Calfram Tablet

(Alfacalcidol BP)

کیلفرام ۰.۵ مائیکروگرام ٹیبلٹ

(الفاکیلسیڈول بی پی)

COMPOSITION

Each tablet contains:

Alfacalcidol (BP).....0.5mcg

Product complies Innovator's specs.

DESCRIPTION

Alfacalcidol is an active metabolite of Vitamin D, which performs important functions in regulation of the calcium balance and the bone metabolism. Alfacalcidol is Vitamin D-hormone analog which is activated by the enzyme 25-hydroxylase in the liver for systemic and in osteoblasts for local D-hormone actions. It possesses a unique pattern of pleiotropic effects on, e.g. gut, bone, pararthyroids, muscle and brain. Alfacalcidol is superior to plain vitamin D (cholecalciferol) because the final kidney activation of the latter is regulated by a negative feedback mechanism.

MECHANISM OF ACTION

Alfacalcidol is a Vitamin-D analogue. It acts as a regulator of calcium and phosphate metabolism. Its active metabolite 1,25- dihydroxyvitamin D_3 binds to receptors distributed in the target tissues, the intestine and bones, where it expresses a series of physiological activities, including promoting calcium absorption from the intestine, bone mineral dissolution, and osteogenic activity.

INDICATIONS

CALFRAM (Alfacalcidol) is used for treating conditions in which calcium metabolism is disturbed due to impaired 1α-hydroxylation, such as reduced renal function and in other disorders associated with Vitamin D resistance. CALFRAM (Alfacalcidol) is indicated for:

- Renal bone disease (Renal Osteodystrophy).
- Hypoparathyroidism (e.g. Postoperative or diopathic Hypoparathyroidism, Pseudo hypoparathyrodism).
- Hyperparathyroidism (with bone disease).
- Nutritional and malabsorptive rickets and osteomalacia.
- Neonatal hypocalcaemia.
- Hypophosphatemic Vitamin D-resistant rickets and osteomalacia.
- Pseudo-deficiency (D-dependent Type I) rickets and osteomalacia.
- Malabsorption of calcium.
- Primary and secondary osteoporosis; osteopenia.

DOSAGE AND ADMINISTRATION

For all indications except osteoporosis:

The dose of CALFRAM (Alfacalcidol) should be adjusted thereafter to avoid hypercalcemia. Plasma levels should initially be measured at weekly intervals. The daily dose of CALFRAM (Alfacalcidol) may be increased by increments of 0.5mcg. When the dose is stabilised, measurements may be taken every 2- 4 weeks.

Adults	**1mcg/day**
Elderly patients	**0.5mcg/day**
Children under 20Kg	**0.05mcg/day**
Children 20Kg and over except in renal osteodystrophy	**1mcg/day**

Most adults respond to doses of 1-3mcg/day. When there is biochemical or radiographic evidence of bone healing (and in hypoparathyroid patients when normal plasma calcium levels have been attained) the dose generally decreases.

Maintenance dose:

The dose required for maintenance are generally in the range of 0.25 to 1mcg/day. If hypercalcemia occur, CALFRAM (Alfacalcidol) should be stopped until plasma calcium returns to normal (usually about a week) then restarted at one half of the previous dose.

Osteoporosis:

The usual dose of CALFRAM (Alfacalcidol) is 0.5mcg/day in adults. The recommended maintenance dose is 0.5-1mcg/day which should not be exceeded. The general oral dose for children with osteoporosis ranges 0.01-0.03mcg/kg once a day.

Renal Bone Disease (Renal Osteodystrophy):

The dose for children 20kg and over with renal osteodystrophy is 0.04-0.08mcg/kg/day. Children seem to need relatively higher dose than adults and may even need the adult dose.

Hypoparathyroidism/Hyperparathyroidism:

For adults 1-4mcg of CALFRAM (Alfacalcidol) is given orally once a day. Severe hypocalcemia is corrected more rapidly with higher doses of CALFRAM (Alfacalcidol) e.g. 3-5mcg, together with calcium supplements. CALFRAM (Alfacalcidol) can be given for 2-3 weeks as preoperative treatment for primary or tertiary hyperparathyroidism surgery.

PHARMACOKINETICS

Following oral administration, alfacalcidol is rapidly absorbed into blood through intestine and the 25-position of the side chain is hydroxylated, with 25-hydroxylase of

hepatic microsome, into the final active substance, in the liver, into 1α, 25(OH)2D3. It binds with receptors in intestinal tract, bone and other target organs and develops series of physiological activities, such as promotion of calcium absorption from intestine, bone resorption and bone formation activities. The peak level is observed at 8-24 hours after the administration and the half life is 2-4 days in normal adults with oral administration of alfacalcidol 4mcg/day. Alfacalcidol circulates in the blood, bound to specific alpha globulins and is stored in adipose and muscle tissue for long periods of time. Approximately 72% of an oral dose of alfacalcidol is excreted in the urine and feces within 48 hours and almost 100% excreted in 7 days. The biological half-life is approximately 35 hours. The presence of bile is essential for adequate intestinal absorption; absorption may be decreased in patients with decreased fat absorption.

PRECAUTIONS

Monitoring of calcium, phosphate, alkaline phosphatase, magnesium and creatinine levels as well as other appropriate biochemical parameters should be done regularly.

Use in the Elderly

Attention to the dose should be required due to generally lower physiologic functions.

Pediatric use

Administration to children should be made with caution to avoid overdose, by gradual dose increase after an initial lower dose under the monitoring of serum calcium level, urinary calcium level and urinary calcium creatinine ratio.

Pregnancy and Nursing Mothers

There are no adequate and well-controlled studies in pregnant and nursing women. Alfacalcidol should be used only if the potential benefit justifies the potential risk to the fetus and infant.

SIDE EFFECTS

No side effects associated directly with alfacalcidol therapy have been noted.

DRUG INTERACTIONS

Digitalis glycosides

Hypercalcemia in patients taking digitalis preparations may precipitate cardiac arrhythmias. Patients taking digitalis concurrently with alfacalcidol must therefore be closely monitored.

Magnesium

Caution should be exercised in the use of magnesium based antacids or laxatives for patients taking alfacalcidol who are on chronic renal dialysis. Hypermagnesemia may occur.

CONTRAINDICATIONS

Alfacalcidol should not be used in patients with evidence of Vitamin D toxicity or known hypersensitivity to the effects of Vitamin D or any of its analogues.

Alfacalcidol should not be administered in the presence of hypercalcemia, hyperphosphatemia (except when occurring with hypoparathyroidism) or hypomagnesemia.

OVERDOSAGE

In the event of overdose, alfacalcidol should immediately be stopped and in severe hypercalcemia additional treatment with loop diuretics and intravenous fluids, or corticosteroids is done.

STORAGE & INSTRUCTIONS:

Store between 15-25°C. Protect from heat, sunlight and moisture. Keep away from the reach of children.

To be sold on the prescription of a registered medical practitioner only.

HOW SUPPLIED

10's, 20's, 30's tablets.

خوراک وطریقہ استعمال:

ڈاکٹر کی ہدایت کے مطابق استعمال کریں۔

ہدایات:

دوا کو ۱۵-۲۵ ڈگری سینٹی گریڈ درجہ حرارت کے درمیان رکھیں۔

دھوپ، گرمی اور نمی سے بچائیں۔ بچوں کی پہنچ سے دور رکھیں۔

صرف مستند ڈاکٹر کے نسخہ کے مطابق فروخت کریں۔

Manufactured by:
PHARMASOL
PRIVATE LIMITED
Plot # 549,Sundar Industrial Estate,
Lahore, Pakistan.