A guide to starting insulin naïve Type 2 Diabetes Mellitus patients on Lantus®

Lantus® is now fully funded for Type 2 Diabetes Mellitus patients who require insulin.¹,²
Starting an insulin naïve patient with Type 2 Diabetes Mellitus (T2DM) on Lantus®

Step 1:

**Before starting**

- HbA1c persistently above target (i.e. HbA1c ≥ 7% or ≥ 53 mmol/mol)\(^3,4\)
- Address other possible causes of hyperglycaemia:\(^3,4\)
  - Lifestyle (e.g. diet, exercise, excess weight)
  - Lack of adherence with current medications
  - Suboptimal use of oral hypoglycaemic medications
  - Other medications or medical conditions that can cause hyperglycaemia
- Discuss barriers to/concerns about starting insulin with patient\(^3,4\)
- Arrange GP Management Plan/Team Care Arrangement if necessary – explain role of other healthcare professionals in patient education and monitoring\(^3,4\)

Step 2:

Select Lantus® insulin device:
- Lantus® SoloStar® – Disposable prefilled pen
- Lantus® 3mL Cartridge and Silver ClikStar® pen
- Lantus® 10mL vials and syringe

Step 3:

Starting Dose
Commence Lantus® 10 units morning or night – add it to the oral hypoglycaemic agents (OHAs)\(^4\)
- If fasting blood glucose level (FBG) is high pre-breakfast \(\rightarrow\) Lantus® given at bedtime\(^4\)
- If FBG is on target but pre-dinner blood glucose level (BGL) is high \(\rightarrow\) give Lantus® in the morning (instead of bedtime\(^4\))

Step 4:

Fix the fasting blood glucose - adjust the Lantus® dose using one of the schedules below\(^4,5,6\) to achieve RACGP target FBG of 4-6 mmol/L\(^6\)

Adapted from RACGP 2011/12 and Davies et al. 2005.* If for three days in a row, FBG ≥ 6 mmol/L, increase the dose by 2 U.† Titration reviewed by healthcare professionals at each contact. Titrate only in the absence of BGL < 4mmol/L

Schedule 1 - Patient self titration\(^5,6,†\)

<table>
<thead>
<tr>
<th>Mean FBG (mmol/L)</th>
<th>Change in Lantus® Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;4</td>
<td>Reduce by 2 to 4 units**</td>
</tr>
<tr>
<td>4-5.9</td>
<td>no change</td>
</tr>
<tr>
<td>6-6.9</td>
<td>+ 2 units</td>
</tr>
<tr>
<td>7-7.9</td>
<td>+ 4 units</td>
</tr>
<tr>
<td>8-10</td>
<td>+ 6 units</td>
</tr>
<tr>
<td>&gt;10</td>
<td>+ 8 units</td>
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Schedule 2 - Physician managed titration\(^4,5\)

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Adapted from Phillips 2007 and Davies et al. 2005.** The insulin dose may be decreased (small decrease of 2-4 units) if there is severe hypoglycaemia (requiring assistance) or the BGL < 3 mmol/L in the preceding week. Do not increase the insulin dose if the fasting BGL < 4 mmol/L at any time in the preceding week.

Adjust the Lantus® dose once weekly to achieve a FBG of 4-6 mmol/L.

The mean FBG is calculated based on the FBG results for the last 3 days.\(^4,7\)
Step 5:
Once FBG is on target, confirm the evening (or other) preprandial BGL is on target.

Step 6:
Review A1c at 3 months.4,6
- Consider reviewing and adjusting the dose of OHAs as required based on individualised blood glucose levels.3,4,6

Step 7:
Find hidden hyperglycaemia (if A1c ≥ 7% or ≥ 53 mmol/mol)
- If preprandial BGLs are on target but A1c and postprandial BGLs are not, review need for a dose of rapid-acting insulin to manage postprandial hyperglycaemia.

All Lantus® presentations are fully funded for Type 1 and Type 2 Diabetes Mellitus patients requiring insulin.1,2

References

Please review Full Data Sheet before prescribing – available at www.medsafe.govt.nz or from the sponsor.

Lantus® (insulin glargine). Indication: Once-daily subcutaneous administration for type 1 and type 2 diabetes mellitus patients who require insulin for control of hyperglycaemia. Contraindications: Hypersensitivity to insulin glargine or any excipient. Precautions: Hypoglycaemia, possibly with delayed recovery or altered warning symptoms; hepatic, renal and visual impairment; lipodystrophy and other injection site or immediate-type allergic reactions; antibody production; not studied in children <6 years, pregnancy category B3, lactation; not intended for i.v. use; not recommended for treatment of diabetic ketoacidosis; LANTUS® MUST NOT BE DILUTED OR MIXED WITH ANY OTHER INSULIN OR SOLUTION. Patient instruction on intercurrent conditions, blood glucose monitoring, injection technique recommended. Interactions: Oral antidiabetic agents; cardiovascular, analgesic, anti-inflammatory, neurological, antipsychotic agents, antibiotics, corticosteroids, other hormonal therapies, diuretics, protease inhibitors, sympathomimetic agents, lithium, alcohol, sympatholytics including β-blockers, others. Adverse effects: Hypoglycaemia; injection site reactions; visual disturbances; others. Dosage and Administration: Subcutaneous, once daily; abdominal, thigh or deltoid administration; blood glucose monitoring is recommended. Lantus® is equipotent to human insulin. Initial dose should be determined individually, depending on desired blood glucose levels and doses and timing of any antidiabetic medication, including Lantus®. For changeover from once-daily NPH initial dose usually not changed; for changeover from twice-daily NPH to once-daily Lantus®, initial dose usually reduced by approximately 20% compared to total daily NPH dose; for initiation of type 2 patients, initial dose is usually approximately 10IU. For secondary dose adjustments, renal, hepatic impairment see full Data Sheet. Medicine Classification: Prescription Medicine. Presentations: Lantus® (insulin glargine injection) 100 U per mL is available in packs of 5x3mL cartridges, 5x3mL cartridges in SoloStar® pre-filled pens and 10mL vials. Sponsor: Sanofi, Level 8, James & Wells Tower, 56 Cawley Street, Ellerslie, Auckland. Lantus® is a Funded Medicine. TAPS PP1900, NZ.GL.A.12.12.002.
Patient education checklist: initiation of insulin therapy

Your patient will need education and advice on:

Self-monitoring of blood glucose
* When to test, how to test, how to record in a log book style
* Test if they have symptoms of hypoglycaemia
* Increase frequency of testing if unwell

Insulin regimen
* Which insulin preparation
* What the dose is, and when to administer it
* How to use the insulin injection device
* How to titrate the dose (if this is appropriate at this stage)

How to administer insulin

How to store the insulin and how to dispose of ‘sharps’

Dietary and lifestyle advice
* Maintaining a healthy body weight by healthy eating and exercise
* The risk of hypoglycaemia with excess alcohol consumption

Managing hypoglycaemia
* How to recognise the symptoms of hypoglycaemia
* How to manage and prevent episodes of hypoglycaemia

Driving: legal and practical issues
* Ensure the patient understands their responsibility to maintain a reasonable level of glycaemic control while minimising their risk of hypoglycaemic episodes
* If the patient is a vocational driver please refer for specialist advice
* Refer to the NZ Transport Agency Medical aspects of fitness to drive: A guide for medical practitioners July 2009

Provide Medic Alert bracelet information

Provide contact and emergency telephone numbers

Advise the patient where to get further self-help information (eg. Diabetes New Zealand website www.diabetes.org.nz or local diabetes societies)

Provide your patient with appropriate written pamphlets