



## NEONATAL MEDICATION GUIDELINE

# Calcitriol

**Scope (Staff):** Nursing, Medical and Pharmacy Staff

**Scope (Area):** KEMH NICU, PCH NICU, NETS WA

This document should be read in conjunction with the [Disclaimer](#).

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### Restrictions

[Formulary: Restricted](#)

[SAS Category A](#) (injection requires approval by TGA)

### Description

Activated Vitamin D3 - increases calcium and phosphorous absorption.

Activates the parathyroid hormone to increase bone resorption, maintaining calcium and phosphorous levels.

### Presentation

**Oral Solution:** 1 microgram / mL

**Ampoule:** 1 microgram / mL (SAS)

### Storage

Store at room temperature, below 25°C.

Protect from light.

### Dose

#### Hypocalcaemia, Hypoparathyroidism, Neonatal Rickets

**Oral:**

Initially 0.25 microgram to 1 microgram ONCE a day.

Increase by 0.25microgram every 4 weeks according to Calcium levels.

Adjust dose to maintain serum calcium in the lower range.

#### **Intravenous:**

Initially 0.25 microgram ONCE daily.

Switch to oral when tolerating oral feeds.

### **Dose Adjustment**

**Renal Impairment:** Not documented

**Hepatic Impairment:** Not documented

### **Administration**

#### **Oral**

Can be administered any time in regard to feeds.

#### **Intravenous**

Push undiluted over at least 15 second.

Discard any unused portion.

### **Compatible Fluids**

Glucose 5%, sodium chloride 0.9%

### **Y-Site Compatibility**

Refer to KEMH Neonatal Medication Guideline: [Y-Site IV Compatibility in Neonates](#)

### **Side Effects**

Adverse effects are associated with hypercalcaemia

**Common:** weakness, headache, nausea, vomiting, dry mouth, constipation, myalgia, bone pain, metallic taste, anorexia, abdominal pain, polyuria, polydipsia, anorexia, weight loss, nocturia

**Serious:** conjunctivitis (calcific), pancreatitis, photophobia, rhinorrhea, pruritus, hyperthermia, elevated blood urea nitrogen (BUN), albuminuria, hypercholesterolemia, elevated SGOT (AST) and SGPT (ALT), ectopic calcification, nephrocalcinosis, hypertension, cardiac arrhythmias, dystrophy, sensory disturbances, dehydration, apathy, arrested growth, urinary tract infections.

## Interactions

Calcitriol can cause hypercalcaemia; calcium supplements or administration with other drugs that can cause hypercalcaemia may increase this risk; monitor calcium concentration.

## Monitoring

Serum calcium and phosphorous, serum alkaline phosphatase, creatinine, urinary calcium

## Comments

Calcitriol adsorbs to PVC. If being given, PVC lines can be used however calcium and phosphate levels should be monitored and dose adjusted accordingly.

Consider the vitamin D content of feeds and other medications when administering calcitriol.

Intravenous calcitriol requires an SAS form to be completed prior to use.

## Related Policies, Procedures & Guidelines

**WNHS Pharmaceutical and Medicines Management Guidelines:**

[Medication Administration](#)









## References

Australian Medicines Handbook. Calcitriol. In: Australian Medicines Handbook [Internet]. Adelaide (South Australia): Australian Medicines Handbook; 2021 [cited 2021 Sep 28]; Available from: <https://amhonline.amh.net.au/>

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Government of South Australia: SA Health [Internet]. South Australian Neonatal Medication Guidelines;2017 [cited 2021 Sep 28]. Available from: [Neonatal Medication Guidelines | SA Health](#)

Takemoto CK, Hodding JH, Kraus DM. Calcitriol (Systemic). In: Pediatric & neonatal dosage handbook with international trade names index: a universal resource for clinicians treating pediatric and neonatal patients. 27th ed. Hudson (Ohio): Lexicomp; 2020. P298-299.

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