

## **Immune System–Special Report # 8**

# ***Your Immune System -Why It Fails & How To Fix It***

***...What Your Doctor Doesn't  
Tell You!***

**The Institute Of Nutritional Science**

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This Special Report does not intend to diagnose disease, nor to provide specific medical advice. Its intention is solely to inform and to educate. The author intends that readers will use the information presented in this report in cooperation with the advice of a qualified health professional trained in such field.

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## Dr. K. Steven Whiting - Biography



**Dr. K. Steven Whiting**

Dr. Whiting is an Orthomolecular Nutritionist. His degrees include a Masters in Psychology as well as a Doctorate in Biochemistry earned at International Universities.

Three decades of personal, practical experience in the field of human nutrition have earned him an international reputation, not only in the understanding of the human body and the profound effect that nutrition plays in protecting and preserving the body, but also in the outstanding results that he has consistently achieved while working with clients and patients on a global scale.

His commitment and dedication within the nutrition field has led him to extensive research into such chronic conditions as Heart Disease, Arthritis, Diabetes, Osteoporosis and Prostrate problems to name but a few. The result of this research has been pivotal in the development of nutritional protocols for the prevention, management and reversal of these conditions.

Studies he has conducted have led to a totally new system of weight management, based on '*Body Typing*', wherein HOW a persons body handles food is evaluated BEFORE they are put on a weight management program that's customized for them.

More recently, he has focused his attention on the human immune system. His subsequent research into deep viral infections has led to the use of oxygen therapy as well as other potent, all-natural immune boosters for the management of immune-compromised conditions.

Further, his work with AIDS and cancer patients, using meditation, biofeedback and visualization has received worldwide attention.

Dr. Whiting has served both as Consultant and Staff member to many of the leading alternative and complimentary hospitals in Europe and Latin America, where he has had the opportunity of applying his concepts to those individuals who were in most need.

This has resulted in the development of nutritional support protocols for a variety of chronic health challenges.

Through his international affiliations, he remains current on the very latest progressive applications of nutrition for a wide variety of chronic degenerative disorders, for which orthodox medicine has offered little hope.

In 1991, Dr. Whiting founded *The Institute Of Nutritional Science*, an international organization, with offices in London, England, Den Haag, The Netherlands and San Diego, California. The purpose of The Institute is to gather information and conduct research on how natural supplements can prevent, manage or reverse disease conditions.

The Institute publishes *The Journal*, available by subscription, to disperse nutritional information, relevant to disease, in an easy to understand, user-friendly fashion.

As an author, Dr. Whiting has published a series of Self Help booklets and reports on nutrition and its role in preventing, managing and reversing disease. A text- book, entitled *Gaining and Maintaining Total Health*, and *Self Health –Your Complete Guide To Optimal Wellness*, which rapidly became a best seller after its first publication in 1996. His most recent book *You Can Be ...Well At Any Age : Your Definitive Guide To Vibrant Health and Longevity*, is the most comprehensive work of it's kind, containing over 250 protocols for a wide spectrum of human health challenges

Author, Lecturer, Teacher, Product Formulator and Consultant, Dr. Whiting is dedicated to helping others in helping themselves toward a more healthful existence, through a better understanding of the nutritional needs of the body. He is the exclusive formulator of all the nutritional products for Curves Fitness Centers, the largest business of its kind in the world.

He is committed to empowering individuals with the very latest nutritional information, safe in the knowledge that this will serve to enhance both the quality and the quantity of life for everyone in the years ahead.

# **Your Immune System Why It Fails & How To Fix It**

***....What Your Doctor Doesn't Tell You!***

## **Introduction**

The human body is one of the most complex and intricate inventions ever conceived. Its complexity is made more so by the many separate, yet linked, systems within it, such as the Nervous System, Cardio-Vascular System, Muscular System and so forth. Each one of these systems carries on its' own life function and specific duties independent of all other systems, yet at the same time works together with all the others to make up the whole physical human being. One such system is the Immune System.

Until quite recently, science has paid but surface attention to this complex, chemical system operating within us. Yet, without it, none of us would reach adolescence, let alone adulthood.

Every day our bodies are bombarded with countless bacteria and viruses, some harmless, some deadly. It is our Immune System that must seek these invaders out, recognize them, build chemical structures called Antibodies, to destroy them and finally remove the waste from that process from our body.

As the number of bacterial and viral diseases rise, the stress upon our Immune System ever increases. Combine this with the onslaught of chemical poisons in our environment, all of which weaken our Immune System, and you have a situation wherein the Immune System can be poised for failure. We are in that very situation today.

Our planet and, more so, our immediate environment, is filled with thousands of chemical poisons not known even 50 years ago. Since it is not likely that this situation will be changing in the near future, what can we do to protect ourselves?

Diseases, such as AIDS, have shown us both the importance of the Immune System and sadly, the devastation that can occur to a human body when that system fails. Through research into the Human Immune System, we are beginning to understand just what a complexity it really is, and better still, what we can do to support this process, without which life, as we know it, would cease to be.

This Special Report provides a basic understanding of what the Immune System is, how it works, and most importantly, what you can do today, and every day, to ensure that it operates at peak performance, protecting you from opportunistic, microbial invasion twenty-four hours a day.

## **What Is Immunity?**

Our bodies have an elaborate system of defense which begins to develop even before we are born. The first few months after birth, the Immune System works overtime to develop codes for thousands and thousands of foreign substances which enter the internal environment of the body.

There are two basic defense systems operating in the body simultaneously, namely Non-Specific and Specific. First line, Non-Specific immunity takes place in specialized tissues of the body called Mucosal Tissue. This may be found wherever there is an opening from the outside environment to the internal environment of the body, such as the Ears, Nose, Mouth & Throat, Urinary Tract and the Anal Canal.

This Mucosal lining is highly resistant to infection and, in fact, generates Non-Specific Antibodies to destroy many potentially harmful pathogens before they can even enter into the interior of our body. The catch is that Mucosal tissue can only do its job in the presence of a nutrient called Vitamin A. When this is deficient the protective factor of Mucosal tissue deteriorates rapidly. Those who suffer from repeated infections of their Mucosal sites should take note.

This Non-Specific defense system, called the Reticuloendothelial System, consists of a variety of semi-related cells whose function is to destroy and remove such things as worn-out blood cells, bacteria, cancer cells and other foreign chemicals that are potentially dangerous to our delicate biochemistry.

Monocytes, large white blood cells, which circulate in the bloodstream, develop into Macrophages, which literally 'eat up' these invading substances. Other parts of this Non-Specific immunity include sites found in the Spleen, Bone Marrow, Lymph Nodes, and even the Brain.

This Non-Specific Immune System functions twenty-four hours a day to ensure internal safety. You may be interested to know that each one of us gets Cancer every day of our lives. Cancer cells form due to Free Radical damage to DNA material within specific cells or cell groups.

When this occurs, the Immune System recognizes these cells as different from the others and takes a chemical photograph of their composition. This information is then returned to the Thymus Gland where it is analyzed. Once the Immune System determines that this cell is not normal, specific Antibodies are formed to destroy the cells before they can explosively multiply.

The final line of defense against disease is what we call the Immune System itself. It is technically referred to as the Specific Defense System because it acts against particular harmful agents and further, has the ability to act quickly against substances new and unfamiliar to itself.

This is important since immunity is not general but very selective, meaning that immunity to one disease, say the measles, does not automatically mean we are immune to others.

## **Inborn and Acquired Immunity**

There are two main categories of immunity. Inborn Immunity, which is basically, what you inherited at birth, and Acquired Immunity.

Acquired Immunity develops as we progress through life and can change, depending upon the chemicals and pathogens we are exposed as a part of living. Acquired Immunity is of interest because this particular portion of the Immune System has the ability to turn on and turn off again whenever it is needed. This active and passive immunity is the key to its specific function.

Let's take a closer look at these phases of immunity so that we may better understand both the importance of their function as well as our need to nourish and support these functions for good health and longevity.

Inborn Immunity develops through a careful selective process which is subsequently passed on from parents to offspring. Such things as species immunity protect us from invasion by microbes that do not specifically attack humans. For example, most infections found in animals cannot affect humans, yet many microbes that do not harm animals affect us.

Racial Immunity is another factor in the inborn immune system. Each racial group has their own particular immunity to certain diseases more so than others. For example, in the United States, black skinned races are much more immune to Polio, Malaria, and Yellow Fever than are the white skinned races.

Lastly individual immunity, acquired by the parents of an offspring, can pass that specific immunity to their children. It is this inherited immunity that allows some people to be able to dissipate throughout their lives by smoking, drinking alcohol, not exercising, etc...., and still live to a ripe old age, relatively free from disease. Are they lucky? Perhaps, but the real 'luck' lies in the fact that the person probably inherited a very strong Inborn Immunity which allowed them to thrive in spite of multiple abuses.

Unlike Inborn Immunity, which you get before birth, Acquired Immunity begins to develop immediately after birth and continues throughout an individuals lifetime as each of us encounters various harmful agents. The problem we face today is that there are so many of these agents that our Immune System can no longer keep up the pace of defense. This weakens the system and leaves us vulnerable to attack.

The Acquired Immune System comes into play when a foreign substance, called an Antigen, enters the body, causing an immune response. Most Antigens are large protein molecules, but some can also be made up of Carbohydrates and Lipids.

Antigens are usually found on the surface of these foreign organisms entering the body. They may also be found on the surface of red blood cells, other tissue cells, pollens and toxins or chemical poisons, as well as some foods. Antigens stimulate the activity of Lymphocytes called T or B cells.

Both T and B cells are produced in the Bone Marrow. They differ, however, in their method of action. Some of the base cells produced in the Bone Marrow travel to the Thymus Gland and develop into T cells.

T cells make up about eighty percent of all the Lymphocytes circulating in the blood. The remaining base cells go to the Lymphoid Tissue and mature as B cells or B Lymphocytes.

## **T Cell Function**

While in the thymus gland, these T cells multiply and are capable of combining with specific foreign antigens which makes them 'sensitized' to that specific Antigen. These cells then produce a specific immunity to that particular Antigen. This is called Cell-Mediated Immunity.

There are several types of T cells within the body, each with specific, unique functions. The destruction of foreign cells directly is accomplished by Natural Killer T cells (NK cells), Helper T cells release substances which stimulate or regulate other T cells in the destruction of foreign invaders. It is these Helper T Cells that are destroyed by the AIDS virus.

Specific T cells, called Suppressor T cells, turn off the immune response when it is no longer necessary. In order to retain the memory of a specific Antigen, Memory T cells keep a chemical picture of the foreign substance so that the Immune System can respond rapidly the next time this same invader is encountered.

In putting this all together, T cells work together with Macrophages, which devour the invaders, in the immune process. In order for a T cells to respond and build a resistance, the Antigen must be 'presented' to the T cell on the surface of a Macrophage.

## **B Cells and Antibodies**

The chemical substance the body uses to destroy a specific invading Antigen is called an Antibody. Also known as an Immunoglobulin (Ig), Antibodies are manufactured by the second type of Lymphocyte, the B cells, present in the Immune System.

As we mentioned earlier, B cells are formed in the Bone Marrow but must mature in the Lymphoid tissue before becoming active in the blood stream. Any exposure to an Antigen stimulates the B cells to multiply very rapidly and produce enormous numbers of clones.

Each of these cells in turn, produces Antibodies, chemicals that circulate in the blood, destroying the Antigen. This form of immunity is called Humoral Immunity because '*humoral*' refers to the body fluids.

Like the T cells, some of the B cells remain active in the blood and retain the memory of the specific Antigens they have battled in the past. Should these substances enter the body again, these cells will be able to respond to the invasion much more rapidly than before.

While we understand that this brief description of the Immune System may seem complex, keep in mind that from infancy forward, your Immune System is capable of protecting you from many millions of foreign substances, even those that are synthetic or man made. All through this process, the system is kept in check so that it does not overreact. For should this occur, Allergies or worse yet, Autoimmune Disease may be the result.

Due to lack of proper nutrients from the daily diet, combined with the ever increasing number of synthetic foreign chemicals, not found in nature, invading our environment, the Immune System can become exhausted. If this occurs it does not always recognize some of these Antigens, allowing them to multiply within us to the point of infectious or chemically induced disease. Or, in some cases, the Immune System overreacts due to excess stimulation by multiple invading Antigens, and loses its ability to self regulate.

An Immune System out of control produces such conditions as Allergies and Autoimmune Diseases such as Lupus and Rheumatoid Arthritis. While these conditions can be inherited through the genetic code, most cases of Allergies and Autoimmune Diseases are a result of an overworked Immune System, which has lost the ability to control its response mechanism.

Let's now look at some of the things that can go wrong with the Immune System, putting us at risk for infection, allergies and disease which can hamper the quality of life, and possibly even end it prematurely.

## **Super Bugs! Antigens That Resist Immunity**

Possibly the greatest claim to fame of the medical industry, certainly in the past 50 years, has to be the advent of the Antibiotic.

Through Antibiotic Therapy, millions upon millions of lives were saved from opportunistic infections so severe that the Immune System likely would not have responded quickly enough to save the persons life.

Yet, as with anything, too much of a good thing is not necessarily better. Antibiotics worked so well, that the medical profession became lazy and literally treated everything with these 'wonder drugs'. This over use, and abuse, has lead to the weakening of the body's own defense systems because they too have become lazy.

Additionally, the Antigen or microbes, when repeatedly exposed to specific Antibiotics, build up their own immunity to them. This antibiotic resistance necessitates the use of more and more powerful Antibiotics in order to combat even the simplest invasions.

All the more reason for us to ensure that our body's Immune System is functioning at its peak. How we can go about ensuring the health and well being of our Immune System and thereby guaranteeing resistance to pathogens of all types will be discussed shortly.

## **Allergies and Autoimmune Conditions: An Immunity Out of Control**

Of all the more common complaints doctors hear about regularly, Allergies must rank at the top of the list. Today, it seems everyone has an allergy to something. If I was ever to contemplate a career in medicine, it might be as an Allergist. Consider the benefits. An almost unlimited number of patients, a condition that is relatively easily, although ineffectively, treated, and a condition which seems to mysteriously change from year to year.

The conventional method of managing Allergies with injections, of like substance in the hope of building a more regulated immune response, only works effectively in the very young. Treatments such as this, if started during childhood, can bring major relief.

Adults suffering from multiple allergies must take a more holistic, or broad spectrum, approach to managing their problems. Where we have gone haplessly wrong in our attempt to manage allergies is that our focus has been on the symptoms of the Allergy and not upon the CAUSE of the allergic response. We must remember that an allergic reaction is a symptom of another underlying causative factor.

Unless that cause is properly addressed, we cannot hope to manage this condition effectively.

(For further information on the control of allergies please see the Special Report #6 entitled, ***Understanding and Controlling Allergies***)

Another condition, which can prove devastating, is called the Autoimmune Disease. This group of conditions are brought about by the body's inability to recognize its own body constituents, subsequently building antibodies and ultimately destroying those tissues or organ systems involved.

Since Autoimmune Disease can be either Organ-Specific or Systemic in nature, they can also be either Cell-Mediated or Humoral in nature. Cell-Mediated autoimmune diseases are caused by T cells which become self-reacting to the body. Examples of this type of condition would include Hashimoto's Thyroiditis which results when T cells react against specific self-antigens. Insulin-Dependent Diabetes Mellitus is the result of an autoimmune attack upon the Pancreas' insulin-producing cells.

Antibody-Mediated Autoimmune Diseases are caused by self-reacting Antibodies and would include such catastrophic conditions as Myasthenia Gravis, when blocking Antibodies bind up Self-Acetylcholine Receptors, Graves' Disease, where Antibodies destroy Thyroid tissue and Systemic Lupus Erythematosus, which involves Antibodies that react against many different tissue Antigens such as Self-Nucleic Acids.

Rheumatoid Arthritis, another, unfortunately, common disease, is the result of Antibodies that react and ultimately destroy the Self-Constituents in joints.

While there are many possible etiologies involved in Autoimmune Diseases, many of which are still unclear, we do know that helper T cells are at the heart of the autoimmune response.

While genetics is believed to be at the heart of most Autoimmune Diseases, nutrition, in many cases specific nutrition, has offered both hope and relief.

Lastly, chemical pollutants in our environment are rising in both strength and numbers almost on a daily basis. This onslaught, of unrecognizable substances, places a particularly intense strain upon our Immune System since none of these chemicals can be encoded into our Immune Memory System.

This means that new antibodies must be developed for every single chemical compound found in these poisons, some of which number into the thousands!

It should not be a surprise that infectious diseases of all types are once again on the rise for the first time since World War II. Through such circumstances as antibiotic abuse, chemical pollution, and mutated virus and bacteria, the Immune System is under constant attack.

The number of cases of Allergies, Autoimmune diseases, infectious diseases, immune-suppressant disorders and even immune failure can be directly linked to these destructive factors in our environment and internal chemistry.

What can be done? Plenty! Let's look at some of the dietary factors that can adversely affect immunity and how we can change our diets to be more Immune System friendly.

## **Dietary Effects Upon Immunity**

According to *RK Chandra* as quoted from an introduction to the Immune System, which appeared in the *American Journal of Clinical Nutrition*, "*Nutrition is a critical determinant of immune responses and malnutrition is the most common cause of immunodeficiency worldwide.*"

Work with both animals and humans consistently shows that variable Immunodeficiency's can arise as a result of various forms of malnutrition. It is important to realize that there are many forms of malnutrition, not just the starving populations of Third World countries. Protein deficiency in industrialized nations such as the United States and the European countries, is often widespread and severe.

Protein-calorie malnutrition causes many complex nutrient deficiencies which can lead to immune suppression.

For instance, Thymus-dependent T cells are reduced and their capacity to generate mediators such as Gamma-Interferon and Interleukin-2 is greatly decreased.

Researchers studying the relationship between the Immune System and diet consistently find a direct link. The importance of diet in multiple aspects of the immune response is inescapable.

Even though there have been only a few clinical trials in this area so far, the modulation of the immune response through manipulating dietary intake will surely become one of the leading modalities in the management of immune related disorders in the future.

Because protein is of vital importance in the integrity of all human cells, a deficiency of protein is probably one of the greatest factors in Immunosuppression. There are several reasons why protein deficiency may exist in humans.

Firstly, and most obviously, is a lack of protein in the diet. In so called 'civilized' countries, we assume that no one is protein deficient, but surveys of dietary habits done by many institutions, including our own, show that indeed many millions of people do not eat adequate amounts of high quality complete protein.

Another factor in protein deficiency is lack of absorption. As we age, protein foods become more and more difficult to digest and assimilate at the cellular level. This is due to a reduction in the protein digestive substance called Hydrochloric Acid, naturally present in the stomach. As we age Hydrochloric Acid is diminished through the over-consumption of dead and lifeless foods.

For this reason, the first recommendation for building and maintaining a strong, healthy Immune System is to ensure that not only adequate protein is being consumed but that the digestion of that protein is complete. We do that by adding a multi-purpose digestive enzyme product that contains Betaine Hydrochloride to each meal.

What about the role of fats in the diet? Fats are among the most commonly misunderstood foods in the diet. A low fat diet is not generally healthy for people except under certain very specific circumstances. The low fat diet craze of the past twenty five years has produced a variety of health challenges as well as premature aging.

Conversely, a high fat diet is not necessarily healthy either. More important than quantity, is the source of the fat in the diet. Some fats are not only less beneficial than others but, in some cases, contribute to a variety of disease processes. Polyunsaturated Fats not only produce the Free Radicals directly responsible for Atherosclerosis, but excessive, fatty acids from these oils have been established in Immunodepression.

(For further information on Heart Disease refer to Special Report #4 entitled ***Heart Disease: The Real Cause, The Real Answer.***)

By reducing fats, specifically Polyunsaturated Fats, we can enhance the performance of the natural killer-cell activity. Later, we will be showing you how to stimulate the production of these natural killer cells, but unless you ensure an environment that is conducive to their performance, they will not be nearly as effective in destroying Antigens.

Sugar, the twentieth century's most common poison, has shown, under clinical studies, to impair cell-mediated immunity as well as impair antibody production.

In one study reported in *The Journal of Nutrition*, researchers found that as the nutritional quality of the diet was reduced by progressively diluting the diet with sucrose, the production of Antibodies was decreased proportionately as well.

In another study, healthy young adults were given 24 ounces of cola beverage containing 66 grams of sucrose. Within 45 minutes, Neutrophilic Phagocytosis decreased by about 50 percent!

In still another instance, healthy volunteers ingested 100 gram portions of Carbohydrate from a variety of sources including glucose, fructose, sucrose, honey and orange juice. Each one had significantly decreased the Phagocytic Index (the capacity of Neutrophils to engulf and eat up bacteria).

Another dietary factor that seems to affect immunity is the ingestion of caffeine. Over consumption of coffee and tea containing caffeine seems to suppress Lymphocyte response. A few studies have indicated that caffeine may also lower Immunoglobulin levels.

We can see that, once again, in many ways we *ARE* what we eat.

Excess Carbohydrate consumption in the form of refined, highly concentrated sugars, once again comes to the forefront in Immunosuppression, as it does in so many Chronic Degenerative Diseases.

We now have a better picture why this is the case. Since sugars depress the immune response, such conditions as Allergies, Autoimmune disorders, and Immunosuppressive diseases, such as AIDS, will never be managed effectively unless Refined Sugars and Polyunsaturated Fats are eliminated or greatly reduced.

## **Specific Nutrients and Other Nutritional Factors That Affect The Immune System**

In addition to macro-dietary factors such as sugar and some fats, micro nutrients such as Vitamins, Minerals, and other nutrient compound factors can also exercise a positive supportive effect upon our Immune System's ability to protect us.

The first nutrient that one must consider when discussing immunity must be Vitamin A. Of all the nutrients positively affecting immunity, Vitamin A has to be the most powerful. Its effects are wide and far reaching.

Vitamin A supports both the T and B cells of the body and a deficiency reduces both the response of these cells as well as their numbers. In the absence of Vitamin A, T and B cells look at potentially dangerous Antigens with a lazy, almost uninterested attitude.

Vitamin A is the sole nutrient that maintains mucosal tissue integrity, which is our first and one of our most powerful lines of defense. In the absence of Vitamin A the mucosal linings of the openings of our body lose their ability to destroy bacteria and virus, allowing these pathogens entry into the delicate environment of our internal biochemistry.

If you suffer from allergies, colds, flu or repeated infections of the ears, nose, throat, urinary tract or anal canal, you would benefit enormously through the addition of Vitamin A, in supplement form, to your diet on a daily basis.

Vitamin A's positive effect upon the entire Immune System doesn't end there. A prolonged deficiency of this vital nutrient produces atrophy of both the Thymus Gland as well as the Spleen.

Hospitals and doctors have known of the immune power of Vitamin A for a long time even though they often do not acknowledge or prescribe its use. As far back as 1979, clinical studies have shown that by administering Vitamin A for as little as a week before surgery, Post-operative Immunosuppression was eliminated. Use of very high levels of Vitamin A, in the 300,000 to 400,000 range reversed existing Post-Operative Immunosuppression in test subjects as well.

It is important to remind the reader once again of the concept of balance and ratio when supplementing with nutrients. Just because a little of one nutrient is good, it doesn't mean that more is always better. In many cases, more is not better.

This applies to the Human Immune System as well. For example, Vitamin A is essential to proper immune function, yet excessive doses of this nutrient can suppress immune function. Balance is the key.

Later in this Special Report, we will offer our recommendations for nutrient support of the Immune System along with therapeutic levels of specific nutrients and the duration of time that they should be used at those levels. These recommendations are the result of many years of working with thousands of individuals with varying degrees of immune suppression or disorder.

The next group of nutrients we must discuss are the B-complex Vitamins. Deficiencies of these have been associated with decreased antibody responses as well as impaired cellular immunity. Further, like Vitamin A, the B-complex nutrients may reduce or prevent Post-Operative Immunosuppression.

The most active members of the B-complex family relative to the Immune System are Thiamine (B-1), Pyridoxine (B6), Cyanocobalamin (B12), Folic Acid and Pantothenic Acid. This is partly due to the fact that these nutrients are also involved in the stress response via the Adrenal Glands. It is this connection that makes excess stress so dangerous to those with immune compromise.

In all cases such as Allergies, Autoimmune conditions, etc., the management of stress is vital to the success of any immune building program.

Stress depletes the specific nutrients which have a direct link to the immune system. That depletion makes every immune-related disorder much worse.

Vitamin C is another nutrient that bears discussion regarding the Immune System. In order to achieve the immune enhancement benefits of Vitamin C, between one and three grams per day are necessary on a therapeutic basis. Vitamin C, however, is one of those nutrients where, again, more is not necessarily better.

Under severe stress, taking Vitamin C in higher doses than above, can result in a suppression of immune function! Do not second guess your health. Rely on both research and practical application over the many years to ensure you are getting the maximum benefit from your nutrient program.

The fat soluble Vitamins D and E have also shown some positive effects upon specific Immune System activity. A deficiency of Vitamin D can depress cellular immune responses to Antigens. The right doses of Vitamin E can increase the number of antibody-forming cells.

Further, supplementation with this nutrient enhances Cell-Mediated Responses, including the delayed hypersensitivity reaction and the clearance function of Reticuloendothelial Cells. In the cases of pre-existing serious Immunosuppressive disorders, one must be conservative with Vitamin E. In these cases, keep Vitamin E supplementation to 200 IU until the person begins to show positive signs of recovery, because high doses of Vitamin E can actually suppress some phases of immune response in these people.

## **What About Minerals?**

Minerals make up the largest number of nutrients of any essential group. There are at least 75 major and trace minerals present in the human body. While they all must be present in order to achieve maximum benefit and chemical balance within the body, some of these minerals have been shown to exercise specific effects upon immunity.

Again, we must remind the reader that many of the benefits of specific minerals upon the Immune System are negated or even reversed if excess amounts of these same nutrients are taken for prolonged periods.

If you presently suffer from some form of immune-related disorder, discuss your nutrient supplement program with your health care provider before embarking upon any program.

Further, follow the guidelines for potency and ratio set forth later in this Special Report as a general guide to proper immune support supplementation.

The first mineral that we must include in any discussion of immunity is Copper. A deficiency of Copper is associated with an increased incidence of infection and impairment of Cell-Mediated Immunity.

Further, in the absence of adequate Copper, the Reticuloendothelial System is depressed and impaired Antibody Response is also noted. Copper is essential for the production of Thymic hormone and is necessary in order for it to do its job once produced.

Another micro trace mineral which induces Gamma-Interferon production is called Germanium Sesquioxide. It is important to note that most clinical studies done with Germanium achieved benefit only from the organic-compounded form of this nutrient. Germanium is especially important to those who are aging, since it seems to have a direct effect upon those specific immune responses that are impaired as a result of aging.

Other trace minerals which contribute to a healthy Immune System include Iodine, a deficiency of which is associated with reduced microbicidal activity; Iron, which is necessary for Lymphocyte proliferation response and Manganese, which enhances Natural Killer Cell action. Selenium, still another amazing trace mineral, is not only a powerful Antioxidant, but contributes to Cell-Mediated Immunity.

Note that Selenium is another nutrient that while of benefit in the right doses, excess can cause Immunosuppression. If you have an immune related disorder, do not exceed 200 mcg of Selenium daily without the express advice of your health care practitioner.

The last mineral we need to discuss relative to the Human Immune System is probably the one which exercises the greatest single benefit upon immune function. That mineral is Zinc.

A deficiency of Zinc is associated with impaired immune responses of almost every nature.

A lack of adequate Zinc causes Thymic atrophy, Lymphopenia, alterations in Lymphocytes, a reduction in antibody-mediated responses to both T cell dependent and T cell independent antigens. Further, in the absence of Zinc, Natural Killer Cells (NK cells) are unable to activate.

We have discussed a great many vitamin and minerals that have, clinically, shown benefit to the Human Immune System. Getting adequate amounts of all these nutrients on a daily basis can be an overwhelming task. Fortunately, there is hope.

Many companies are now beginning to combine all the 100 plus nutrients into Full Spectrum nutritional products that provide these nutrients both conveniently and economically. Please see the protocol section at the end of this Special Report for sources of nutrient products.

## **The Concept of Totality**

It is important to realize that none of these nutrients should be taken alone or in the absence of the others. Each one of the vitamins and minerals we have discussed can only perform to their full potential in the presence of all the others. Nutrients are much like a symphony orchestra. They can either work together and make beautiful music or by leaving some of them out, we can produce a sound that is less than full.

When nutrients are taken in high amounts, in the absence of all the others, we create a situation similar to a first year high school band. In this case, a chemical nightmare that is difficult for the body chemistry to balance, just as that music would be for our ears to listen to.

Before you embark on any of the recommendations outlined in this booklet, you must ensure that you are taking the Full Spectrum of nutrients as a foundation. Then you can supplement with the larger doses of specific nutrients as outlined previously, with no worry of creating an imbalance.

For further information on this, see the specific protocols which follow at the end of this Special Report.

## **Other Nutritional Factors Involved in Immunity**

There are several other nutritional compounds which have a positive effect upon the Human Immune System and should be included in any immune building program.

Beta-Carotene improves several levels of immune response when taken together with vitamin A. Beta-Carotene can protect specific cells from auto-oxidative damage due to Free Radical formation, while stimulating both T cells and Natural Killer Cell activity.

Coenzyme Q10 and Dimethyl Glycine, two cellular oxygenators, assist in the proper functioning of the Immune System partly due to their oxygenating effect. When the cell is oxygenated, you have less waste matter building up to cause toxic by-products. This adds further strain to the Immune System to remove them.

You should be able to see, by now, that not only is the Immune System vital to our health and longevity but it is a complicated system requiring the support of many nutrients.

In fact, you could likely form a connection between the Immune System and almost every one of the 120+ nutrients present in the human body.

## **Colostrum: The New Secret in Immune Support**

Recently, attention has been given to Colostrum supplements and their link to a healthy Immune System.

There is overwhelming evidence to show that Bovine Colostrum (from cattle), contains many factors which can enhance the Immune System. The most direct way in which these preparations help immunity is through boosting production of the Natural Killer Cells (NK Cells). NK cells, you remember, are responsible for destroying many of the Antigens that make their way into our delicate internal biochemistry.

Natural Colostrum contains Immunoglobulins (antibodies), which are powerful substances effective on both bacteria and virus.

*The New England Journal of Medicine* reported that Immunoglobulins are so important that they have been used to help treat a wide variety of existing immune related infections and conditions which included Hepatitis A, Chickenpox, Cytomegalovirus, Rheumatoid Arthritis, Multiple Sclerosis, Myasthenia Gravis, Systemic Lupus, Chronic Fatigue Syndrome and Crohn's Disease.

Colostrum, together with oxygen, which we will discuss shortly, are the ONLY natural supplements that will destroy viruses!

For this reason, Colostrum has been shown to be effective in its ability to stop colds, herpes, cold sores, flu viruses, viral bronchitis, viral pneumonia and low grade viruses such as those responsible for chronic fatigue and Epstein Barr syndromes.

Another active ingredient in Colostrum, specifically Bovine Colostrum, is Lactoferrin. This is one of the most powerful antiviral, antibacterial substances known and it is found only in Colostrum. Lactoferrin binds directly to bacteria, inactivating them and increasing their vulnerability to other natural immune functions. Lactoferrin contains antibodies against a wide range of bacterial, fungal, viral and protozoal pathogens. Lactoferrin also exhibits antioxidant properties, preventing damage from Free Radicals.

Bovine Colostrum is not only safe and non-toxic, but it can be consumed in any quantity without side-effects. In a recent article written by *Robert Preston, ND, President of The International Institute of Nutritional Research*, he describes Colostrum as follows:

*"Bovine Colostrum is safe. Colostrum contains an unprecedented combination of nutritional factors with which to fortify the Immune System. It is so harmless, it has been prepared by nature as the first food for infants, intended as their total diet for the first 24 hours. It would be hard to imagine any nutritional substance more natural or beneficial than Colostrum."*

How much can you take then? Well, since it is a food, you cannot easily overdose. For convenience sake, Colostrum is now available in supplemental form. Most of these products are concentrated, some more than others, to provide the maximum dose with the least inconvenience or expense.

It is important to realize that while Colostrum is safe and virtually harmless, all Colostrum preparations are not created the same.

Firstly, in order for Colostrum to be the most effective, it must be concentrated to guarantee potency. Secondly, it must be specifically encoded for human pathogens. By encoding the Colostrum it can target major viral and bacterial groups that specifically play havoc with human health.

Unfortunately, many of the Colostrums supplements on the market are neither concentrated nor encoded.

These processes are expensive and many companies are turning out inferior products in order to save on manufacturing costs. For a source of highly concentrated, encoded Colostrum see the Protocol Section which follows.

Colostrum concentrates should be taken at the first sign of an infection. You should keep a bottle of capsules in the medicine cabinet and at your place of work. At the very first sign of trouble, begin taking Colostrum in aggressive doses every two hours. You will be surprised to see how rapidly you recover, or worst case, how much less the severity of your attack will be.

Should Colostrum be taken constantly? This is a question that has been debated for some time. While Colostrum is certainly harmless, and likely continues to be harmless even through prolonged ingestion, the question is, is it necessary?

We must go back to nature for our answer. Colostrum is produced by lactating mammals for their offspring during the first few hours or days of birth. Then the production ceases forever. This would lead us to believe that because Colostrum is so powerful, its use should be abundant but temporary.

Like many substances which have been shown to enhance the Immune System such as Echinacea and Golden Seal, a lot for a short time is best.

One exception to this rule might be in persons suffering from ongoing Immunosuppressive disorders. These would include Autoimmune Disorders, AIDS and other low grade viral infections. Long term use of Colostrum might be indicated in these instances. However, when the individual begins to show positive signs of improvement, the supplement should be adjusted accordingly. (See Protocol for proper recommendation of Colostrum use)

## **Oxygen: The Universal Cleanser**

All 75 trillion cells in your body produce waste matter. Each one of them requires oxygen not only for life function but to detoxify that waste matter and ultimately assist in removing it via the kidneys.

When our bodies become weighed down with excess toxic material at the cellular level, we become fatigue and listless, setting the stage for viral and bacterial proliferation. When this occurs, the Immune System must work extra hard in order to fight all these invading Antigens.

Through the use of Liquid Oxygen by supplementation, we can effectively increase the available oxygen to all the cells of the body, making them much more effective in cleansing and destroying pathogens.

(For further information on the use of Liquid Oxygen Therapy refer to Special Report #14 entitled ***Effective Oxygen Therapy for Chronic Conditions***)

## **Diet and Nutritional Protocol for Immune Support**

### **DIET**

- \* Reduce or eliminate all sources of refined sugars.
- \* Increase protein intake to at least 80 grams or more per day.
- \* Ensure that the protein is a complete protein.
- \* Avoid polyunsaturated oils
- \* Eat foods in their whole, natural state as much as possible

## SUPPLEMENTATION

\* Take a Full Spectrum Dietary Supplement that provides all the Vitamins, Minerals, Amino Acids and Phytonutrients necessary for life.

This should be taken according to body weight as per the manufacturer's suggestion.

\* Add extra mega dose amounts of the stress related nutrients as follows...

Vitamin C	1000 mg
Vitamin B1	50 mg
Vitamin B2	50 mg
Vitamin B6	50 mg
Vitamin B12	500 mcg
Pantothenic Acid	1200 mg
Adrenal Substance	200 mg
Valerian Root extract	200 mg

Use the above combination once or twice per day depending upon the amount of stress involved.

\* Concentrated, encoded Bovine Colostrum. This should be taken aggressively, at the first sign of infection or other immune compromise.

Take 2 to 4 capsules every 2 to 4 hours for the first 24 hours.

Reduce by half for the next 3 days. After this initial period, take as needed only.

\* Adrenal and Thymus Support. This is best accomplished by taking desiccated broad spectrum glandular formulas which have an emphasis upon the Adrenal and Thymus glands. These products are derived from the DNA of bovine organs.

\* Liquid Oxygen. Take a Liquid Oxygen supplement at the dose of one ounce three times per day on an empty stomach.

For acute infections or low grade viruses, you can try the Oxy Flush which consists of taking 2 ounces of the Oxygen/Aloe Vera blend three times per day, on an empty stomach.

Note that this is the only supplement which must be taken on an empty stomach, 30 minutes before or three hours after a meal.

Further, note that due to rapid detoxification, you may have to work up to the suggested dose of Liquid Oxygen over a two to four week period. Once able to take the full 6 ounces per day, stay at that level for 4 to 6 weeks.

For further immune support, you may add the following nutrients in these mega-dose amounts daily, but only after you have provided the balance of nutrients through taking a Full Spectrum product as outlined above.

Vitamin A (from fish liver oil only)	25,000 IU
Zinc (Chelate)	50 mg
Folic Acid	400 mcg

The previous dietary and nutrient recommendations represent those reflected by the very latest nutritional and bio-medical research from around the world.

We have had tremendous results in using this Protocolin specific application to a wide variety of conditions. Anyone who has reason to believe that their Immune System may be compromised, even if it's just catching one too many colds in a season, should begin to take care of their Immune System now, before you really need it and it's not there for you.

The program is simple enough. What remains is for you to make the commitment and develop the discipline to follow it through.

Each of the formulas and protocols detailed in this Special Report are available exclusively from Phoenix Nutritionals.

Contact [www.PhoenixNutritionals.com](http://www.PhoenixNutritionals.com) or by telephone at 1-800- 440-2390 or 858-217-2412 or email [Questions@PhoenixNutritionals.com](mailto:Questions@PhoenixNutritionals.com)

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