# Vitamin C

1,000 mg

#### **DESCRIPTION**

Vitamin C, provided by Douglas Laboratories®, contains 1,000 mg of vitamin C as L-ascorbic acid per tablet.

### **INDICATIONS**

For those who wish to increase their daily intake of vitamin C.

#### **FUNCTIONS AND MECHANISM OF ACTION**

Vitamin C, also known as ascorbic acid, is a water-soluble antioxidant that reacts directly with superoxide, hydroxyl radicals, and singlet oxygen. Vitamin C readily undergoes reversible oxidation and reduction in the body and has been shown to regenerate other antioxidants within the body, including alpha-tocopherol. It decreases oxidants in gastric secretions which may protect lipids in plasma and against peroxidative damage. Ascorbic acid is absorbed in the small intestine by a sodium-dependent transport process that is intake dependent. It is a specific electron donor for enzymes that participate in collagen hydroxylation and carnitine biosynthesis. This function is required to catalyze the crosslinking of collagen fibers which are essential for normal wound healing and capillary health. Vitamin C also appears to prevent inactivation of nitric oxide (NO)-mediated vasodilation. ‡

In addition to its biosynthetic and antioxidant functions, vitamin C plays an important role in immune function and improves the absorption of nonheme iron, the form of iron present in plant-based foods. Taking at least 200 mg of vitamin C per 30 mg of iron together increases nonheme iron absorption in adults. In children, adding 25-50 mg of Vitamin C daily can increase iron absorption from a meal by 3.2- 4.8-fold compared to eating the meal alone. <sup>‡</sup>

### FORMULA (#202445)

Each tablet contains:

### Non-GMO, Gluten-free

### **SUGGESTED USE**

Adults take one tablet daily with a meal or as directed by a healthcare professional.

#### SOURCE

Non-GMO corn dextrose fermentation. Dextrose is a carbohydrate from corn which does not contain corn protein. During fermentation dextrose consumed by microorganisms then isolated and purified to produce the final ascorbic acid ingredient.

### **STORAGE**

Store in a cool, dry place, away from direct light. Keep out of reach of children.

#### REFERENCES

Leibovitz B, Siegel BV. *Adv Exp Med Biol.* 1981;135:1-25. Levine M, et al. *JAMA* 1999:281:1415-23. Fishman SM, et al. *Public Health Nutr* 2000;3:125-50. Horning B, et al. *Circulation* 1998;97:363-8. Noroozi M, et al. *Am J Clin Nutr.* 1998 Jun;67(6):1210-8.

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Zhang M, et al. *Nutrition*. 2011 May;27(5):530-3. Peponis V, et al. *Br J Ophthalmol*. 2002 Dec;86(12):1369-73. Omeroğlu S, et al. *Nutrition*. 2011 May;27(5):530-3. McRae, M. *Chiropr.Med* 2008;7(2):48-58. Davidsson L et al. *Am J Clin Nutr*. 2001 Feb;73(2):283-7. Cook JD, Reddy MB. *AJCN* 2001;73;1.93-98. Jacob RA, Sotoudeh G. *Nutr Clin Care* 2002;5:66-74. Gershoff SN. *Nutr Rev* 1993;51:313-26.

# For more information on Vitamin C visit douglaslabs.com

‡ These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

Manufactured by Douglas Laboratories 600 Boyce Road Pittsburgh, PA 15205 800-245-4440 douglaslabs.com



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