

### 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 periodically 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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