

Thyine 50

Thyroxine (Levothyroxine) 50 mcg Tablet

Overview:

Thyroxine (Levothyroxine) 50 mcg tablet is a synthetic thyroid hormone designed to replace or supplement the natural hormone produced by the thyroid gland. It is primarily used to treat [hypothyroidism](#), a condition in which the thyroid does not produce enough thyroid hormones, leading to fatigue, weight gain, slow metabolism, and other health issues.

Thyroxine is essential for maintaining various bodily functions, including metabolism, energy production, brain function, and cardiovascular health. This medication is often prescribed as a long-term therapy and requires careful dosage adjustments based on regular thyroid function tests.

Indications:

Thyroxine (Levothyroxine) 50 mcg tablet is used for:

- **Primary Hypothyroidism:** Treatment of underactive thyroid due to autoimmune conditions (such as [Hashimoto's thyroiditis](#)) or iodine deficiency.
- **Secondary Hypothyroidism:** Thyroid hormone replacement in patients with pituitary or hypothalamic dysfunction.
- **Congenital Hypothyroidism:** Used in infants born with underdeveloped or absent thyroid glands.
- **Post-Thyroidectomy Therapy:** Given after surgical removal of the thyroid gland (total or partial) to maintain normal hormone levels.
- **Goiter Management:** Helps in reducing and preventing thyroid gland enlargement caused by hormonal imbalances.
- **Thyroid Cancer Management:** Used as a suppressive therapy to prevent recurrence after treatment.

How It Works:

Thyroxine (Levothyroxine) is a synthetic form of the natural hormone **thyroxine (T4)**, which the body converts into the active hormone **triiodothyronine (T3)**. These hormones are critical for regulating metabolism, heart rate, temperature control, and the body's use of fats, proteins, and carbohydrates.

Once absorbed in the bloodstream, levothyroxine helps normalize thyroid hormone levels, alleviating symptoms of hypothyroidism and restoring metabolic balance.

Dosage & Administration:

- Taken **once daily** on an **empty stomach**, preferably **30 to 60 minutes before breakfast** with a full glass of water.
- The dosage is determined based on **age, weight, severity of hypothyroidism, and other health conditions**.
- Patients must **take it at the same time every day** to maintain consistent hormone levels in the body.
- It may take **several weeks** for the full effects to be noticeable. Regular **thyroid function tests (TSH, T3, T4 levels)** are necessary to monitor the treatment's effectiveness.
- Avoid taking **calcium supplements, iron supplements, antacids, soy products, and high-fiber foods** within **4 hours** of taking the tablet, as they can interfere with absorption.
- If a dose is missed, take it as soon as remembered. However, if it is close to the next scheduled dose, skip the missed dose—**do not double up**.

Precautions & Warnings:

- **Cardiac Conditions:** Patients with **heart disease, hypertension, or arrhythmias** should use levothyroxine cautiously, as it may increase heart rate.

- **Adrenal & Pituitary Disorders:** Should be treated before starting levothyroxine therapy, as imbalances can affect hormone metabolism.
- **Diabetes:** Levothyroxine can alter blood sugar levels, requiring adjustments in diabetes medication.
- **Pregnancy & Breastfeeding:** Thyroid hormone is crucial for fetal development; pregnant women often require **increased dosages** under medical supervision.
- **Elderly Patients:** More sensitive to thyroid hormone; typically started on lower doses to avoid cardiac complications.
- **Cholesterol-lowering drugs** (may interfere with hormone levels)
- **Diabetes medications** (may require dose adjustments)
- **Antidepressants and blood thinners** (effects may be altered)
- **Seizure medications and corticosteroids** (can influence thyroid function)

Certain **foods and beverages**, such as **soy products, high-fiber diets, and grapefruit juice**, can also impact absorption.

Storage & Handling:

- Store at **room temperature** (15-30°C) in a **cool, dry place**, away from direct sunlight and moisture.
- Keep the tablets in their **original blister pack or airtight container** to protect from air and humidity.
- Ensure the medication is stored **out of reach of children and pets**.

Lifestyle & Dietary Considerations:

- **Regular exercise** and a **balanced diet** help optimize thyroid function and overall health.
- Adequate **iodine intake** from food sources like seafood, dairy, and eggs is essential for thyroid hormone synthesis.
- **Caffeine and high-fiber diets** may interfere with absorption; adjust intake if necessary.
- **Regular thyroid function monitoring** ensures proper dosage adjustments and prevents complications.

Conclusion:

Thyroxine (Levothyroxine) 50 mcg tablet is essential for managing hypothyroidism and maintaining overall metabolic balance. It helps restore energy, prevent weight fluctuations, and support various organ functions. Proper adherence to dosage, lifestyle modifications, and routine medical check-ups are crucial for successful treatment. Patients should **not self-adjust the dosage** and must follow their doctor's guidance for long-term thyroid health.

Possible Side Effects:

When taken at the correct dosage, levothyroxine is well-tolerated. However, incorrect dosing may cause symptoms of **hyperthyroidism (overactive thyroid)** or **hypothyroidism (underactive thyroid)**.

Common Side Effects:

- Weight changes (loss or gain)
- Increased heart rate (palpitations)
- Nervousness, irritability, or anxiety
- Excessive sweating and sensitivity to heat
- Insomnia or difficulty sleeping
- Headache or dizziness
- Muscle weakness and tremors

Serious Side Effects (Rare):

- Chest pain or irregular heartbeat
- Shortness of breath or swelling in extremities
- Severe fatigue, confusion, or mood swings
- Osteoporosis (long-term overuse)
- Seizures or fainting

If severe symptoms occur, **seek immediate medical attention**.

Drug Interactions:

Levothyroxine can interact with various medications, affecting its absorption and effectiveness. Inform your doctor if you are taking:

- **Antacids, calcium, or iron supplements** (reduce levothyroxine absorption)

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