SUMMARY OF PRODUCT CHARACTERISTICS

1 NAME OF THE MEDICINAL PRODUCT

InVita D3 5,600 IU soft capsules

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Each capsule contains colecalciferol (vitamin D3) 5,600 IU (equivalent to 0.14 mg vitamin D3).

Excipients with known effect:
Each capsule contains 0.03 mg Allura Red AC (E129).
Each capsule contains 0.1 mg Sunset Yellow FCF (E110).

For the full list of excipients, see section 6.1.

3 PHARMACEUTICAL FORM

Soft capsule

Red, oval-shaped, soft capsule. It contains a slightly yellow oily liquid. Each capsule has "5.6" printed in white ink. Capsule dimensions are 10.6mm x 7mm.

4 CLINICAL PARTICULARS

4.1 Therapeutic indications

Prophylaxis and treatment of vitamin D deficiency in adults and adolescents with an identified risk.

In addition to specific osteoporosis treatment of patients who are at risk of vitamin D deficiency, preferably in combination with calcium.

4.2 Posology and method of administration

Posology

Recommended dose: One capsule per week.

Higher doses can be necessary to achieve desirable serum levels of 25-hydroxycolecalciferol (25(OH)D).
The weekly dose should not exceed 5 capsules.

Dosage in hepatic impairment

No dose adjustment is required.

Dosage in renal impairment

InVita D3 should not be used in patients with severe renal impairment.

Paediatric population
InVita D3 is not recommended in children under 12 years of age.

Method of administration
The capsules should be swallowed whole with water.

4.3 Contraindications

- Diseases and/or conditions resulting in hypercalcaemia or hypercalciuria.
- Nephrolithiasis.
- Nephrocalcinosis
- Hypervitaminosis D.
- Hypersensitivity to the active substance or to any of the excipients listed in section 6.1.

4.4 Special warnings and precautions for use

InVita D3 should be prescribed with caution to patients suffering from sarcoidosis due to risk of increased metabolism of vitamin D into its active form. These patients should be monitored with regard to the calcium content in serum and urine.

During long-term treatment, serum calcium levels should be followed and renal function should be monitored through measurements of serum creatinine. Monitoring is especially important in elderly patients on concomitant treatment with cardiac glycosides or diuretics (see section 4.5) and in patients with a high tendency to calculus formation. In case of hypercalciuria (exceeding 300 mg (7.5 mmol)/24 hours) or signs of impaired renal function the dose should be reduced or the treatment discontinued.

InVita D3 should be used with caution in patients with impairment of renal function and the effect on calcium and phosphate levels should be monitored. The risk of soft tissue calcification should be taken into account. In patients with severe renal insufficiency, vitamin D in the form of cholecalciferol is not metabolised normally and other forms of vitamin D should be used.

The content of vitamin D (5,600 IU) in InVita D3 should be considered when prescribing other medicinal products containing vitamin D. Additional doses of vitamin D should be taken under close medical supervision. In such cases it is necessary to monitor serum calcium levels and urinary calcium excretion frequently.

InVita D3 5,600 IU soft capsules contain Allura Red AC (E129) and Sunset Yellow FCF (E110) which may cause allergic reactions.

4.5 Interaction with other medicinal products and other forms of interaction

Thiazide diuretics reduce the urinary excretion of calcium. Due to the increased risk of hypercalcaemia, serum calcium should be regularly monitored during concomitant use of thiazide diuretics.

Concomitant use of phenytoin or barbiturates may reduce the effect of vitamin D since the metabolism increases.

Excessive dosing of vitamin D can induce hypercalcaemia, which may increase the risk of digitalis toxicity and serious arrhythimias due to the additive inotropic effects. The electrocardiogram (ECG) and serum calcium levels of patients should be closely monitored.

Glucocorticoid steroids may increase vitamin D metabolism and elimination. During concomitant use, it may be necessary to increase the dose of InVita D3 tablets.

Simultaneous treatment with ion exchange resins such as cholestyramine or laxatives such as paraffin oil may reduce the gastrointestinal absorption of vitamin D. Orlistat may potentially impair the absorption of colecalciferol as it is fat-soluble.

The cytotoxic agent actinomycin and imidazole antifungal agents interfere with vitamin D activity by inhibiting the conversion of 25-hydroxyvitamin D to 1,25-dihydroxyvitamin D by the kidney enzyme, 25-hydroxyvitamin D-1-hydroxylase.

4.6 Fertility, pregnancy and lactation

Pregnancy

Vitamin D deficiency is harmful for mother and child.. High doses of vitamin D have been shown to have teratogenic effects in animal experiments. Overdose of vitamin D must be avoided during pregnancy, as prolonged hypercalcaemia can lead to physical and mental retardation, supravalvular aortic stenosis and retinopathy of the child.

InVita D3 can be used up to 2 capsules of 5,600 IU/week, only in case of a vitamin D deficiency.

Breast-feeding

Vitamin D3 and metabolites pass into the breast-milk. No adverse events have been observed in infants. InVita D3 can be used at recommended doses during lactation in case of a vitamin D deficiency.

Fertility

Normal endogenous levels of vitamin D are not expected to have any adverse effects on fertility.

4.7 Effects on ability to drive and use machines

There are no data about the effect of this product on driving capacity. An effect is, however, unlikely.

4.8 Undesirable effects

Adverse reactions frequencies are defined as: uncommon $\geq$ 1/1,000, <1/100), rare

≥1/10,000, <1/1,000) or not known (cannot be estimated from the available data

Immune system disorders

Not known (cannot be estimated from the available data): Hypersensitivity reactions such as angio-oedema or laryngeal oedema.

Metabolism and nutrition disorders

Uncommon: Hypercalcaemia and hypercalciuria.

Skin and subcutaneous disorders

Rare: Pruritus, rash and urticaria.

Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorization of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via: Yellow Card Scheme Website: www.mhra.gov.uk/yellowcard

4.9 Overdose

Overdose can lead to hyper-vitaminosis D. An excess of vitamin D causes abnormally high levels of calcium in the blood, which can eventually severely damage the soft tissues, and kidneys. Tolerable Upper Intake Level for vitamin D3 (colecalciferol) is set at 4000 IU (100 µg) per day. Vitamin D3 should not be confused with its active metabolites.

Symptoms of hypercalcaemia may include anorexia, thirst, nausea, vomiting, constipation, abdominal pain, muscle weakness, fatigue, mental disturbances, polydipsia, polyuria, bone pain, nephrocalcinosis, renal calculi and in severe cases, cardiac arrhythmias. Extreme hypercalcaemia may result in coma and death.
Persistently high calcium levels may lead to irreversible renal damage and soft tissue calcification.
Treatment of hypercalcaemia: The treatment with vitamin D must be discontinued. Treatment with thiazide diuretics, lithium, vitamin A, and cardiac glycosides must also be discontinued.
Rehydration, and, according to severity, isolated or combined treatment with loop diuretics, bisphosphonates, calcitonin and corticosteroids should be considered. Serum electrolytes, renal function and diuresis must be monitored. In severe cases, ECG and CVP should be followed.

5 PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Vitamin D and analogues, colecalciferol ATC Code: A11CC05

Vitamin D increases the intestinal absorption of calcium and phosphate.

Administration of vitamin D3 counteracts development of rickets in children and osteomalacia in adults. It also counteracts the increase of parathyroid hormone (PTH) which is caused by calcium

deficiency and which causes increased bone resorption.

In addition to bone and intestinal mucosa many other tissues have vitamin D receptors, to which the active hormonal form of vitamin D, calcitriol, binds.

5.2 Pharmacokinetic properties

Vitamin D

Sun exposure: UVB light converts 7-dehydrocholesterol, found in the skin, to colecalciferol.

Absorption: Vitamin D is easily absorbed in the small intestine. Food intake potentially increases the absorption of vitamin D.

Distribution and biotransformation: Colecalciferol and its metabolites circulate in the blood bound to a specific globulin. Colecalciferol is converted in the liver by hydroxylation to 25-hydroxycholecalciferol. It is then further converted in the kidneys to 1,25- dihydroxycholecalciferol. 1,25-dihydroxycholecalciferol is the active metabolite responsible for increasing calcium absorption. Vitamin D, which is not metabolised, is stored in adipose and muscle tissues.

After a single oral dose of colecalciferol, the maximum serum concentrations of the primary storage form are reached after approximately 7 days. $25(OH)D_3$ is then slowly eliminated with an apparent half-life in serum of about 50 days. Colecalciferol and its metabolites are excreted mainly in the bile and faeces.

Elimination: Vitamin D is excreted mainly in bile and faeces with a small percentage found in urine.

5.3 Preclinical safety data

At doses far higher than the human therapeutic range teratogenicity has been observed in animal studies. No other relevant data is available that has not been mentioned elsewhere in the SmPC (see section 4.6 and 4.9).

6 PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Capsule fill
all-rac-α-tocopherol (E307)
Medium Chain Triglycerides

Capsule shell
Glycerol (E422)
Gelatine (E441)
Allura Red AC (E129)
Sunset Yellow FCF (E110)
Medium Chain Triglycerides
Purified water

Printing ink
Opacode® White imprinting ink

- Shellac (E904)
- Titanium dioxide (E171)
- Simethicone
- Ammonium hydroxide (E527)
- Propylene Glycol (E1520)
- N-butyl alcohol
- Isopropyl alcohol

6.2 Incompatibilities

Not applicable.

6.3 Shelf life

30 months

6.4 Special precautions for storage

Do not store above 25°C.

Store in the original package in order to protect from light.

Shelf life after first opening is 2 months.

6.5 Nature and contents of container

4 or 12 capsules packed in PVDC/Aluminium foil blisters, inserted into a cardboard carton or 250 capsules packed in a plastic bottle, inserted into a cardboard carton.

Not all pack sizes may be marketed.

6.6 Special precautions for disposal

No special requirements.

7 MARKETING AUTHORISATION HOLDER

Consilient Health Limited,

Floor 3, Block 3, Miesian Plaza,

Dublin 2, D02 Y754,

Ireland

8 MARKETING AUTHORISATION NUMBER(S)

PL 24837/0077

9 DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

30/08/2016

10 DATE OF REVISION OF THE TEXT

02/04/2024