



PRESS RELEASE

FOOD AND DRUG ADMINISTRATION GRANTS TWO NEW LABEL CHANGES TO TIROSINT®-SOL (LEVOTHYROXINE SODIUM) ORAL SOLUTION

New FDA-approved label updates offer patients more flexible administration

PARSIPPANY, N.J., December 4, 2023 — The U.S. Food and Drug Administration (FDA) has approved two new changes to the label of Tirosint-SOL (levothyroxine sodium) oral solution, a unique formulation of levothyroxine (LT4) for the treatment of hypothyroidism. The first regards the use of Tirosint-SOL in the presence of proton pump inhibitor (PPI) therapy. The second regards the timing of Tirosint-SOL administration. Both label changes help to differentiate Tirosint-SOL from other levothyroxine therapies.

The absorption and performance of levothyroxine tablets has been shown to be affected by the concomitant use of proton pump inhibitors (PPIs).¹ The updated label removes PPIs as a drug that may decrease the absorption and reduce the efficacy of Tirosint-SOL. Similarly, current labeling for all levothyroxine sodium therapies instructs patients to self-administer the drug once daily, on an empty stomach, one-half to one hour before breakfast. Tirosint-SOL's updated label indicates that it can be administered 15 minutes before eating breakfast.²

Tirosint-SOL is now the only FDA-approved LT4 therapy without a labeled interaction with PPIs and the only FDA-approved LT4 therapy that can be administered 15 minutes before eating breakfast.

"The availability of this liquid oral levothyroxine formulation, which is not affected by proton pump inhibitors and can be taken just 15 minutes before breakfast, is a real plus for hypothyroid patients and healthcare practitioners," said Michael Scully, Head of Commercial Operations, IBSA USA. "These new label changes reinforce Tirosint-SOL's position as a simple, convenient, and clean LT4 therapy with only three ingredients."

The label changes resulted from two clinical studies sponsored and conducted by the Department of R&D and Scientific Affairs - IBSA Institut Biochimique SA, Switzerland. The results of the first study demonstrated a lack of interaction between Tirosint-SOL and the PPI drug omeprazole regardless of the timing of administration of the PPI.³ The results of the second study demonstrated that administration of Tirosint-SOL produces similar levels (bioavailability) of LT4 drug exposure in healthy individuals when taken 15 minutes in advance of eating breakfast as it does when administered 30 minutes before eating breakfast. It did not evaluate Tirosint-SOL's overall bioavailability when administered simultaneously with eating breakfast.⁴

"Appropriate administration of levothyroxine can be difficult for patients, given the multiple therapies that can interfere with its absorption and the requirement to administer it in a fasting state,"⁵ said Dr. Francesco Celi, University of Connecticut School of Medicine. "The opportunity to provide patients living with hypothyroidism with a medication that is easier to use because it is not affected by PPIs, which are commonly used acid-reducing agents, and can be taken 15 minutes before breakfast, should be of interest to clinicians as it may increase adherence and improve therapeutic outcomes."

Tirosint-SOL has 15 dosing strengths including unique 13, 37.5, 44, and 62.5 microgram dosing options, the widest range of doses for any levothyroxine therapy available in the U.S. It is made with only three ingredients – levothyroxine, glycerol, and water.² Tirosint-SOL is widely available in retail pharmacies.



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IBSA offers a generous Copay Savings Coupon for Tirosint-SOL, which allows eligible patients with commercial insurance to significantly reduce their out-of-pocket cost for the medication. For patients with high deductibles/copays or without insurance, the company offers a convenient mail-order pharmacy program called Tirosint Direct that offers Tirosint-SOL at the lowest cash price available. Additional information about these money-saving options can be found at TirosintSOL.com.

IMPORTANT SAFETY INFORMATION

WARNING: NOT FOR THE TREATMENT OF OBESITY OR FOR WEIGHT LOSS.

- See full prescribing information for complete boxed warning
- Thyroid hormones, including TIROSINT-SOL, should not be used for the treatment of obesity or for weight loss
- Doses beyond the range of daily hormonal requirements may produce serious or even life-threatening manifestations of toxicity

CONTRAINDICATIONS

- Hypersensitivity to glycerol
- Uncorrected adrenal insufficiency

WARNINGS AND PRECAUTIONS

- *Cardiac adverse reactions in the elderly and in patients with underlying cardiovascular disease:* Initiate TIROSINT-SOL at less than the full replacement dose because of the increased risk of cardiac adverse reactions, including atrial fibrillation
- *Myxedema coma:* Do not use oral thyroid hormone drug products to treat myxedema coma
- *Acute adrenal crisis in patients with concomitant adrenal insufficiency:* Treat with replacement glucocorticoids prior to initiation of TIROSINT-SOL treatment
- *Prevention of hyperthyroidism or incomplete treatment of hypothyroidism:* Proper dose titration and careful monitoring is critical to prevent the persistence of hypothyroidism or the development of hyperthyroidism
- *Worsening of diabetic control:* Therapy in patients with diabetes mellitus may worsen glycemic control and result in increased antidiabetic agent or insulin requirements. Carefully monitor glycemic control after starting, changing, or discontinuing thyroid hormone therapy
- *Decreased bone mineral density associated with thyroid hormone over-replacement.* Over-replacement can increase bone reabsorption and decrease bone mineral density. Give the lowest effective dose

Limitations of Use

- Not indicated for suppression of benign thyroid nodules and nontoxic diffuse goiter in iodine-sufficient patients
- Not indicated for treatment of transient hypothyroidism during the recovery phase of subacute thyroiditis

Adverse Reactions

Common adverse reactions with TIROSINT-SOL are primarily those of hyperthyroidism due to therapeutic overdosage including arrhythmias, myocardial infarction, dyspnea, muscle spasm, headache, nervousness, irritability, insomnia, tremors, muscle weakness, increased appetite, weight loss, diarrhea, heat intolerance, menstrual irregularities, and skin rash.

For Full Prescribing Information, including Boxed Warning, go to <https://tirosintsol.com/wp-content/uploads/2023/11/Tirosint-SOL-USPI.pdf>.



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About IBSA Institut Biochimique⁶

IBSA (*Institut Biochimique SA*) is a Swiss multinational pharmaceutical Company, founded in 1945 in Lugano. Today, its products are present in over 90 Countries on 5 continents, through the Company's 18 subsidiaries located in Europe, China, and the United States. The company has a consolidated turnover of 900 million CHF, and employs over 2,200 people between headquarters, subsidiaries and production sites. IBSA holds 90 families of approved patents, plus others under development, as well as a vast portfolio of products, covering 10 therapeutic areas: reproductive medicine, endocrinology, pain and inflammation, osteoarticular, aesthetic medicine, dermatology, uro-gynaecology, cardiometabolic, respiratory, consumer health. It is also one of the largest operators worldwide in the area of reproductive medicine, and one of the world's leaders in hyaluronic acid-based products. IBSA has based its philosophy on four pillars: Person, Innovation, Quality and Responsibility.

About Hypothyroidism

Hypothyroidism is an endocrine disorder with numerous causes, resulting in a deficiency in thyroid hormone. In the U.S., more than 24.5 million people are estimated to have hypothyroidism.⁷ Large observational studies and meta-analyses have shown that about 4-7% of community-derived populations in the U.S. and Europe have undiagnosed hypothyroidism.⁸

About 2% of the U.S. population has pronounced hypothyroidism, and as much as 10% has subclinical (mild) hypothyroidism. The condition is most common in women over 40 years of age and in the elderly of both sexes.⁹ The signs and symptoms of hypothyroidism are nonspecific and may include fatigue, forgetfulness, depression, constipation, muscle cramps, weight gain, dry skin, and hair loss.¹⁰ Thyroid stimulating hormone (TSH) laboratory tests are recommended as first-line screening tests for thyroid dysfunction.¹¹ Levothyroxine sodium is a synthetic version of a hormone that is normally produced by the thyroid gland. It is used to treat patients who suffer from hypothyroidism or require suppression of TSH.

References

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For more information about IBSA, visit www.ibsagroup.com/media.

For Full Prescribing Information, including Boxed Warning, go to <https://tirosintol.com/wp-content/uploads/2023/11/Tirosint-SOL-USPI.pdf>

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