

MEDICINAL INGREDIENTS	NON-MEDICINAL INGREDIENTS	ALLERGENS	SOURCE	USES	RECOMMENDED AMOUNT
SIDE EFFECTS	PRECAUTIONS	INTERACTIONS & CONTRADICTIONS		PHARMACEUTICAL COMMENTARY	

MultiSure for Men

Multivitamin and Mineral Formula

DIN/NPN 02248777

Class: Nutrients

Ingredients (alphabetical) Medicinal: Beta carotene (Provitamin A), Biotin, Calcium (calcium carbonate), Choline Bitartrate, Chromium (Chromium HVP* Chelate), Copper, Folic Acid, Iodine (Potassium Iodide), Inositol, Magnesium (Magnesium Oxide), Manganese ((Manganese HVP* Chelate), Molybdenum (Molybdenum Citrate), Niacin, Niacinamide, Pantothenic Acid (Calcium Pantothenate), Potassium (Potassium Citrate), Selenium (Selenium HVP* Chelate), Vanadium (Vanadium Citrate), Vitamin A (Vitamin A Acetate), Vitamin D3, Vitamin C (Ascorbic Acid), Vitamin B1 (Thiamine Hydrochloride), Vitamin B2 (Riboflavin), Vitamin B12 (Cyanocobalamin), Vitamin E (d-alpha Tocopheryl Acetate) Zinc (Zinc HVP* Chelate) *HVP = Hydrolyzed Vegetable Protein (sourced from rice)
Non-medicinal: Gelatin capsule (gelatin, purified water, titanium dioxide), rice flour, saw palmetto extract, citrus bioflavonoids, alfalfa juice powder, vegetable grade magnesium stearate (lubricant), lycopene, para-aminobenzoic acid (PABA), protease, amylase, lipase, cellulase, glutamic acid, lutein and grape seed extract.

Allergens Corn, fish, preservatives, rice, soy, starch

Source Natural and pharmaceutical

Uses Use this product as a daily vitamin and mineral supplement

Recommended Amount 2 capsules daily or as directed by a physician

Adverse Side Effects Adverse side effects are not associated with these nutrients when consumed at the recommended amounts. Taking capsules on an empty stomach may cause nausea.

Precaution / Cautions B vitamin supplementation should be guided by the customer's physician when using phenytoin. Both folic acid and B6 in high doses can lead to reduced drug control and resultant seizures. See the Interactions section.

Interactions The following are recognized potential interactions:

Thiamine (B1)

Aluminium-based antacids may inactivate thiamine.¹

Thiamine depletion plays a role in the development of Wernicke-Korsakoff syndrome, a neurological disorder associated with long term alcohol abuse.¹

Riboflavin (B2)

Tetracyclines in long term use may deplete the body of riboflavin.¹ Chlorpromazine, fluphenazine, and other major tranquillizers in long term use may deplete the body of riboflavin. Suggested minimum supplementation is 2-5 mg per day.¹

Niacinamide (B3)

Isoniazid (anti-tuberculosis) may deplete the body of niacin/niacinamide (B3), as well as vitamin B6, possibly requiring supplementation. Too much B6 could compromise the effectiveness of isoniazid. Suggested ranges are, 6-50 mg for B6, 15-25 mg for niacin/niacinamide.¹ Niacinamide is the predominate form of B3 circulating in the blood.³

High dose niacin or niacinamide may complement lipid-lowering medication.²

Pyridoxine (B6)

Alcohol, regularly consumed, can retard B6 and B12 absorption and utilization.¹

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Penicillamine, long term may deplete the body of B6.¹

Birth control pills are associated with depletion of B6, as well as folic acid. A B6 depletion can lead to depression. Depletion of folic acid is associated with cervical dysplasia.^{1,2} Routine supplementation should be discussed.

Estrogen replacement therapy can lower folic acid and B6. Risk of depression is associated with low B6 levels, while low folic acid levels is a risk of cervical dysplasia.^{1,2}

Hydralazine containing drugs may deplete the body of B6. Supplementation is recommended.¹

Corticosteroids in long term use can deplete the body of B6, B12, and folic acid.^{1,2}

Epilepsy drugs like barbiturates and phenobarbitol can be adversely lowered in plasma concentration by B6 and folic acid, potentially leading to seizures.¹

Phenytoin may cause depletion of folic acid as well as B6. However, supplementation must be directed by the physician since it can reduce the effectiveness of the phenytoin with resultant seizures. More than 2 mg of folic acid per day is a risk, while 80 mg per day of B6 will reduce the efficacy of phenytoin by 50 per cent.^{1,2}

L-dopa effectiveness can be significantly lowered by B6 supplementation. Supplementation should only be prescribed by a physician.¹

Isoniazid can deplete the body of B6, as well as niacin/niacinamide. Too much B6 or niacin/niacinamide supplementation can reduce the effectiveness of isoniazid. Recommended ranges are, 6-50 mg per day of B6, and 15-25 mg per day of niacin or niacinamide.¹

Biotin

Depletion can occur in those using more than 100 mg of alpha-lipoic acid per day.⁴

Alcohol inhibits absorption and utilization.²

Long term use of antibiotics may reduce the level of biotin produced by intestinal bacteria. Supplementation with biotin or *Lactobacillus acidophilus* is recommended.²

Pantothenic acid (B5)

None known.²

Folic acid

Corticosteroids in long term use long term can deplete the body of B6, B12, and folic acid.^{1,2}

Folic acid supplementation should always be complemented with vitamin B12 supplementation since folic acid can mask a B12 deficiency.²

Alcohol interferes with folic acid absorption.^{1,2}

ASA lowers folic acid levels. Regular users of ASA should supplement with 400 to 1000 mcg or as directed by their physician.¹

Methotrexate reduces the absorption of folic acid, as well as B12. Clinically important imbalances may result. This drug is finding a wider application to include arthritis and psoriasis. Supplementation should be discussed.¹

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Birth control pills are associated with reduced folic acid absorption, as well as B6. Cervical dysplasia can result from prolonged folic acid depletion.^{1,2}

Triamterene-containing drugs deplete the body of folic acid. Supplementation is recommended at 400 to 1000 mcg per day.¹

Questran and other bile acid sequestrants can interfere with folic acid absorption. Supplementation is recommended at 400 to 1000 mcg per day.¹

Epilepsy drug blood levels like barbiturates and phenobarbital can be lowered by folic acid, as well as by B6, increasing the potential for seizures. Phenytoin may cause depletion of folic acid as well as B6. However, supplementation must be directed by the physician since it can reduce the effectiveness of the phenytoin with resultant seizures. More than 2 mg of folic acid per day is a risk, while 80 mg per day of B6 will reduce the efficacy of phenytoin by 50 per cent.^{1,2}

Estrogen replacement therapy can lower folic acid and B6. Risk of depression is associated with low B6 levels, while low folic acid levels is a risk of cervical dysplasia.^{1,2}

Sulfasalazine interferes with folic acid absorption. Supplementation is recommended at 400 to 1000 mcg per day.^{1,2}

Para-aminosalicylate may deplete the body of folic acid as well as B12. Supplementation may be necessary.¹

Nitrofurantoin long term can interfere with folic metabolism. Consultation with the physician may be necessary.¹

Metformin may interfere with the absorption of folic acid and vitamin B12. Measurements of serum vitamin B12 and folic acid are advised at least every 1 to 2 years in patients on long term use. (CPS)

Cobalamin (B12)

Corticosteroids in long term use can deplete the body of B6, B12, and folic acid.^{1,2}

Folic acid supplementation should always be complemented with vitamin B12 supplementation since folic acid can mask a B12 deficiency.²

Potassium supplementation can interfere with B12 absorption. This is not a widely realized interaction. Long-term use in older patients has been associated with cognitive and neurological deficits before blood levels deficiencies were apparent.¹

Omeprazole can dramatically reduce the absorption of B12. Cimetidine and ranitidine may also have this adverse interaction.

Metformin may interfere with the absorption of folic acid and vitamin B12. Measurements of serum vitamin B12 and folic acid are advised at least every 1 to 2 years in patients on long term use. (CPS)

Alcohol interferes with B12 absorption.¹

Methotrexate reduces the absorption of B12, as well as folic acid. Clinically important imbalances may result. This drug is finding a wider application to include arthritis and psoriasis. Supplementation should be discussed.¹

Questran and other bile acid sequestrants can interfere with B12 absorption. Supplementation is recommended at 400 to 1000 mcg per day.¹

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Colchicine impairs B12 absorption. Long term use may warrant B12 supplementation.¹

Chlorpromazine, fluphenazine, and other major tranquilizers in long term use may deplete the body of B12. Supplementation may be appropriate.¹ B12 depletion is associated with cognitive and neurological problems.

Para-aminosalicylate may deplete the body of B12, as well as folic acid. Supplementation may be necessary.¹

Choline

None known.²

Inositol

None known.²

Calcium absorption is dependent on the presence of adequate vitamin D. The recommended daily intake is 400 IU for ordinary needs. Those who are seeking to arrest osteoporosis should discuss 800 IU per day with a qualified health care professional.

Quinolones and tetracyclines combine with calcium, magnesium or other minerals. Concurrent use will render the antibiotics less effective. Minerals should be taken at least two hours apart from these antibiotics. Used long term, these antibiotics may produce mineral deficiencies.¹

Penicillamine absorption is impaired by magnesium and many of the minerals in a multi-mineral supplement. Such supplements should be taken at least two hours apart from the antibiotic. Long term use of Penicillamine can deplete the body of zinc and copper.¹

Loop diuretics may cause the loss of calcium and magnesium from the body, frustrating efforts to address osteoporosis.¹

Thiazide diuretics cause mineral losses, including calcium and magnesium. Long term use could deplete the body of these and other minerals. Since many of those using thiazides could also be osteoporotic, supplementation of minerals may be necessary.¹

Colchicine may impair magnesium absorption.¹

Corticosteroids interfere with calcium absorption and metabolism. Long term use may contribute to or exacerbate osteoporosis.¹

Barbiturates, phenobarbital, and dilantin interfere with the metabolism of vitamin D. Long term use may contribute to or exacerbate osteoporosis, or lead to osteomalacia. Vitamin D supplementation should be advised in proportion to needs.¹ In older people where fat absorption is compromised, 800 IU may be appropriate.

Etidronate (Didronel) reacts with calcium and magnesium interfering with its absorption, if the respective dosing are not separated by at least two hours. However, this drug also alters vitamin D metabolism so that calcium deficiencies may result.¹

Calcium interferes with iron absorption.¹

Isoniazid alters vitamin D metabolism with possible reduction in calcium absorption. Supplementation with vitamin D at the optimal dose for individual needs should be advised.¹

High doses of magnesium, zinc, fiber, and oxalates interfere with calcium absorption.¹

Caffeine, alcohol, phosphates (soft drinks, meat, many can goods), protein (amino acids), sodium, and sugar lead to increased calcium excretion.¹

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Digitalis may adversely affect magnesium status. Magnesium depletion is associated with an adverse heart impact, including arrhythmias and coronary spasms.^{5,6}

There are no expected adverse interactions between vitamin C and any drug.²

A deficiency of zinc, vitamin C, protein, or thyroid hormone impairs the conversion of dietary pro-vitamin A carotenoids to vitamin A.²

Cholestyramine, Dilantin, phenobarbital, and mineral oil interfere with the absorption and/or the metabolism of vitamin D.²

Vitamin E at high dose can potentiate anticoagulation medications. However, at the strength found in this product, vitamin E is not expected to present a risk.

Contraindications

Patients with hyperparathyroidism or cancer should not supplement with calcium unless directed by a physician.

Pharmaceutical Commentary

The B vitamins are so intimately involved in metabolism as coenzymes that their optimal tissue levels help to maintain effective robust metabolism. Full blown deficiencies are rare. However, marginal deficiencies do exist and contribute to many of the health problems seen today. This Multi-product allows the customer to practice optimal supplementation of the B vitamins, and obtain key minerals that may be lacking in the diet of many Canadians.

The practice of supplementing the B-vitamins at higher than RDA doses or at what is assumed to be optimal doses, has been criticized as unnecessary and a waste of money. This point of view fails to respect the value of tissue saturation favored by higher doses and the metabolic efficiency that obtains. Given the wide spread use of manufactured and highly processed foods, and the generally recognized high stress level in society that translates as metabolic stress, supplementation at higher than RDA values may be the wiser choice. The lipotropic nutrients choline and inositol facilitate liver management of fat to prevent a fatty liver condition. This product also supplies the fat soluble vitamins A, D, and E.

Key minerals are supplied that may not be well represented in the diet of many Canadians, including Calcium, Magnesium, Zinc, Manganese, and Copper. Iron is omitted to lower the risk of enhancing or developing age-related iron overload in men 50 years old and older. Iron accumulation is considered a contributing factor in free-radical generation.

The citrus bioflavonoids and grape seed extract are associated with enhanced antioxidation and vascular integrity.⁷

Saw palmetto extract has been traditionally used for treating the symptoms of prostate gland enlargement; however, men seeking symptomatic relief from BPH should use a standardized higher potency product.

Lutein is a recognized carotenoid for risk reduction and nutritional intervention in age-related macular degeneration (AMD).^{9,10,11}

References

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