

### COMPOSITION

Each 1ml ampoule contains: Colecalciferol BP (Vitamin D<sub>3</sub>) ... 5mg (200,000IU) [Innovator's Specs.]

# DESCRIPTION:

**DESCRIPTION:** Vitamin  $D_3$  is a fat-soluble vitamin that is essential for maintaining normal calcium metabolism. Chemically it is described as 3-[2-[7a-methyl-1-(6-methylheptan-2-yl)-2,3,3a,5,6,7-hexahydro-IH-inden-4-ylidene]-4-methylidene-cyclohexan-1-ol and its molecular weight is 384.638 g/mol.

## PHARMACOLOGY:

Pharmacology:
Pharmacodynamics: Vitamin D3 (Colecalciferol) can be synthesized by humans in the skin upon exposure to ultraviolet-B (UVB) radiation from sunlight or it can be obtained from the diet. When exposure to UVB radiation is insufficient for the synthesis of adequate amounts of vitamin D3 in the skin, adequate intake of vitamin D3 from the diet is essential for health. Most if not all actions of vitamin D3 are mediated through a nuclear transcription factor known as the vitamin D receptor (VDR)

Pharmacokinetics: Vitamin D<sub>3</sub> is well absorbed from the gastrointestinal tract. The presence of bile is essential for the adequate intestinal absorption. Absorption may be decreased in patients with decreased fat absorption. Vitamin D<sub>3</sub> and its may be decreased in patients with decreased fat absorption. Vitamin D<sub>3</sub> and its metabolite circulate in the blood bound to specific alpha globulin. Vitamin D<sub>3</sub> can be stored in muscle and adipose tissue for long periods of time: It is slowly released from such storage sites and from the skin where it is formed in the presence of sunlight or UVB. Vitamin D<sub>3</sub> has a slow onset and longer duration of action. It is hydroxylated in the liver by the enzyme vitamin D 25-hydroxylase to 25-hydroxycolecalciferol (Calcidiol). This compound undergoes further hydroxylation in the kidneys by the enzyme vitamin D 1-hydroxylase to form the active metabolite 1, 25-dihydroxycolecalciferol (Calcitriol). Further metabolism also occurs in the kidney, including the formation of 1,24,25 trihydroxy derivatives, Vitamin D<sub>3</sub> compounds and their metabolites are excreted mainly in the bile and faeces with only small amount appearing in the urine; there is some enterohepatic recycling but it is considered to have negligible contribution to vitamin D<sub>3</sub> substances may be distributed into the breast milk.

## INDICATIONS:

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  Trick-D injection is indicated:

  For the prevention and treatment of Vitamin D deficiency.

  For the treatment of Vitamin D insufficiency, refractory rickets (Vitamin D resistant rickets), familial hypophosphatemia and hypoparathyroidism and in the management of hypocalcemia and renal osteodystrophy in patients with chronic renal failure undergoing dialysis.

  In conjunction with calcium in the management and prevention of primary or action the production of the property of the product of the
- corticosteroid-induced osteoporosis.

   In bone fixation of calcium.

**CONTRAINDICATIONS:** The drug must not be used in the following cases

- Hypersensitivity to any of the ingredients, mainly to vitamin D<sub>3</sub>
  Hypercalcemia (abnormally high levels of blood calcium)
  Hypercalciuria (excessive urinary elimination of calcium)
  Calcium lithiasis (kidney stones)

## POSSIBLE ADVERSE EFFECTS:

As with any medicine, it may also produce unpleasant effects of varying intensity. Loss of appetite, constipation, diarrhea, dry mouth, headache, increased thirst, mental confusion, nausea & vomiting and unusual tiredness are few of the side effects generally encountered.

## DRUG INTERACTIONS:

Steroid medications such as prednisone can interfere with vitamin D<sub>3</sub> metabolism. If you take steroid drugs regularly, discuss with your doctor. The weight loss drug, Orlistat and cholesterol-lowering drug, Cholestyramine may cut absorption of vitamin Ds. People taking these drugs should discuss vitamin intake with their doctors. The seizure drugs Phenobarbital and Phenytoin affect vitamin Ds metabolism and affect calcium absorption, so do anti-tuberculosis drugs. On the other hand, cholesterol-lowering statin drugs and thiazide diuretics increase vitamin Ds levels.

### WARNINGS:

Kidney disease: Vitamin D<sub>3</sub> may increase calcium levels and increase the risk of "hardening of the arteries" in people with serious kidney disease.

High levels of calcium in the blood: Taking vitamin D<sub>3</sub> could make this condition

Sarcoidosis: Vitamin Da may increase calcium levels in people with sarcoidosis. This could lead to kidney stones and other problems.

Histoplasmosis: Vitamin D<sub>3</sub> may increase calcium levels in people with histoplasmosis. This could lead to kidney stones and other problems.

Over-active parathyroid gland (hyperparathyroidism):
Vitamin D<sub>3</sub> may increase calcium levels in people with hyperparathyroidism.

**Lymphoma:** Vitamin D<sub>3</sub> may increase calcium levels in people with lymphoma. This could lead to kidney stones and other problems.

Other medications: Concomitant use of other medicines containing vitamin D<sub>3</sub> could, result in overdosage. If high or repeated doses of vitamin D<sub>3</sub> or calcium are administered, it is necessary to monitor calcium levels in blood and urine.

Pregnancy & Lactation: Vitamin D<sub>3</sub> is SAFE during pregnancy and breast-feeding when used within the recommended dose

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DOSAGE & ADMINISTRATION:
Trick-D can be taken orally or administered by IM route.

Prevention: Infants receiving Vitamin D enriched milk: 1/2 ampoule (2.5 mg or 100000 IU) every 6 months.

Nursed infants or infants not receiving Vitamin D enriched milk or young children upto 5 years of age: 1 ampoule (5 mg or 200000 IU) every 6 months.

Adolescents: 1 ampoule (5 mg or 200000 IU) every 6 months during winters.

Pregnancy: 1/2 ampoule (2.5 mg or 100000 IU) every 3 months.

Deficiency: 1 ampoule (2.5 mg or 200000 IU) which can be renewed every 1 to 6 months.

# SPECIAL INSTRUCTION TO THE PHYSICIAN:

SPECIAL INSTRUCTION TO THE PHYSICIAN: If high or repeated doses of vitamin D3 are administered or if high doses of calcium are associated, it is necessary to monitor calcium levels in blood and urine. Overdosage: Overdose symptoms may include headache, weakness, drowsiness, dry mouth, nausea, vomiting, constipation, muscle or bone pain, metallic taste in the mouth, weight loss, itchy skin, changes in heart rate, confusion, unusual thoughts or behavior, severe pain in your upper stomach spreading to your back and fainting. Treatment of vitamin D3 toxicity may include stopping vitamin D3 upplements and restricting calcium intake as well as taking medication. In severe cases, hospitalization may be necessary.

## DIRECTION FOR USE:

# Direction for oral use:







## Direction for IM use:









INSTRUCTIONS: Store below 30° C. Protect from heat & light. Keep out of the reach of children.

PRESENTATION: Trick-D ampoule 5mg/ml is available in pack size of 1's x 1ml.

ہدایات: ۲۰ ڈکریسنٹی کریڈے کم درجہ حرارت پر کھیں۔ گری اور روشی سے بچائیں۔ بچوں کی پیٹی سے دور رکھیں۔

Manufactured by: **Surge Laboratories (Pvt.) Ltd.,** 10th Km, Faisalabad Road, Bikhi, District Sheikhupura Pakistan.

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