

**SIDE EFFECTS****CNS:** Headache, (nasal)**EENT:** Eye pain (nasal)**GI:** Nausea, diarrhea, vomiting, anorexia, (IM/SUBCUT)**GU:** Nocturia, frequency**INTEG:** Rash, flushing, reaction at inj site**MS:** Backache, myalgia, arthralgia**RESP:** Dyspnea, flulike symptoms, **bronchospasm****SYST:** **Anaphylaxis**, infection**PHARMACOKINETICS****IM/SUBCUT:** Onset 15 min, peak 2 hr, duration 6-8 hr, metabolized by kidneys, excreted as inactive metabolites via kidneys**INTERACTIONS****Decrease:** lithium effect; monitor lithium level**Decrease:** effect of nasal spray—bisphosphonates (Paget's disease); monitor for adequate effect**NURSING CONSIDERATIONS****Assess:**

- **Anaphylaxis, hypersensitivity reaction (rash, fever, inability to breathe); emergency equipment should be nearby**

- GI symptoms, polyuria, flushing, head swelling, tingling, headache; may indicate hypercalcemia

- Nutritional status; diet for sources of vit D (milk, some seafood), calcium (dairy products, dark green vegetables), phosphates

- **Postmenopausal osteoporosis:** vit D (50-135 international units/dL), alk phos baseline, q3-6mo; monitor urine hydroxyproline with Paget's disease, biochemical markers of bone formation/absorption, radiologic evidence of fracture; bone density

- **Toxicity (can occur rapidly), increased drug level; have parenteral calcium on hand if calcium level drops too low; check for tetany (irritability, paresthesia, nervousness, muscle twitching, seizures, tetanic spasms)**

**Evaluate:**

- Therapeutic response: calcium levels 9-10 mg/dL, decreasing symptoms of Paget's disease

**Teach patient/family:****SUBCUT route/IM route**

- About the method of inj if patient will be responsible for self-medication; to rotate sites, not to inject into broken, irritated skin; provide written instructions

- To report difficulty swallowing, any changes in side effects to prescriber immediately

- To report immediately signs/symptoms of hypocalcemia: tetany, seizures

- **Pregnancy/breastfeeding:** to advise prescriber if pregnancy is planned or suspected; or if breastfeeding

- **Postmenopausal osteoporosis:** to take vitamin D and calcium differential; that nausea, vomiting, and facial flushing occur often

**Nasal route**

- To use alternating nostrils; to use after allowing to warm to room temperature; to prime to get full spray; to discard after 30 days

**calcitriol vitamin D<sub>3</sub> (Rx)**

(kal-sih-try'ole)

Calcijex  Rocaltrol, SilKis *Func. class.:* Parathyroid agent (calcium regulator)*Chem. class.:* Vit D hormone**Do not confuse:****calcitriol/Calciferol/calcitonin/calcium****ACTION:** Increases intestinal absorption of calcium; provides calcium for bones; increases renal tubular reabsorption of phosphate**USES:** Hypocalcemia with chronic renal disease, hyperparathyroidism, pseudohypoparathyroidism, psoriasis, renal osteodystrophy**CONTRAINDICATIONS:** Hypersensitivity, hyperphosphatemia, hypercalcemia, vit D toxicity**Precautions:** Pregnancy, breastfeeding, renal calculi, CV disease