

# L-ARGININE COMPLETE

## PRODUCT INGREDIENT BENEFITS

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### **L-Arginine:**

Through a process involving an enzyme called nitric oxide synthase, L-arginine is converted to nitric oxide in the innermost lining of the arteries known as the endothelium. L-Arginine is well known to promote vasodilation during exercise or hypercholesterolemia (**Definition: condition of very high levels of cholesterol in the blood**).<sup>11</sup> Vasodilation is hindered by this condition and L-arginine has been found to promote smooth muscle relaxation through nitric oxide production.<sup>3</sup>

### **L-Citrulline:**

L-Citrulline yields more L-arginine and nitric oxide. This important process helps optimize blood flow, promotes healthy energy levels, and helps maintain optimal levels of nitric oxide for a longer period of time. L-citrulline prevents inflammation and oxidative stress induced muscle cell wasting.<sup>6</sup> L-citrulline plus L-arginine supplementation results in a more rapid increase in plasma L-arginine levels and marked enhancement of nitric oxide (NO) bioavailability than when dosing with these amino acids individually.<sup>9</sup> In addition, studies have shown that L-citrulline supplementation has been proven to be safe and psychologically well accepted by patients in its role as an alternative treatment for mild to moderate erectile dysfunction (ED).<sup>2</sup>

### **Vitamin C:**

Vitamin C may lower the risk for some cancers, including those of the stomach, esophagus, mouth and breast. Long-term use of supplemental vitamin C may protect against cataracts. It helps make collagen, a connective tissue that knits together wounds and supports blood vessel walls. In addition, it helps make the neurotransmitters serotonin and norepinephrine, thus increasing alertness and well-being. Vitamin C acts as an antioxidant, neutralizing unstable molecules that can damage cells and boosts the immune system.<sup>7</sup>

### **Vitamin D:**

Many people don't get enough of this nutrient. While the body uses sunlight to make vitamin D, it cannot make enough if you live in northern climates or don't spend much time in the sun. This vitamin supports healthy cardiovascular function and inflammatory response. It helps maintain normal blood levels of calcium and phosphorus, which strengthen bones. It helps form bones and teeth. Supplementing with this vitamin can reduce the number of non-spinal fractures.<sup>7</sup>

### **Vitamin K:**

An essential vitamin that is needed by the body for blood clotting and other important processes. Vitamin K keeps the calcium in the bones and out of the arteries, and it may help prevent hip fractures.<sup>7</sup>

### **Vitamin B12, B6 and Folate:**

**B6:** B6 aids in lowering homocysteine levels and may reduce the risk of heart disease. This vitamin helps convert tryptophan to niacin and serotonin, a neurotransmitter that plays key roles in sleep, appetite, and moods. It helps make red blood cells and influences cognitive abilities and immune function.<sup>7</sup>

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**Folate:** This vitamin is vital for new cell creation. It helps prevent brain and spine birth defects when taken early in pregnancy and should be taken regularly by all women of child-bearing age since women may not know they are pregnant in the first weeks of pregnancy. It too can lower levels of homocysteine and may reduce heart disease risk. May reduce risk for colon cancer. Offsets breast cancer risk among women who consume alcohol.<sup>7</sup>

**B12:** Some people, particularly older adults, are deficient in vitamin B12 due to having trouble absorbing this vitamin from food. A lack of vitamin B12 can cause dementia, memory loss and numbness in the arms and legs. This vitamin aids in lowering homocysteine levels (*linked to heart attack and stroke through plaque formation in arteries*) and may lower the risk of heart disease. In addition, vitamin B12 assists in making new cells, to include red blood cells, and breaking down some fatty acids and amino acids, and protects nerve cells and encourages their normal growth.<sup>7</sup>

### **Magnesium:**

The majority of magnesium in the body is found in bones. If your blood levels are low, your body can tap into those magnesium reserves to correct the problem. This mineral is needed for many chemical reactions in the body as it works with calcium in blood clotting, regulation of blood pressure and muscle contraction. In addition, magnesium helps build bones and teeth.<sup>7</sup>

### **Chromium:**

Chromium assists in keeping blood sugar levels healthy, and it also helps build lean, muscular bodies.<sup>1</sup> Enhances the sensitivity of insulin, helps maintain normal blood glucose levels, and is needed to free energy from glucose.<sup>7</sup>

### **Citric Acid:**

Anhydrous Citric Acid is found in citrus fruits. Citric acid is used as an excipient in pharmaceutical preparations due to its antioxidant properties. It maintains stability of active ingredients and is used as a preservative. It is also used as an acidulant to control pH and acts as an anticoagulant by chelating calcium in blood.<sup>10</sup>

### **Malic Acid:**

Malic acid is used in many product as a flavor enhancer. It may also aid in pain reduction and skin care. Malic acid is a compound that occurs naturally in foods, in fruits in general, and in especially high levels in apples. When levels of malic acid are low, the body often has to shift to a very inefficient means of generating energy. This contributes to an abnormal buildup of lactic acid, which can cause muscle pain, achiness, and fatigue.<sup>5</sup>

### **Beet Root powder:**

Natural source of coloring. Beets are an excellent source of fiber. Maintains healthy cells and prevents anemia. Aids in muscle building, nerve function, bone strength and immune system.<sup>8</sup>

### **Silicon dioxide:**

Silicon dioxide is found naturally in many plants. For example, leafy green vegetables, beets, bell peppers, brown rice and oats, and alfalfa. As a food additive, silicon dioxide serves as an anticaking agent. It is used to prevent clumping. In supplements, it's used to prevent the various powdered ingredients from sticking together.<sup>12</sup>

### **Stevia:**

Native plant to Paraguay and has been used as a sweetening agent in South America for centuries. This is a safe sweetener with no calories, no carbohydrates and does not elevate blood glucose.<sup>4</sup>

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## References

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