

Med Names

Prototype Med	Levothyroxine (Synthroid)
Other Meds	liothyroxine (Cytomel)
	liotrix (Thyrolar)
	Thyroid USP

Action: Levothyroxine is a synthetic form of thyroxine or T4 which is then converted to T3 in the body

Therapeutic Use

Hypothyroidism

Adverse Drug Reactions

Thyrotoxicosis, Hyperthyroidism (from excessive doses)
 Headache, irritability, insomnia
 Abdominal cramping, diarrhea
 Tachycardia, arrhythmia
 Heat intolerance, diaphoresis
 Menstrual irregularities

Nursing Interventions

Monitor thyroid function
 Monitor for indications of hyperthyroidism (anxiety, tachycardia, palpitations, tremors, altered appetite, heat intolerance, fever, diaphoresis, weight loss)

Patient Education

Watch for and report nervousness, rapid heart rate, palpitations, tremors, altered appetite, heat intolerance, fever, sweating, weight loss, and chest pain.

Contraindications

Thyrotoxicosis
 Recent myocardial infarction

Precautions

Cardiovascular disorders (hypertension, angina pectoris, ischemic heart disease)
 Renal impairment
 Diabetes mellitus
 Older adults

Administration

Give orally to treat hypothyroidism and IV to treat myxedema coma.
 Give daily on an empty stomach (at least 30–60 min before breakfast with full glass of water).
 Measure baseline vital signs, weight, and height, and monitor periodical- ly thereafter.
 Monitor for cardiac excitability (angina, chest pain, palpitations, dysrhythmias).
 Monitor T4 and TSH levels.
 Be aware that the various formulations of thyroxine are not interchangeable; instruct clients to notify the provider if a pharmacy dispenses a different levothyroxine product.
 Expect lifelong replacement therapy.

Interactions

Cholestyramine (Questran), antacids, iron and calcium supplements, and sucralfate (Carafate) reduce absorption, so clients should not take levothyroxine within 4 hr of these drugs
 Food reduces absorption
 Many antiepileptic and antidepressant drugs, including carbamazepine (Tegretol), phenytoin (Dilantin), phenobarbital, and sertraline (Zoloft), decrease levels.
 Anticoagulant effects of warfarin (Coumadin) increase.
 Cardiac response to catecholamines (such as epinephrine) increases.

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