

## Summary of Product Characteristics

### 1 NAME OF THE MEDICINAL PRODUCT

AltavitaD3 800IU soft capsules

### 2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Each capsule contains colecalciferol (vitamin D3) 800 IU (equivalent to 0.02 mg vitamin D3).

Excipients with known effect:

Each capsule contains 0.01 mg Allura Red AC (E129).

For the full list of excipients, see section 6.1.

### 3 PHARMACEUTICAL FORM

Soft capsule

Pink, oval-shaped, soft capsule. It contains a slightly yellow oily liquid. Each capsule has "0.8" printed in white ink. Capsule dimensions are 10.5mm 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 day.

Higher doses can be necessary in treatment of vitamin D deficiency, where the dose should be adjusted dependent upon desirable serum levels of 25-hydroxycolecalciferol (25(OH)D), the severity of the disease and the patient's response to treatment.

The daily dose should not exceed 4,000 IU (5 capsules per day).

##### *Dosage in hepatic impairment*

No dose adjustment is required.

##### *Dosage in renal impairment*

AltavitaD3 should not be used in patients with severe renal impairment (see section 4.3).

##### *Paediatric population*

AltavitaD3 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

AltavitaD3 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.

AltavitaD3 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 (800 IU) in AltavitaD3 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.

### 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 arrhythmias 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 AltavitaD3 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. There are no signals that recommended doses of vitamin D3 are harmful for the embryo/fetus. 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, supraaortic stenosis and retinopathy of the child.

AltavitaD3 can be used up to 2,000 IU/day only in case of a Vitamin D deficiency.

AltavitaD3 is not recommended during pregnancy in patients without a vitamin D deficiency as the daily intake should not exceed 600 IU vitamin D.

### *Breast-feeding*

Vitamin D3 and metabolites pass into the breast-milk. No adverse events have been observed in infants. AltavitaD3 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  $\geq 1/10,000$ ,  $<1/1,000$ ) 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 authorisation 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 HPRC Pharmacovigilance, Earlsfort Terrace, IRL - Dublin 2; Tel: +353 1 6764971; Fax: +353 1 6762517. Website: [www.hpra.ie](http://www.hpra.ie); E-mail: [medsafety@hpra.ie](mailto:medsafety@hpra.ie).

## 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 (coleciferol) is set at 4000 IU (100 µg) per day. Vitamin D3 should not be confused with its active metabolites, colecalciferol.

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 D<sub>3</sub> 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<sub>3</sub> 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- $\alpha$ -tocopherol (E307)

Medium Chain Triglycerides

#### *Capsule shell*

Glycerol

Gelatine  
Medium Chain Triglycerides  
Allura Red AC (E129)

*Printing ink*

Shellac (E904)  
Titanium dioxide (E171)  
Simethicone

## **6.2 Incompatibilities**

Not applicable.

## **6.3 Shelf life**

2 years

## **6.4 Special precautions for storage**

Do not store above 30°C.

Keep the blister(s) in the outer carton to protect from light.

## **6.5 Nature and contents of container**

28 or 90 capsules packed in PVDC/Aluminium foil blisters, 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  
5<sup>th</sup> Floor, Beaux Lane House  
Mercer Street Lower  
Dublin 2  
Ireland

## **8 MARKETING AUTHORISATION NUMBER**

PA1876/004/002

## **9 DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION**

Date of first authorisation: 16th March 2016

## **10 DATE OF REVISION OF THE TEXT**

January 2017