



# REGIONAL ADULT PARENTERAL DRUG MONOGRAPH

GENERIC NAME  
**levothyroxine**

<b>Effective Date:</b> Dec 2012	CLASSIFICATION <b>Thyroid</b>	OTHER NAMES <b>l-thyroxine; Synthroid</b>	PAGE 1 of 1
<b>Revised Date:</b> Nov13-2013			

**ADMINISTRATION POLICY:**

- IV Bolus - May be administered by a nurse
- IM Injection - *Not recommended*
- Subcutaneous - *Not recommended*

**RECONSTITUTION/DILUTION/ADMINISTRATION:**

**Available as:** 500 mcg vial: Add 5 mL of 0.9% Sodium Chloride Injection. Do NOT use bacteriostatic sodium chloride injection, as the preservative interfere with complete reconstitution. Shake vial to ensure complete mixing.  
Final Concentration: 100 mcg/mL (0.1 mg/mL)

**IV Bolus:** Slowly over 1 to 2 minutes

**Maximum rate:** 100 mcg/minute

**Maximum concentration:** 100 mcg/mL

**DOSAGE:**

**Usual:**

- Maintenance: 0.05 to 0.15 mg (50 to 150 mcg) IV daily
- Myxedema Coma or Stupor: 0.2 to 0.5 mg (200 to 500 mcg) IV
- Organ Donor Management: 0.1 mg (100 mcg) IV bolus, followed by 0.05 mg (50 mcg) IV bolus every 12 hours

**Maximum single dose:** 0.5 mg (500 mcg) – Myxedema coma

**Maximum daily dose:** N/A

**STABILITY/COMPATIBILITY:**

**Stability of Reconstituted Solution:** Limited stability information available, assume stable for 48 hours room temperature (based on sterility)

**Stability of Final Admixture:** N/A

**Compatibility:** Compatible in normal saline only.

**PRECAUTIONS, POTENTIAL ADVERSE REACTIONS:**

- Increased pulse rate, sweating
- May aggravate angina, arrhythmias or hypertension. Use with caution and reduce dosage in patients with angina pectoris or other cardiovascular disease.
- Use with caution in patients with adrenal insufficiency; symptoms may be exaggerated or aggravated

**ADDITIONAL NOTES AND NURSING CONSIDERATIONS:**

- Since oral absorption of levothyroxine is incomplete, the IV dosage should be reduced to 50 to 80% of the previously established oral dosage of levothyroxine.
- Can be given IM; however IV is preferred since absorption may be slow and is unpredictable with IM administration.
- As levothyroxine has a long half-life of about 6 to 7 days, effects may persist for several weeks after withdrawal. Patients who are temporarily NPO do not usually require levothyroxine IV.
- Injectable form should not be given orally as it crystallizes when exposed to acid.
- Elderly patients: more likely to have compromised cardiovascular function.