



## Mineral, Health and Vitality Formula

Maintaining optimal mineral levels, enjoying peak health and increasing your body's vitality are now more accessible than ever. OptimALL Nutrition™ **balance™** is an all-natural, organic mineral supplement that balances your mineral intake to improve pH buffering capacity. **balance™** promotes increased fluid intake and nutrient and phytonutrient absorption.

### Key Benefits

#### balance™ Your Mineral Intake

- Minerals are essential for health and vitality. **balance™** provides a source of several key minerals and over 70 vital trace minerals all in an easy to assimilate form.\*

#### balance™ Your Fluid Intake

- **balance™** is a simple additive to water and consuming it will augment your fluid intake if consumed in addition to other fluids you normally drink.

#### balance™ Your Vitality

- Balancing your fluid intake, pH buffering capacity and mineral intake optimizes digestive capacity, increases nutrient uptake and improves clearance of waste products to deliver optimal vitality & peak health.\*

### Ingredient Information

Avisae OptimALL Nutrition **balance™** is a mineral supplement composed primarily of a calcium matrix derived from naturally occurring fossilized coral deposits collected off the island of Okinawa<sup>1</sup>.

The Japanese Government oversees the actual mining. It is a very carefully controlled process using an undersea vacuum that is attached to the ship above. This practice limits the amount of dust sediment created. This undersea mining is confined to a small offshore "quarry" near Okinawa that is designated for this purpose only and it does not negatively affect surrounding live coral growth or the environment.

The coral-derived calcium-rich matrix contains a number of other naturally occurring trace elements.

#### Calcium<sup>2</sup>

You have heard that calcium protects your bones—but what do you really know about this essential nutrient? Most people may not realize that calcium is the most abundant mineral in the body. Calcium does far more than just strengthen your bones and teeth. Calcium also helps maintain heart rhythm, muscle function, and more.



### Product Features

- Clinically proven, standardized ingredients
- Organic, All-natural
- Harvested with environmentally safe measures to ensure the highest levels of purity and safety





The body needs calcium to maintain strong bones and to carry out many other important functions. Just as important, the body also needs calcium for muscles to move and for nerves to carry vital messages between the brain and every part of the body. In addition, calcium is used to help blood vessels move blood throughout the body and aids the body in releasing hormones that affect other essential body functions.

As bones undergo natural degeneration, calcium is essential to build new bone. Getting enough calcium is important for keeping your bones strong throughout your lifetime, but is especially critical during childhood while the bones are still growing. It is also essential during the senior years, when bones tend to break down faster than they can rebuild. Older bones lose bone mineral density and can be more easily fractured—a condition called osteoporosis. Calcium supplements are standard for treating and preventing osteoporosis—weak and easily broken bones—and its precursor, osteopenia.

Calcium also plays an important role in several other body functions, including:

- Nerve signal transmission
- Hormone release
- Muscle contraction
- Blood vessel function
- Blood clotting

There is also some early evidence that calcium might lower blood pressure and help protect against colorectal and prostate cancers. However, these observations have yet to be confirmed in long term studies.

Experts say that most adults in the U.S. are deficient in calcium. While improving one’s diet will help, without supplementing calcium many people will still fall short of the daily requirement. Make sure to avoid eating high salt foods or drinking soda when you take your supplements because they interfere with calcium absorption.

Calcium is used for many other conditions. It’s an ingredient in many antacids. Doctors also use calcium to control high levels of magnesium, phosphorus, and potassium in the blood. It also may reduce PMS symptoms.

The people at highest risk of a calcium deficiency are postmenopausal women. Since dairy products are one of the most common sources of calcium, people who are lactose intolerant or vegan are also at increased risk of calcium deficiency.

The Institute of Medicine has set an adequate intake (AI) for calcium. Getting this amount from diet, with or without supplements, may be enough to keep your bones healthy under normal circumstances but there are many potential confounding factors that can impact this adequacy. Doctors may recommend higher doses.

Category	Calcium: Adequate Intake (AI)
0-6 months	210 mg/day
7-12 months	270 mg/day
1-3 years	700 mg/day
4-8 years	1,000 mg/day
9-18 years	1,300 mg/day
19-50 years	1,000 mg/day
51 years and up	1,200 mg/day



SOY FREE



NUTS FREE



DAIRY FREE



VEGAN



GLUTEN FREE



NON GMO



MADE IN USA





A recent study suggests that dietary calcium lowers body weight by converting a portion of dietary energy to heat rather than to stored body fat. “When we reduce calcium intake, we send the body a signal—make more fat,” says Michael Zemel, PhD, lead researcher on the study reported in the *American Journal of Clinical Nutrition*.

His group contends that when your body is deprived of calcium, it conserves it, prompting you to produce higher levels of calcitriol, a hormone that triggers increased production of fat cells. Extra calcium in your diet suppresses calcitriol, leading to the breakdown of more fat, making fat cells leaner and trimmer. The fact that participants in Dr. Zemel’s study essentially lost just fat is another reason his results are intriguing.

Some bone thinning occurs as part of the natural process of aging. However, osteoporosis is considered a preventable disease.

### Key Points

- After age 30, men and women naturally begin to lose bone mass. You can slow bone loss and possibly prevent osteoporosis by eating a diet rich in calcium and vitamin D and undertaking load bearing exercise (e.g. walking) on a regular basis.
- Getting enough calcium and vitamin D is especially critical for women in the first few years after menopause, when bone mass is lost more rapidly.
- If you do not get enough calcium and vitamin D from the foods you eat, you can change your diet to include more calcium and vitamin D rich foods or take calcium and vitamin D supplements. Your body needs vitamin D to absorb calcium.
- If you are diagnosed with osteoporosis, it is important to get enough calcium and vitamin D, adequate load bearing exercise and take prescribed medicine for this disease.
- Calcium is found in many foods, including dairy products such as milk or yogurt, fortified orange juice, nuts, and many vegetables.

Calcium, combined with vitamin D and load-bearing exercise, keeps bone loss from getting worse or helps reduce the rate of bone loss that occurs with osteoporosis. Taking vitamin D along with calcium can help strengthen your bones. Calcium should always be taken with vitamin D, because vitamin D is necessary for the body to absorb calcium.

High calcium intakes or high calcium absorption were previously thought to contribute to the development of kidney stones. However, a high calcium intake has been associated with a lower risk for kidney stones in more recent research.\*

### Magnesium<sup>3</sup>

Magnesium is a mineral that is crucial to many aspects of the body’s function. Magnesium supports immune function, helps keep blood pressure normal, assists in the maintenance of bones strength, and normalises heart rhythm.

Experts say that many people in the U.S. are not eating enough foods with magnesium. Adults who consume less than the recommended amount of magnesium are more likely to have elevated inflammation markers. Inflammation, in turn, has been associated with major health conditions such as heart disease and diabetes. Also, low magnesium appears to be a risk factor for osteoporosis. There is some evidence that eating foods high in magnesium and other related minerals can help prevent high blood pressure in people with prehypertension.





Because of the important interaction between phosphate and magnesium ions, magnesium ions are essential to the basic nucleic acid chemistry of life, and thus are essential to all cells of all known living organisms. Over 300 enzymes require the presence of magnesium ions for their catalytic action.

Magnesium is a vital component of a healthy human diet. Low levels of magnesium in the body has been associated with the development of a number of human illnesses such as asthma, diabetes, and osteoporosis. Taken in the proper amount, magnesium plays a role in preventing both stroke and heart attack. Magnesium plays a role in reducing the severity of symptoms of fibromyalgia, migraines, and premenstrual syndrome, and magnesium can also shorten the duration of the migraine symptoms.

Observations of reduced dietary magnesium intake in modern Western countries compared to earlier generations may be related to modern food production methods and the widespread use of modern fertilizers that contain no magnesium.

Intravenous or injected magnesium is used to treat other conditions, such as eclampsia during pregnancy and severe asthma attacks. Magnesium is also a main ingredient in many antacids and laxatives.

The recommended dietary allowance (RDA) includes the magnesium you get from both the food you eat and any supplements you take.\*

Category	Recommended Dietary Allowance (RDA)
<b>CHILDREN</b>	
1-3 years	80 mg/day
4-8 years	130 mg/day
9-13 years	240 mg/day
<b>FEMALES</b>	
14-18 years	360 mg/day
19-30 years	310 mg/day
31 years and over	320 mg/day
Pregnant	Under 19 years: 400 mg/day
	19 to 30 years: 350 mg/day
	31 years and up: 360 mg/day
Breastfeeding	Under 19 years: 360 mg/day
	19 to 30 years: 310 mg/day
	31 years and up: 320 mg/day
<b>MALES</b>	
14-18 years	410 mg/day
19-30 years	400 mg/day
31 years and up	420 mg/day





## Chromium<sup>4</sup>

Chromium is an important metallic mineral our bodies use in small amounts for normal body functions, such as digesting food. Chromium exists in many natural foods including brewer's yeast, meats, potatoes (especially potato skins), cheeses, molasses, some spices, whole-grain breads and cereals, and fresh fruits. Drinking "hard" tap water supplies chromium to the body, and cooking in stainless-steel cookware increases the chromium content in foods.

Those at risk for chromium deficiency include people with diabetes and the elderly.

Chromium helps to move blood sugar (glucose) from the bloodstream into the cells to be used as energy and to turn fats, carbohydrates, and proteins into energy.

- Chromium may help some people with type-2 diabetes by assisting with control of blood sugar and may play a role in the management of type-2 diabetes. But more studies are needed to know how well it really works.
- Low chromium levels may cause high cholesterol and may increase your risk for cardiovascular disease. Supplemental chromium may increase "good" (HDL) cholesterol and lower triglycerides and total cholesterol levels, especially in people with high blood sugar and diabetes. But more studies are needed to know how well it really works.
- Some studies suggest that chromium supplements may be helpful in building muscle and burning fat and in helping the body utilise carbohydrates but more research into this is required before a definitive role is demonstrated.
- Chromium may be beneficial for eye health as there appears to be a link between low chromium levels and increased risk of glaucoma.
- Optimal chromium levels slows the loss of calcium, so it may help prevent bone loss in women during menopause.\*

## Potassium<sup>5</sup>

Potassium is a mineral that is crucial for life. Potassium is necessary for the heart, kidneys, and other organs to work normally.

The standard American diet is deficient in potassium. Low potassium is associated with a risk of high blood pressure, heart disease, stroke, arthritis, cancer, digestive disorders, and infertility. For people with low potassium levels, doctors sometimes recommend improved diets or potassium supplements to improve management of these conditions.

Potassium is a critical electrolyte. It allows our muscles to move, our nerves to fire, and our kidneys to filter blood. The right balance of potassium literally allows the heart to beat.

If you have high blood pressure, heart failure, or heart rhythm problems, getting enough potassium is especially important. Potassium deficiencies are more common in people who:

- Use certain medicines, such as diuretics and certain birth control pills
- Have physically demanding jobs
- Are athletes





- Have health conditions that affect their digestive absorption, such as Crohn’s disease
- Have an eating disorder
- Smoke
- Abuse alcohol or drugs

The Institute of Medicine has set an adequate intake for potassium. Getting the amounts of potassium as listed below from diet, with or without supplements, should be enough to keep you healthy. The FDA has determined that foods that contain at least 350 milligrams of potassium can bear the following label: “Diets containing foods that are good sources of potassium and low in sodium may reduce the risk of high blood pressure and stroke.”

Category	Adequate Intake (AI)
<b>CHILDREN</b>	
0-6 months	400 mg/day
7-12 months	700 mg/day
1-3 years	3,000 mg/day
4-8 years	3,800 mg/day
9-13 years	4,500 mg/day
14 years and up	4,700 mg/day
<b>ADULTS</b>	
18 years and up	4,700 mg/day
Pregnant women	4,700 mg/day
Breastfeeding women	5,100 mg/day

Always take potassium supplements with a full glass of water or juice.

Keep in mind that some types of cooking, such as boiling, can destroy the potassium in some foods.

Most people get adequate potassium by eating a normal American diet. The main source of potassium in our food is fruits and vegetables. Dairy products, whole grains, meat, and fish also provide potassium.

In healthy amounts, potassium is a heart-friendly mineral. Potassium does not treat or prevent heart disease, but studies have shown that getting enough potassium benefits the heart in several important ways.

- Reduction of heart disease risk
- Lowering blood pressure
- Lowering the risk for obesity

In one major study of people with high blood pressure, taking potassium supplements reduced systolic blood pressure (the top number) by about 8 points.

A direct link between potassium and cholesterol has not been established but many diets proven to lower cholesterol are also high in potassium so a correlation is possible.





Taking potassium is not known to directly reduce the incidence of heart attacks but by making sure you are taking in enough potassium, you will probably end up eating more fruits and vegetables. A healthy diet—high in fruits and veggies and low in saturated fat and cholesterol—can help cholesterol levels and reduce the risk of heart disease.

For people with abnormal heart rhythms, potassium may be even more important. Potassium is critical to the electrical process that triggers every heartbeat. Heart muscle needs just the right potassium balance in order to contract in a coordinated fashion.

For people with congestive heart failure, getting enough potassium is especially important. Some diuretics—water pills—for heart failure can cause you to lose potassium in the urine. Potassium supplements or a potassium-rich diet are used to manage the correct balance.\*

## Trace Minerals<sup>6</sup>

Minerals required for optimal health fall into two groups. Minerals or macro-minerals are those minerals which the body requires more than 100 milligrams of per day for proper maintenance of health. Micro or trace minerals are those minerals which the body requires less than 100 milligrams of per day.

Minerals in order of abundance in the human body include the seven major minerals: calcium, phosphorus, potassium, sulfur, sodium, chlorine, and magnesium, some of which have been discussed above.

Important “trace” minerals, necessary for mammalian life, include: iron<sup>7</sup>, cobalt<sup>8</sup>, copper<sup>9</sup>, zinc<sup>10</sup>, molybdenum<sup>11</sup>, iodine<sup>12</sup>, and selenium<sup>13</sup>.\*

## References

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