Vitamin E	1000 Units/day=
Nicotinamide Cherry Juice concentrate	2 x 500- 600mg/day 2 capsules 3 x/day or 2 tablespoons 2x/ day

Optional:

ECGC Green Tea extract	2 capsules 2 x/day
Beta carotene	24 mg/day
Zinc	40-60 mg/day

11

Bioflavonoids

100mg/day

With liver toxicity:
Silymarin (milk thistle)

2x 500- 600mg/day

Avoid Beef and Pork as much as possible, except in iron deficiency or on special occasions. Iron can enhance toxicity, as can increase iron stored in the liver.

(Side effects: *Succus liquiritiae* is an aldosterone mimetic, this means that there is a shift in the sodium and potassium in the body. The sodium can increase and the potassium can decrease. If the patients have a kidney problem, heart disease or high blood pressure, they must speak to their physician and monitor the electrolyte levels. Normally, by eating bananas, or oranges the potassium levels can return to normal. However, if the viral disease is chronic, a pause must be made after two or three weeks for at least one week, and after the pause, the patient can retake the *liquiritiae*.)

12 Swine Flu Support: (For all types of influenza illnesses and prevention)

Selenium: 200 mcg/day: antiviral effect,
reduces peroxides as part of glutathione peroxidase

Nicotinamide: 500 mg 2 x/day: decreases inducible nitric oxide synthase (iNOS) and Tumor Necrosing Factor alpha (TNFa), to down regulate toxicity.

Vitamin E: 600 I.U./day: inhibits NF Kappa b to down regulate viral replication
Scavenges oxygen radicals (ROS).

Flavinoids (citrus) 500 mg 2 x/day: inhibits xanthine oxidase generation of oxygen radicals. Decreases NF Kappa b viral replication.

Milk thistle 500 mg/day lowers the ferritin levels to protect against radicals.(optional when extreme cases)

Cherry concentrate: 2 capsules 2 x/day Or 2 tablespoons 2 x/day. Inhibits xanthine oxidase generation of oxygen radicals.

ECGC: Green Tea extract 2 capsules 2 x/day inhibits binding of the virus on the cells and blocks neuraminidase decreasing swine flu replication.

Licorice Root: 2 capsules 2 x/day

N-acetylcysteine: 500-1000mg mg 3x/day increases Th-1 lymphocytes and regulates iron.

Zinc: 20 mg/day: enhances Interferon activity to fight viruses

Vitamin C 1 gram 3 x/day: blocks NF Kappa B prevents viral replication.

Dr. Dana F. Flavin, M.S. M.D.(patent pending)

Epstein Barr Virus

Major Manifestations:

Pharyngitis, fatigue, Chronic Fatigue Syndrome.

Clinical symptoms:

Recurrent pharyngitis, fever, malaise, lymphadenopathy, muscle aches, no energy, depression, fatigue.

Differential diagnosis:

HIV, chronic depression, organic depression, Streptococcus, chronic sinusitis, immune suppression, heavy metal toxicity, Coxsackie virus, Vincent angina, Ludwig's angina.

The reason I put chronic viral infections separately from acute is that the dosages are different, and the daily use of nutrients such as licorice are somewhat limited because of the sodium retention and the potassium loss. Also, what I often have to do in chronic viral infections is give licorice when they have a flare up. Although that is not so often, when the patients have allergies, for example, or are suddenly under a lot of stress, sure enough they often have an activation of their viral disease.

Most of my chronic viral infections are EBV, although I have been relatively successful with slowing down the toxicity of hepatitis viruses. The latter are still under investigation, so I shall stay with my EBV and in one case, coxsackie B virus.

Case Studies

Patient 1:

Boris came to me with a file that made the Guinness Book of Records look like a comic book. He was what I call an experienced patient. He was 27 years old, out of work, as he claimed, because of his virus, but I believe he was not sure what he wanted to be in life.

When he arrived, he complained that none of the physicians could help him, and showed me case after case of experiments he had taken part in, without success. Then he informed me that since he was out of work, he had no money. I said, „don't worry about it, maybe someday you can give me an honorarium, but let us first see if we can help you.“ Physicians have this tendency to say we, implying the whole medical community, even though it is only one physician.

After carefully ferreting through hundreds of pages on his illness, I was convinced from the lab data, that Boris did indeed have EBV, chronically. I then suggested what he should take, gave him a list and diet and figured he would probably seek out the next physician for some more attention as he had done with the last 19. Well, I was wrong.

I did not hear from Boris for months after that and suddenly a patient phoned me to inform me she was interested in my treatment for EBV. I asked her who referred her, and she said.....and this you will not believe....“I saw it on the Internet.“ Yes, it seems that I had helped Boris so much that he decided he would open up my treatment to the world via Internet. In Germany a physician may not advertise, but it seems that if this is coming from a patient, it is not considered advertising. None the less, I prefer to see

14 Each patient if possible to make sure there is no mistake in the diagnosis, or that we might have missed something else.

Boris phoned me later, thanking me for my help and saying he had a job. He never mentioned remuneration, and I figured the heck with it, at least I was on the Internet, and he was doing fine.

The chronic fatigue these patients have, along with absolute cancelling out of interest and enthusiasm from plain tiredness causes a tremendous limitation on their life styles. They most often cannot function mentally well, as they get so tired, they forget things, have no energy to carry out what they had planned just a few hours ago, and their social lives become one of television, sleeping, a few hours of daily routines, and then back to bed. This is an impossible illness for anyone interested in studying, or carrying on a career. That is, without the help that these treatments can give, many of my patients would never have gotten on with their lives.

Patient 2:

The next patient I want to mention is named Annie. She is 22 years old, a beautiful tall thin blonde from a northern country. She came to me upon the referral of my pharmacy friend who has more patients than I ever had, as she conjures up potions for dozens of people a day. However, she knows when a patient needs something stronger, or expertise in an area that is not her own, and so she referred Annie to me.

When this girl arrived, I thought she was anorexic, but she is just athletic and vegetarian. She told me how she had all these symptoms of heart pains, and fatigue and was tired all the time. She said she wanted to study for a Masters in Art, but that she was afraid she couldn't handle the program because of her health. Annie had already been to a Cardiologist, and he did a stress test on her, to measure her EKG, only to find out she did not have any arrhythmias. He told her, her illness was all psychological and referred her to a Psychologist for psychosomatic medicine.

I asked her if anyone had take blood to test for viruses, and she said, „No, they said that wasn't necessary. “ I said, I begged to differ and sent her to a colleague who did my lab tests for me. We checked for EBV and another heart virus, Coxsackie virus. It took about a week to get all the data back, but I had already started Annie on the treatment, as I felt the sooner the better. Well, it turned out she not only had EBV, mononucleosis, but she also had a very dangerous heart virus, coxsackie.

When I think that the Cardiologist said she could start jogging again, and saw no problem, I wondered how my colleague could overlook someone who had such complaints. Unfortunately she looked so pretty and healthy, I guess he just couldn't fathom that she was ill.

It has been several years since I have been treating Annie with nutrients, and except when she is totally stressed out, or worn out from doing too much, she can handle just about everything. She finished her Masters in Art at Berkeley California with honors, and her creativity was never better. She still gets bouts of fatigue and relapses when she leads a group of twenty teenagers across Europe for two weeks teaching them day and night, but actually I think that would do me in too.

One begins to see that there is a possibility of living with a virus, and still functioning somewhat normally. The biggest problems are in people under lots of stress, people with allergies that lower their immune systems to fight against viruses, and people who don't remember to take their nutrients every day. Do you recall I mentioned two groups of T-cells? The Th-1 cells for antiviral activity and the Th-2 cells that fight against allergies. Well, when the Th-2 cells are activated, the immune system is reduced and the patients often start to show symptoms of a relapse in their viral disease. This is why in the pollen

15 allergies, and with animals, I prefer that the patients also take vitamin B6 and extra vitamin C to decrease their allergic responses. Sometimes they have to have shots for tolerance but often this is not necessary.

Patient 3:

My next case was a young lady who was the daughter of a scientist, who played soccer. The father was so skeptical that I could help, that when he was told I had a treatment, he did not phone me himself, but rather had his wife call me. I guess he figured if it didn't work, he wouldn't look like an idiot, and the mother would just appear as an overprotective parent.

Her name is Tina, and she is in High School. In Germany, High School has a series of exams that qualify the students for the University and their degree if they do well. Tina couldn't even go school because of her EBV. She stayed home and slept. I received a call from her mother who told me the physicians name and said they had tested for mono and it was positive. I spoke to the daughter and later to the physician and explained what needed to be taken. Then the mother phoned the druggist in her small town and he phoned me to order all of the nutrients. I guess the fellow thought I was nuts when I mentioned my list of substances and he had not heard of licorice root being used for anything except colds in old tea recipes. I convinced him it all worked, and so he ordered everything.

About a week later, I received a bottle of champagne and a card from Tina. She told me that after 4 days she felt so much better she had returned to the High School and had begun studying for her exams. She had missed about a month of school, but she was determined and made up the work in record time. Her physician wanted my treatment, as he said he had never seen anything work so fast in mono in his life. I explained the mechanisms and he said that the treatment and the results with Tina were enough to convince him that it worked. She is now heading on to the University, and has the strength and stamina to go on with her life, in spite of the mononucleosis that she carries in a dormant state in her body. I cannot say if any of these patients except the children with an acute case are cured, that time will only tell, but they can now live normal, functional and thank God, happy lives. It seems all this effort was worth it.

Conventional Therapy: Supportive. For Serum Conversion, Interferon therapy has proven as successful as succus liquiritiae, 60 % conversion in both treatments.

Nutritional Supplements for Chronic Viral Infections.

EBV, CMV, Herpes and Hepatitis (Swine flu, next section)

Fish oil (omega-3 fatty acids)	3grams/day
Zinc	20mg/day
Vitamin C	2 grams/day
Vitamin E	600 Units/day
Bioflavonoids	100mg/day
Methionine	500mg/day

Nicotinamide	500mg/day
Silymarin (with liver toxicity)	300mg/day
Cherry juice concentrate	2 tablespoons /day
Acute relapses: N-acetyl-cysteine	1200mg 3x/day
Succus Liquiriteae	2 tbs/day One week only, then pause.
Zinc	60mg/day
(side effects: succus liquiriteae, see Acute Viral Diseases)	
Avoid Beef and Pork in the diet as much as possible.	

Major manifestations:

Chronic recurring infections, immune suppression.

Clinical symptoms:

swollen lymph nodes (lymphadenopathy), thrush in the mouth and other changes such as oral hairy leukoplakia (white tongue), shingles, thrombocytopenia, molluscum contagiosum (small elevated wart-like structures on the face, recurrent herpes simplex, condyloma acuminata (warts), aphthous ulcers in the mouth and genitals. Later, respiratory and neurological complications take over the symptoms from opportunistic infections, followed by Kaposi's sarcoma.

Differential diagnosis:

Immunodeficiency diseases, cancers including, leukemia, Hodgkin's, Non Hodgkin's lymphoma, multiple myeloma, genetic inherited immunodeficiency, drug induced immunodeficiency, malnutrition from many causes e.g. Intestinal lymphangiectasia, protein losing enteropathy etc., radiation related deficiencies, and other environmental induced immune suppressions (heavy metals, electro smog, radiation fall-out, nuclear accidents).

The Human Immunodeficiency virus was isolated in the early 80's from a patient with a lymphadenopathy. The immune suppression is from a decrease in the T cells, lymphocytes, which are responsible for immune surveillance in the body. These T cells are not only suppressed by the Interleukin 10 released in these patients as in EBV and in HBV, but also the entire cascade of toxic cytokines, including TNF α , IL1b, IL2, IL6 etc all increase the apoptosis (programmed death) and lyses in the T lymphocytes.

There is also an interesting phenomena in the HIV infected cells in that in-vitro they lyse very rapidly. A friend of mine, who worked at the National Institute of Health, mentioned to me many years ago, that when she added the HIV virus to the medium, the lymphocytes „practically exploded“. She decided to use transformed T-cells, meaning they were cancerous cells, and they did not lyse. In fact the HIV could then replicate very well. What is interesting here is that many viruses can be grown in cancer cells, including, for example, the hepatitis viruses in hepatomas. The transformed cancer cells do not have superoxide radicals or hydrogen peroxide to destroy the cells in a direct toxicity. But, normal cells do have both possibilities to either program their own death, in apoptosis, or through direct lyses (toxicity). This is most likely why the cancer cells are a good replication point for viruses.

There is a list of immune suppressions in HIV infected patients in Harrison's, Principles of Internal medicine, for those who wish to have a more in depth review of the causes. For the most part it is a decrease in the lymphocytes responsible for anti viral, and anti cancer activity. Those are the Th1 cells, producing many immune modulators important in defense against viruses, bacteria, fungi etc.

Since most of the toxic cytokines in HIV can be altered with fish oil, it is a very good place to start in the treatment. One must, however, always watch out for secondary infections from other viruses, fungi, particularly Candida and several others that can affect the lungs, blood vessels etc. The nutritional supplementation is not a treatment for these bacterial or fungal infections, but rather a support measure to decrease the apoptosis, and lyses of the T-cells as well as a down regulation of the virus replication, for example through the inhibition of NF-kappa B proteins by antioxidants.

18 There have been increasing numbers of cases of HIV in Europe from contaminated blood that was received in hospitals for operations. This virus can linger for years without any signs or symptoms and even though the person who is HIV positive may seem perfectly healthy, he or she may be contagious. Who would have thought that an operation, or a brief encounter, one time might lead to such a tragedy in so many people's lives. We are all hoping that an immunization will someday make this disease a memory, but until then, the new treatments and the nutritional supplements can increase the quality of life and the duration of life in these patients. No one deserves this disease.

I had noticed something interesting from a researcher in the USA who showed that nitric oxide could slow down the movement of lymphocytes. This is how I could reduce a splenomegaly in 24 hours, in mononucleosis, by binding the nitric oxide. I suspected in HIV that there may be a similar mechanism taking place. In fact, I was so convinced this must be one of the problems in this disease, getting the lymphocytes out where they are needed, that I wrote to a professor in Heidelberg, Germany at the Cancer Research Center, and asked him if N-acetylcysteine, a thiol drug that is used in colds, could increase the lymphocytes. I figured that since thiols bind nitric oxide, and they work in my other viral diseases, then they should help in HIV. He wrote me back that they had no evidence that this was the case. Well, not being one to accept no for an answer I phoned him back seven years later. I guess I am a little stubborn when it comes to finding something to help my patients, I never quit. Besides, I had a hunch.

He asked me who I was again, and I reminded him that I had written him seven years earlier to ask if the N-acetylcysteine increased T-cells. He was silent at first, and then he whispered, „We just showed that in HIV patients several months ago.“ I laughed and told him I was glad I followed my hunches.

I had done something similar with another thiol which I use in my treatments, but the life style of the patient plays a strong role in the outcome and the development of AIDS in these patients.

The general symptoms of HIV are similar to a flu. Fever, sore throat, swollen lymph glands, headache, eye pains, joint pains malaise, lethargy weight loss sometimes nausea and diarrhea. These are all general symptoms that are seen in many viral diseases such as colds and flu's. For this reason one is often confused at the beginning of an HIV illness, and most assume that it could not be anything more than a simple non dangerous virus. The changes in the central nervous system and the skin are usually seen later in the disease, following further infections from immune weaknesses. They include meningitis, encephalitis, peripheral neuropathy, myelopathy and in the skin, rashes and ulcers can appear.

In later stages of this disease, a form of cancer develops called Kaposi's sarcoma. This form of cancer shows purple, blue pigment changes in the skin. The growth and spread of this cancer is enhanced by many of the toxic cytokines. For this reason again, fish oil can be helpful.

Case Studies

Patient 1:

My first patient with HIV was in a stage of moderate infection. There are 4 stages of this disease, and he was in the second. His T-cells were down to zero when I met him. His name was Wolfram, or Wolf, as his friends called him. He was a very nice looking young man of 35, who lived with his friend. His friend was HIV negative. Wolf painted, gave singing concerts using just a cassette of the music and his microphone. It was sort of a sing along, and he sang. We all loved it, and he gave so much to his friends.

19 He loved the attention of performing, and his mother was so proud she could have burst. In fact this was a man, everybody loved.

Sometimes, as a friend of mine said, „life is unfair“. In this case, I must admit, I agreed. Wolf was developing AIDS. When I met him he had tried many different treatments, including ozone. He had fortunately not developed any opportunistic infections so far, but he was weak and had trouble sleeping. Wolf had lost about 20 pounds already, and was wasting away.

I put him on a list of nutrients that looked like a drug store inventory at Christmas. I had also had him on a low dose of N-acetyl cysteine, and he was stable. What was interesting is that he decided to take alpha lipoic acid, himself. After he began taking that, he gained 5 pounds and his T cells went from zero to 60 in two weeks. I was quite surprised. He remained very balanced for months, then almost a year and a half later, he decided to go to a purported HIV specialist in Munich. I warned him the man may make things worse, as there were no good treatments yet, but he insisted. What I found out later was that the colleague was giving Thymus extract shots to boost the immune system. Unfortunately he boosted the immune system so quickly that all of the T cells were destroyed. Wolf began to go downhill rapidly. It was devastating for me to see all the time and effort we had made together destroyed in one shot. He died six months later. We all cried, I was ready to lynch my colleague, but I had no rights to say anything as Wolf had gone to him on his own accord. It was his choice, and perhaps it was a wrong choice, or perhaps it was fate, just like his getting AIDS.

Medicine is not always a happy ending, and the more serious the disease the greater the chance of a not so happy ending. This is why I try to keep an open mind to all of my colleagues, be they „Heilpraktikers“ who work with homeopathic medicine, or the patients themselves who work on trial and error. Often times I learn from my patients about plants, or alternative treatments and I read up on them as much as possible. I am very wary of quacks who use a person's illness to rob them of their money, but worse, their hope. Often times, if I can treat a patient soon enough I can not only prolong their lives, but tremendously increase the quality of their lives.

Patient 2:

This next case about a wonderful man named Charles was most interesting. I have a druggist friend who is always referring someone to me when they come into her drugstore. Sometimes I am not sure if we physicians are needed when the druggists are as good as my friend, but when a case is too far, too unusual, or too difficult, she refers them to me. It is a great compliment, I must admit, since this lady knows so much.

Charles was 36 year old when I first heard about him from his wife. Several years earlier he had had an operation for a simple tonsillectomy and he lost too much blood and was given a transfusion. Unfortunately, the blood was contaminated with HIV. Now, he had a lung infection and was in the hospital where I had trained. Not wishing to offend the Chairman, I asked Charles not to mention my treatment, as I did not wish the Chairman to think I was overstepping my boundaries. Besides, I knew the Chairman would only follow the normal protocol. He was very conservative and quite exact in his medicine. He did not use anything that was not approved, tested, and confirmed by his colleagues, the drug companies and his experience, which, albeit was an awful lot, wasn't ever enough for one searching for help, when all else failed.

Charles was now HIV positive, and was in the hospital for his lung infection. He had a disease called Pneumocystis carinii. This is typical in HIV patients. He felt miserable, was under treatment, but his immune system was weaker and weaker. I received a phone call from him and heard his whole story. He had received a blood transfusion and was diagnosed as HIV positive several years later. His wife was HIV

20 negative, which surprised me, but one sees in this disease that some people are indeed spared, others, unfortunately are not.

His wife said she had heard I might be able to help him. I was skeptical, but assured her I would do my best. I faxed her a list of what he should take, his diet, and life style. Life style is little alcohol, no smoking, no caffeine, and less meat. Otherwise, it is not so extreme. She thanked me and then I put the case in my „maybe I shall hear from them and maybe not,“ file; and went on with my life, and my other patients.

I did not hear from Charles, or his wife for weeks. It was almost two months later that I asked the druggist if she had heard from Charles. „Don't you know,“ she said, „they went on a Mediterranean cruise.“ I must have had my mouth open, because she laughed and said,“ yes, he felt so much better, they decided to enjoy life and go on a cruise.“ He is staying stable, is happy, and so far as I see, enjoying his life. I hope the next few years go as well as the last, but every day is a gift, in this disease, and God knows, I do my best.

My other cases are so early that I can not judge yet how much I have helped. I only know they don't get colds, so far, no secondary infections, and they all have been staying in remission for years. The future will tell what and how my treatments help, but until we have a good immunization no one can change fate, we can only prolong it.

Conventional Therapy for HIV/AIDS:

Antiretroviral therapy, protease inhibitors, Nucleoside analogues, reverse transcriptase inhibitors, integrase inhibitors, antisense nucleic acids, IFN α , bone marrow transplantation, thymic implants, active immunotherapy, vaccines, passive immunotherapy, etc.
(side effects: see Harrison's Principles of Internal Medicine))

Nutritional Supplements for HIV Patients:

Fish oil (Omega 3-fatty acids)	3 grams/day
Vitamin E:	1000 units/day
Vitamin C:	3-grams/day
Alpha Lipoic Acid	800mg/day
Methionine	500 mg/day
Nicotinamide (PARP inhibitor)	2 grams 2 x/day
N-acetylcysteine	600mg 2x/day
Zinc	40mg/day
Nicotinamide	800mg/day

Selenium	200 micrograms/day
Bioflavonoids	100mg/day
ECGC (Green Tea Extract)	1-2 capsules 3 x/day
Beta carotene	18-24mg/day
Succus liquiriteae	1 tsp/twice a day (Pause from liquiriteae after 10 days for 6 days, then retake for 10 days again. Always evaluate sodium and potassium levels every few weeks for regulation of electrolyte balance.)
Cherry Juice concentrate	2 capsules 2 x/day or 2 Tablespoons/day
Optional: Folic Acid	5mg/day
Coenzyme Q	Daily recommended dosage(DRS)
Grape seed extract	DRS
Pine bark extract	DRS
Silymarin	500mg/day

(Side effects: succus liquiriteae, see Acute Viral Diseases)

All of the above can be combined with conventional treatments to enhance the efficacy, and decrease the side effects.

Avoid Beef and Pork as much as possible. They stimulate the immune system to enhance toxicity. Lots of fresh fruits and vegetables, fruit juices, and green teas are also antioxidants.

The importance of diet in any disease has to do with the mechanism of toxicity in infections and in autoimmune diseases. Do you remember the old saying “feed a cold, starve a fever”? Well, that is not so far from the truth, in that by eating red meat for example, one increases the toxic cytokines which also increase the fever. This is why I recommend not to eat red meat (beef or pork) in any of these diseases, except upon occasion, for example, every 10 to 12 days, a little bit, if it is really needed, or missed in the diet. Most of my patients have no difficulty with this, as one can always eat fish, chicken, turkey, sometimes a little lamb, and many, many vegetarian dishes, including quiche, pizza, spinach lasagna, etc. I try to limit my ingestion of animal fats as much as possible, including cheeses but most of my patients eat a little every day, without any major changes in the metabolism. The fish oil in all of these inflammatory diseases is imperative, as it shifts the toxic cytokines in both autoimmune diseases as well as viral diseases.

As far as foods that prevent further toxicity, the following are recommended: fresh fruits, vegetables, red and black berry juices, green tea, garlic, onions, and whole grains of all sorts, seeds and fish products. The berry juices contain natural antioxidants called flavinoids, which block the oxygen radicals and prevent their toxicity. Garlic has thiol groups which also protect the immune system and garlic inhibits xanthine oxidase, an oxygen radical generating enzyme in inflammation. Garbanzo beans, wheat germ and parsley have high levels of folic acid. I had never thought that diet could play such an important role in preventing diseases as well as keeping down the toxicity in diseases, but I was wrong. It does indeed play a major role.

Seeds have not only many antioxidants including vitamin E, but they have natural inhibitors of proteases, and many nuts also have magnesium.

Staying away from coffee, colas, and alcohol is important in decreasing the substrates for the oxygen radical generating enzymes. A glass of wine, however, or an occasional beer is allowed, but not every day. The alcohol alters the immune system and generates oxygen radicals. This is especially a problem in liver toxicities as seen in viral hepatitis.

One very important substance to stay away from, especially in inflammations of the brain as in multiple sclerosis, is monosodium glutamate (MSG). MSG enhances toxicity in inflammatory situations in the brain. One of my patients told me that she had double vision after eating Chinese food. This was when I began to read more and more about the toxicity of MSG in the brain. It seems that in healthy individuals this is not a problem, but in inflammatory diseases this is indeed a problem.

Sufficient amounts of zinc, magnesium, folic acid and vitamin C are all very important to increase the synthesis of bipterin responsible for antiviral as well as anti-inflammatory activities from the nitric oxide synthase enzymes in the body. Selenium is important in reducing peroxide products to non toxic substances. It is part of a very important enzyme called glutathione peroxidase. This enzyme requires cysteine from garlic and green leafy vegetables, as well as flavinoids, found in berry juices and many vegetables, including root plants. Selenium is found in grain products from Scandinavian countries, especially high in the fall and spring, when more rains wash the selenium into the soil for the plants to take up. Unfortunately, many of these natural protective substances are robbed from the soil in our modern agriculture methods. When organic foods cannot be obtained, it is often necessary to take these substances as extra supplements in the daily diet. This is why I recommend the higher dosages of these supplements, as many patients cannot find these natural foods, or they do not have the time, or interest to go out of their way and look for them.

23 Vegetarian diets, in general are healthier, as long as they are not soaked with pesticides, but all people cannot adjust to such a change if they are not used to it. Often this needs to be a slow change, which over time can indeed open up a whole new world of tastes and pleasant eating experiences. The lowest incidences of cancer are in vegetarians. This alone certainly shows us how much diet plays a role in diseases.

My patients tell me they feel much better eating more vegetables and more fruits. Some of them had discovered this on their own, before they ever came to me. Others discovered this after being on a healthier diet that it enhanced the efficacy of the nutritional supplements.

All in all, a healthy diet prevents disease, toxicities, and cancer. It does not change the predisposition to diseases, but it drastically changes their development.

Viral diseases and autoimmune diseases have a similarity in their toxicity and treatment. The differences lie in the extra necessity to inhibit viral replication in order to suppress the toxicity in viral diseases that is not needed in autoimmune diseases. However, the latter, have other complications in that they often require even more inhibition because they cannot be suppressed as well as viral diseases. When a virus replication is inhibited, the toxicity goes down. Ironically, I have noticed this in multiple sclerosis too, especially when they have any herpes viruses. For this reason I sometimes give succus liquiritiae at the beginning of an M.S. treatment if there is any suspect of a viral involvement, such as EBV, HSV, etc. In autoimmune diseases, the entire immune system must be regulated to prevent further toxicity. In viral diseases the immune cells, Th-1, play an important role in suppressing the viral replication, whereas, in autoimmune diseases the Th-1 lymphocytes actually enhance the toxicity. This is why in viral diseases, when the patients have allergies, the Th-2 cells, are increased at the cost of the Th-1 cells. In other words, with allergies, the Th-1 goes down and leaves the patient susceptible to a viral infection relapse. When the Th-1 is decreased, viruses replicate faster and cause more damage, than when the allergies are suppressed.

Often times it is necessary to include extra vitamin C and B6 in viral diseases if the patients have allergies. In autoimmune diseases and in viral diseases stress plays a massive role in activating the toxicity in the disease. None of the treatments regardless of whether they are nutritional, chemical, conventional medicine or any alternative medicine can counteract the impact of stress on a disease. I have seen this time and time again. Perhaps it sounds strange to say attitude is everything, but I have seen the most incredible changes in patients when they took the supplements, and at the same time stopped being negative with themselves or their illness. The depression and negativity enhances the toxicity in the diseases and even the strongest steroids cannot block the impact on this mental influence. The illnesses that my patients encounter are destructive and debilitating, until they are in control. The supplements can and do help tremendously. In some cases it is necessary to include conventional treatments in addition to nutrient supplements. This is usually not necessary, but it is not a situation where this means the supplements are not working, only that they need additional support. I have fortunately only seen this with a very few cases, one of M.S. and the other, SLE. There is always an improvement with the supplements. It comes slowly in a bout 5 to 10 days, depending on the nature of the disease, and the diet of the patient before treatment and during. It is only in the cases where I have seen a tremendous amount of stress, from home, from work etc. that there are complications in the progression of the illnesses. This is why I emphasize the importance of taking care of yourself, both mentally and physically. The rest falls into place.

The mechanisms of the nutritional supplements are complicated, but not impossible to understand, even for a lay person. The toxicity from TNF α , (tumor necrosis factor) which is elevated in all inflammatory diseases, is inhibited by nicotinamide and suppressed partially by fish oil. Fish oil also down regulates all the toxic cytokines responsible for fever, aches and pains in both autoimmune disease and in viral diseases. In fact, the same cytokines that the steroids, such as cortisone, inhibit are reduced by fish oil. The only difference is, the steroids have very strong negative side effects, whereas, fish oil does not.

Personally if anyone had told me 15 years ago that omega-3 fatty acids could help in an inflammatory disease, I probably would have thought them naive, however, following the biochemistry of the synthesis and release of toxic substances in the body, as well as the thousands of articles I have read over the years, I know how they work and by combining them with other inhibitors of toxicity, one sees remarkable results. I combine the antioxidants, and thiols such as N-acetyl cysteine or methionine because they not only reduce oxygen radicals, they also inhibit the NF kappa b, which is important in viral replication, and they protect a substance in the body called tetrahydrobiopterin, or B4, to make it simple.

25 This substance is very, very important in both protection against viruses, as well as protecting against the synthesis of toxic superoxide radicals and hydrogen peroxide from an enzyme called nitric oxide synthase. Nitric oxide synthase plays a role in every inflammation there is. This B4 that regulates nitric oxide synthase to be protective rather than toxic, is increased from vitamin C, folic acid and zinc. That is why I often include these substances in many treatments, especially if it is a particularly difficult case.

The licorice root, *succus liquiritiae*, increases an antiviral substance in the body called Interferon gamma. This is particularly protective in EBV (mononucleosis). When I combine this with extra thiol groups I also increase the lymphocytes responsible for protection in viral diseases.

As you can see from all of this biochemistry and toxicology, it is not at all witchcraft what the nutrients do, it is pure pharmacology going back to our roots in medical treatments before only synthetic compounds were used. One could say it is an extension of science into the 21st century utilizing many substances that nature gave us millions of years ago, but using them in a goal oriented mechanistic approach to stop suffering and allow patients to lead normal quality lives.

Each patient is an individual, and I prefer, when I can, to speak to each end every one. However, because this is not always possible, I want to give those patients the experience and knowledge that I have so that he or she can benefit from all of this work. In addition, I hope my colleagues who read this information will remain open to new areas of integrated medicine utilizing every and any opportunity to help our patients. When I can personally help in any cases above, or in cancer, which I have begun successfully to cure in individual cases, I shall do all that I can to remain available wherever and whenever possible.