



## **LELAND VITAE TEA**

### **PRODUCT SUPPLEMENT INFORMATION ON *ImmuniTEA***

<b>LELAND VITAE TEA VARIANT:</b>	<b><i>ImmuniTEA</i></b>
<b>SUPPLEMENT:</b>	<b>Zinc</b>
<b>CAFFEINE LEVEL:</b>	<b>Medium Caffeine</b>

### **ZINC INFORMATION**

RDA  
Men: 11 mg  
Women: 8 mg

#### **Key facts to keep in mind about Zinc:**

- For treating the common cold, one zinc gluconate or acetate lozenge, providing 9-24 mg elemental zinc, dissolved in the mouth every two hours while awake when cold symptoms are present
- Zinc is likely for most adults when applied to the skin, or when taken by mouth in amounts not larger than 40 mg daily. Routine zinc supplementation is not recommended without the advice of a healthcare professional. In some people, zinc might cause nausea, vomiting, diarrhea, metallic taste, kidney and stomach damage, and other side effects.
- Zinc is possibly safe when taking by mouth in doses greater than 40 mg daily. There is some concern that taking doses higher than 40 mg daily might decrease how much copper the body absorbs. Decreased copper absorption may cause anemia.
- Taking high amounts of zinc is **LIKELY UNSAFE**. High doses above the recommended amounts might cause fever, coughing, stomach pain, fatigue, and many other problems.
- Taking more than 100 mg of supplemental zinc daily or taking supplemental zinc for 10 or more years doubles the risk of developing prostate cancer. There is also concern that taking large amounts of a multivitamin plus a separate zinc supplement increases the chance of dying from prostate cancer.
- Taking 450 mg or more of zinc daily can cause problems with blood iron. Single doses of 10-30 grams of zinc can be fatal.
- Zinc is likely safe for infants and children when taken by mouth appropriately in the recommended amounts. Zinc is possibly unsafe when used in high doses.
- Zinc is likely safe for most pregnant and breast-feeding women when used in the recommended daily amounts (RDA). However, zinc is **POSSIBLY UNSAFE** when used in high doses by breast-feeding women and **LIKELY UNSAFE** when used in high doses by pregnant women. Pregnant women over 18 should not take more than 40 mg of zinc per day; pregnant women age 14 to 18

should not take more than 34 mg per day. Breast-feeding women over 18 should not take more than 40 mg of zinc per day; breast-feeding women age 14 to 18 should not take more than 34 mg per day.

- Long-term, excessive alcohol drinking is linked to poor zinc absorption in the body.
- Large doses of zinc can lower blood sugar in people with diabetes. People with diabetes should use zinc products cautiously.
- People receiving hemodialysis treatments seem to be at risk for zinc deficiency and might require zinc supplements.
- Use zinc cautiously if you have HIV/AIDS. Zinc use has been linked to shorter survival time in people with HIV/AIDSs.
- People with Rheumatoid arthritis (RA) absorb less zinc.

### **What is Zinc?**

Zinc is a metal. It is called an “essential trace element” because very small amounts of zinc are necessary for human health.

Zinc is used for treatment and prevention of zinc deficiency and its consequences, including stunted growth and acute diarrhea in children, and slow wound healing.

It is also used for boosting the immune system, treating the common cold and recurrent ear infections, and preventing lower respiratory infections. It is also used for malaria and other diseases caused by parasites.

Some people use zinc for an eye disease called macular degeneration, for night blindness, and for cataracts. It is also used for asthma; diabetes; high blood pressure; acquired immunodeficiency syndrome (AIDS); and skin conditions such as psoriasis, eczema, and acne.

Other uses include treating attention deficit-hyperactivity disorder (ADHD), blunted sense of taste (hypogeusia), ringing in the ears (tinnitus), severe head injuries, Crohn’s disease, Alzheimer’s disease, Down syndrome, Hansen’s disease, ulcerative colitis, peptic ulcers and promoting weight gain in people with eating disorders such as anorexia nervosa.

Some people use zinc for benign prostatic hyperplasia (BPH), male infertility, erectile dysfunction (ED), weak bones (osteoporosis), rheumatoid arthritis, and muscle cramps associated with liver disease. It is also used for sickle cell disease and inherited disorders such as acrodermatitis enteropathica, thalassemia, and Wilson’s disease.

Some athletes use zinc for improving athletic performance and strength.

Zinc is also applied to the skin for treating acne, aging skin, herpes simplex infections, and to speed wound healing.

There is a zinc preparation that can be sprayed in the nostrils for treating the common cold.

Zinc sulfate is used in products for eye irritation.

Zinc citrate is used in toothpaste and mouthwash to prevent dental plaque formation and gingivitis.

Note that many zinc products also contain another metal called cadmium. This is because zinc and cadmium are chemically similar and often occur together in nature. Exposure to high levels of cadmium over a long time can lead to kidney failure. The concentration of cadmium in zinc-containing supplements can vary as much as 37-fold. Look for zinc-gluconate products. Zinc gluconate consistently contains the lowest cadmium levels.

### **How does it work?**

Zinc is needed for the proper growth and maintenance of the human body. It is found in several systems and biological reactions, and it is needed for immune function, wound healing, blood clotting, thyroid function, and much more. Meats, seafood, dairy products, nuts, legumes, and whole grains offer relatively high levels of zinc.

Zinc deficiency is not uncommon worldwide, but is rare in the US. Symptoms include slowed growth, low insulin levels, loss of appetite, irritability, generalized hair loss, rough and dry skin, slow wound healing, poor sense of taste and smell, diarrhea, and nausea. Moderate zinc deficiency is associated with disorders of the intestine which interfere with food absorption (malabsorption syndromes), alcoholism, chronic kidney failure, and chronic debilitating diseases.

Zinc plays a key role in maintaining vision, and it is present in high concentrations in the eye. Zinc deficiency can alter vision, and severe deficiency can cause changes in the retina (the back of the eye where an image is focused).

Zinc might also have effects against viruses. It appears to lessen symptoms of the rhinovirus (common cold), but researchers can't yet explain exactly how this works. In addition, there is some evidence that zinc has some antiviral activity against the herpes virus.

Low zinc levels can be associated with male infertility, sickle cell disease, HIV, major depression, and type 2 diabetes, and can be fought by taking a zinc supplement.

### **Effective for:**

- Zinc deficiency. Zinc deficiency might occur in people with severe diarrhea, conditions that make it hard for the bowel to absorb food, liver cirrhosis and alcoholism, after major surgery, and during long-term use of tube feeding in the hospital. Taking zinc by mouth or giving zinc intravenously (by IV) helps to restore zinc levels in people who are zinc deficient. However, taking zinc supplements regularly is not recommended.

### **Likely Effective for:**

- Diarrhea. Taking zinc by mouth reduces the duration and severity of diarrhea in children who are undernourished or zinc deficient. Severe zinc deficiency in children is common in developing countries.
- An inherited disorder called Wilson's disease. Taking zinc by mouth improves symptoms of an inherited disorder called Wilson's disease. People with Wilson's disease have too much copper in their bodies. Zinc blocks how much copper is absorbed and increases how much copper the body releases.

## **MODERATE INTERACTIONS: Be cautious when taking this combination**

- Antibiotics (Quinolone antibiotics) interacts with Zinc. Zinc might decrease how much antibiotic the body absorbs. Taking zinc along with some antibiotics might decrease the effectiveness of some antibiotics. To avoid this interaction take zinc supplements at least 1 hour after antibiotics. Some of these antibiotics that might interact with zinc include ciprofloxacin (Cipro), enoxacin (Penetrex), norfloxacin (Chibroxin, Noroxin), sparfloxacin (Zagam), trovafloxacin (Trovan), and grepafloxacin (Raxar).
- Antibiotics (Tetracycline antibiotics) interacts with Zinc. Zinc can attach to tetracyclines in the stomach. This decreases the amount of tetracyclines that can be absorbed. Taking zinc with tetracyclines might decrease the effectiveness of tetracyclines. To avoid this interaction take zinc 2 hours before or 4 hours after taking tetracyclines. Some tetracyclines include demeclocycline (Declomycin), minocycline (Minocin), and tetracycline (Achromycin).
- Cisplatin (Platinol-AQ) interacts with Zinc. Cisplatin (Platinol-AQ) is used to treat cancer. Taking zinc along with EDTA and cisplatin (Platinol-AQ) might increase the effects and side effects of cisplatin (Platinol-AQ).
- Penicillamine interacts with Zinc. Penicillamine is used for Wilson's disease and rheumatoid arthritis. Zinc might decrease how much penicillamine your body absorbs and decrease the effectiveness of penicillamine.

## **MINOR INTERACTIONS: Be watchful of this combination**

- Amiloride (Midamor) interacts with Zinc. Amiloride (Midamor) is used as a "water pill" to help remove excess water from the body. Another effect of amiloride (Midamor) is that it can increase the amount of zinc in the body. Taking zinc supplements with amiloride (Midamor) might cause you to have too much zinc in your body.



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<b>SUPPLEMENT:</b>	<b>Vitamin C</b>
<b>CAFFEINE LEVEL:</b>	<b>Medium Caffeine</b>

#### **VITAMIN C INFORMATION**

RDA  
Men: 95 mg  
Women: 75 mg

#### **Key facts to keep in mind about Vitamin C:**

- Vitamin C RDA varies depending on condition.
- Do not take more than the following amounts of Vitamin C: 400 mg per day for children ages 1 to 3 years, 650 mg per day for children 4 to 8 years, 1200 mg per day for children 9 to 13 years, and 1800 mg per day for adolescents and pregnant and breast-feeding women 14 to 18 years, and 2000 mg per day for adults and pregnant and lactating women. Amounts higher than 2000 mg daily are possibly unsafe and may cause a lot of side effects, including kidney stones and severe diarrhea. In people who have had a kidney stone, amounts greater than 1000 mg daily greatly increase the risk of kidney stone recurrence.
- Vitamin C is likely safe for most people when taken by mouth in recommended doses, when applied to the skin, when injected into the muscle, and when injected intravenously (by IV) and appropriately. In some people, Vitamin C might cause nausea, vomiting, heartburn, stomach cramps, headache, and other side effects. The chance of getting these side effects increases the more Vitamin C you take.
- Vitamin C is likely safe for pregnant or breast-feeding women when taken by mouth in amounts no greater than 2000 mg daily for women over 19 years-old, and 1800 mg daily for women 14 to 18 years-old, or when given intravenously (by IV) or intramuscularly and appropriately. Taking too much Vitamin C during pregnancy can cause problems for the newborn baby. Vitamin C is possibly unsafe when taken by mouth in excessive amounts.
- Avoid taking supplements containing Vitamin C or other antioxidant vitamins (beta-carotene, vitamin E) immediately before and following angioplasty without the supervision of a health care professional. These vitamins seem to interfere with proper healing.
- Vitamin C might raise blood sugar. In older women with diabetes, Vitamin C in amounts greater than 300 mg per day increases the risk of death from heart disease. Do not take Vitamin C in doses greater than those found in basic multivitamins.
- Vitamin C can increase iron absorption, which might make blood-iron disorders, including conditions called “thalassemia” and “hemochromatosis conditions worse. Avoid large amounts of Vitamin C.

- Large amounts of Vitamin C can increase the chance of getting kidney stones. Do not take Vitamin C in amounts greater than those found in basic multivitamins.
- Vitamin C levels are reduced during a heart attack. However, low Vitamin C has not been linked to an increased risk for heart attack.
- Large amounts of Vitamin C can cause red blood cells to break in people with a metabolic deficiency called “glucose-6-phosphate dehydrogenase” (G6PD) deficiency. Avoid excessive amounts of Vitamin C.
- Smoking and chewing tobacco lowers Vitamin C levels. Vitamin C intake in the diet should be increased in people who smoke or chew tobacco.
- Vitamin C might make sickle cell disease worse. Avoid using large amounts of Vitamin C.

### **What is Vitamin C?**

Vitamin C (ascorbic acid) helps tissue and bone grow and repair themselves. While Vitamin C supplements are extremely popular, research has yet to establish solid health benefits.

### **Why do people take Vitamin C?**

Studies have shown that Vitamin C may reduce the odds of getting a cold, but only in specific groups in extreme circumstances, such as soldiers in subarctic environments, skiers, and marathon runners. Studies have not found solid evidence that Vitamin C helps prevent or treat colds in average situations.

Vitamin C's antioxidant benefits are also unclear. While some studies of Vitamin C supplements have been promising, they have not found solid evidence that Vitamin C supplements help with cancer, stroke, asthma, and many other diseases. Evidence does suggest that they do not help with cataracts or high cholesterol.

Data on Vitamin C and heart disease are mixed. Some studies show an association between low levels of Vitamin C and heart disease risk, yet many studies have linked the use of Vitamin C supplements with an increased risk of heart disease.

Data on taking Vitamin C for hypertension are also mixed. Taking Vitamin C with antihypertensive medications may slightly decrease systolic blood pressure, but not diastolic pressure. Supplemental Vitamin C -- 500 mg per day taken without antihypertensives -- doesn't seem to reduce systolic or diastolic blood pressure. Type 2 diabetics who supplemented with Vitamin C and remained on their antihypertensive medications seemed to have a reduction in blood pressure and arterial stiffness. Lower levels of Vitamin C in the blood are associated with increased diastolic and systolic blood pressure.

Studies have shown that dietary rather than supplemental sources of Vitamin C are more effective in keeping blood pressure in check.

A substantial number of Americans may have low intake levels of Vitamin C due to the inadequate intake of fruits and vegetables. The proven and effective use of Vitamin C is for treating Vitamin C deficiency and conditions that result from it, like scurvy.

Vitamin C also seems to help the body absorb the mineral iron.

Most experts recommend getting Vitamin C from a diet high in fruits and vegetables rather than taking supplements. Fresh-squeezed orange juice or fresh-frozen concentrate is a better pick than ready-to-drink orange juice. The fresh juice contains more active Vitamin C. Drink fresh-frozen orange juice within one week after reconstituting it for the most benefit. If you prefer ready-to-drink orange juice, buy it 3 to 4 weeks before the expiration date, and drink it within one week of opening.

Historically, Vitamin C was used for preventing and treating scurvy. Scurvy is now relatively rare, but it was once common among sailors, pirates, and others who spent long periods of time onboard ships. When the voyages lasted longer than the supply of fruits and vegetables, the sailors began to suffer from Vitamin C deficiency, which led to scurvy.

These days, Vitamin C is used most often for preventing and treating the common cold. Some people use it for other infections including gum disease, acne and other skin infections, bronchitis, human immunodeficiency virus (HIV) disease, stomach ulcers caused by bacteria called *Helicobacter pylori*, tuberculosis, dysentery (an infection of the lower intestine), and skin infections that produce boils (furunculosis). It is also used for infections of the bladder and prostate.

Some people use Vitamin C for depression, thinking problems, dementia, Alzheimer's disease, physical and mental stress, fatigue, and attention deficit-hyperactivity disorder (ADHD).

Other uses include increasing the absorption of iron from foods and correcting a protein imbalance in certain newborns (tyrosinemia).

There is some thought that Vitamin C might help the heart and blood vessels. It is used for hardening of the arteries, preventing clots in veins and arteries, heart attack, stroke, high blood pressure, and high cholesterol.

Vitamin C is also used for glaucoma, preventing cataracts, preventing gallbladder disease, dental cavities (caries), constipation, Lyme disease, boosting the immune system, heat stroke, hay fever, asthma, bronchitis, cystic fibrosis, infertility, diabetes, chronic fatigue syndrome (CFS), autism, collagen disorders, arthritis and bursitis, back pain and disc swelling, cancer, and osteoporosis.

Additional uses include improving physical endurance and slowing aging, as well as counteracting the side effects of cortisone and related drugs, and aiding drug withdrawal in addiction.

Sometimes, people put Vitamin C on their skin to protect it against the sun, pollutants, and other environmental hazards. Vitamin C is also applied to the skin to help with damage from radiation therapy.

**How does it work?**

Vitamin C is required for the proper development and function of many parts of the body. It also plays an important role in maintaining proper immune function.

**How much Vitamin C should you take?**

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

Category	Vitamin C: Recommended Dietary Allowance (RDA)
<b>CHILDREN</b>	
0-6 months	40 mg/day Adequate Intake (AI)
7-12 months	50 mg/day Adequate Intake (AI)
1-3 years	15 mg/day
4-8 years	25 mg/day
9-13 years	45 mg/day
<b>FEMALES</b>	
14 to 18 years	65 mg/day
19 years and up	75 mg/day
Pregnant	<i>18 years and under:</i> 80 mg/day <i>19 years and over:</i> 85 mg/day
Breastfeeding	<i>18 years and under:</i> 115 mg/day <i>19 years and over:</i> 120 mg/day
<b>MALES</b>	
14 to 18 years	75 mg/day
19 years and up	90 mg/day

Although many people take much higher doses of Vitamin C, it's not clear that high doses have any benefit. Some studies have found that doses above 200 milligrams are not utilized by the body. Instead, the extra Vitamin C is excreted in urine.

The tolerable upper intake levels of a supplement are the highest amount that most people can take safely. Higher doses might be used to treat Vitamin C deficiencies. But don't take more unless a doctor says so.

Category (Children & Adults)	Tolerable Upper Intake Levels (UL) of Vitamin C
1-3 years	400 mg/day
4-8 years	650 mg/day
9-13 years	1,200 mg/day
14-18 years	1,800 mg/day
19 years and up	2,000 mg/day

### **Can you get Vitamin C naturally from foods?**

Many people get enough Vitamin C from their diets. All fruits and vegetables have some Vitamin C. Some of the best sources are:

- Green peppers
- Citrus fruits and juices
- Strawberries
- Tomatoes
- Broccoli
- Sweet potatoes

Light and heat can reduce Vitamin C levels. Fresh and uncooked fruits and vegetables have the most Vitamin C.

### **What are the risks of taking Vitamin C?**

- Side effects. At recommended doses, Vitamin C supplements are safe. However, they can cause upset stomach, heartburn, cramps, and headaches in some people. High doses of Vitamin C can cause more intense symptoms, such as kidney stones and severe diarrhea.
- Interactions. If you take any other regular medicines or chemotherapy drugs, ask your doctor if it's safe to take Vitamin C. It can interact with drugs like aspirin, acetaminophen, antacids, and blood thinners. Nicotine may reduce the effects of Vitamin C.
- Risks. People who are pregnant or have gout, liver disease, kidney disease, and other chronic diseases should check with a doctor before using high doses of Vitamin C supplements.

### **Can Vitamin C Prevent or Treat Cold Symptoms?**

Vitamin C has been studied for many years as a possible treatment for colds, or as a way to help prevent colds. But findings have been inconsistent. Overall, experts have found little to no benefit from Vitamin C for preventing or treating the common cold.

In a July 2007 study, researchers wanted to discover whether taking 200 milligrams or more of Vitamin C daily could reduce the frequency, duration, or severity of a cold. After reviewing 60 years of clinical research, they found that when taken after a cold starts, Vitamin C



supplements do not make a cold shorter or less severe. When taken daily, Vitamin C very slightly shortened cold duration -- by 8% in adults and by 14% in children.

According to this research, the average adult who suffers with a cold for 12 days a year would still suffer for about 11 days a year if that person took a high dose of Vitamin C every day during that year.

For the average child who suffers about 28 days of cold illness a year, taking daily high-dose Vitamin C would still likely mean about 24 days of cold illness.

When Vitamin C was tested for treatment of colds in 7 separate studies, it was found to be no more effective than placebo at shortening the duration of cold symptoms

## **VITAMIN C MODERATE INTERACTIONS: Be cautious when taking this combination**

- Aluminum is found in most antacids. Vitamin C can increase how much aluminum the body absorbs. But it isn't clear if this interaction is a big concern. Take Vitamin C two hours before or four hours after antacids.
- Estrogens interacts with Vitamin C (Ascorbic Acid). The body breaks down estrogens to get rid of them. Vitamin C might decrease how quickly the body gets rid of estrogens. Taking Vitamin C along with estrogens might increase the effects and side effects of estrogens.
- Fluphenazine (Prolixin) interacts with Vitamin C (Ascorbic Acid). Large amounts of Vitamin C might decrease how much fluphenazine (Prolixin) is in the body. Taking Vitamin C along with fluphenazine (Prolixin) might decrease the effectiveness of fluphenazine (Prolixin).
- Medications for cancer (Chemotherapy) interacts with Vitamin C (Ascorbic Acid). Vitamin C is an antioxidant. There is some concern that antioxidants might decrease the effectiveness of some medications used for cancers. But it is too soon to know if this interaction occurs.
- Medications used for HIV/AIDS (Protease Inhibitors) interacts with Vitamin C (Ascorbic Acid). Taking large doses of Vitamin C might reduce how much of some medications used for HIV/AIDS stays in the body. This could decrease the effectiveness of some medications used for HIV/AIDS. Some of these medications used for HIV/AIDS include amprenavir (Agenerase), nelfinavir (Viracept), ritonavir (Norvir), and saquinavir (Fortovase, Invirase).
- Medications used for lowering cholesterol (Statins) interacts with Vitamin C (Ascorbic Acid). Taking Vitamin C, beta-carotene, selenium, and vitamin E together might decrease the effectiveness of some medications used for lowering cholesterol. It is not known if Vitamin C alone decreases the effectiveness of some medications used for lowering cholesterol. Some medications used for lowering cholesterol include atorvastatin (Lipitor), fluvastatin (Lescol), lovastatin (Mevacor), and pravastatin (Pravachol).
- Niacin interacts with Vitamin C (Ascorbic Acid). Taking Vitamin C along with vitamin E, beta-carotene, and selenium might decrease some of the helpful effects of niacin. Niacin can increase the good cholesterol. Taking Vitamin C along with these other vitamins might decrease the effectiveness of niacin for increasing good cholesterol.
- Warfarin (Coumadin) interacts with Vitamin C (Ascorbic Acid). Warfarin (Coumadin) is used to slow blood clotting. Large amounts of Vitamin C might decrease the effectiveness of warfarin (Coumadin). Decreasing the effectiveness of warfarin (Coumadin) might increase the risk of clotting. Be sure to have your blood checked regularly. The dose of your warfarin (Coumadin) might need to be changed.

## **MINOR INTERACTIONS: Be watchful of this combination**

- Acetaminophen (Tylenol, others) interacts with Vitamin C (Ascorbic Acid). The body breaks down acetaminophen (Tylenol, others) to get rid of it. Large amounts of Vitamin C can decrease how quickly the body breaks down acetaminophen. It is not clear exactly when or if this interaction is a big concern.
- Aspirin interacts with Vitamin C (Ascorbic Acid). The body breaks down aspirin to get rid of it. Large amounts of Vitamin C might decrease the breakdown of aspirin. Decreasing the breakdown of aspirin might increase the effects and side effects of aspirin. Do not take large amounts of Vitamin C if you take large amounts of aspirin.
- Choline Magnesium Trisalicylate (Trilisate) interacts with Vitamin C (Ascorbic Acid). Vitamin C might decrease how quickly the body gets rid of choline magnesium trisalicylate (Trilisate). But it is not clear if this interaction is a big concern.
- Nifedipine (Cardene) interacts with Vitamin C (Ascorbic Acid). Vitamin C is taken up by cells. Taking nifedipine (Cardene) along with Vitamin C might decrease how much Vitamin C is taken in by cells. The significance of this interaction is not clear.
- Nifedipine interacts with Vitamin C (Ascorbic Acid). Vitamin C is taken up by cells. Taking nifedipine (Adalat, Procardia) along with Vitamin C might decrease how much Vitamin C is taken in by cells. The significance of this interaction is not clear.
- Salsalate (Disalcid) interacts with Vitamin C (Ascorbic Acid). Vitamin C might decrease how quickly the body gets rid of salsalate (Disalcid). Taking Vitamin C along with salsalate (Disalcid) might cause too much salsalate (Disalcid) in the body, and increase the effects and side effects of salsalate.