

**Combining powerful antioxidant
berry juices with immunity-
enhancing transfer factors**

Transfer Factor-Juice Revolution

***Provides valuable information on the new liquid
form of transfer factors combined with potent
antioxidants found in Nature's most powerful
berry juices açai berry, elderberry, blueberry
and pomegranate. Read inside to learn more
about this important breakthrough!***

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The information in this book is for educational purposes only and is not recommended as a means of diagnosing or treating an illness. All matters concerning physical and mental health should be supervised by a health practitioner knowledgeable in treating that particular condition. Neither the publisher nor the author directly or indirectly dispenses medical advice, nor do they prescribe any remedies or assume any responsibility for those who choose to treat themselves.

Introduction

The topics of immune support and anti-aging *are* a few of the most widely discussed health subjects in today's world. All of us want to feel better, look younger and lead healthier lives. But how do we achieve that? So many modern diseases could be prevented if we just took better care of our bodies. Chronic inflammation, caused by a dysfunctional immune system, is a prevalent problem that has been implicated in a host of diseases. A healthy immune system is the best possible start to achieving superior health overall, and even allows powerful antioxidants to more effectively do their job.

For the past thirty years, I have written about dozens of health topics and researched thousands of natural compounds. It is my opinion that the substances outlined in this book represent the very best in immune and anti-aging support on the market today. Taken together, they will give you an excellent combination for a healthier, more fulfilling lifestyle for years to come.

Body Under Attack

Every day, your body is under attack. Not from something you can see, but from unseen threats like germs, toxins, stress and poor nutrition. Today's world is a truly hostile environment that threatens to undermine health from every different direction. Even if you can't see the problem, more than likely, you've felt its effects.

- Do you frequently find yourself rundown, out of energy and dragging from one day to the next?
- Does it seem as if you and your family are always battling another cold, another bout of the flu, another respiratory infection?
- Do you lead a stressful life, not getting adequate rest and exercise?
- Do you often eat meals on the go?
- Do you or someone in your family suffer from diseases such as cardiovascular disease, diabetes, fibromyalgia, allergies or arthritis? Do you have a family history of these conditions?

If you can relate to one or more of these, you're no different than the rest of us. So, if what you can't see really can hurt you, what are some of the problems that your body faces every day?

- "Superbugs" and failing antibiotics
- Life stress
- Diet stress
- Environmental stress
- The free radical war

THE AGE OF SUPERBUGS

It's a scenario that's unfortunately becoming all too common. Your infant daughter just hasn't been herself lately, crying, fussy and not sleeping well at night. You take her to the pediatrician, and he gives you a prescription for her double ear infection. You follow the directions perfectly, give her the entire course of antibiotics, but she still pulls at her ears and cries in pain. Back to the doctor you go, only to find out that the medicine failed to do its job. *USA Today* reported in 1998 that more than 70% of hospital-acquired infections are resistant to at least one antibiotic.

Antibiotics, once touted as the silver bullet of medicine, are slowly beginning to backfire. As the germs become smarter and smarter, the medical world must develop more sophisticated drugs to outwit nature. The problem is, it doesn't take long for the germs to emerge victorious once again. And what's more, antibiotics are often abused. Whether it's the doctor who prescribes antibiotics when they aren't necessary, or the patient who uses an old prescription for a new and different illness, antibiotics are clearly overused and misused.

Another concern with antibiotics is that by their very nature, they kill all bacteria: the bad and the good. Within your body exists a delicate balance of flora and fauna, or good bacteria. When an antibiotic kills all bacteria within its path, this causes a dangerous disruption in the balance of bacteria, often leading to an increase in fungal, or yeast infections. You should avoid antibiotics

and use them only when absolutely necessary—to avoid them altogether, you need a strong and well-equipped immune system to keep you out of the doctor’s office.

STRESS: THE BIG THREE

Life stress. For most of us, stress is just a normal part of life. Like most of the world, you probably have a full-time job that often stretches the limits of the forty-hour workweek. You come home from your job and there’s a million things going on—carpools, homework, dinnertime—home life really is just as demanding as the office!

Perhaps you’re experiencing financial difficulties that have placed their extra burdens on your shoulders. Maybe you have trouble sleeping at night, sometimes getting only three or four hours of good rest each night. The National Sleep Foundation 2005 Poll reported that 75% of us experience sleep problems at least once or twice a week.

A good night’s rest is crucial for good health, productivity and mental alertness. Who could blame you for being stressed? And as the world moves faster and faster, your life spins more and more out of control.

Diet stress. With the busy life you’re living, who has time to eat three balanced and healthy meals every day? While 80% of Americans recognize the Food Guide Pyramid when showed to them, two-thirds of the population are overweight or obese, U.S. Department of Agriculture officials report. That’s 197 million of us. We know what we should be eating, but it seems that very few of us follow through.

A familiar saying tells us that “you are what you eat.” Although you’ve probably heard it a thousand times, it really is true. The food you eat has a dramatic effect on the overall well-being of your body. And if you’re like most of today’s society, that diet is filled with convenience foods, too much salt, too much sugar and too much fat. Your unhealthy diet also puts added stress on the immune system to perform its job as your defense from the outside world. And a weakened immune system can’t keep you well.

Environmental stress. Scientific research has overwhelmingly supported the theory that environmental toxins in the air such as pollution weaken our immune system and contribute to disease. A report published in *Environmental Pollution and Neuroimmunology* states that the combined influence of various factors such as chemical agents, radiation and stress on the immune system may lead to immunodeficiency in the form of respiratory and inflammatory diseases.

THE FREE RADICAL WAR

Picture in your mind the following scenario: It’s the middle of the afternoon and you decide to have a healthy treat as a pick-me-up at work. You peel and slice the apple, only to be called away for a last-minute department meeting. When you return two hours later, your apple has begun to turn an ugly shade of brown.

The same process occurs, albeit more slowly, in a car. When you purchase a brand-new car, it is beautiful and sleek, free of any imperfections. As the vehicle ages, susceptible to the outside elements of air, rain, snow, wind and pollution, you begin to notice rust spots. A few spots become many, until it seems like there’s more rust than actual car!

What’s going on here? The process of oxidation.

OXIDATION

With every breath you take, you’re adding soldiers to a war going on inside your body: the free radical war. The process of oxidation, the very process by which you receive vital oxygen into your body, carries it with a nasty by-product called free radicals. And even the food you eat, broken down into carbohydrates, fats and proteins, goes through its own process of oxidation, creating more free radicals. Agents in the outside environment, such as cigarette smoke, fried foods, ozone, excessive sun exposure, car exhaust, certain drugs, radiation and air pollution, can also contribute to increasing levels of oxidation within your body.

FREE RADICALS

Free radicals are oxygen molecules that are missing a shared electron, leaving them unstable. These unpredictable molecules begin attacking cells, taking electrons away and damaging body cells in the process. On a small scale free radicals are normal, and actually necessary for the body to do repair work among cells and fight infection. But when this situation gets out of control, as it often does, the body goes into a state that's referred to as oxidative stress.

Oxidative stress has been associated with the following diseases:

- Parkinson's disease
- Alzheimer's disease
- stroke
- cardiovascular disease
- diabetes
- cancer
- arthritis
- hypertension
- other degenerative diseases

Putting it simply, free radicals are essentially what make you age. And the more free radical damage, the faster your body ages. Heart disease, premature aging, wrinkling of the skin, hardening of the arteries and even stiffening of the joints are just a few of the signs that your body is not winning the free radical war.

CONTENTS UNDER PRESSURE

Superbugs, stress, oxidation—each of these problems places burdens on your body. Combined, it's a load no body should have to bear. Yours does, day in and day out. But it won't forever. Fortunately, there is something you can do today to counteract the damage and take control of your health.

THE TRANSFER FACTOR-JUICE REVOLUTION

To survive and thrive in such a hostile environment, you need a two-pronged solution that addresses your body's most critical needs. First, support the immune system, bringing it back into fighting form. Second, prime the body with antioxidant support to help reverse the aging process going on inside your body. Scientists have come up with a new transfer factors-and-berry-juice supplement that can deliver both immune system and antioxidant support.

1. Immune System Support

The vast majority of the time, you don't even notice that your health is being threatened, and that's because your immune system is doing its job. The immune system, your body's defense against harmful microorganisms invading from all sides, works overtime to protect you from smarter and stronger bugs. When an invader seeks to undermine your health, the immune system calls into action cells throughout the body to mount an attack and quickly defeat it.

THE BASICS OF IMMUNITY

The immune system is a complex group of organs, cells and molecules throughout the body that work together with one goal in mind: to keep you healthy and strong. The main components of the immune system are:

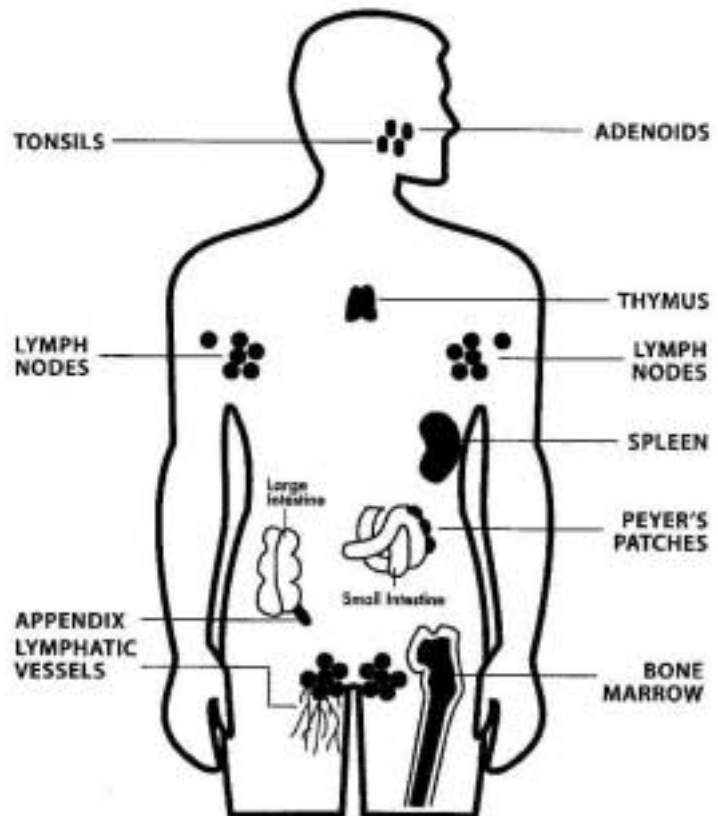
- skin, nose, mouth and eyes
- thymus
- spleen
- lymph system (including adenoids, tonsils, appendix and Peyer's patches)

- bone marrow
- white blood cells
- antibodies
- complement system
- hormones

There are two facets to the immune system, the innate (instinctive) response and the acquired (learned) response. Each of us is born with an innate immune response—the ability of the immune system to generally recognize foreign invaders. The innate immune system includes immune cells such as natural killer (NK) cells and macrophages. NK cells and macrophages do not need prior exposure to an infectious agent in order to act. They simply recognize foreign cells and go to work.

In addition to the innate immune system, you also have acquired immunity to handle all of the microbes that the innate immune system can't take care of on its own. Immune cells

learn new skills and build new tools to deal with the increasing host of microbial invaders that you face on a daily basis. In order for the acquired immune system to work effectively, it must first recognize the threat and then build the tools to mount an attack. After the enemy has been defeated, the acquired immune system remembers it for the next time.



THE FOUNDATION OF GOOD HEALTH

The immune system is intimately connected to every other system in your body. When your immune system is rundown or operating at half capacity, the rest of your body is left vulnerable to the germs, viruses and bacteria that are everywhere in today's environment. If you stress your body with a bad diet, no exercise and a demanding lifestyle, your immune system isn't getting the support it needs. Working around the clock to protect you, it can often fall short just when you need it the most.

An immune system that is strong and up to the challenge of everyday life allows every system in the body to function at its best. A healthy immune system paves the way for a healthier you.

2. Antioxidant Support

Oxidative stress means there aren't enough antioxidants in your body to control the free radical population. Oxidative stress, caused by free radicals wreaking havoc inside your body, is making you age every minute of every day. Your best tool to combat the aging process is antioxidant support. Antioxidants are substances that neutralize free radicals and stop their destructive assault on the cells of the body. You'll remember that free radicals are so damaging because they're unbalanced. They lack a shared electron. The antioxidant donates one of its own electrons to the rogue free radical and restores balance. Antioxidants also work together with your body to repair the harm caused by free radicals.

THE NUTS AND BOLTS OF ANTIOXIDANTS

Antioxidants exist within your body and also within nature. Some of the more well-known antioxidants include vitamin C, vitamin E, selenium and the carotenoids. Research has also uncovered high antioxidant value in certain fruits and vegetables, including berries. Antioxidant

supplements have been on the rise in recent years, with sales increasing 6% in 2003 to \$2.7 billion worldwide, as reported by the *Nutrition Business Journal*.

ANTIOXIDANT BENEFITS

Antioxidants support the body in many different ways:

- Promote cardiovascular and circulatory health
- Control excessive inflammation
- Maintain healthy cholesterol levels
- Promote digestive system health
- Boost the immune system
- Reduce the signs of aging

ORAC VALUE

In the past thirty years, a procedure has been developed, tested repeatedly and perfected to help determine the who's who list of antioxidants. The Oxygen Radical Absorbance Capacity, often referred to as the ORAC value, measures the total antioxidant value of foods and other chemical substances. The antioxidant value is defined as the ability of a compound to reduce the amount of free radicals within the body. The higher the ORAC value, the more antioxidant value that particular substance carries.

Recently, the Agricultural Research Service conducted studies on foods with high ORAC values. In the studies, scientists found that eating high-ORAC foods:

- raised the antioxidant power of human blood 10 to 25%.
- prevented some loss of long-term memory and learning ability in middle-aged rats.
- maintained the ability of brain cells in middle-aged rats to respond to a chemical stimulus—a function that normally decreases with age.
- protected rats' capillaries against oxygen damage.

"If these findings are borne out in further research, young and middle-aged people may be able to reduce risk of diseases of aging—including senility—simply by adding high-ORAC foods to their diets," said ARS Administrator Floyd P. Horn.

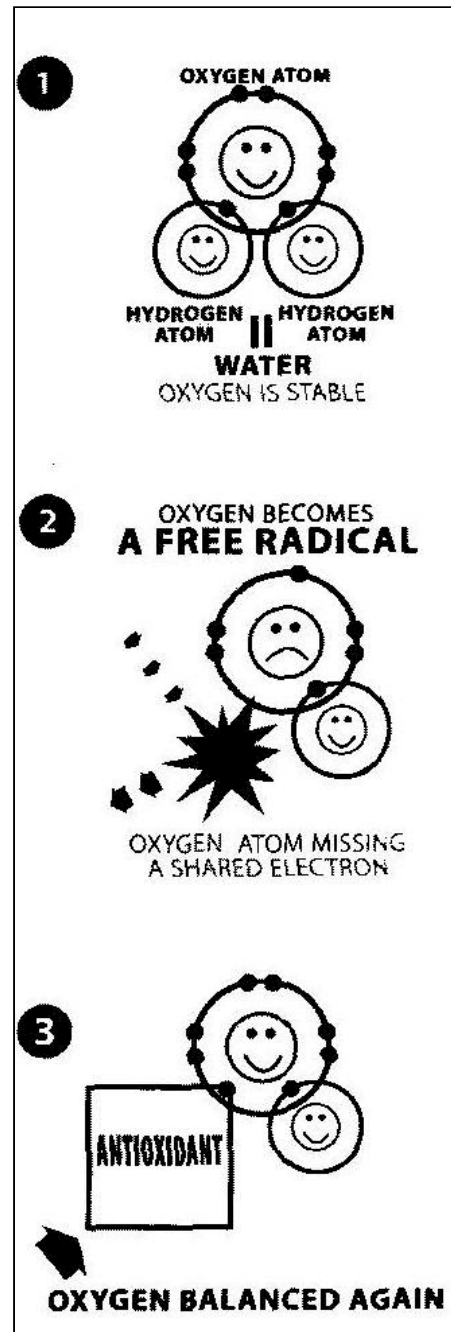
The value of antioxidants is now firmly placed in scientific fact. Their ability to scavenge free radicals and reverse the effects of premature aging simply cannot be ignored. With oxidative stress occurring everywhere in your body, antioxidants provide real support and real solutions to turn back the clock and help you feel younger than you actually are.

A Better Body Machine Through Immune System Support

Your body works like a well-oiled machine. At least it does when you take good care of it. One of the most important cogs in that body machine is the immune system. As truly the basis of health for your entire body, it's crucial to support the immune system. Your quality of life literally depends on it.

THE SECRET IN NATURE: TRANSFER FACTORS

More than fifty years ago, science uncovered the secret to a strong immune system hiding in nature. H. Sherwood Lawrence, a researcher studying tuberculosis, made a clandestine breakthrough in 1949. He discovered that immune information could be transferred from a donor to



a recipient. He concluded that there must be certain “factors” that were doing the actual transferring. He named these tiny molecules transfer factors.

Transfer factors are an entirely new category in immune technology, different from anything ever before brought to market. What transfer factors are *not*:

- vitamins
- minerals
- herbs

SO WHAT ARE TRANSFER FACTORS?

Transfer factors are some of the most unique molecules in the human body, performing highly specialized and critical roles within the immune system. Simply put, they are messenger molecules that carry information to immune cells all over the body. Supporting your body with transfer factors can be compared to the continuing education you receive as you progress in your chosen career. They give your immune system critical refresher courses. Transfer factors teach and train the immune system in three very important ways:

THE 3 R’S

Recognize. Transfer factors educate the immune system to quickly identify invading germs, speeding up the recognition stage.

Respond. An intelligent immune system must immediately mount an attack and destroy the threat. Transfer factors are able to decrease the response time and enable the immune system to more quickly defeat the enemy, shortening the duration of an illness.

Remember. Transfer factors aid the immune system in remembering the specific makeup of each germ it encounters, ensuring a swift and strong defense the next time.

RESTORING BALANCE

In addition, transfer factors have the ability to suppress an overactive immune system. This is especially important when dealing with autoimmune conditions such as fibromyalgia, allergies and chronic fatigue syndrome. In autoimmune conditions, the immune system turns on itself and begins to attack the body. While many supplements simply boost the immune system, transfer factors determine if the immune system has lost control, and turn off the immune response when necessary. Transfer factors restore balance to an out-of-control situation.

An example: In the case of a healthy immune system, inflammation is a normal response to an infection or injury, such as a cut or scrape. Immune cells flood the area and create swelling or inflammation. When your immune system is functioning properly, the immune cells retreat once the problem has been dealt with and the swelling goes down. In some situations, the immune cells do not retreat and the inflammation continues, creating a possibly chronic problem. Chronic inflammation is now being linked to a host of serious diseases, including cardiovascular disease, Alzheimer’s and diabetes. Transfer factors educate the immune system’s suppressor cells, alert them to the inflammation problem and help them control it.

Transfer factors also have a highly specialized component called the antigen-specific fraction. This part is especially important in the memory stage, providing critical information about each particular microbe the immune system faces. When that specific germ is faced again, the immune system knows exactly what to do and you don’t get sick.

TRANSFER FACTOR ORIGINS

Transfer factors originate at the very beginning of life itself—when a baby is born. In humans and animals, a mother provides precious immune knowledge for her newborn in the first critical days of life. This immune knowledge will provide the newborn with the lessons to build its own immune strength and history, and includes transfer factor education. Patented processes have been developed to extract transfer factors from cow colostrum (US Patent 4,816,563), mother’s first milk, and chicken egg yolks (US Patent 6,468,534) (US Patent 6,866,868).

TRANSFER FACTOR SCIENCE

In the half century since Dr. Lawrence's ground-breaking discovery, thousands of research papers have been written, documenting the use of transfer factors with various conditions. These studies conclusively agree on its safety and efficacy in immune-supporting situations.

Transfer factors can be beneficial in fighting the following diseases:

- viral infection
- parasitic disease
- malignant disease
- mycobacterial disease
- fungal infection
- autoimmune disease
- bacterial disease
- neurological disease

Colostrum is the first milk that a mother gives to her newborn during breastfeeding. Although cow colostrum itself has many immune components, many of the large antibodies can not be used by the human body. Unlike the antibodies present in cow colostrum, transfer factors are not species specific. This means that transfer factors can be shared from animal to animal. The blueprint for transfer factors remains the same, no matter if it's a cow, chicken or human.

LIQUID TRANSFER FACTORS

Transfer factor technology is constantly improving and advancing. Recently, a procedure was developed to stabilize transfer factors in liquid form, making them available for beverage consumption. Flash sterilization processes were used to reduce the impact of heating on the bioactivity of the transfer factors and retain all of the transfer factor efficacy and potency.

TRANSFER FACTOR STUDIES

The following are just a few of the hundreds of studies done on transfer factors in the past fifty years:

Cancer. Transfer factors, combined with other known immune modulators, were shown to increase natural killer cell and tumor necrosis factor alpha (TNF-alpha) function in patients with late-stage cancer. Both are important immune cells that aid the body in fighting cancer cells. Researchers also recorded that quality of life improved for the cancer patients.

Pediatrics. The Rostov Microbiological Institute in Russia does groundbreaking work in the field of immunology. Recently, they did testing on transfer factors and their role in priming and supporting the naive immune system. They found that transfer factor supplementation provided vital immune education for premature babies and infants. The researchers also used transfer factors as preventive support for children about to be vaccinated. They recommended that expectant mothers consume transfer factors prior to giving birth as a means to correct their own immune dysfunctions and infections.

Autism. Autism, sometimes referred to Autism Spectrum Disorders, is a debilitating condition that occurs in ever-increasing numbers throughout the world. The Autism Society of America estimates that as many as 1.5 million Americans, children and adults, live with autism. There are many theories on the causes of autism, but researchers do agree that immune system dysfunction may play a part in the development of the disease. Transfer factors have been studied with autistic patients and there have been some promising results in this field, specifically with the epileptic seizures that often accompany the disorder. Studies have reported neurotransmitter benefits and potentially anti-epileptic effects when using transfer factor supplementation.

RUSSIAN ACADEMY OF MEDICAL SCIENCES RECOMMENDS TRANSFER FACTORS

In 2004, the Russian Academy of Medical Sciences conducted numerous studies involving transfer factor preparations and various conditions. These studies included the following diseases:

- chlamydia
- psoriasis
- herpes
- HIV
- viral hepatitis
- osteomyelitis
- stomach cancer
- pediatric conditions

At the conclusion of their investigations, they released a Methodological Letter authorizing and encouraging health care professionals in Russia to use transfer factors in their efforts at rehabilitating and retraining the immune system after infections and diseases. Academician Anatoly A. Vorobiev, a member of the Russian Academy of Medical Sciences, made this comment about his experience with transfer factors. “A multitude of immune modulators are used in medical practices but their effectiveness and the other properties defining their safety, simplicity in use and economy factors differ greatly. Transfer Factor is superior to other, even well-known, immune modulators in being extremely effective in boosting the immune system. It possesses a broad spectrum of action, is safe, is used orally as gelatinous capsules, has no contraindications, causes no adverse reactions and is effective both in adults and children.”

EXTRAORDINARY IMMUNE-BOOSTING ABILITY

One of the most important functions of transfer factors is their ability to boost the immune system, specifically calling the immune cells of the body to action. *The Journal of the American Nutraceutical Association* published results in 1999 of studies they conducted on 400 natural products, some compounds alone and some combinations of natural substances. They selected 196 of those products to be featured. Forty-four of the products tested were found to significantly increase natural killer cell function.

The highest of the original forty-four raised NK cell activity by 48.6%. When a transfer factor extract from cow colostrum was tested using these methods, it scored 103% above the baseline values, more than twice what the next highest product scored. Researchers also combined transfer factors with other known immune-boosting compounds and found this combination increased NK cell activity by 248% above baseline values.

TRANSFER FACTOR THE ANTIOXIDANT?

Oxidative stress is the state at which free radicals begin to wreak damage within the body's cells. Chronic inflammation is often associated with oxidative stress. When inflammation is controlled and brought back into the normal range, oxidative stress is likewise reduced.

New research points to evidence that transfer factors may help the body improve its own antioxidant status. Transfer factors boost and balance the immune system, and the immune system is truly the starting point to good health. A recent study performed in Russia was conducted with transfer factor supplementation and patients who suffered from osteomyelitis, a chronic infection of the bones which can cause severe pain and swelling. When scientists treated the patients with transfer factors, not only did it boost their immune system and control the inflammatory situation, but their antioxidant defenses were raised as well. What can be concluded from this study? The immune system is responsible for and affects the entire body. When the immune system is doing its job, every other body system is able to work more effectively.

HOW TRANSFER FACTORS HELP YOU AND YOUR FAMILY

Transfer factors are safe for people of all ages. Whether young or old, you can safely consume transfer factors on a daily basis. Unlike drugs or antibiotics that can ultimately weaken the immune system, transfer factors support, strengthen and boost your natural defenses. Not vitamins, minerals or herbs, transfer factors represent an entirely new class in the arena of immune supplements, with the ability to tailor their focus to what your individual immune system needs.

The importance of building and teaching the immune system can never be underestimated. As some of the most unique and effective immune components ever discovered, transfer factors may yet hold the key to unlocking better health and wellness for people all over the world.

Lactoferrin

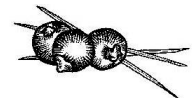
Lactoferrin is a large protein that is commonly found in milk, tears, saliva, bile, pancreatic juice and various other human secretions. It is also one of the most abundant components in human colostrum. Lactoferrin has been shown to have a positive effect on the immune system. Scientists found this to be the case when studying lactoferrin and eosinophils, vital immune cells that help combat infections such as asthma. The researchers concluded that lactoferrin plays a role in activating these immune cells. Researchers in Texas found that lactoferrin is a potent agent against cancer, both by itself and when combined with chemotherapy.

Berry Power

For the past several years, scientific research has uncovered that certain nutrients provide important antioxidant support, neutralizing free radicals and reversing the damage they do to the body. Vitamins A, C and E, red grapes, pine bark, selenium—the list of antioxidants found in nature is certainly long. But what provides the most antioxidant support? What should you take on a daily basis?

The following berries represent some of the very best in antioxidant superpowers on the market today. Açai, blueberry, pomegranate and elderberry provide superior antioxidant support for the entire body.

Açai (*Enterpe oleracea*)



If you traveled deep into the Amazon rain forests of Brazil, you would find thousands of miles of Amazon palm trees. And high in the tops of these trees grow berries called açai. Pronounced AH-sigh-EE, these deep purple berries resemble small marbles and have an unusual taste of sweet berry with just a hint of chocolate. Açai, used for hundreds of years by native Brazilians for its various health benefits, is just now beginning to take center stage in the western world. The main source of antioxidants in açai is anthocyanins, which give the berry its purple color. Açai contains ten to thirty-three times the amount of anthocyanins of red wine. More than just simply an antioxidant fruit, açai contains valuable amino acids, unsaturated fats and has numerous health benefits for the entire body.

Nicholas Perricone, author of *The Perricone Promise* and *The Perricone Prescription*, recently touted the benefits of açai on the Oprah Winfrey show, naming it one of “Ten Superfoods for Age-Defying Beauty.”

UNSATURATED FATS

Açai contains healthy fats that are necessary for growth, nutrition and development. There are two types of fat, saturated and unsaturated. Saturated fats, although needed in small doses by the body, should be largely avoided. Unsaturated fats are the so-called “good fats” that the body requires on daily basis. These fats contain crucial building blocks of information for the heart, circulatory system, brain and skin. The three types of unsaturated fats are omega-3, omega-6 and omega-9 oils.

Açaí provides two important and often hard to get unsaturated fats, omega-6 (Linoleic acid) and omega-9 (Oleic acid). Research shows that these fatty acids play an important role in maintaining healthy cholesterol levels. Omega-9 fatty acids help lower LDL (harmful cholesterol) while maintaining HDL (beneficial cholesterol) levels. Omega-6 essential fatty acids have also been found to lower LDL cholesterol.

AMINO ACIDS

Amino acids are molecules that make up proteins and carry out important functions throughout the body. They build cells, repair tissue and form antibodies to fight invading germs. Açaí contains two amino acids, methionine and lysine. Methionine promotes healthy cholesterol levels, reduces liver fat, protects the kidneys and promotes hair growth. Lysine helps your body absorb calcium, promotes healthy bone cartilage and connective tissue and plays a role in the production of antibodies, hormones and enzymes.

PHYTOSTEROLS

Phytosterols, also referred to as plant sterols, are natural substances that are found in the cells and membranes of plants. Açaí contains valuable phytosterols such as beta-sitosterol. These sterols provide numerous benefits to the human body, including the reduction of harmful cholesterol. Researchers have also studied the effects of sterols with BPH (benign prostate hyperplasia) and have found them to be an effective treatment for the condition. Beta-sitosterol has been investigated for its use in supporting the immune system, particularly immune weakness that results from physical stress placed on the body.

DIGESTIVE SUPPORT AND CANCER PREVENTION

Açaí is an excellent source of fiber. Your doctor has probably mentioned to you a number of times that a high fiber diet can provide protection against cancer, diabetes, heart disease and obesity. But most of us only get about half the fiber we need each day. There are two types of fiber, soluble and insoluble. Soluble fiber is important for reducing levels of blood cholesterol within the body and recent research also shows that insoluble fiber may help reduce the risk of contracting certain kinds of cancer.

CARBOHYDRATES FOR INCREASED ENERGY

Açaí is also rich in carbohydrates, which can provide your body with a much-needed extra boost of energy to feel better and experience more vitality throughout the day, every day.

Blueberry (*Vaccinium corymbosum*)

Found in various parts of North America such as Canada and Maine, the blueberry is a staple of the modern American diet. Whether on ice cream or in muffins, blueberries are widely enjoyed. This blue fruit is bursting with flavor and color and grows on a flowering bush. Native Americans have consumed the leaves, roots and fruits of the highbush blueberry for centuries for its various health proprieties. The cousin of the blueberry, the bilberry, has long been considered an important part of European medicine as a staple of their health and nutrition program. The main antioxidants contained in blueberry are anthocyanins and chlorogenic acid. The anthocyanins are what gives blueberry its vibrant blue color.



When tested for their antioxidant value, blueberry scored 2,400 ORAC units, one of the highest antioxidant values of any fruit tested. The USDA Jean Mayer Human Nutrition Research Center on Aging (HNRCA) recently conducted a study to test certain fruits and vegetables for their antioxidant content. Blueberry ranked at the top of a list of over forty fruits and vegetables. Dr. Ronald Prior, a scientist at the HNRCA stated, "In general, blueberries are one of the richest sources of antioxidant phytonutrients of the fresh fruits and vegetables we have studied."

BRAIN FUNCTION

One of the most exciting benefits of blueberry is its ability to boost brain function. The National Autonomous University of Mexico conducted a study on aged rats to determine if supplementation with blueberry would slow aging of the brain. Prior to testing, researchers fed twelve older rats a diet supplemented by 2% with blueberry. A control diet was fed to eleven aged rats and twelve young rats. Scientists later tested all of the rats for object recognition memory. The aged rats that were fed blueberry performed significantly better than the aged control group, specifically in terms of memory and recognition.

Another promising study was conducted on rats and blueberry to study its effects with ischemic brain damage. This type of brain damage occurs when blood circulation is cut off to certain areas of the brain, shutting down the oxygen flow and causing brain cells to die. Using two groups, one group of rats whose diets were supplemented with blueberry, and a control group without supplementation, the researchers concluded that blueberry supplementation may provide important protection from ischemic brain damage.

CONTROLLING THE INFLAMMATORY RESPONSE

Inflammation is a normal response generated by the immune system in times of wounds or infections. But if the inflammation continues, this can create a chronic problem within the body. The Human Nutrition Research Center on Aging conducted research to determine how the antioxidant support found within blueberry and cranberry would reduce both oxidative stress and excessive inflammation within the body. Both berries reduced production of inflammatory mediators that recruit immune cells to the sites of inflammation. When inflammation is controlled in the blood vessels, blood circulation is restored to normal and healthy levels. Scientists concluded that blueberry supplementation controls inflammation and improves blood circulation throughout the body.

CHOLESTEROL REDUCTION

You hear all the time about the importance of lowering your cholesterol, but it's important to understand the basics. Not all cholesterol is bad. There are two types of cholesterol, low-density lipoprotein (LDL), which is the bad or harmful type of cholesterol, and high-density lipoprotein (HDL), the beneficial form of cholesterol. LDL cholesterol is especially harmful when it becomes oxidized within the body.

Blueberry has been studied to determine its possible benefits in reducing the buildup of LDL cholesterol and normalizing cholesterol levels throughout the body. Studies conducted by researchers at the University of California at Davis concluded that blueberry reduces LDL cholesterol within the body, providing increased protection against cardiovascular disease and stroke.

IMPROVES EYESIGHT

For decades, researchers have studied the effects of blueberry on eyesight. Even as early as World War II, British Royal Air Force pilots consumed bilberry, the European blueberry, to help increase their night vision for bombing runs. The antioxidant content in blueberry and bilberry, specifically anthocyanin, is thought to be the factor behind the improved eyesight. Scientists in Japan explored the connection between blueberry and eyesight in a 1999 study. They tested twenty-six people, giving one part of the group blueberry extract twice a day and the other group a placebo or sugar pill. The study concluded that the blueberry supplement group experienced an improvement in weak eyesight, including a reduction in fatigue and pain.

DIABETES AND CANCER

Diabetes, particularly type 2 or adult-onset diabetes, is quickly becoming an epidemic around the world. The WHO reports that 177 million people around the world are afflicted with diabetes. Insulin is a hormone produced by the pancreas that facilitates your body's ability to utilize glucose, or sugar, for energy and growth. Type 2 diabetes is characterized by resistance to insulin within the

body, which has been linked to oxidative stress. Pterostilbene is a compound found within blueberry and other substances such as the Indian kino plant. This compound has been shown to regulate blood sugar, an important component in the fight against type 2 diabetes.

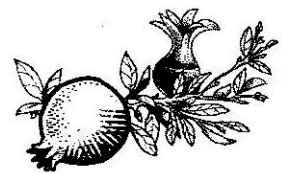
Researchers at the U.S. Department of Agriculture also tested pterostilbene to determine its value in preventing certain types of cancer. Using mouse cells infected with breast cancer, they found that pterostilbene significantly inhibited cancer growth.

DIGESTIVE HEALTH

As discussed previously, blueberry has been found to be beneficial in controlling excessive inflammation throughout the body. This benefit extends to the digestive system, where inflammation can contribute to a host of debilitating conditions such as Crohn's disease, irritable bowel syndrome and leaky gut syndrome. Because blueberry aids the immune system in halting an out-of-control inflammatory response, the digestive system is able to repair the damage and begin functioning normally again.

Pomegranate (*Punica granatum*)

For centuries, the pomegranate has symbolized health, fertility and rebirth. Native from Iran to the Himalayan mountains of northern India, this fruit was cultivated all over the Mediterranean region, Asia, Malaysia, East Indies and tropical Africa, and then later introduced to the United States by Spanish settlers in California in the late eighteenth century. The pomegranate fruit is composed of sacs filled with sweet juicy pulp, either red, pink or white. Pomegranate juice itself is commonly used in the beverage and liquor industries. The main antioxidants in pomegranate are anthocyanins, hydrolyzable tannins and ellagitannins, with antioxidant activity measuring three times the amount of red wine and green tea.



CARDIOVASCULAR HEALTH

With potent antioxidant value, pomegranate has been shown in laboratory studies to provide significant benefit for the cardiovascular system. One study used pomegranate juice with people who suffered from carotid artery stenosis (CAS), a condition that narrows the carotid arteries. The carotid arteries are the main arteries in the neck that supply crucial blood flow to the brain. After one year of testing, those patients who had supplemented their diet with pomegranate juice noticed a reduction in carotid intima-media thickness. The intima and media are the first two layers of an artery. The thickening of these sections, caused by plaque formations, can mark the development of atherosclerosis, or hardening of the arteries. In addition to reducing the intima-media thickness, the researchers also reported normalized blood pressure and lowered LDL cholesterol in the test subjects. The scientists concluded that pomegranate juice is a beneficial component to promoting cardiovascular health. Another study, using both human cells and mice, found that pomegranate juice extract is an important component in reversing the progression of atherosclerosis entirely.

CHOLESTEROL BALANCE

Like many antioxidants, pomegranate has also been touted for its abilities to reduce the levels of LDL cholesterol within the body. One study in particular found that pomegranate supplementation in mice with atherosclerosis 'significantly inhibited the development of atherosclerotic lesions and this may be attributed to the protection of LDL against oxidation.'

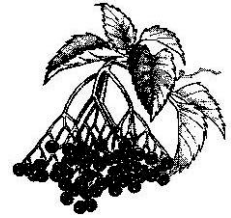
CANCER

Scientists have also begun to discuss whether pomegranate could possibly inhibit the growth of tumors within the body, specifically cancerous ones. Researchers in the Department of Dermatology at the University of Wisconsin used a topical application of pomegranate fruit extract on the skin tumors of mice to determine its effects. Their results were clear. All of the mice that were not treated with the pomegranate developed cancer, while only 30% of the ones given the pomegranate application did. These scientists found this to be "clear evidence that pomegranate fruit extract possesses anti-skin-tumor-promoting effects."

Experts have told us for years that exposure to the sun, even in relatively small doses, can be harmful. Ultraviolet radiation, particularly UV-B rays, is very damaging to the skin and has been implicated in the development of skin cancer. Using normal skin cells and treating them with pomegranate fruit extract, scientists determined that pomegranate was able to protect against the adverse effects of UV-B radiation.

Elderberry (*Sambucus nigra*)

Elderberry is native to Europe, Asia and North Africa and have been naturalized in the United States. The flowers, leaves, berries, bark and roots have been a part of traditional folk medicine for hundreds of years. The elderberry has often been used as a diaphoretic, diuretic, laxative, astringent and emetic. In cooking, elderberry is used for pies, jams and wine. A popular hedge tree in England, the elder tree was once referred to in England as “nature’s medicine chest.” The main antioxidants contained in elderberry are anthocyanins and proanthocyanidin flavonoids.



IMMUNE PROPERTIES

Perhaps the most important benefit of elderberry is its ability to fight viruses that the body encounters on a daily basis. Scientific research has long established that certain components of elderberry neutralize viral activity, inhibiting a virus’ ability to penetrate cell membranes. And if a virus can’t infiltrate your cells, you don’t get sick! One particular study tested elderberry with the influenza virus to determine the berry’s benefit. Patients were given elderberry extract orally within forty-eight hours of first noticing flu symptoms. Two days after the initial dose of elderberry, scientists noticed “significant improvement” in 93.3% of the patients.

In addition, elderberry has been shown to increase cytokine production. Cytokines are proteins that are utilized by the immune system for various functions, including alerting immune cells to an inflammatory situation within the body. This is especially important in controlling inflammation and bringing the body back into balance. Two separate studies demonstrated elderberry’s ability to provide a considerable increase in cytokine production.

BLOOD VESSEL BENEFITS

All blood vessels are lined by endothelial cells. These extraordinary cells were once considered to be simple lining cells without any real function or value, other than to keep blood cells from leaking out of the vessels. However, years of research on endothelial cells has revealed that they have an amazing array of functional and adaptive qualities. Most importantly, they play a key role in the health of blood vessels in general and a major role in arterial disease.

Researchers at The Human Nutrition Research Center on Aging conducted a study investigating elderberry and its benefits against various oxidative stressors. Their results showed decisively for the first time that vascular endothelial cells can incorporate anthocyanins, antioxidants found in elderberry, into their cell membrane. This translates into significant antioxidant protection for the endothelial cells, and better blood vessel and cardiovascular system health.

Additional Antioxidants

RED GRAPES

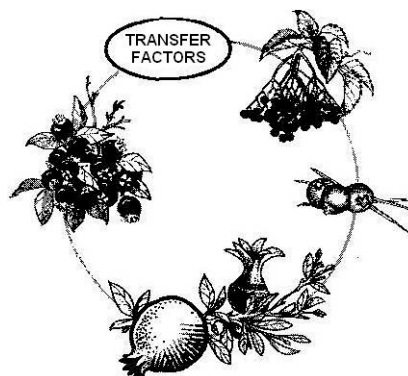
Red grapes are rich in antioxidants and have been heavily researched for years. It has been theorized that the superior health of Europeans, when compared to Americans, may be attributed in part to their greater consumption of red wine, made from red grapes. Scientific studies have shown the red grape’s value for the cardiovascular system, including normalizing blood pressure, blood flow and cholesterol levels.

VITAMIN C

Vitamin C is another powerful antioxidant that has been recognized by the scientific community for the many benefits it can provide to the body. Vitamin C has been shown to inhibit the oxidation of LDL cholesterol, to reduce oxidative stress in people who smoke, and to protect immune cells from damage caused by free radicals. Further investigation into vitamin C's immune properties has shown a decreased risk of breast, cervical, colorectal, pancreatic and gastric cancer, as well as decreased duration and severity of the common cold.

The Whole is Greater...

than the sum of the parts. Immune system and antioxidant support together provide a powerful and effective approach to help your body where it needs it most. A well-functioning immune system allows antioxidant supplementation to truly deliver the kind of support that your body needs to combat oxidative stress. The new combination of transfer factors and berry antioxidants such as açai, blueberry, pomegranate and elderberry is simply unsurpassed in the nutritional supplement industry today. Together they provide a one-two punch that allows you to feel better, deal effectively with stress, reverse the signs of aging and live a longer, more fulfilling life.



Glossary

açai: a powerful antioxidant discovered in the Amazon jungles of Brazil. Açai contains 10-33 times the antioxidant power of red wine.

amino acids: molecules that make up proteins and carry out important functions throughout the body. They build cells, repair tissue and form antibodies to fight invading germs.

antioxidants: substances that supply an extra electron to free radicals, helping to restore their stability and reverse the damage already caused to body cells.

chronic inflammation: out-of-control immune response that has been associated with cardiovascular disease, Alzheimer's and diabetes.

free radicals: oxygen atoms that lack an essential electron, making them unstable. Free radicals cause damage to cells throughout the body, kickstarting the aging process.

oxidative stress: the state at which the free radical population in your body has overpowered antioxidants, causing premature aging and various diseases.

phytosterols: also referred to as plant sterols. Phytosterols are natural substances that are found in the cells and membranes of plants and perform numerous functions in the body.

transfer factors: messenger molecules that train, boost and balance the immune system.

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