

# Children's Calci Care

Herbs of Gold Children's Calci Care is a delicious strawberry-vanilla tasting chewable tablet, providing calcium, phosphorus, vitamin D3 and vitamin K2 for healthy, growing bones.



60 chewable tablets



## Each chewable tablet contains:

Calcium hydrogen phosphate dihydrate.....	860.6mg
equiv. calcium 200mg	
equiv. phosphorous 154mg	
Colecalciferol.....	7.5 micrograms
equiv. vitamin D3 300IU	
Menaquinone 7 (vitamin K2).....	8.75 micrograms

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

## DIRECTIONS FOR USE

Tablets can be crushed and added to food.

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

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

Or take as directed by your health professional.

## FEATURES & BENEFITS

- ✓ Calcium for healthy, growing bones
- ✓ Vitamin D to assist calcium absorption
- ✓ Vitamin K to bind calcium to bone
- ✓ Easy to chew
- ✓ Delicious strawberry-vanilla flavour
- ✓ Contains tooth-friendly xylitol

## TECHNICAL INFORMATION

- Children's Calci Care contains the key nutrients calcium, vitamin D3 and vitamin K2 to support healthy bone development and growth in children in a great-tasting strawberry-vanilla flavoured chewable tablet.
- Children's Calci Care contains the bioactive form of vitamin D3 (coleciferol) that is identical to the vitamin D naturally produced by the body.
- Children's Calci Care contains vitamin K2 as menaquinone-7 (MK-7). MK-7 provides a high rate of absorption and bioavailability.
- Vitamin D3 is sourced from wild-crafted Reindeer Lichen (*Cladonia rangiferina*), a natural plant-based source of vitamin D3 that is vegan friendly.
- Children's Calci Care is naturally sweetened with 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 alkalisng which creates an unfriendly environment for bacteria detrimental to tooth enamel.

### Bone development

- Bone formation in children begins very early in development, at about the third week of foetal life. Cartilage is produced in the shape of the future bone, then during the second trimester of pregnancy this cartilage turns to bone and begins to form the child's adult-like skeleton. During pregnancy and breastfeeding, bone development and growth is supported by the mother's calcium levels. However, once a child moves to a diet of solid foods, their calcium requirements need to be met through their diet.
- Skeletal development is most rapid in infancy, with bones growing and strengthening in childhood. Approximately 40% to 60% of adult bone mass is accrued during the adolescent years, with 25% of peak bone mass acquired during the 2-year period when a child experiences their peak height growth. This peak bone mineral growth rate occurs on average at 12.5 years for girls and 14 years for boys. At age 18 years, approximately 90% of peak bone mass has been accrued. Childhood and adolescence, therefore, are critical periods for skeletal mineralisation<sup>1</sup>.
- Maintaining adequate calcium intake during childhood is necessary for the development of maximal peak bone mass. Increasing peak bone mass is recognised as an important way to reduce the risk of

osteoporosis in later life<sup>2</sup>.

- Calcium homeostasis is tightly regulated by parathyroid hormone, phosphorous, vitamin K2 and vitamin D. Together they determine the level of calcium absorption, excretion or retention via the kidneys and control the bone remodelling process in the developing skeleton.
- In addition to calcium intake, exercise is an important aspect of achieving maximal peak bone mass. There is evidence that childhood and adolescence may represent an important period for achieving long-lasting skeletal benefits from regular exercise<sup>3</sup>.

### Bone growth & bone health in children

- Children's Calci Care assists healthy bone development and supports bone mineralisation and density in children.
- Children's Calci Care contains calcium which is required for the normal development and maintenance of bone.
- Over 90% of the bodies total calcium levels are found in bone. Calcium is an essential mineral for bone remodelling, a life-long process in which old bone is removed from the body and replaced with new bone. The bone remodelling process involves the constant addition of calcium to the bone and removal of calcium from the bone and into circulation.
- Vitamin K2 is a fat-soluble vitamin, essential for calcium distribution in the body. Vitamin K2 is crucial for bone building and bone strength, as it incorporates or binds calcium into bones, whilst driving calcium away from blood vessels.
- Vitamin K2 is a group of compounds, known as menaquinones (MKs). MK-7 has high rate of absorption and bioavailability and is only obtained in the Western diet through the intake of fermented foods.
- Vitamin D facilitates calcium absorption by attaching to specific vitamin D receptors (VDR) on target cells responsible for the synthesis of different proteins involved in calcium transport and utilisation.

### Muscle health & function in children

- Children's Calci Care contains calcium and vitamin D, important nutrients for muscle health and muscle strength in children.
- The contraction and relaxation of muscles occurs due to rapidly changing calcium concentrations within the cells of muscles, a biochemical process known as the calcium cycle. Adequate calcium is required for a balanced calcium cycle, necessary for the healthy functioning of muscles.

1 Golden, N. H. & Abrams, S. A. (2014). Optimising bone health in children and adolescents. *Paediatrics*, 134(4), e1229-e1243.

2 Osteoporosis Australia. (2014). *Prevention*. <https://www.osteoporosis.org.au/prevention>

3 Herrmann, D., Buck, C., Sioen, I., Kouride, Y., Marild, S., Molnár, D., ... & Ahrens, W. (2015). Impact of physical activity, sedentary behaviour and muscle strength on bone stiffness in 2-10-year-old children: cross-sectional results from the IDEFICS study. *International Journal of Behavioral Nutrition and Physical Activity*, 12(1), 112.

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- Vitamin D regulates neuromuscular functioning and impacts protein synthesis. VDRs are also present on both skeletal muscle cells and smooth muscle cells, playing an important role in overall muscle health and function.

## Healthy teeth in children

- Children's Calci Care contains calcium to support healthy teeth in children.
- Calcium plays a role in the formation and maintenance of healthy teeth and gums in children by making jaw bones healthy and strong and by assisting in the mineralisation and strength of teeth.

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## DRUG INTERACTIONS

- Contraindicated with blood thinning medications and warfarin – vitamin D supplementation reduces drug effectiveness.
- Caution with tetracycline and quinolone antibiotics – calcium can reduce drug bioavailability. Take antibiotics either 2 hours before or 4-6 hours after calcium.
- Caution with magnesium, iron and zinc supplements – concurrent use with calcium can reduce the absorption of these minerals. Separate dose by 2 hours.
- Caution with thiazide diuretics – drug decreases urinary excretion of calcium. Monitor serum calcium levels and look for signs of hypercalcaemia.
- Caution with cardiac glycosides (digoxin) – calcium supplementation may cause drug toxicity. Monitor.
- Caution with calcium channel blockers – vitamin D supplementation may reduce drug effectiveness. Monitor.

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## CAUTIONS

- Calcium supplementation is contraindicated in hypercalcaemia and hypercalciuria.
- Caution with hyperparathyroidism and chronic kidney disease – calcium supplementation should only be taken under medical supervision.
- Vitamin D is contraindicated in people with vitamin D hypersensitivity, systemic lupus erythematosus (SLE) and hypercalcaemia.

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## SIDE EFFECTS

- Calcium supplementation may cause mild gastrointestinal discomfort, nausea, constipation and flatulence in some sensitive individuals.

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## COMPANION PRODUCTS

- Children's Fish-i Care
- Children's Multi Care
- Children's Probiotic 15 Billion
- Zinc Forte + C