Department of Health & Social Care

NHS England

Medicine Supply Notification

MSN/2025/053

Liothyronine 20microgram powder for solution for injection vials

Tier 2 – medium impact*
Date of issue: 09/10/2025
Link: Medicines Supply Tool

Summary

- Advanz, sole supplier of liothyronine **20microgram** vials, will be out of stock from October 2025 until the end of April 2026.
- Advanz have sourced unlicensed imports of liothyronine **10microgram/ml** solution for injection (XGen) to support the gap during this time (see Supporting information).
- Liothyronine tablets and capsules remain.
- Levothyroxine 200 micrograms/ml ampoules remain available.

Actions Required

NHS provider trust pharmacy procurement teams should work with clinical teams and local Medication Safety Officers to:

- review and update local prescribing systems and protocols to use intravenous levothyroxine (L-T4) as treatment of choice for myxoedema coma or when oral or nasogastric liothyronine is not possible in accord with current guidelines
- consider the appropriateness of using unlicensed imports of XGen liothyronine 10microgram/ml solution for injection, which can fully support the supply gap during this time, noting differences between the products (see Supporting information);
- review and update local prescribing systems and protocols to reflect the shortage and ensure these are agreed at trust level; and
- ensure all impacted clinical areas are informed of the shortage and any changes to the product sourced.

Where the above actions are not considered appropriate, advice should be sought from specialists on alternative management options.

Supporting information

Liothyronine injection
Licensed for the treatment of myxoedema coma (current best practice is to use when patients have not had an adequate response when treated with intravenous Levothyroxine). It is usually administered at a dose 5 to 20 micrograms given by slow IV injection and repeated at intervals of 12 hours or less if required. An initial dose of 50 micrograms is used by some doctors, followed by further injections of 25 micrograms every 8 hours until improvement occurs. The dosage may then be reduced to 25 micrograms twice daily.

*Classification of Tiers can be found at the following link:
https://www.england.nhs.uk/publication/a-guide-to-managing-medicines-supply-and-shortages/

Intravenous liothyronine is associated with an increased risk of arrhythmia, tachycardia and other cardiac complications compared with enteral liothyronine. It should therefore only be used in patients in whom oral or nasogastric liothyronine is not possible.

Levothyroxine injection

Licensed for the treatment of myxoedema coma, as well as hypothyroidism in patients where oral therapy is not feasible, particularly due to difficulties in swallowing or malabsorption. For the treatment of myxoedema coma, a loading dose of 200 to 400 micrograms is given as a slow IV infusion. The maintenance dose of parenteral levothyroxine is 1.6 micrograms per kilogram body weight. As gastrointestinal absorption of oral levothyroxine tablet is approximately 70%–80% in healthy fasting adults, parenteral levothyroxine should be administered at an initial dose that corresponds to 70-80% of the patient's oral dose.

Guidelines
Experts consulted highlight that IV levothyroxine is the recommended treatment for myxoedema coma in both the American Thyroid Association (ATA) and the draft European Thyroid Association (ETA) / British Thyroid Association (BTA) / Society for Endocrinology (SfE) guidelines, due to better cardiac outcomes compared to intravenous liothyronine.

Supply information

Table 1 compares the licensed and unlicensed liothyronine injections.

	Liothyronine 20microgram powder for solution for injection vials (licensed product)	**Liothyronine 10microgram/ml solution for injection vials (XGen Pharmaceuticals, unlicensed import;)**
Vial contents	20 micrograms liothyronine	10 micrograms liothyronine
Administration	IV injection The solution is prepared by adding 1 or 2ml water to the vial*	IV injection
Final concentration	10 – 20microgram/ml (depending on reconstitution*)	10microgram/ml
Vials required per 20microgram dose	One	Two
Excipients	Dextran 110 Sodium Hydroxide Water for Injection	Alcohol Anhydrous citric acid Ammonia
Storage conditions	Stable at room temperature (≤25°C)	Requires refrigeration (2°C – 8°C)

Links to further information

BNF liothyronine
SmPC: Liothyronine injection
Datasheet: liothyronine sodium injection (XGen Pharmaceuticals)
SmPC: Levothyroxine SERB 200 micrograms/ml solution for injection/infusion
Medusa: NHS Injectable Medicines Guide
Guidelines for the Treatment of Hypothyroidism: Prepared by the American Thyroid Association Task Force on Thyroid Hormone Replacement

Guidance on ordering and prescribing unlicensed imports.

Any decision to prescribe an unlicensed medicine must consider the relevant guidance and NHS Trust or local governance procedures. Unlicensed imports do not undergo any central quality assessment or suitability evaluation. Therefore, any import must be locally assessed in line with local unlicensed medicines processes. Please see the links below for further information:

- The supply of unlicensed medicinal products, Medicines and Healthcare products Regulatory Agency (MHRA)
- Professional Guidance for the Procurement and Supply of Specials, Royal Pharmaceutical Society
- Prescribing unlicensed medicines, General Medical Council (GMC)

Enquiries

Enquiries from NHS Trusts in England should in the first instance be directed to your Specialist Pharmacy Service Regional Pharmacy Procurement Team, who will escalate to national teams if required.

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All other organisations should send enquiries about this notice to the DHSC Medicine Supply Team quoting reference number MSN/2025/053.

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