What are Humic and Fulvic?

Humic and Fulvic have been called Nature's "Miracle Molecules" — their nutritional contribution to superior health as Nature’s Own nutrient activation and delivery system to the cell is just part of their story... they also perform many other vital biological functions as well.

Fulvic and Humic’s Nutritional Contribution to Superior Health
In Nature, just one of Fulvic and Humic’s functions, is to insure Delivery of Nutrients—all 74+ organic ionic minerals, organic vitamins, amino acids and other phytonutrients—to all living things including human beings.

In this capacity they are a FULL SPECTRUM MINERAL AND NUTRIENT SUPPLEMENT DELIVERING ALL 74+ Macro, Micro and Trace Minerals, Organic Vitamins, Amino Acids, and Other Nutrients our bodies need, in their organic ionic forms, and in just the right proportions vitamins and minerals need to work synergistically with each other to support our bodies’ intricate design.

Humic is a term that describes a group of complex organic molecules. Fulvic is just one member of this group. The Fulvic molecules are the smallest (lowest molecular weight) of the Humic group and is one of the reasons it is the most biologically active. Fulvic is a Golden Liquid, whereas Humic is almost black in color.

Its smaller size allows Fulvic molecules to more easily pass through cell membranes and carry nutrients inside the cell.

Did You Know...A single Fulvic molecule can individually carry up to 60 different vital activated minerals nutrients to our cells?

Did You Also Know...It is inside our cells that most life-giving and sustaining metabolic functions are carried out and it is inside our cells where nutrients are needed as fuel or participants for these metabolic functions to take place. If nutrients don’t make it inside our cells metabolic reactions would be impaired.

This is why many supplements seem to lack benefit. This is especially true of inorganic supplements which include most mineral supplements. Most over the counter mineral supplements are inorganic unless they also contain Fulvic or Humic.

A large portion of these inorganic mineral supplements are just lost through the intestinal tract and rarely make it out of the intestinal tract into the bloodstream. Liquid inorganic mineral supplements are more easily
absorbed, but they are typically not in an organic form our bodies easily recognize and can use.

This can be a problem because if inorganic mineral supplements can’t be converted through a series of steps to their organic, ionic forms, they are removed from our blood and excreted through our urine and lost, or worse, stored in our fat tissue with other waste as mineral metals (heavy metals) that can’t be eliminated and can even build-up and become toxic.

Interestingly, another one of Fulvic’s other biological functions, is its ability to remove these heavy metal toxins and other toxins stored in our fatty tissues to protect vital organs and safely escort them out of our body.

In the presence of Fulvic, nutrients we receive from our diets or from the supplements we take are transformed into their organic, ionic, “cell-ready” form our cells recognize and can use easily and are transported into the cells where they are needed. When we receive all these nutrients we naturally feel better and more alive.

Equally important to Humic and Fulvic’s role in nutrient activation and delivery to the cells for superior health is Fulvic’s ability to improve waste and toxin removal from cells and tissues by restoring cellular membrane electrical difference between inside and outside of each cell.

When cell membrane electrical charge gradients are working correctly, nutrients more easily enter our cells and waste products from metabolic reactions (highly acidic) or toxins are more easily transported out of our cells and out of our body. A primary biological role Fulvic performs is providing positive and negative charges as needed to establish and maintain optimum membrane potential.

Fulvic is like a battery providing The Spark of Life!
2. What are some of Humic and Fulvic’s Biological Functions Besides Their Nutritional Contribution?

In Nature Humic and Fulvic’s role is definitely not limited to their nutritional contributions, such as transforming nutrients into their “cell-ready” active forms that our bodies can use immediately and actually transporting them to cells where they are needed so all the life-giving and sustaining processes that occur in our bodies...
can take place, they play a host of other vital biological roles as well....

Humic and Fulvic are considered some of the most biologically active substances on earth and the many biologically important functions they perform are well-recognized.

For Starters, Humic and Fulvic...

- Supercharge the body at the cellular level imparting life-sustaining electrical balance and life-giving energy to our cells—all bodily processes are improved and enhanced in their presence, and they help us to achieve and maintain the most optimal health possible.
- Improves cell membrane potentials so nutrients the cell needs gets in and acidic wastes and toxins the cell doesn't need gets out and cells are healthier. If cells are healthier, we are healthier.
- Stimulate immune functions and white blood cell production. The organic micro and trace minerals they carry are essential in the production of immune cells.
- Promotes blood, cell and tissue oxygenation so oxygen is distributed throughout our bodies, metabolic reactions that rely on oxygen occur more effectively and we feel more energized.
- Help neutralize acidity and restore pH balance which helps maintain or restore good health and prevent disease.
- Chelate (bind) heavy metals and other toxins and escort them out of the body,
- Neutralize all classes of free radicals (they are in a class called super-antioxidants because they neutralize more than one class) that cause extensive damage to cells and tissues,
- Balance endocrine systems and hormone production,
- Supports cardiovascular function—improved contractility, improved blood pressure control, and oxidative stress reduction which contribute to the prevention of cardiovascular and coronary heart disease.
- Improves activity of nutrients received from our diets or through supplements that are part of a health maintenance or restorative program,
- Nutrients, such as carbohydrates and proteins, are also metabolized more completely.

This is the short list. You can read more about the functions of these amazing Miracle Molecules under More Information about Humic and Fulvic on this website.

3. Where do Humic and Fulvic come from?
Humic Substances are naturally produced in soils by beneficial microbes. This is where they Start their Journey that will take them throughout the Biosphere to Support Life Everywhere They Go.

In the soil, Humic and Fulvic’s first task is to Transform Inorganic Mineral Rocks and Mineral Metals into their Activated, Organic, and Ionic (water-soluble) “Cell-ready” Forms…the only mineral form Plants can use …and the only form we can use, too.

…and Humic and Fulvic Carry these Organic Minerals Out of the Soil into the Plant… to the Plant Cells where they are needed in just about every metabolic “life-giving and sustaining” process.

Humic and Fulvic are Nature’s Own Nutrient Activation and Delivery System. Humic and Fulvic make it possible for plants receive the Nutrition, Especially Minerals, Needed to be Healthy and Thrive. …and to carry out a host of vital, life-giving functions.

We rely on these microorganisms and the Humic and Fulvic they Produce just as much as plants to be healthy and thrive also.

Did You Know…When we consume plants—Humic and Fulvic Naturally carry all 74+ activated Organic, Ionic “cell-ready” Minerals, the Vitamins, Amino Acids and other Nutrients to our cells where they are needed to support all of our metabolic “Life-giving and sustaining” processes too...

…And Because Fulvic Nutrients are in their Organic, Ionic Natural Forms, Our Bodies Have no Difficulties Using Them Immediately… We need Humic and Fulvic along with the 74+ Organic, Ionic Minerals, 13 Vitamins, 18 Amino Acids, and Other Vital Nutrients, they Naturally Carry as much as plants to be Healthy and Thrive!

Humic and Fulvic also play other vital roles in our bodies, just as they do in plants, and have been called “Nature’s Miracle Molecules” because like Sunlight, Air and Water…Life just cannot exist without them.

BUT THAT IS JUST PART OF THE STORY...

4. Why do we need to Supplement our Diets with Fulvic or Humic/Fulvic if They are Naturally Occurring in Our Food Sources?

If we lived a hundred years ago, just by eating a balanced diet we would receive all the Fulvic and Humic along with all the
minerals, vitamins, and other nutrients they naturally carry and stay healthy and strong.

Did You Know... Our US crop plants contain only a fraction... as much as 80% less of the Humic Substances, especially Fulvic, along with the Vitamins, Minerals, Elements, amino acids, Phytochemicals, and Other Nutrients Humic and Fulvic Naturally carry than they did a century ago according to the US Department of Agriculture, (USDA)...

This is Shocking...

Fertilizers and Pesticides Used in Modern Agricultural Practices destroy or severely stunt the microorganisms in the soil that produce Humic and Fulvic ...

...and this has far-reaching consequences... (more on that in a minute)

Even Organic farming methods that protect the microorganisms deplete the Humic and Fulvic because they are used by plants faster than they can be replaced naturally. Some Organic Farmers, especially large growers, are now supplementing soils with Organic Agricultural Humic Compounds as part of a Sustainable Agricultural Program.

So, Despite Even the Best-Efforts to Eat a Balanced Diet... Our Food Sources No Longer Contain the Vitamins, Fulvic Minerals and Nutrients Our Bodies Need to Stay Healthy and Strong!

Vitamin and Mineral Deficiencies are Taking a Serious Toll on Our Health... Amazingly, there are now 157 Degenerative Diseases Linked to Vitamin and Mineral Deficiencies.

Did You Know... Our Bodies Rely on Humic and Fulvic-Activated Minerals—Minerals Are Alkaline—(and vitamins as co-factors to minerals) to Neutralize Acids and Maintain a Healthy pH balance.

Normal Cellular Metabolism Produce Acids as End-Products, also our diets can include highly acidic foods, such as carbonated beverages, or emotional and mental states of anxiety, stress, fear, worry are extreme acid producers.

When our Diets are Mineral-deficient, our bodies become Acidic.
When our Bodies are Acidic, our tissues become Inflamed, cells are damaged and even destroyed, and excessive amounts of free-radicals are produced that further harm cells and tissues.

**In a state of Chronic Acidity and Inflammation, we eventually become prone to Disease.**

There are now 157 Degenerative Diseases...

including Cancer, Diabetes, Heart Disease, Alzheimer’s, Rheumatoid Arthritis, Asthma, Fibromyalgia, MS, Osteoporosis, Lupus, Parkinson’s...the list is long...

... with links to chronic acidity and inflammation resulting from underlying mineral and vitamin deficiencies.

**Did You Know...**When we become deficient in the Fulvic-Activated Minerals our bodies can use to neutralize excess acid, our bodies stay in a state of chronic acidity. This chronic acidity promotes an environment that is a breeding ground for viruses, bacteria, and yeast. Fulvic also assists us in eliminating acidic waste and toxins from our bodies and without it they can build-up in our cells and tissues.

Cancer cells are produced routinely in our body, and can typically be handled by our amazing immune systems and cells. But in a state of chronic acidity, cancer cells thrive and our immune systems become weakened. Our immune cells can become stretched to their limit because they must also address other aspects of chronic acidity, so that cancer cells can proliferate.

**Did You Also Know...**The incidence of cancer has skyrocketed since the beginning of the 1960’s. The National Institute of Health (NIH) recently reported that **Cancer is now expected to affect 1 in every 3 females and 1 in every 2 males compared to 1964 statistics of only 1 in 261 people.**

The increase in incidence of other degenerative diseases is equally sharp and alarming.

**But, it is also a Serious Mistake to Think that taking Vitamin and Mineral Supplements are Going to be Effective to Bridge the Gap...**Many supplements are not easily absorbed by our bodies and if they are absorbed they can’t be used easily by our bodies (this is especially important as we age). Much of what can’t be converted into a form our bodies can easily use, is simply excreted by the body and lost.

**In the presence of Fulvic and Humic, however, ALL Nutrients including those in supplements are transformed and their benefit is amplified.** Many supplement manufacturers now understand this and are including Fulvic in their formulas: not very much Fulvic, but some is better than none at
all. If you see anything above 70 minerals advertised on the label, you’ll know the product includes Humic or Fulvic.

5. **Why is Taking the Right Form of Minerals important and Why can’t I just Supplement individual Vitamins and Minerals?**

First, the Task of Trying to Supplement the Vitamins and Minerals and other nutrients Missing in Our diets Would Be Nearly Impossible...Costly...And Probably Counterproductive...

Thankfully Mother Earth has already done it for us! It is with The Gift from Mother Earth—Humic and Fulvic...

Humic and Fulvic Naturally Carry With Them In Their Structures...ALL of the Vitamins, Over 74 Organic, Ionic Minerals...along with elements such as phytochemicals, natural sterols, hormones, fatty acids, polyphenols, and ketones, including flavonoids, flavones, flavins, catechins, tannins, quinones, isoflavones, tocopherols, and others...All Vital Nutrients Our Bodies Need Every Day!

...Activated into Their Organic, Ionic Forms so our cells can recognize and use them immediately...

...in just the right proportions...

...and transported into our cells right where we need them...to Help Keep our Bodies Healthy and Strong.

It’s also Important to Remember.. Each cell in our bodies requires a complex interaction of all the Vitamins, over 74 Minerals, amino acids and other elements and nutrients to function optimally. They all must be present or things don’t work as well as they should.

**The Importance of Full Spectrum Mineral Supplementation**

In the case of minerals, for every mineral, such as Calcium, there are several other minerals that must be present in the proper amount and in turn, those minerals must have other minerals present, or the mineral will not do the job required
by the human body. Plus, Vitamins are co-factors to Minerals—and they need each other to work.

![Mineral Wheel Diagram]

The mineral wheel diagram shows the complex interactions that minerals have with each other. Note all it's interactions with just these 23 minerals. It's already hard enough to read so imagine the complexity if all 74+ minerals our bodies need were included.

You can see that some minerals require other minerals to be present in order to do their job (single arrows on the lines of the mineral wheel.) Calcium (Ca) and Manganese (Mn) for example.

Other minerals interfere with another's bioavailability so it can't be used by the body (double, opposing arrows on the lines of the mineral wheel). Calcium (Ca) and Magnesium (Mg) are good examples that must be present in just the right proportions to be effective. If they are not in proportion the opposite of the intended effect occurs.

Also, Minerals must be in their Organic, Ionic, Water-soluble forms Before Our Bodies Can Use Them... Most Mineral Supplements on the market today, are not in these forms... and can even build-up as "mineral metals" because they can't be easily transformed or eliminated and become toxic. This is especially true of non-fulvic
liquid mineral supplements which are more easily absorbed from the intestines into the blood stream.

It is interesting to note that one of the biological functions of Humic and Fulvic is to chelate (bind) and transform into a usable form or remove toxic mineral metals from the body.

So, the Goal of Mineral Supplementation is to Insure ALL 74+ Minerals—Macro, Micro, and Trace Minerals—are delivered in their organic, ionic forms...concentrated...and in just the right proportion Nature Intended...Along with all the Vitamins that act as their co-factors.

6. Why is the source of Humate Raw material important in choosing a Fulvic or Humic/Fulvic product?

It probably goes without saying that a Superior-Quality Humic and Fulvic Product can only be produced from superior-quality raw materials. And high-quality raw materials have a high Fulvic content and are free from toxins or impurities such as pollution, chemicals, pesticides, or fertilizers.

Did You Know...The best sources are from deposits that were originally beds of ancient fresh-water lakes (NOT Salt Water) during the late Cretaceous Period that are distant from large population centers where ground waters are still pure. It is sad to say, there are only a handful of these left in the World. **Humic and Fulvic derived from deposits where** marine saltwater bodies once existed are not as good because the average molecular weight of the Humic/Fulvic molecules is higher so not as active, and there are more impurities.

**Advances in processes based on Nanotechnology have enabled us to extract and purify Humic and Fulvic from Deposits of Ancient Plant Material at Concentrations that are Truly Remarkable while maintaining the activity of the Fulvic and Humic molecules.**

Deposits contain a massive quantity of plant material that has been compressed over millions of years. It would be impossible to duplicate this quantity using modern plant sources to produce highly concentrated Humic and Fulvic that achieves Real Biological Activity.

**Humic and Fulvic in Mother Earth’s Humic and Fulvic Products** are derived from the Highest-Quality Humic deposits located in the wilderness Fruitland Formation located in the Northwest corner of New Mexico in the United States of America—well known to be among the finest fresh-water Humic
deposits in the world because of its very high Humic and Fulvic content and its purity. The Fruitland Formation is a pristine, remote mountainous wilderness area in Northwest New Mexico.

7. Are there any Side Effects with Fulvic?

There are no known negative side effects or toxicity when taken as recommended, even up to 3 ounces 3 times per day as many do who are facing a health challenge and are counting on Humic and Fulvic's health restorative and maintenance power. On the contrary, Humic and Fulvic work to help neutralize and remove toxic elements from the body.

It is important to remember Humic and Fulvic are completely natural substances and Nature’s Own Nutrient Activation and Delivery System to the Cells throughout our biosphere. If our food sources contained the Humic and Fulvic and all the minerals, vitamins, and other nutrients they naturally carry as they once did a century ago, we wouldn’t need to supplement them.

Mother Earth’s Humic and Fulvic products contain highly-concentrated Humic and/or Fulvic and since Humic and Fulvic help to remove toxic substances that have been stored in tissues, sometimes people with excessive amounts of toxic build up, experience flu like symptoms for a few days while the body is being cleansed of toxins. If this happens, it is suggested you reduce the dose you are taking until you no longer experience these symptoms and work your way back up slowly. Be patient and give your body the time it needs.

8. What are Colloidal Minerals and Why are Humic and Fulvic Minerals better than Colloidal Minerals?

Colloidal Minerals are inorganic (non-biological) non-ionic (not dissolved), mineral complexes that are suspended in a liquid solution. Although they are small in size they are much larger than the organic, ionic minerals that Humic and Fulvic carry. They also reflect light when a light source is shining through the liquid.

Humic and Fulvic Minerals are Organic, Ionic, and Plant-derived, so they are smaller in size and more absorbable than colloidal minerals.

Also, Fulvic and the Organic, Ionic Minerals it naturally carries can pass through cell membranes with ease. For several reasons, Colloidal Minerals rarely pass through cell membranes and are therefore offer very little health benefit. Also, **Colloidal Minerals can actually become toxic if they can’t be converted to their organic, ionic counterparts** and are stored as mineral metals in the body’s fatty tissues to protect vital organs.
Fulvic does not contain colloidal minerals, but interestingly can actually convert Colloidal Minerals into their Organic, Ionic Forms our bodies can use which may explain why people who have taken colloidal minerals have reported some benefit since everyone receives varying amounts Fulvic naturally from food sources.

Humic and Fulvic deliver all 74+ of the organic, ionic minerals our bodies need in just the right form our bodies can recognize and easily use, in just the right concentrations and proportions that Nature Intended to be the most biologically active and beneficial to our health.

9. Can I take Humic or Fulvic While on Medications?

It is important to remember that Humic and Fulvic can amplify the effects of many supplements and may also amplify the effects of prescription medications. Conversely Humic and Fulvic are also powerful detoxifying agents and may alter the effective dose of prescription medications because many medications are foreign or toxic substances to the body and can be removed by Fulvic from the body thereby reducing a medication’s effects.

We advise anyone taking prescription medications to check with their health care practitioner how to best integrate supplements to their health restorative and maintenance regimen.

We also understand that many practitioners who practice traditional medicine may be unfamiliar with natural healing supplements and modalities including Humic and Fulvic’s natural healing capabilities to help restore and maintain good health holistically rather than symptomatically.

**It is important to note that most practitioners who approve supplements their patients wish to take recommend typically allow a minimum of 2 hours in between taking the prescription and the supplement.**

10. Can Children Benefit from Taking Humic and Fulvic Minerals?

Most certainly. Our mineral deficient food sources create vitamin and mineral deficiencies in children too. **Now almost a third (1 out of 3) of our children in the United States experience chronic health problems**—health problems with links to underlying mineral and vitamin deficiencies.
Studies have shown significant improvement in health problems associated with asthma, diabetic, and ADD and ADHD symptoms in children. Many parents have reported success in these areas as well.

Mother Earth’s Humic and Fulvic products have very little taste and can be added to water or juice. Start with ½ teaspoon per 20 pounds and work up to 1 teaspoon per 20 pounds of body weight over a couple of weeks. We do not recommend exceeding 1 ounce (6 teaspoons) per day.

11. Can Animals Benefit from Taking Humic and Fulvic Minerals?

Animals benefit greatly from Mineral and Vitamin supplementation.

Most store bought food, even the advanced preparations, lack minerals, especially the vital micro and trace minerals used in critical life-sustaining metabolic processes that help keep our animal companions healthy and strong throughout their lives. This is because the plant-based portion of the preparation is from the same plant food sources we use for food sources and our modern food sources contain as much as 80% less of the vitamins and minerals they did a century ago.

Pet parents report significant improvement in arthritis and other joint and connective tissue mobility issues in their older animals. One parent of an elderly Maltese dog reported the dog can now easily make it up the stairs without any assistance and no longer waits at the bottom of the stairs for someone to help out.

Mother Earth’s Humic and Fulvic products have very little taste and animals should not mind the taste. It is best administered from a medicine dropper, but can be added to a water bowl. However, it is important to monitor water consumption when starting administering Humic or Fulvic in this fashion to insure the pet is maintaining proper hydration. Start with ½ teaspoon per 20 pounds and work up to 1 teaspoon per 20 pounds of body weight over a couple of weeks. We do not recommend exceeding 1 ounce (6 teaspoons) per day.

12. Can people who are facing health issues benefit from taking more than one ounce per day of Humic or Fulvic?
Many of the people who learn about the power of Humic and Fulvic do so when they are facing a health challenge and looking for allies to help them on their path to restore their good health.

_Humic and Fulvic are very potent allies helping restore natural body functions, boost immune response, and enable our body’s own amazing ability to heal itself whenever possible by providing the nutrients it needs and energizing the cells to achieve the balance they needs to carry our normal functions._

Because there is no danger of toxic build-up many, people can take as much as 3 ounces 3 times per day depending on their need. Mother Earth’s Humic and Fulvic products are very concentrated so it is important to start slowly and work up. If you listen to your body, it will tell you and adjust as needed.