











## Vitamin C Plus

Bioactive Synergistic Vitamin Supplement

Contains vitamin C plus synergistic nutrients manganese as a fully reacted amino acid chelate, rutoside, resveratrol and the supporting herb rosehip (Rosa canina).

Supports healthy immune system function, collagen and connective tissue formation, nervous system health and skin and wound healing. Aids in the synthesis of neurotransmitters and maintains healthy teeth and bones.

## **Nutritional Therapy**

Bioactive

Bioavailable

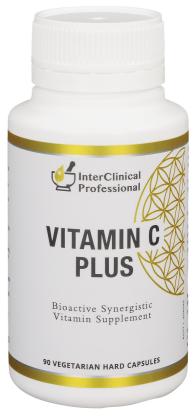
Quality Ingredients

Ascorbic acid plus synergistic nutrients manganese as a fully reacted amino acid chelate, rutoside, resveratrol from Reynoutria japonica (Japanese knotweed) and the supporting herb rosehip (Rosa canina).

## What you need to know about this supplement

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- Helps reduce free radical damage to body cells (Vitamin C, Manganese, Reynoutria japonica)
- Supports collagen and connective tissue formation (Vitamin C, Manganese)
- Healthy teeth and bone maintenance (Vitamin C)
- Aids the synthesis of neurotransmitters (Vitamin C)
- Aids healthy bone growth and maintenance (Manganese)
- Maintains blood vessel and blood capillary health (Vitamin C)
- Supports healthy immune system function (Vitamin C)
- Aiding sugar and carbohydrate metabolism (Manganese)
- Supports absorption of dietary vitamin C
- Helps prevent dietary iron deficiency (Vitamin C)
- Nervous system health support (Vitamin C)
- Reduces the duration and severity of the common cold symptoms (Vitamin C)
- Supports skin health and wound healing (Vitamin C)
- Helps prevent dietary vitamin C deficiency (Vitamin C, Manganese)
- Maintains general health and well being (Vitamin C, Manganese)



For Practitioner Dispensing Only

## Specifications



90 Vegetarian Hard Capsules 9mm

22mm mm |

Description: Capsule

Dosage Adults: 2 capsules with water once daily, or as directed by your healthcare professional.

Vegan friendly

Blended, tableted and packaged in Australia



## Allergen & Free From

Ingredients in this product have been formulated <u>without</u> gluten, wheat, yeast, soy, egg, gelatin, fish, molluscs, crustaceans, milk products, peanuts, tree nuts, sesame, bee products, artificial preservatives, colours or flavours.

#### Each Capsule Contains:

| 500 mg |
|--------|
| 60 mg  |
| 600mg  |
| 100 mg |
| 50 mg  |
| 10 g   |
| 25 mg  |
| 1 mg   |
|        |

Excipients Citric acid, hypromellose, magnesium stearate, maltodextrin (corn), microcrystalline cellulose.

Vitamins and minerals can only be of assistance if dietary intake is inadequate.

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#### **PEER NOTES**

#### FOR PROFESSIONAL REFERENCE ONLY

Vitamin C Plus contains both ascorbic acid and the rich bioflavonoid sources Rosa canina, Reynoutria japonica, and rutoside. Bioflavonoids enhance vitamin C's absorption and support its anti-inflammatory and antioxidant activities. (1)

A positive correlation exists between vitamin C intake, bone metabolism and bone density. (2, 3) Vitamin C influences expression of osteoblast genes and attenuates the loss of osteoblast differentiation markers. (4) This is associated with a lower risk of hip fracture and osteoporosis, and a deficiency of vitamin C is associated with an increased risk of osteoporosis. (3, 4)

Vitamin C deficiency is associated with poor wound healing. It is a cofactor for the proline and lysine hydroxylases that stabilise the collagen molecule's tertiary structure and promotes collagen gene expression. (5) Vitamin C reduces oxidative skin damage and increases the proliferation and migration of dermal fibroblasts to the wound site. (5) Increased vitamin C levels are associated with faster wound recovery and restored skin integrity. (5) Vitamin C supports epithelial barrier function and the skin's oxidant scavenging activity. (6)

Vitamin C contributes to immune defence by supporting cellular functions of the innate and adaptive immune systems. (6) A combination of supplemental and therapeutic doses of vitamin C relieved chest pain, fever, and chills and shortened the mean duration of common cold symptoms in adults and children. (7, 8)

As a potent antioxidant, vitamin C neutralises free radicals and alleviates chronic inflammation. (8) Smoking is a major oxidant source, both smokers and passive smokers have lower plasma and leukocyte vitamin C levels than non-smokers, as do those suffering stress and obesity (6, 9,10,11) Vitamin C improves the uptake of iron by increasing its solubility in the small intestine. (11)

Vitamin C neutralises reactive oxygen species (ROS) which deplete tetrahydrobiopterin, a cofactor for endothelial cell nitric oxide synthase, thus limiting pro-inflammation, adhesion, and platelet aggregation associated with atherosclerosis. (12) A recent study found 78% of patients with peripheral artery disease were deficient in Vitamin C. (11) A higher daily intake may be required with diseases that increase vitamin C turnover due to oxidation and inflammation. (12)

In humans the brain has the highest concentration of vitamin C. Vitamin C protects neurons from oxidative stress, induces their differentiation and maturation, and regulates the synthesis and release of serotonin, catecholamines, and glutamate. (13) Vitamin C supplementation of 1 gram/day for four weeks in healthy young adults increased work motivation and attentional focus. (13) In both mid-life and older cohorts, lower levels of plasma vitamin C have been associated with higher levels of cognitive impairment. (14, 15)

Manganese (Mn) is an essential nutrient for intracellular activities. It functions as a cofactor for a variety of enzymes, and helps regulate the metabolism of glucose and lipids in humans. (16) Mn is one of the required components for Mn superoxide dismutase that is mainly responsible for scavenging ROS in mitochondrial oxidative stress. (16) Mn is essential in the synthesis of cartilage and bone collagen, as well as bone mineralisation. (17) Manganese glycinate is a fully reacted amino acid chelate. The structure of the molecule protects the mineral from chemical reactivity as it passes through the stomach, enhancing its stability, absorption, bioavailability, and digestibility. (18)

# Work with the Specialists!

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