

Immune Power™

DNA TARGETED NUTRACEUTICALS

PHARMACEUTICAL GRADE



OPTOMED
Pharmaceuticals



180 Vcaps™ • Dietary Supplement

Supplement Facts

Serving Size 6 Capsules
Servings per Container: 25

Amount Per Serving	% Daily Value
Vitamin A (as Vitamin A Palmitate & Alpha-Carotene)	20,436 IU 409%
Vitamin E (as d-Alpha Tocopheryl Acetate)	200 IU 667%
Selenium (as L-Selenomethionine)	80 mcg 114%
Calcium EDTA	750 mg †
Maitake TD-Fraction™ Powder (10% Concentration)	500 mg †
Bio-Factor™* (44% Humic Acid & 11% Fulvic Acid)	300 mg †
Catalase	200 mg †
TMG (Trimethylglycine)	200 mg †
Omega-3 Fatty Acid Powdered Extract (Providing EPA (Eicosapentaenoic Acid) & DHA (Docosahexaenoic Acid))	200 mg †
Cat's Claw Herb Powdered Extract (3% Total Alkaloids as Mitraphylline)	200 mg †
NAC (N-Acetyl Cysteine)	150 mg †
Quercetin	150 mg †
Ginkgo biloba Herb Powdered Extract (24% Ginkgoflavoneglycosides & 6% Terpene Lactones)	150 mg †
IP6 (Inositol Hexaphosphate)	150 mg †
Turmeric Herb Powdered Extract (95% Curcuminoids)	100 mg †
Green Tea Powdered Extract (60% Catechins)	100 mg †
L-Carnosine	100 mg †
Alpha Lipoic Acid	75 mg †
SOD (Super Oxide Dismutase)	75 mg †
Bilberry Fruit Powdered Extract (25% Anthocyanosides)	75 mg †
Beta 1,3 Glucan	60 mg †
Tocotrienol Complex (From Rice)	60 mg †
Lactoferrin	60 mg †
CoEnzyme Q-10	50 mg †
Flax Seed (Shaved)	50 mg †
Grape Skin Powdered Extract	50 mg †
Di-Indole Methane	25 mg †
Lycopene (From Tomato Fruit Powdered Extract)	8 mg †
Lutein (From Marigold Flower Powdered Extract)	5 mg †
Chaparral Powdered Extract	570 mcg †

† Daily Value Not Established

Suggested Use: As a dietary supplement, take 1–3 capsules twice daily or as directed by a health care professional.

Developed and directed by Dr. Sam Walters and his entire pharmaceutical research team of Biochemists and Nutraceutical researchers, this revolutionary system of Immune Modulation Formula has been developed throughout Dr. Sam Walters' 35-year career, caring for 55,000+ patients.

Other Ingredients: Nectarberry™ Delivery System**, Magnesium Stearate and Silica in Vcaps™.

*Bio-Factor™ is assayed in accordance to California Department of Agriculture

**Exclusive Nectarberry™ Delivery System is a proprietary blend of acid-stable, plant & fruit-based enzymes (furnishing Amylase, Cellulase I, Cellulase II, Lactase, Lipase, Protease I, Protease II & Protease III with Bromelain & Papain) and ConcenTrace® Alfalfa for enhanced bioavailability.

ConcenTrace® Alfalfa is a blend of 72 Trace Minerals in a base of Alfalfa Leaf. ConcenTrace® Alfalfa is a registered trademark of Trace Minerals Research. Vcaps™ Vegetable Capsules is a trademark of Capsugel®. Maitake TD-Fraction™ Powder (10% Concentration) is a trademark of Maitake Products, Inc.

Store in a cool dry place. KEEP OUT OF REACH OF CHILDREN.

Does not contain any fillers, dairy, egg, sugar, yeast, soy, corn, glutes, artificial colors, flavors or preservatives.

Vegetarian Friendly Formula. Does not contain any animal products. Never tested on animals.

This product has not been approved by the FDA. This product is not intended to diagnose, treat or cure any disease.

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When it comes to our health, nothing is more important than having a strong immune system. This intricate system of organs, white blood cells, lymphatic vessels and specialized cells must all work together in harmony 24 hours a day, every day of the year in order for us to remain in good health.

Now, when we think about the immune system, many of us immediately remember the last time we came down with a nasty cold or flu bug. While this is certainly a reasonable association to make—after all, if our immune systems are not working up to speed chances are we will come down with a good case of the sniffles—the immune system actually does far more than ward off the common cold. In fact, research has shown time and time again that the immune system is connected with just about every type of illness or health condition that you can think of.

For example, did you know that there is a very strong and proven link between a weakened immune system and cancer? There is also strong evidence that having a strong immune system can help ward off many forms of cardiovascular disease, and just as many studies connect the immune system with arthritis. Truly, you are only as healthy as your immune system. If it is working well, so will you. If it is not, chances are you will get sick.

A few words about inflammation and illness

In addition to being directly related to the immune system, diseases like cancer, heart disease and arthritis share another thing in common—they are all related to inflammation. Actually, the inflammatory response is just one of the many jobs that your immune system is responsible for doing. For example, when your body is trying to heal an injured area, it will respond by sending out blood and immune system cells to the affected area. This process results in the familiar pain, redness and swelling that any of us who have ever sprained an ankle know all too well. In a perfect world, this inflammation will last until our injury heals up, and then the process will stop. But sometimes, inflammation will keep on occurring, which can lead to tissue damage and other symptoms.

The key to the inflammatory response is in substances found in all of us called prostaglandins. When the delicate balance of prostaglandins is off kilter, unnecessary inflammation can result. Scientists are now saying that because of our poor diets, general lack of exercise and environmental issues like bad air pollution, we are all getting too many prostaglandins and as a result, we are all living what are termed “hyper-

inflammatory lives.” As a result, inflammation-based diseases like arthritis, cancer, heart disease and even diabetes and Alzheimer’s are reaching near epidemic levels in our country.

What we usually do to help our immune systems and reduce inflammation

Unfortunately, when it comes to the immune system, most of us go through life essentially playing a type of “zone defense.” When we feel a cold coming on, we rush out to the closest drug store and stock up on over the counter cough syrups and antihistamines, or non-steroidal anti-inflammatory drugs (or NSAIDs). Or, in the case of much more serious immune and inflammatory-related illnesses like cancer, heart disease or arthritis, we wait until the grim diagnosis to undergo expensive and oftentimes invasive medical techniques in order to try to get better. In other words, we wait for the illness to settle in before taking action to improve our health.

What we should do to help our immune systems and reduce inflammation

Instead of waiting to get sick before trying to improve the health of our immune systems, wouldn’t it make a lot more sense to take a proactive approach to our health? Wouldn’t it be a lot better in the long run to make a few simple changes in our daily routine, rather than sit back and let some disease settle in that will lead to an often radical difference in our quality of life?

Fortunately, there are many things that we can and should be doing in order to improve the health of our immune systems, which in turn can help to reduce inflammation. For example, remember how your Mom would always tell you to get at least 8 hours of sleep every night? She was right—getting enough shut-eye can go a long way in keeping our immune systems strong.

Also, to strengthen our immunity we need to take a close and critical look at what we are putting into our mouths. Unfortunately, many of us are just so darn busy these days that we simply do not have the time to make or eat healthy meals. Instead, we rush to the closest drive-through restaurant and toss back a burger, fries and soda while heading to our next appointment. But fast food is bad for more than just your waistline—excessive levels of sugar and unhealthy fats can weaken your immune system and lead to excessive prostaglandins faster than you can say “Ronald McDonald.”

However, even if you ate what is considered the “perfect” healthy diet, you would still be deficient in many health-boosting nutrients. For example, the vitamin and mineral content of the soil in our country has declined so rapidly over the last several decades, that many fruits, vegetables

and grains are just not as healthy as they used to be. Take spinach, for example. A study at Harvard University looked at the nutrient content of spinach that was harvested back in the 1940s and compared it to what is being grown today. The results were both amazing and depressing. Researchers discovered that we would have to eat something like 25 cups of modern-day spinach to reach the same level of nutrients in only one cup of “vintage” spinach. Even Popeye wouldn’t be able to eat that much!

This story of spinach leads us to our next point, and that is the importance of taking supplements. Simply put, in order to remain healthy and have a powerful immune system with a properly working inflammatory response, we must supplement our diet with a variety of vitamins, minerals, and herbal remedies. We cannot rely on a healthy diet anymore to give us all of the nutrients that our bodies so desperately crave.

Fortunately, there are a huge number of antioxidants—vitamins, minerals, and herbal supplements—that have been clinically shown to help strengthen our immune system. In addition, there is an exciting new class of supplements called COX-2 inhibitors, that can help fight inflammation. COX-2, which in case you were wondering, stands for cyclooxygenase-2, is an enzyme that helps convert something called arachidonic acid into the prostaglandins that causes inflammation and leads to pain. Since we are in a hyper-inflammatory state most of the time, the key is to find natural remedies that can help reduce or inhibit this COX-2 process and thus keep the number of prostaglandins in check.

Overall, there are 29 natural antioxidant remedies that have been shown to be superior when it comes to helping to fight off cancer, cardiovascular disease and arthritis, as well as improving our overall good health. Many of them are COX-2 inhibitors, and all of them may be extremely beneficial for our health. Taking them all together in a convenient formula may be the simplest way yet to make sure our immune systems stay as strong as possible. This team of super hero antioxidants includes:

Vitamin A—When you are looking at natural supplements that can boost the immune system, the beginning of the vitamin alphabet is a good place to start! This amazing antioxidant has been shown to boost the immune system in a variety of ways, including encouraging the formation of white blood cells, increasing the production and activity of antibodies, and discouraging the growth of tumors. Vitamin A goes right to work in the areas of your body where infections typically enter in—places like the lungs, skin, and linings of the respiratory and gastrointestinal tracts. Vitamin A helps to keep these important parts of our body in prime working order,

so they can be more effective at keeping out harmful bacteria and other toxins that can make us sick. In fact, studies have shown that taking vitamin A right before or after being exposed to bacteria may actually reduce your chances of getting an infection. This is especially great news for folks who always seem to catch whatever cold or flu is going around. While increased levels of vitamin A may help your immune system, being deficient will cause the exact opposite. In fact, if your body is low in vitamin A, your lungs, skin, and various linings of your body will actually become more prone to damage, and thus will not as able to ward off infection. In addition to being at an increased risk of diseases like viral infections, a deficiency in vitamin A may also lead to an increased chance of developing skin infections.

Vitamin E—This impressive vitamin also helps with immunity and like vitamin A, if we do not get enough our immune systems will not function at their optimum levels. Vitamin E is also an antioxidant, which means it helps to protect both our cell membranes and the genetic information inside the cells from free radical damage. This bit of information is crucial for our health because when these parts of our cells become damaged, the cells often respond by growing abnormally, which can lead to cancer. Furthermore, vitamin E has been shown in clinical trials to prevent pre-cancerous cells from growing. Historically, eating a diet that is rich in vitamin E has been linked to a reduction in several types of cancer, including those affecting the lungs, esophagus, liver, and colon. Conversely, patients with low levels of vitamin E typically exhibit a higher rate of developing cancer. Of course, taking a high quality supplement is an easy and effective way to make sure you are getting enough of this remarkable vitamin. Vitamin E also appears to have a positive effect on our cardiovascular health. For example, a recent study that was conducted at the Harvard Medical School in Boston found that people who supplemented daily with vitamin E for two years or more reduced their risk of getting heart disease by a whopping forty percent! Another amazing study found that a deficiency in vitamin E could be a much more accurate predictor for future heart problems—even better than traditional factors like high cholesterol or hypertension. The antioxidant ability of vitamin E may also protect our joints from free radical damage, which means it may help prevent and treat arthritis.

Selenium—If we do not consume enough of this vital mineral, our immune systems can quickly get into trouble. Specifically, being deficient in selenium can prevent the immune system from making enough antibodies to ward off infection, and it may also lead to a reduction in the cells that help fight

off illness. Selenium also works as an antioxidant, and in recent years it has attracted a lot of attention due to its arthritis-preventing, cancer-fighting and cardiovascular health-enhancing abilities. One landmark study was conducted at both Cornell University and the University of Arizona. It concluded that daily doses of selenium led to 58 percent fewer cases of colorectal cancer, 46 percent fewer lung malignancies, 63 percent fewer tumors in the prostate, and a promising 39 percent fewer deaths from cancer. Other research studies have connected supplementing with selenium to reduced levels of ovarian, bladder, esophageal, liver, and pancreatic cancers. Overall, the recurring theme of these studies was that the folks with the lowest blood levels of selenium typically had the highest risk of developing cancerous tumors and having their cancer metastasize, while also having the lowest survival rate. In addition to its amazing anti-cancer properties, selenium has also been shown to be good for the cardiovascular system. From decreasing the risk of clotting to increasing the amounts of HDL (or “good”) cholesterol present in our body, selenium is superb when it comes to the heart! Finally, when taken in combination with vitamin E, selenium may also work as a natural anti-inflammatory, which makes it an important factor in the fight against joint-related illnesses.

Calcium EDTA—Chelation therapy has attracted a lot of attention recently, and for good reason. Due to a variety of environmental issues, our bodies now contain more toxic metals than ever before. These heavy metals include lead, aluminum and mercury. Chelation is a safe and effective process that has been used since the 1950s to help remove these metals from the bloodstream so that they may be eliminated from our bodies when we go to the bathroom. Taking oral forms of chelation therapy (or in other words, chelation in supplement form) is a simple way of getting the benefits of this amazing process—intravenous chelation is the other option. Calcium EDTA (which stands for edetate calcium disodium) is a common and effective form of oral chelation therapy that can provide us with small amounts of chelation that can help address the daily inflow of heavy metals into our bodies. Taking calcium EDTA can be beneficial for a variety of health concerns, including diseases that effect circulation like atherosclerosis. Patients with this condition have large amounts of fat and cholesterol, or plaque, clinging to the walls of their arteries. Interestingly, researchers have found that calcium helps keep this sticky plaque together. So when you take an oral chelation treatment such as calcium EDTA, less plaque will gunk up your arteries, which should cause a return to a healthy and normal blood flow. Multiple sclerosis, Parkinson’s disease, Alzheimer’s disease and arthritis are other diseases

that have been helped by chelation therapy.

Maitake—This large mushroom is usually found growing in Japan, Europe, and right here in North America. It is well known for its delicious flavor when used in cooking, but it also has the well-deserved reputation of being very beneficial for our health. Maitake or *Grifola frondosa*, has been used in for centuries to treat health conditions ranging from high cholesterol to infections. Maitake is also an “adaptogen,” which means it is capable of strengthening the immune system. Maitake mushrooms contain a substance known as polysaccharides, which help support the immune system. The chief type of polysaccharide found in maitake is called beta-1,6-glucan, which has been shown in clinical studies to help promote the action of important immune cells called T-helper cells (which are also called CD4 cells), as well as discourage cancerous tumors. In addition, the beta-1-6-glucan polysaccharide is being studied as an exciting new type of treatment option for HIV patients. Consuming maitake mushrooms has also been found to be beneficial to people suffering from high blood pressure, diabetes, chronic fatigue syndrome, or obesity. Research also strongly suggests that maitake mushrooms are absorbed better than other types of popular and edible fungi (like shiitake). Taking maitake in supplement form is a fantastic way to ensure you are getting all of the important polysaccharides that your body needs.

Catalase—When we think about antioxidants, vitamins like vitamins A and E often come to mind. But while they are certainly powerful forces in the war against free radicals, as we have seen there are also many other types of very potent antioxidants that we can and should be adding into our arsenal. One class of antioxidant that may not be as well-known as others but is still significant to our health is the enzymes. Our bodies create these chemical substances to act as catalysts in all sorts of different chemical reactions that must occur in our bodies in order for them to function normally. Several key enzymes work at a cellular level, and can help to prevent free radicals caused by hydrogen peroxide. One of these cellular enzymes is called catalase. This enzyme is especially concentrated in our red blood cells. Its main job is to help remove hydrogen peroxide from our bodies, which in turn will prevent the formation of free radicals. In a series of impressive chemical reactions, catalase actually converts this harmful byproduct into water and oxygen. Catalase goes after the hydrogen peroxide that it finds hanging out in the water-soluble areas of our cells (which, if unstopped, can often adversely affect our cells’ mitochondria and DNA). This somewhat confusing series of events is actually vital to our immune system

and overall health, because when our cells become damaged cancerous tumors often begin to form. Keeping free radical damage to a minimum inside our cells and making sure that any toxins like hydrogen peroxide are removed are key to this cellular health, and when our bodies contain enough catalase, then both situations should be well under control.

TMG (Trimethylglycine)—Also known as betaine, TMG is a form of another popular supplement called S-adenosylmethionine. Technically, TMG is a “methyl donor,” which means it spends its days carrying around methyl molecules, which it then donates as needed to help with various chemical processes in the body. This “methyl donation” is especially important when cells replicate, as well as in proper liver functioning. In fact, several animal-based studies have found that supplementing with TMG can help protect the liver from chemical damage. In addition, TMG has also been shown to help reduce our levels of homocysteine, a toxin that occurs as the result of when amino acids metabolize. Excessive homocysteine has been linked to atherosclerosis and osteoporosis, so if you want to keep your heart and your bones as healthy as possible, TMG must be part of your supplement routine.

Omega-3 Fatty Acid Powdered Extract (Including EPA and DHA)—Lately, many of us are trying to eat more cold-water fish because we know that it is rich in an incredibly healthy substance called omega-3 essential fatty acids (EFAs). “Essential” fatty acids mean that our bodies cannot make them on their own, so we must get them from other sources, like our food. While some of us could happily eat salmon, tuna or halibut everyday, just as many folks are not so wild about the concept. Fortunately, taking fish oil in supplement form is another great way to make sure we are getting all of the EFAs our bodies so desperately need. Fish oil contains two specific types of omega-3 EFAs with the incredibly long names of eicosapentaenoic acid and docosahexaenoic acid, but for the sake of our eyesight let’s just call them EPA and DHA. Consuming enough of these forms of omega-3 fatty acids has been linked to an improvement in an enormous variety of health conditions, including heart disease, cancer, skin conditions and arthritis. For example, in regards to cardiovascular health, omega-3 EFAs have been shown to cause the platelets in our blood to be less likely to clump together, which in turn reduces the chances that we will develop heart attack-promoting blood clots. Also, omega-3 has been shown to help reduce cholesterol levels and it may help lower blood pressure as well. Also, remember earlier when we were talking about COX-2 inhibitors and the importance of reducing inflammation? Omega-3 EFAs have been shown to prevent

inflammation from occurring inside our arteries, which is crucial when it comes to avoiding the buildup of artery-clogging plaque. In its role as a natural anti-inflammatory, omega-3 fatty acids like EPA and DHA may help with conditions like lupus, psoriasis, and joint problems by reducing our levels of prostaglandins. So, if you feel like you are about to grow gills from all of the fish you have been eating lately, rest assured that a high quality omega-3 supplement that contains EPA and DHA can provide you with the essential fatty acids you need for good health.

Cat’s Claw—This herb remedy, also known by its Spanish name of uña de gato, gets its name from the two thorns located near the plant’s leaves that closely resemble the claws of a cat. For years, cat’s claw has been used extensively in other cultures to treat a wide variety of conditions, including cancer, arthritis, and other conditions that are due to inflammation. In recent years, however, cat’s claw is beginning to receive more attention in our country, and for good reason! Scientists have concluded that the root and inner bark of cat’s claw contain substances called procyanidolic oligomers (or PCOs for short). These compounds have been found to inhibit tumor growth in animal-based studies. In addition, cat’s claw contains another substance that may actually encourage a type of cell found in the immune system called phagocytes to destroy bacteria, viruses, and other pathogens that can make us ill. And as if that were not enough, a study conducted about 10 years ago over in Italy found that cat’s claw contains yet another remarkable substance called quinovic acid glycosides. In addition to acting as free radical-destroying antioxidants, this third compound can also help to reduce inflammation, eradicate viruses, and discourage normal cells from turning into cancerous ones. Not bad for this unique and unusually shaped vine from the Amazon!

N-Acetylcysteine (NAC)—Our bodies need an amino acid known as cysteine to produce a compound called glutathione that is very useful for fighting off free radicals. N-acetylcysteine (or NAC) is a stable type of cysteine that when taken in supplement form, helps to ensure the presence of enough of this important substance. Specifically, NAC is utilized by the liver and our lymphocytes to help neutralize the various poisons that enter into our bodies everyday such as pollutants, alcohol, and smoke. These toxins can be incredibly wearing on our immune system, so having them eliminated quickly and effectively from our bodies is paramount to our good health. Taking NAC in supplement form can reduce both the length and the occurrences of infectious diseases. And because NAC may increase the amounts of good en-

zymes in our bodies, it may actually slow the damage to our cells that is part of aging. One clinical study found that supplementing with NAC was an effective way to reduce or prevent symptoms of the flu in both the elderly and folks who are chronically ill.

Quercetin—What do cayenne pepper, onions, garlic, and green tea all have in common? If you answered “they are all delicious!” you would be correct. But if you wanted to be even more correct (and impress all of your friends in the process) you could also say “they all contain the healthful bioflavonoid known as quercetin!” Quercetin is an incredibly powerful antioxidant that has been shown in several landmark studies to have a powerful and healthy influence on cardiovascular health. As you know, antioxidants help to prevent the production of bad guys known as free radicals. Specifically, quercetin seems to have a direct and positive effect on the heart because it can actually prevent free radicals from oxidizing LDL (or “bad”) cholesterol. This is crucial, because oxidized LDL cholesterol has been linked to heart-related conditions like atherosclerosis and damaged arteries. Quercetin’s effect on the heart has been proven in clinical studies—one project, called the Zutphen Elderly Study, was conducted back in 1985 and involved 805 men age 65 to 84. The subjects were tracked for a total of 5 years. Overall, the men who ate a lot of food rich in flavonoids like quercetin had a decreased risk of dying from heart disease as well as a reduced rate of having a first heart attack. As an added bonus, the a quercetin-rich diet also led to a decreased risk of stroke.

Ginkgo Biloba—This herbal remedy, nicknamed “the smart herb,” is a very potent antioxidant that may be especially useful for the retina, the brain, and the heart. Ginkgo biloba has been shown to improve circulation, particularly in the blood vessels leading into the brain. One study that was detailed inside the October, 1997 issue of *Journal of the American Medical Association* showed how supplementing with ginkgo biloba can help people suffering from dementia, either as a result of a stroke or Alzheimer’s disease. In the study, results began to show up after only 12 weeks. Clinical studies have also proven that ginkgo biloba can help increase oxygen levels to the heart, and a study conducted in Sweden found that taking ginkgo biloba improved the ability to see long distances in people who were already showing signs of macular degeneration. Because ginkgo biloba works as an antioxidant and also can help to strengthen the small blood vessels that are located inside our eyes, it can be a powerful deterrent against diseases that affect and attack our eyes. Ginkgo biloba has also been used to help treat tinnitus (or ringing in

the ears), hearing loss, high blood pressure, and impotence. When taking ginkgo biloba in supplement form, be sure to use one that is standardized to contain 24 percent ginkgo flavone glycosides as well as 6 percent terpene lactones. These levels are an indicator that the ginkgo you are taking is of the highest quality.

IP6 (Inositol Hexaphosphate)—This supplement, which is also sometimes called phytic acid, contains the member of the B family of vitamins called inositol as well as 6 phosphate groups. IP6 has been shown to be an incredibly powerful antioxidant, and clinical studies have looked at its ability to ameliorate a host of serious diseases including arthritis, cancer, heart disease, high cholesterol, and kidney stones. Specifically, IP6 helps to reduce the action of free radicals in the body, and it seems to be especially effective when malignant tumors are just beginning to form. By helping to eliminate the free radicals, IP6 has been shown to help reduce abnormal cell division or growth, which in turn allows the cells to return to normal and continue to grow in a healthy, cancer-free way. So in other words, IP6 may not only shrink tumors, but it may also prevent tumors from forming in the first place. Specifically, studies have shown that eating a diet high in IP6-rich foods like beans, raisins and wheat bran is linked to lower levels of colon, breast and prostate cancer). IP6 may also keep our hearts healthy by discouraging blood clots from forming and by also reducing our blood levels of triglycerides. Finally, do you remember how maitake mushrooms contain a substance called beta-1,6-glucan? IP6 contains something similar called beta-1,3-D-glucan, which helps to keep our immune systems healthy and strong. While some of the terms used to describe IP6 may seem a bit confusing at first, its health benefits are crystal clear.

Coenzyme Q10—This remarkable “vitamin-like” antioxidant is absolutely first-rate when it comes to improving the immune system, strengthening the heart, and possibly even helping combat cancer. Our bodies contain some natural amounts of Coenzyme Q10 (or CoQ10 for short), but like other nutrients, the levels naturally begin to fall off as we get older. Because this nutrient is so crucial for our health, it is paramount that we take it in supplement form. CoQ10 performs many tasks inside our bodies, but one of the most crucial involves its role in helping our cells produce ATP, which is basically cell-fuel created inside our mitochondria. CoQ10 also goes by the name of “ubiquinone,” which is from the combination of the words ubiquitous and quinone. CoQ10 is ubiquitous, because it is found in every cell inside our bodies, and a quinone is a term for a biological chemical that creates

energy. CoQ10 has also been strongly linked to helping with the prevention and treatment of patients with cardiovascular disease. For example, a landmark 6-year study conducted at the University of Texas found that patients diagnosed with congestive heart failure who also took CoQ10 in addition to their traditional therapies had an amazing 75 percent survival rate after 3 years. The same study also found that patients who took only the conventional therapies had only a 25 percent survival rate. Other researchers are looking at CoQ10 and the way it may impact cancer research. For example, in several animal-based studies, giving CoQ10 to animals with either tumors or leukemia was shown to reduce their death rates.

Turmeric—If you are a fan of curried foods then you are already well-familiar with this remarkable herb—turmeric helps to give curry its trademark yellow color. But when it comes to our health, turmeric does a lot more than just liven up our meals. Turmeric contains a substance called curcumin, which is a phytochemical with incredible antioxidant power that makes it very exciting in combating cancer. For example, the curcumin found in turmeric has been shown to halt precancerous changes in the DNA that are the result of free radical damage, and it may also block the work of certain enzymes that are needed for cancer to progress. One exciting study that details turmeric's ability to help with cancer involved a group of smokers (smoking, of course, is a known carcinogen). Researchers found that the subjects who took curcumin had a much lower level of something called mutagens, which are basically substances that encourage our cells to mutate and become cancerous. This result backed up the theory that curcumin helps our bodies cope with cancer-causing agents. The curcumin in turmeric may also help with cardiovascular disease. For example, curcumin may stop cholesterol from being oxidized, which means less plaque will build up inside our arteries. Turmeric is also a well-known COX-2 inhibitor, which means it plays a role in reducing inflammation, one of the key factors in developing cancer and heart disease.

Green Tea Powdered Extract—Did you know that both black and green tea both come from the same plant called *Camellia sinensis*? The difference is in how the leaves are treated once they have been picked. If they are left out to dry naturally or are gently steamed they become green tea leaves. But if they are fermented the leaves become black tea. The fermentation process also ruins a lot of the naturally occurring healthful substances found in the tea leaves. This helps explain why black tea, while delicious, is not especially well-known for its health-enhancing qualities, and scads of

literature has been devoted to the fantastic health-giving properties of green tea. For centuries, green tea has been an enormously popular beverage in Asia, partially because of its delicious flavor, but also because of its amazing ability to help with a variety of health issues. Green tea's main claim to fame is that it is an incredibly powerful antioxidant that it has been shown to ward off both viruses and cancers, and it is also a COX-2 inhibitor, which means it can help ward off inflammation. The key antioxidant substances found in green tea are called polyphenols, which are also a type of bioflavonoid. Specifically, the chief type of polyphenol in green tea is called a catechin. The catechin polyphenols found in green tea are what give it its amazing healing properties. Working as antioxidants, they appear to work by lowering cholesterol and blood pressure, discouraging bacteria and viruses, preventing various mechanisms that lead to cancer, and offering protection against strokes. For example, a type of catechin known as epigallocatechin gallate (or EGCG) appears to actually penetrate the cells in our bodies. Once inside the cells, EGCG works by protecting the DNA from hydrogen peroxide (much like the enzyme catalase does). One research study conducted at the University of Purdue found that EGCG can inhibit the growth of cancer cells. While drinking green tea is delicious, taking it in supplement form is an easy way to make sure you are getting all of its health-enhancing benefits. Green tea powdered extract, containing 60 percent catechins, is a fantastic way to make sure you are getting all that green tea has to offer.

L-Carnosine—This antioxidant has begun to receive quite a bit of attention lately, especially in people who are at least 40 years old. L-Carnosine is an amino acid that helps our systems fight off some of the effects connected with the passage of time—specifically, changes to the brain, heart, skin and muscles. Our bodies all contain at least some l-carnosine, but these amounts gradually diminish as we get older—particularly the l-carnosine that is found in the heart and brain. Because it is an antioxidant, l-carnosine helps to prevent free radicals, which in turn keeps our cells healthy and functioning normally. In addition, l-carnosine has been shown to help prevent a process called glycosylation, which happens when sugar molecules attack both proteins and DNA in the cells. Recently, scientists have begun to look more closely at this phenomenon and it is now understood that when these sugar and protein levels are not normal, the rates of many serious diseases really begin to rise. Specifically, excessive glycosylation has been linked to heart disease, stroke, and diabetes. Because l-carnosine has been shown to actually prevent glycosylation from occurring, the abnormal sugar-protein

combinations should not be a factor, and many age-related diseases may be prevented. L-carnosine is found naturally in red meat, seafood, and poultry, but taking it in supplement form is an excellent way to guarantee that we are getting enough of this impressive “anti-aging” amino acid.

Alpha Lipoic Acid—This amino acid has been given two nicknames: “the ideal anti-aging antioxidant” and “the universal antioxidant.” What makes alpha lipoic acid (or ALA for short) so amazing is that it can literally travel anywhere inside our bodies, because it is both fat and water-soluble. This impressive ability to get around makes ALA a sort of “jack of all trades” in the antioxidant world—it has been shown to help protect just about every part of our bodies from oxidative stresses. Like many other antioxidants, ALA seems to offer us protection from both cancer and cardiovascular disease and also helps to keep our immune systems strong, which we now know is the first line of defense against all kinds of diseases. Now, to explain how ALA can help fight cancer we have to get technical again for a little bit. In the study of cancer, researchers have identified what they call oncogenes, which are the genes that essentially cause cancer. Oncogenes are activated to do their dirty work by a compound called Nuclear Factor kappa-B (or NF kappa-B)—this process takes place requires the presence of free radicals and any other carcinogens who happen to be hanging around. This matchup between oncogenes and NF kappa-B leads to the excessive cell growth common to cancer. Alpha lipoic acid has been shown to actually penetrate the cells and prevent NF kappa-B from becoming activated. And because it works so well as an antioxidant, ALA helps to zap free radicals that are wearing down your immune system. So with enhanced immunity and a way to prevent a vital process in the development of cancer, ALA is definitely a supplement you should have in your line of defense against illness!

SOD (Superoxide Dismutase)—Like catalase, superoxide dismutase (or SOD) is another important enzyme that is necessary for good health. It works by neutralizing what is known as the superoxide radical, a particularly unpleasant type of free radical. Superoxides do most of their damage in the synovial fluid, which helps to lubricate our joints. If we do not have enough synovial fluid, the bones of the joint begin to rub together, causing uncomfortable friction and inflammation. SOD goes right to work breaking apart the chemical structure of the superoxides, changing it to hydrogen peroxide and oxygen. As we know from the catalase section, hydrogen peroxide is not great to have in our systems either, but when compared to superoxide it is not as nasty. Once

SOD has finished its job breaking up the superoxides, catalase comes along and removes the unwanted hydrogen peroxide from our bodies. SOD has also been shown to help our body use its reserves of copper, manganese, and zinc. If you are a fan of the rather odiferous cruciferous vegetables like broccoli, cabbage, or Brussels sprouts, you will be pleased to know that all 3 contain nice amounts of SOD. Having said that, SOD is just too important to our well-being to leave to diet alone. Taking it in supplement form is a great way to make sure the superoxide radicals do not take over in our bodies!

Bilberry Fruit Powdered Extract—Bilberry, or *Vaccinium myrtillus*, is the European cousin to our own delicious blueberry plant, and like blueberries, it is incredibly rich in antioxidants. Bilberry contains a phytochemical called anthocyanidins, which has been shown to ease hypertension, improve the blood supply going to the nervous system, as well as prevent the formation of blood clots. Like other antioxidants, bilberry can also help keep the walls of our capillaries healthy and strong, and some studies have found it to be as much as 50 times stronger than our old friend vitamin E when it comes to antioxidant protection. (Of course vitamin E is still a vital part of any antioxidant formula!) Bilberry also works as a natural anti-inflammatory, which makes it a key component in the fight against diseases caused by inflammation (like heart disease and cancer and the like). It has also been shown to help keep our collagen healthy, while discouraging the formation of bacteria and it may even be useful in lowering our blood sugar level, due to a naturally-occurring substance called glucoquinine. Bilberry is also well-known for its ability to help with eyesight—anecdotal evidence abounds that pilots flying for the Royal Air Force flying nighttime missions during World War II would often eat bilberry jam on their toast before going into the cockpit. Research conducted about twenty years later in 1964 proved that these pilots were correct! Specifically, a host of studies have found that bilberry can help with a wide variety of eye-related problems, including cataracts, glaucoma, macular degeneration and nearsightedness.

Beta-1,3-Glucan—While some antioxidants are quite well-known (like vitamins A and E), others are definitely much less familiar. Beta-1,3-Glucan definitely falls into this category. But just because it is not a household name (yet!) do not think for an instant that it is any less important to your health or immune system. Technically, beta-1,3-glucan is a polysaccharide, which is a type of carbohydrate molecule. Polysaccharides have been shown to be very useful when it comes to stimulating the immune system. Beta-1,3-glucan goes to

work inside our bodies, and encourage a type of immune system cell called macrophages to get busy destroying abnormal cells, unwanted microorganisms, and other bits of cellular “garbage” that can cause damage to the immune system. The macrophages actually surround these unwanted substances and digest them, where they can no longer cause any harm. This in turn reduces both inflammation and infection. Beta-1,3-glucan may have a long and scientific-sounding name, but its impressive ability to bolster our immunity makes it a necessary choice in any supplement routine.

Tocotrienol Complex—Tocotrienols are fat-soluble substances that are found in the vitamin E family of compounds (for example, d-Alpha Tocopheryl Acetate is a very easily absorbed form of this vitamin.) There are different types of tocotrienols available on the market today—one kind that is particularly effective is made from rice. Rice-based tocotrienols provides folks with an incredibly high level of gamma tocotrienol, which has been shown to be the most biologically active of all of the tocotrienols (in addition to gamma, there is also alpha and delta tocotrienols). Research on tocotrienols is quite exciting, in that some studies have shown that they can actually help stop the proliferation of breast cancer cells. At least four different studies, conducted at places like the University of Louisiana and the University of Reading in the United Kingdom, found that the delta and gamma type of tocotrienols can inhibit what are called either the estrogen-positive or estrogen-negative types of breast cancer cells. Tocotrienol has also been associated with improved cardiovascular health, due to its role as an antioxidant.

Lactoferrin—This is a type of protein that is found naturally-occurring in milk, as well as in our tears, mucus, bile, and saliva. Lactoferrin works by binding with what are called “free irons,” which in plain English means that it helps to regulate the levels of this important growth-promoting mineral. Lactoferrin has also been found to help fight off as well as prevent infections from setting in, because it can actually prevent iron from getting into the nasty bacteria and viruses, which in turn prevents them from growing as they should. Lactoferrin also helps a vital type of white blood cell called lymphocytes work as they should—this is important because if we do not have adequate levels of lymphocytes our immune systems will not function properly and we can become prone to developing a wide variety of inflammatory and low immunity-based diseases. Lactoferrin is important enough to our health to take in supplement form, as we want to make sure that we are getting enough of its iron-regulating and immune boosting benefits. Lactoferrin has also been found to reduce the activ-

ity of organisms like E. coli, staphylococcus, candida, listeria, and salmonella, which means it can also be very beneficial to our intestinal systems.

Flaxseed (shaved)—Simply put, flaxseed is one of the most amazing foods that we can eat. It is hard to find another natural remedy that is so health-enhancing, and that can assist in such a wide variety of health conditions. Earlier, when we were talking about omega-3 essential fatty acids, we were focusing then on fish oil. However, flaxseed is another excellent source of omega-3 as well—in fact, it is the world’s richest source of this type of EFA. Flaxseed also contains omega-6 EFAs, as well as a small amount of omega-9, which makes it an incredibly complete package of these vital nutrients. It is also a powerful COX-2 inhibitor. Studies on flaxseed meal have been overwhelmingly positive. For example, in a study conducted at Duke University, 25 men with prostate cancer were asked to eat a low-fat diet supplemented with 3 daily tablespoons of ground flaxseed. After about a month, the subjects had a reduction in their cholesterol and testosterone levels, as well as something known as the prostate specific antigen (or PSA), that helps doctors tell how large prostate tumors are. In the same study, the researchers also determined that taking the ground flax led to an increase in dead tumor cells. But men are not the only ones who can benefit from flaxseed meal. Another study involved 50 women who had recently been diagnosed with breast cancer. Half of the women were given a daily muffin that contained 2 tablespoons of flaxseed, while the other half of the subject were given non-flax fortified muffins. All of the subjects underwent surgery, and the removed cancerous tumors were closely examined. Remarkably, the women who had eaten the flaxseed muffins were found to have tumors that grew more slowly than the non-flax group. In both cases, researchers were able to explain their remarkable findings due to flaxseed’s high levels of lignans. While many types of plants have lignans, flaxseeds are especially full of them, particularly two types known as enterodiols and enterolactone, which have been proven to have an especially impressive impact on cancer. Up until now, most flaxseed meal has been made by crushing the seeds into a powder. However, an even better way of processing the seeds is to shave them. When flaxseeds are shaved, more of the valuable EFAs are retained in the end product, and the resulting fine meal is also more chemically stable.

Grape Skin Powdered Extract—Have you ever heard of the “French Paradox”? Recently, this phenomenon has garnered a lot of attention in the news—basically, many of the citizens in France tend to smoke and eat a high-fat diet, yet amazingly,

their levels of heart disease remain relatively low. Scientists who looked into this scenario found that the red wine that is so popular in France contains very high levels of a polyphenol called resveratrol, that actually appears to offset some of the negative side effects of an unhealthy lifestyle. Resveratrol is actually found in a variety of plants, but especially peanuts and grapes—particularly red grapes (which, of course, go on to make red wine!). Resveratrol is especially concentrated in the skins of red grapes, so unless you drink wine on a fairly regular basis, taking a grape skin supplement is a good idea to make sure you are getting enough of this important antioxidant. Several clinical animal-based studies have found that resveratrol can actually reduce the stickiness of blood platelets, which is an important finding in the treatment of atherosclerosis. Additional animal-based research found that resveratrol may prevent both the development and growth of cancer, as well as being an impressive COX-2 inhibitor with anti-inflammatory abilities.

Di-Indole Methane—This substance occurs naturally in cruciferous vegetables such as broccoli, cauliflower, and cabbage, particularly as they are chewed. Enzymes found in these veggies help produce Di-Indole Methane, (or DIM). DIM is important to our health in a variety of ways, but particularly due to its effect on estrogen. For example, research on has found that supplementing with DIM may help restore a normal balance of estrogen during menopause. This finding was very exciting in the field of natural medicine, as we have known for years that problems with the metabolism of estrogen can lead to several health problems, including cancers of the uterus, breasts, and/or ovaries. But DIM is not just for women—in men, a reduction in estrogen metabolism or an increase in estrogen are also linked to various health problems associated with growing older, particularly problems with the prostate gland. Specifically, when estrogen is metabolized properly through the help of DIM, healthy substances called “2-hydroxy metabolites” are formed. These metabolites get right to work helping to free up protein-bound testosterone, resulting in a greater level of available testosterone. In fact, supplementing with DIM has actually been found to produce about the same results as using testosterone replacement therapy. In order to get enough Di-Indole Methane from the diet, experts recommend that you eat 3 to 5 servings of veggies a day, with emphasis on the cruciferous ones. Since this can be a challenge to even the most devoted follower of broccoli or cauliflower, supplementing with DIM is an especially important.

Lycopene (from Tomato Fruit Powdered Extract)—Finally—an excuse to eat all of the ketchup and spaghetti sauce

that you want! Recent studies have found that lycopene, a powerful antioxidant carotenoid that is found in the lovely bright red skin of tomatoes, appears to have significant cancer-fighting properties. For example, a study conducted at Harvard University followed the lives of about 50,000 men for an amazing 6 years. Researchers discovered that the men who ate tomato-rich foods had up to a 45 percent less chance of getting prostate cancer. In addition, in the October, 1994 publication *International Journal of Cancer*, reported that “Dietary intake of tomatoes which contain high levels of lycopene appeared to protect against cancer of the mouth, pharynx, esophagus, stomach, colon and rectum in over 5,000 cancer patients and controls.” Clearly, there is something very powerful in this potent antioxidant. The benefits of lycopene are not limited to just men—a study conducted at the University of Illinois found that women with high levels of lycopene have a much lower risk (5 times lower, to be exact!) of developing signs of precancer in the cervix as compared to other women with much lower lycopene levels. Lycopene also appears to have a positive effect on the cardiovascular system. As we know, a reduction in oxidation and free radicals is an important indicator of heart health. Recently, 10 countries in Europe participated in what is called a multicentered study on lycopene. The results showed that high adipose tissue levels of lycopene led to a reduced risk of a heart attack.

Lutein (from Marigold Flower Powdered Extract)—Lutein is a carotenoid, which occur naturally in several beautifully colored fruits, vegetables, and flowers. In all, there are around 560 known carotenoids, all of which act as extremely powerful antioxidants. Lutein is found in very high concentration inside the maculas in our eyes, so in order to have good eye health and avoid nasty diseases like macular degeneration, it is imperative that we all get enough lutein. For example, one study showed that patients who ate foods rich in lutein had a 57 percent reduction in the risk of getting macular degeneration, while those who did not had a greater chance of getting this condition. Lutein works very well with two other carotenoids called zeaxanthin and cryptoxanthin. Fortunately, these other two nutrients are typically found in all of the plant sources that also contain lutein, so getting this potent antioxidant trio in combination is not difficult to do. Lutein is found in a variety of food sources like kale, peas, and dark leafy lettuce, but in supplement form it is usually made from the beautiful yellow marigold flower.

Chaparral Powdered Extract—If you live in the Southwest or have spent any time here, then you are probably familiar with the lovely chaparral plant. Chaparral is a potent herbal remedy that contains a huge number of phytochemicals, including

alpha-pinene, camphene, camphor, and limonene. It is also naturally-rich in amino acids as well as many vitamins and minerals. Chaparral is also a powerful antioxidant, and when taken as a supplement it goes right to work fighting free radicals. Interestingly, it can also work as a chelating agent, helping to remove toxic heavy metals from our bodies. Chaparral also has a very significant effect on our immune systems—so much so that it is currently being used as a natural remedy to treat HIV patients. It has also been shown to help protect our cells against too much sun exposure (a good thing for a Southwestern plant to do!), and it also helps discourage the formation of both cancerous cells and tumors.

A whole new healthy immune system can equal a whole new healthy YOU!

Clearly, the immune system is a crucial link to good health, and making sure it is working the best that it can is paramount. Fortunately, with this combination of vitamins, minerals and herbal remedies, we can all go a long way to making ourselves healthy. By keeping our inflammation down through our friends the COX-2 inhibitors, to improving our cardiovascular system and warding off cancer, to simply being able to survive a cold and flu season without going through 10 boxes of tissues—this antioxidant formula can do it all!

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