

# Children's Multi Care

**Herbs of Gold Children's Multi Care** provides key vitamins and minerals to support children's health and general wellbeing, including iodine for children's cognitive function and brain health.



60 chewable tablets



## Each chewable tablet contains:

Retinol acetate.....60 micrograms RE* equiv. vitamin A 200IU	Colecalciferol..... 2.5 micrograms equiv. vitamin D3 100IU
Thiamine nitrate (vit. B1) ..... 1mg	d-alpha-tocopheryl acid succinate .....8.27mg equiv. vitamin E 10IU
Riboflavin (vit. B2) ..... 1mg	Calcium hydrogen phosphate .....17mg equiv. calcium 5mg
Nicotinamide ..... 1mg	equiv. phosphorous 3.9mg
Calcium pantothenate ..... 1.64mg equiv. Pantothenic acid (vit. B5) 1.5mg	Ferrous fumarate equiv. iron .....1mg
Pyridoxine hydrochloride ..... 1mg equiv. Pyridoxine (vit. B6) 820 micrograms	Magnesium phosphate pentahydrate.....24.2mg equiv. magnesium 5mg
Folic acid..... 100 micrograms	equiv. phosphorous 4.3mg
Cyanocobalamin (vit. B12) ..... 20 micrograms	TOTAL ELEMENTAL PHOSPHOROUS 8.2mg
Biotin ..... 25 micrograms	Manganese amino acid chelate equiv. manganese.....
Ascorbic acid (vit. C) .....10mg	.....12.5 micrograms
Sodium ascorbate ..... 11.3mg equiv. ascorbic acid (vit. C) 10mg	Potassium iodide equiv. iodine .....75 micrograms
TOTAL ASCORBIC ACID (vit. C) 20mg	Selenomethionine equiv. selenium .....10 micrograms
Citrus bioflavonoids extract..... 1mg	Zinc amino acid chelate equiv. zinc .... 500 micrograms

\*Retinol Equivalents

Does not contain egg, milk, peanut, tree nuts, animal products, gluten, lactose or artificial colours, flavours or sweeteners.

## DIRECTIONS FOR USE

**Children 2-8 years** – Chew 1 tablet daily.

**Children 9-13 years** – Chew 2 tablets daily.

Or take as directed by your health professional.

## FEATURES & BENEFITS

- |                                            |                                 |                                  |                                 |
|--------------------------------------------|---------------------------------|----------------------------------|---------------------------------|
| ✓ Great tasting strawberry-vanilla flavour | ✓ Helps convert foods to energy | ✓ Synthesis of neurotransmitters | ✓ Bone health                   |
| ✓ Chewable tablet for easy compliance      | ✓ Nervous system health         | ✓ Thyroid gland function         | ✓ Absorption of dietary calcium |
| ✓ With 21 vitamins & minerals              | ✓ Cognitive function            | ✓ Healthy thyroid hormones       | ✓ With tooth friendly xylitol   |
|                                            | ✓ Brain health                  | ✓ Immune system function         | ✓ Vegan-friendly                |

## TECHNICAL INFORMATION

- Adequate provision of nutrients, beginning in the early stages of life, is crucial to ensure good physical and mental development and long-term health in children. While a child's diet should provide all the vitamins and minerals they need, often fussy eating habits or food allergies or intolerances can mean a child isn't obtaining the recommended intake of certain vitamins and minerals each day.
- Children's Multi Care contains a blend of 21 vitamins, minerals and nutrients in a great tasting chewable tablet for easy compliance.
- Children's Multi Care contains tooth-friendly xylitol. Xylitol is a natural sweetener found mainly in fibrous fruits and vegetables. While sugar has a glycaemic index of 100, xylitol has a glycaemic index of 7, so it has a negligible effect on blood sugar levels. Xylitol is alkalising which creates an unfriendly environment for bacteria that are detrimental to tooth enamel.
- Children's Multi Care is suitable for children aged 2 years and up and can be taken once or twice a day to support general health and wellbeing.

### Energy production

- Children's Multi Care contains vitamins B1, B2, B5, B6 and B12 to help in the conversion of food into energy. B vitamins are important for the production of adenosine triphosphate (ATP), a chemical form of cellular energy used by every cell in the body for metabolic processes.
- Between the age of three years old and middle adolescence, the body uses approximately 1% to 2% of energy requirements for growth alone.

### Antioxidant

- Children's Multi Care contains the antioxidant nutrients vitamin C, citrus bioflavonoids, vitamin E, selenium and zinc to help reduce free radicals in the body.
- Vitamin C is the most important water-soluble antioxidant, providing important protection for cells against oxidative damage. The body does not store vitamin C, meaning regular intake of adequate fruits

and vegetables is essential to maintain appropriate levels, which does not always occur in a child's diet.

- Vitamin E is the most important fat-soluble antioxidant, protecting vitamin C, vitamin A, red blood cells and essential fatty acids from free radicals.
- Selenium is an important component of glutathione peroxidases 1-4, antioxidant enzymes that reduce potentially damaging reactive oxygen species (ROS). Zinc is an essential part of the antioxidant enzyme copper/zinc superoxide dismutase (Cu/Zn SOD).

### Cognitive function & brain health

- Children's Multi Care contains iodine, important for supporting a child's brain health and cognitive development.
- Iodine is used by the thyroid gland to help regulate metabolism and for the development of both a child's skeleton and brain.
- To help in the management of adequate iodine levels, Australia and New Zealand introduced mandatory fortification of iodine in bread in 2009.

### Nervous system

- Children's Multi Care contains vitamins B1, B2, B5, B6 and B12 to help support a healthy nervous system in children and assist in the synthesis of neurotransmitters.
- Vitamin B6 is involved in the conversion of tryptophan to niacin, the synthesis of gamma aminobutyric acid (GABA) in the central nervous system as well as the metabolism of serotonin, norepinephrine and dopamine.
- Vitamin B12 is required for the proper functioning and development of the brain and nerve cells. It is essential for the myelin sheath that covers and protects the nerves of the central and the peripheral nervous system, ensuring fast and effective nerve-impulse transmission.
- Serotonin and dopamine are neurotransmitters that play a role in overall mood and wellbeing.

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## Thyroid health

- Children's Multi Care contains iodine to support healthy thyroid gland function in children.
- Iodine acts as an integral component of thyroid hormones. Thyroid hormones participate in the regulation of cell division, growth and differentiation of tissues, in particular the dendrites and the myelination of neurons in the nervous system, playing a crucial influential role in brain development during childhood.

## Immune health

- Children's Multi Care contains vitamin C and vitamin D, both of which are important for helping children to maintain a healthy immune system in order to fight illness. Young children don't have fully developed immune systems, which leaves them more susceptible to infection and colds and flu.
- Vitamin C enhances both innate and adaptive components of a child's immune system, improving natural killer cell, T-cell and B-cell function.
- Vitamin D enhances the immune systems response to both bacterial and viral agents primarily through promoting differentiation and activity of the macrophages.

## Skin health

- Children's Multi Care contains vitamin C to support skin health in children.
- Normal skin contains high concentrations of vitamin C, which supports collagen synthesis and assists in antioxidant protection against UV-induced photodamage.
- Vitamin C increases the formation of elastin, which thickens, protects and heals the skin cells. The thickening effect helps retain moisture, increases the skin circulation and plumps up the skin surface.

## Bone health

- Children's Multi Care contains calcium and vitamin D to support bone health. Vitamin D supports bone health by assisting calcium absorption in the intestines and influencing bone remodelling. Vitamin D is necessary for osteocalcin, which binds calcium to bone.
- Vitamin D maintains appropriate serum calcium concentrations. In a low vitamin D state, the small intestine can only absorb approximately 10%–15% of dietary calcium. However, with adequate vitamin D, intestinal absorption of dietary calcium rises to approximately 30%–40%<sup>1</sup>.

## Clinical studies in children

- A study conducted on 5276 Australian infants revealed those with low vitamin D status ( $\leq 50$  nmol/L) were 11 times more likely to have a peanut allergy, almost 4 times more likely to have an egg allergy and more than 10 times more likely to have multiple food allergies when compared to infants with adequate vitamin D levels<sup>2</sup>.
- A study of students aged between 8–12 years found that the children supplemented with a multi micro-nutrient supplement performed significantly better than the placebo group (not supplemented) in reading speed, learning capacity and arithmetic examinations. The study concluded that micro-nutrient supplementation played a notable role in better nutritional status and learning ability of school children<sup>3</sup>.
- A randomised, double-blind, placebo-controlled investigation of 81 healthy children aged 8–14 years found that the children given a multivitamin/mineral supplement over a 12-week period had improved brain function when assessed for speed and accuracy of attention and memory<sup>4</sup>.

## DRUG INTERACTIONS

- Separate dose from any prescription medications by 2 hours to minimise any potential interactions.
- Caution with phenobarbital and phenytoin (anticonvulsants) - high doses of vitamin B6 or folate can decrease their efficacy. Use only under the supervision of a health professional.

- Caution with quinolone and tetracycline antibiotics, cefalexin and penicillamine - magnesium and zinc can form insoluble complexes with the drugs and decrease absorption. Take drug 2 hours before or 6 hours after multivitamin.
- Caution with methotrexate (folic acid antagonist) - co-administration with folate may reduce the effects. Take only under the supervision of a health professional.
- Separate dose from aluminium-containing phosphate binders - vitamins C and D can increase aluminium absorption.
- Caution with phosphate and drugs containing phosphate - vitamin D increases the absorption of phosphates which may lead to hyperphosphatemia. Monitor.
- Caution with bisphosphonate medications - magnesium supplements can reduce drug absorption. Separate dose by 2 hours.
- Caution with amphetamines (some ADHD medications) - vitamin C may reduce drug absorption. Separate dose by 2 hours.
- Caution with anticoagulant and antiplatelet drugs - vitamin C may increase the blood thinning effects. Separate dose by 4 hours.
- Caution with eltrombopag - concurrent use with zinc can reduce drug absorption. Separate dose by at least 4 hours.

## CAUTIONS

- Caution in iron overload conditions, such as haemochromatosis, as vitamin C can increase iron absorption.
- Caution in thyroid conditions (iodine).

## SIDE EFFECTS

- Supplementation of some minerals such as calcium, magnesium and zinc may cause mild gastrointestinal irritation in higher doses. Taking with food reduces the risk of side-effects.

## COMPANION PRODUCTS

- Children's Calci Care
- Children's Calm Care
- Children's Fish-i Care
- Children's Immune Care

1 Alshahrani, F., & Aljohani, N. (2013). Vitamin D: deficiency, sufficiency and toxicity. *Nutrients*, 5(9), 3605–3616.

2 Allen, K. J., Koplin, J. J., Ponsonby, A. L., Gurrin, L. C., Wake, M., Vuillermin, P., ... & Tey, D. (2013). Vitamin D insufficiency is associated with challenge-proven food allergy in infants. *Journal of Allergy and Clinical Immunology*, 131(4), 1109–1116.

3 Wang, Y., Yin, S., Zhao, X., Lai, J., Ying, H. X., Q. & Jia, J. (2003). Study on the effect of micronutrients supplementation on health status of children. *Wei Sheng Yan Jiu*, 32(5), 455–458.

4 Haskell, C. F., Scholey, A. B., Jackson, P. A., Elliott, J. M., Defeyter, M. A., Greer, J., Robertson, B. C., Buchanan, T., Tiplady, B., & Kennedy, H. O. (2008). Cognitive and mood effects in healthy children during 12 weeks, supplementation with multi-vitamin/minerals. *British Journal of Nutrition*, 100(5), 1086–1096.