



NEONATAL Medication Monograph

LEVOTHYROXINE

This document should be read in conjunction with this [DISCLAIMER](#)




IV: Restricted: Requires Neonatologist or Endocrinologist approval before commencing

ORAL: Unrestricted: Any prescriber may initiate treatment as per guideline

Presentation	Tablet: 50 microgram Ampoule: 200 microg/mL (SAS)
Classification	Thyroid hormone
Indication	Treatment of hypothyroidism
Dose	<div>Caution: Ferrous Sulphate may reduce therapeutic effect of Thyroxine. Separate dose administration times.</div> Oral: 10 to 15 microgram /kg DAILY Adjust according to thyroid function tests IV: Initiated as per consultant 5 to 8 microgram/kg DAILY Dose may be adjusted according to response
Dose Adjustment	Adjust dose according to thyroid levels
Monitoring	Blood levels of TSH (Thyroid Stimulating Hormone) Free T4 level Clinical signs of hyperthyroidism Bone mineral density
Compatible Fluids	Sodium Chloride 0.9%
Preparation	See Page 2

Administration	<p>Oral:</p> <ul style="list-style-type: none"> • Dose should be administered 30 minutes before feeds and/or 2 hours after. • Feeds impair absorption. • Should be administered in the same way, at the same time every day in regard to feeds to ensure consistent absorption. <p>IV: Slow IV push – over 3 to 5 minutes.</p>	
Storage	<p>Tablets: Store at room temperature, below 25°C. Protect from light and moisture.</p> <p>Use prepared IV or oral solution immediately and discard excess.</p>	
Preparation	<p>Oral:</p> <p>Crush and dissolve ONE levothyroxine (50microgram) tablet with 5mL of water.</p> <p>Concentration is 50microgram/5mL = <u>10microgram/mL</u></p> <p>IV:</p> <p>Withdraw 1mL (200microg) of levothyroxine and dilute with 9mL of Sodium Chloride 0.9%</p> <p>Final Volume is 10mL</p> <p>Concentration is 200microg/10mL = <u>20microgram/mL</u></p>	
Adverse Reactions	<p>Common</p> <p>Serious</p>	<p>Increased blood pressure, increased heart rate, decreased bone mineral density</p> <p>Seizures, rash</p>
Interactions	<p>Ferrous sulphate, calcium carbonate, omeprazole, famotidine– can affect thyroxine absorption - separate dose administration times</p> <p>Contact Pharmacy for IV Compatibility</p>	
Notes	<p>Intravenous levothyroxine requires an SAS Category A form to be completed</p>	
Guidelines & Resources	<p>Thyroid Disorder: Care of the Infant Born to Women with Thyroid Disorders</p>	
References	<p>Truven Health Analytics. Levothyroxine. In: NeoFax [Internet]. Greenwood Village (CO): Truven Health Analytics; 2020 [cited 2020 July 13]. Available from: https://neofax.micromedexsolutions.com/</p> <p>Takemoto CK, Hodding JH, Kraus DM. Pediatric & neonatal dosage handbook with international trade names index: a universal resource for clinicians treating pediatric and neonatal patients. 24th ed. Hudson (Ohio): Lexicomp; 2019.</p> <p>Australian Medicines Handbook. Levothyroxine. In: Australian Medicines</p>	

	<p>Handbook Children's Dosing Companion [Internet]. Adelaide (South Australia): Australian Medicines Handbook; 2019 [cited 2020 July 13]. Available from: https://childrens.amh.net.au/</p> <p>AusDI. Levoxine. In: AusDI By Medical Director [Internet]. Australia: AusDI by Medical Director; 2021 [cited 2024 Jan 25]. Available from: https://ausdi-hcn-com-au.kelibresources.health.wa.gov.au/quickSearch.hcn</p>
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