HSE National Clinical Guideline for Safe Diabetes Management following Levemir® (Insulin Detemir) Discontinuation

National Policy ☐ National Procedure ☐ National Protocol ☐ National Guideline ☐
National Clinical Guideline ☒

HSE National Clinical Guideline for Safe Diabetes Management following Levemir® (Insulin Detemir) Discontinuation

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[1] Records the senior management roles involved in the governance and development of the document.
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VERSION CONTROL UPDATE [3]		
Version No. (most recent version first)	**Date reviewed** (most recent date first)	**Comments** (1 sentence max, if required)
1	04.03.2026	Information on availability of Humulin I added; Insulin degludec (Tresiba® 100units/ml or 200 units/ml) added as alternate option for use in pregnancy
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Additional notes:

If there are no amendments to the National document following a formal review, the date and detail of the review must still be recorded in the version control update box.

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HSE Guidance for Safe Diabetes Management following Levemir® (Insulin Detemir) Discontinuation
National Group:
National Clinical Programme for Diabetes and National Clinical Programme for pediatric Diabetes
Short summary:
This document was developed in collaboration with the National Clinical Programmes for Diabetes, Paediatric Diabetes, Specialist Endocrinologists and the Access and Integration Drug Management Programme in response to the Novo Nordisk discontinuation of Levemir® (insulin detemir) in both Penfill® and Flexpen® forms. The purpose of the guidance is to support clinicians in selecting and safely initiating alternative basal insulins in advance of the Levemir® (insulin detemir) discontinuation. Due to the large number of people living with diabetes (Type 1, 2, 3c (pancreatic), diabetes in pregnancy and gestational diabetes) on Levemir® a planned and pro-active approach is essential. With a planned approach this can be incorporated in regular reviews where possible. This guidance has been adapted with permission from the UK Guidance1 developed by the Primary Care Diabetes & Obesity Society (PCDOS) and Association of British Clinical Diabetologists (ABCD) .
Description:
The HSE has developed this clinical guidance to support health care professionals in selecting and safely initiating alternative basal insulins in advance of the Levemir® (insulin detemir) discontinuation.

[3] Records details when a document is reviewed, even if no changes are made.

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***** Refer to HSE National Framework for developing Policies, Procedures, Protocols and Guidelines (PPPGs)***

Version	Revision Date	List Section Numbers Changed	Author
1	04.03.2026	Information on availability of Humulin I added; Insulin degludec (Tresiba® 100units/ml or 200 units/ml) added as alternate option for use in pregnancy	Appendix 2

Purpose of the Guidance

This document was developed in collaboration with the National Clinical Programmes for Diabetes, Paediatric Diabetes, Specialist Endocrinologists and the Access and Integration Drug Management Programme in response to the Novo Nordisk discontinuation of Levemir® (insulin detemir) in both Penfill® and Flexpen® forms.

The purpose of the guidance is to support clinicians in selecting and safely initiating alternative basal insulins in advance of the Levemir® (insulin detemir) discontinuation.

Due to the large number of people living with diabetes (Type 1, 2, 3c (pancreatic), diabetes in pregnancy and gestational diabetes) on Levemir® a planned and pro-active approach is essential. With a planned approach this can be incorporated in regular reviews where possible.

This guidance has been adapted with permission from the UK Guidance[1] developed by the Primary Care Diabetes & Obesity Society (PCDOS) and Association of British Clinical Diabetologists (ABCD).

Key Points

- **From January 2026, do not initiate** any new individuals on Levemir® (insulin detemir).
- System planning must account for the high volume of people on Levemir®, including adults and paediatrics with Type 1, Type 2, Type 3c (pancreatic), diabetes in pregnancy and gestational diabetes.
- Clinical review by a competent clinician (consultant endocrinologist, registered advanced nurse practitioner/ midwife practitioner in diabetes or clinical nurse/ midwife diabetes who is a registered nurse prescriber) is essential before switching to an alternative insulin.
- No basal insulin analogue is licensed for **twice-daily** use like Levemir®, so alternatives will need consideration, close monitoring, and adjustment.
- **The manufacturer of Human isophane insulin (Humulin I®) has advised that there is currently insufficient production capacity to accommodate any increase in demand beyond existing usage levels. Supply availability within the community should be confirmed before prescribing. If supply cannot be assured, an alternative option should be considered**
- Monitoring should rely on **capillary blood glucose (CBG)** at least four times daily, **Continuous Glucose Monitoring** (**CGM)**, and ketone monitoring (where appropriate)—not HbA1c alone, due to its historical nature.
- People with allergies to alternative insulins should be referred to a diabetes service, or alternatively a local allergy service if one is available, as required.

- Risk of glucose instability is elevated during insulin changes. A **clinical review with CBG/CGM data** should be considered in high-risk groups. High risk groups are listed in the patient factors to be taken into consideration section below.

- A clinical review should include an assessment of whether the current insulin regimen in Type 2 diabetes could be optimised by introducing / switching to different insulin types (e.g., rapid-acting, or mixed insulin) or by incorporating non-insulin therapies.

- When switching between insulins, there can be differences between absorption, potency, and action profile, therefore **consider reducing doses by 10-20% to avoid the initial risk of hypoglycaemia**.

- When prescribing new insulins, ensure any change in device type is **explained to the patient** with written product information provided (insulin patient information leaflets).

- For those with very erratic glucose levels, or disproportionately high insulin doses, **assess injection technique** and **check for evidence of lipohypertrophy** at injection sites.

- If lipohypertrophy is detected, considerable dose adjustment is often required when changing injection sites, seek advice and guidance as necessary if unsure.

- Education and support should be provided to help individuals self-adjust doses post-switch, where appropriate, along with a check of **understanding of the HSE Sick Day Advice available: Here**[2]

- Ensure adequate safety netting, advising patients to report any concerns about glucose levels after following provided dose adjustment guidance.

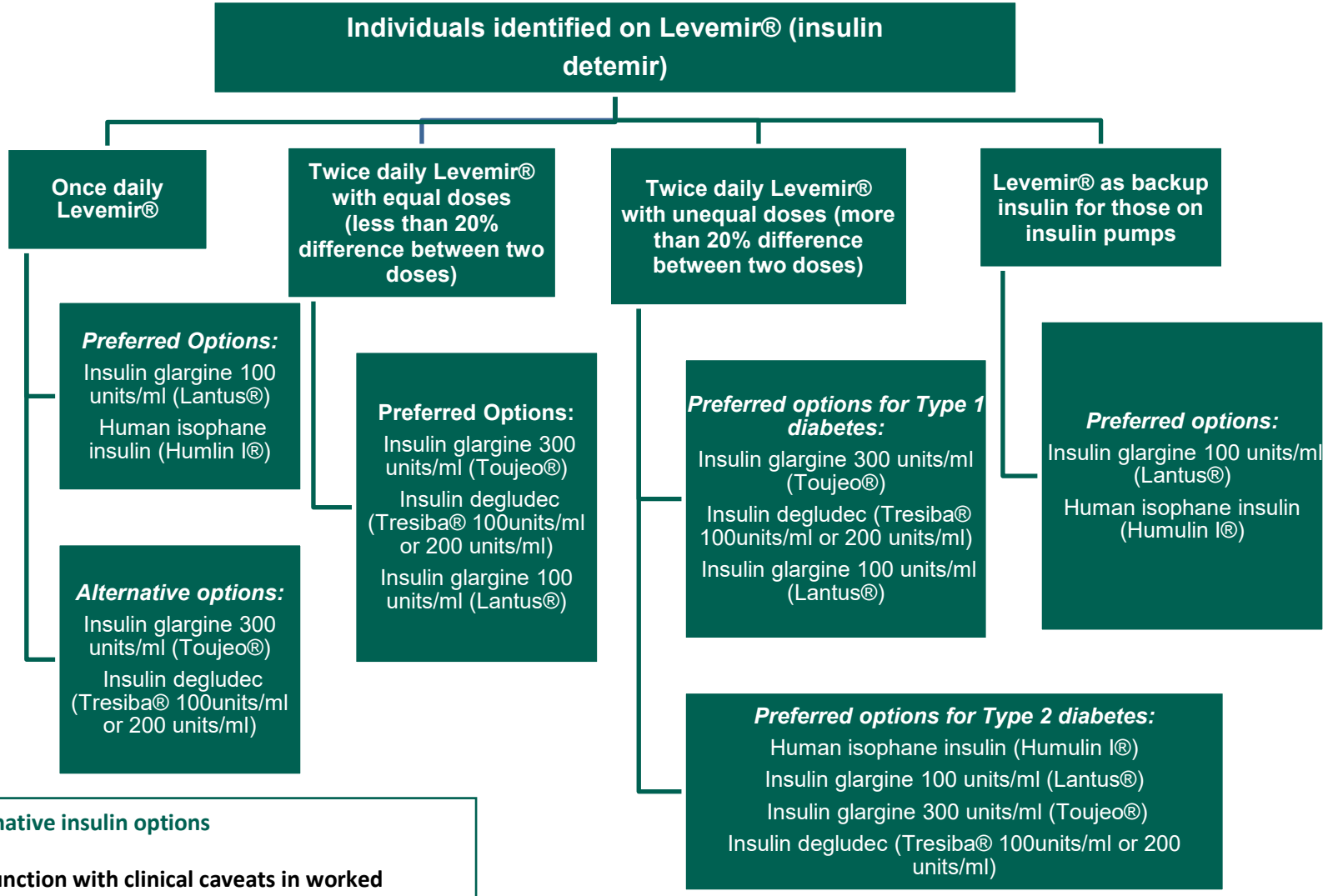
- People living with diabetes should be provided with the opportunity to contact their diabetes service for support with dose titration, as necessary. Patients experiencing dysglycaemia should contact their diabetes service by phone or preferred method of contact.

Alternative Insulin Options

Insulin type	Brand name and device	Compatible re-usable cartridge pen device
Insulin glargine 100 units/ml (Long acting)	Lantus® (SoloStar® / cartridges)	AllStar® PRO (1 unit increments) JuniorSTAR® (½ unit increments)
Insulin glargine 300 units/ml (Ultralong acting)	Toujeo® (SoloStar® / DoubleStar®)	N/A
Insulin degludec (Ultralong acting)	Tresiba® 100 units/ml (cartridges / FlexTouch®)** Tresiba® 200 units/ml (FlexTouch®)**	NovoPen 6® (1 unit increments) NovoPen Echo Plus® (½ unit increments)
Human isophane insulin[#] (intermediate acting) *NPH insulin*	Humulin I® (KwikPen® / cartridges)	HumaPen Savvio®

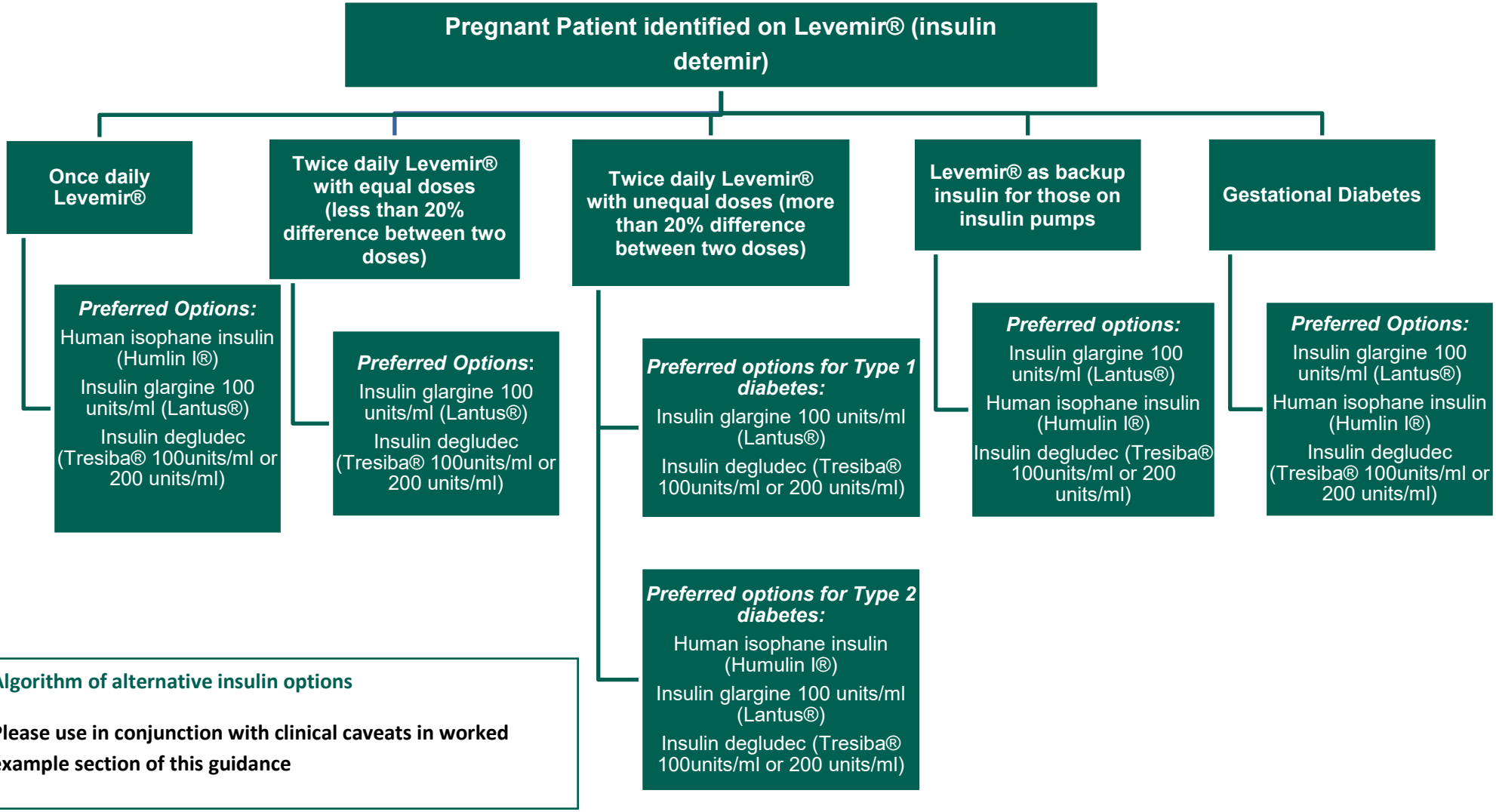
*** Please note: Some products may be subject to supply quotas (restricted distribution / allocations) at wholesale level. Please see HPRA Shortages for up to date supply information.*

[#]While Humulin I is a clinically appropriate alternative to Levemir®, the manufacturer of Human isophane insulin (Humulin I®) has advised that there is currently insufficient production capacity to accommodate any increase in demand beyond existing usage levels. Supply availability within the community should be confirmed before prescribing. If supply cannot be assured, an alternative option should be considered



Algorithm of alternative insulin options

Please use in conjunction with clinical caveats in worked example section of this guidance



Algorithm of alternative insulin options

Please use in conjunction with clinical caveats in worked example section of this guidance

Target Audience

- Prescribers in Secondary Care settings and Diabetes Services
- Registered Advanced Nurse/Midwife Practitioner Diabetes
- Clinical Nurse/Midwife Specialist Diabetes (Registered Nurse Prescriber)
- Public Health Nurses
- HSE Diabetologists / Endocrinologists
- Specialist diabetes services and associated health care professionals
- Primary care, general practice, and community care teams for information only
- Organisations commissioning HSE services
- Providers of HSE services

Advice for Prescribers

This guidance does not override the responsibility of the clinician or Registered nurse practitioner to make decisions appropriate to the circumstances of the individual, in consultation with them and/or their families, carers or guardian. Responsibility remains with the prescribing clinician or Registered nurse practitioner / clinical team. The guidance contained within this document is not intended to replace individual clinical decision making by healthcare professionals who are competent in the management of insulin in those living with diabetes.

Please ensure close attention to any timelines or uplift availability noted within the medicines supply notification issues by the Health Products Regulatory Authority (HPRA) when considering alternative treatment options to avoid shortages / product unavailability. Further information may be found: HPRA Medicine Shortages

When prescribing an alternative insulin, clinicians are advised to ensure an appropriate clinical review occurs which allows for individualisation of treatment and shared decision making.

In Type 2 diabetes there may be circumstances where treatment options other than insulin may be clinically appropriate as alternatives, but these are not covered in this guideline.

Levemir® (Insulin detemir) is a long-acting insulin analogue used as a basal insulin administered subcutaneously by injection. Levemir® is available in either Flexpen®, a disposable pen device, or Penfill®, 3ml cartridges designed to be used with Novo Nordisk insulin delivery systems such as NovoPen®. Please see SmPC for full clinical information: www.ema.europa.eu

There are no direct alternatives to Levemir® (insulin detemir), which is the only analogue basal insulin licenced for twice daily use. Alternative insulins will need to be chosen after clinical review, with appropriate follow-up arranged for further insulin dose adjustment as required. When switching between insulins, there can be differences between absorption, potency, and action profile, therefore consider reducing doses by 10-20% to avoid the initial risk of hypoglycaemia. Where possible and clinically appropriate, people with diabetes should be given appropriate education and encouraged to self-adjust their insulin doses according to their blood glucose concentrations after switching to alternative insulin and given the opportunity to contact their diabetes service if needed.

Summary of Levemir® patient groups and actions suggested

Diabetes Type and Levemir® usage	Suggested Action
Any type of diabetes	Levemir® should not be initiated for new patients living with diabetes from January 2026
Pregnant women with diabetes of any type (Type1, Type 2, Type 3c) and gestational diabetes	Levemir® should not be initiated for new pregnant patients with diabetes or patients with gestational diabetes from January 2026. Alternative treatment should be offered Human isophane insulin (Humulin I®) or Insulin glargine 100 units/ml (Lantus®) or Insulin degludec (Tresiba® 100units/ml or 200 units/ml)[3,4]
Paediatric and adolescent diabetes of any type (Type 1, Type 2, Type 3c) under 25 years old.	Levemir® should not be initiated for new paediatric patients living with diabetes from January 2026. Children or adolescents living with diabetes should be reviewed by local paediatric or young adult diabetes services to consider alternative treatment options. With the discontinuation of Levemir®, in paediatric patients, the alternative basal insulins include Lantus® (licensed from age 2 and up), Tresiba® (licensed from age 1 and up) and Toujeo® (licenced from age 6 and up). For patients on insulin pump therapy, a basal insulin should be prescribed as a backup option, in the case of insulin pump malfunction. Lantus® may be preferable due to its shorter half-life. Lantus® is licensed for once daily dosing in children aged 2 years and above. Therefore, Lantus® will be used off license in the under 2 age group and/or if used twice daily.

Diabetes Type and Levemir® usage	Suggested Action
Adults on insulin pumps with Type 1 Diabetes, Type 3c Diabetes or Cystic Fibrosis Related Diabetes (CFRD) with Levemir® insulin as a backup injection.	Patients living with diabetes should be advised to discuss alternative insulin options with their specialist diabetes team at their next routine review or to contact their specialist diabetes team if a review is not planned. Insulin pump services should proactively work to identify individuals under their service prescribed Levemir® as a backup insulin and plan an approach to ensure patients living with diabetes are gradually converted over to an alternative backup basal insulin.
Adults on Levemir® insulin with Type 1 Diabetes, Type 3c Diabetes or Cystic Fibrosis Related Diabetes (CFRD).	Patients living with diabetes should be advised to discuss alternative insulin options with their specialist diabetes team at their next routine review or to contact their specialist diabetes team if a review is not planned. If the person is not achieving their individualised HbA1c target and has recurrent hypoglycaemia or HbA1c < 48mmol/mol consider referring to specialist diabetes services as further optimisation may be needed.
Adults with Type 2 Diabetes on Levemir® insulin	Patients living with Type 2 diabetes should be advised to discuss alternative treatment options with their specialist diabetes team at their next routine review or to contact their specialist diabetes team if a review is not planned. Take into consideration clinical and patient factors, consider alternative insulin options as outlined in the guidance below.
Adults with any form of diabetes with an eGFR <30ml/min on Levemir® insulin.	Patients living with diabetes should be advised to discuss alternative treatment options with their specialist diabetes team at their next routine review or to contact their specialist diabetes team if a review is not planned.

Patient Factors to be taken into consideration

Glucose instability is a potential risk during any switch to an alternative insulin. To assess and minimize this risk, appropriate clinical review should be carried out in higher risk patients, supported by sufficient glucose data from structured CBG monitoring (e.g. before meals and bedtime) or CGM.

The patient groups who are higher risk for instability are outlined below (this list is not exhaustive and does not replace clinical decision on individual patient factors to be taken into consideration when assessing risk level):

- Impaired hypoglycaemia awareness
- Patients living with diabetes planning pregnancy
- History of severe hypoglycaemia or recurrent diabetic ketoacidosis (DKA)
- Evidence of lipohypertrophy at injection sites
- Frailty and/or older age
- Children and Adolescents
- Renal or severe hepatic impairment
- High glucose variability on CGM
- Cognitive or functional impairment
- Learning difficulties or low health literacy
- Those with visual impairment and manual dexterity problems
- High alcohol intake or binge drinking
- High level of physical activity

People living with diabetes should be provided with the opportunity to contact their diabetes service for support with dose titration, as necessary. Patients experiencing dysglycaemia should contact their diabetes service by phone or preferred method of contact. Where possible, a written dose adjustment plan should be provided to support self- dose adjustment.

Dose Adjustment for Normal Eating (DAFNE) course considerations

DAFNE is a structured group education programme, which provides skills-based training to adults with Type 1 diabetes to develop autonomy, competence and confidence in diabetes self-management including insulin adjustment. It is recommended for all adults with Type 1 diabetes in the NCEC Type 1 diabetes National Clinical Guideline No 17[5] and is widely available in Ireland. Many adults with Type 1 diabetes who have trained in DAFNE will use twice daily Levemir®. The DAFNE Consortium are advising that DAFNE audit data shows that DAFNE participants on twice daily NPH insulins, e.g., Humulin I, twice daily glargine (100 units/ ml), and once daily ultra-long acting basal insulin, e.g., Tresiba® or Toujeo® (Glargine 300 units / ml), all gain benefit in terms of HbA1c reductions and decreased acute complications of DKA and severe hypoglycaemia. There is no direct randomised control trial evidence in DAFNE graduates comparing different background insulins, so they cannot advise which insulin should be the first choice alternative and conclude that the education and skills in assessing and adjusting insulin doses are more important than the types of the insulins. They are recommending local acute diabetes team discussions to consider alternative options and the DAFNE Consortium will update their training resources across 2026, removing reference to Levemir®, to support patients and educators.

Summary of Insulin Time Action Profiles

Insulin Type	Brand names	Onset of action	Peak Effect	Duration
Insulin detemir (Long acting)	Levemir® (FlexPen® and Penfill® cartridge)	1-2 hours	4-14 hours (generally considered peakless at lower doses)	Duration is dose dependent (Range 12-24 hours)
Insulin glargine 100 units/ml (Long acting)	Lantus® (SoloStar® / cartridges)	2-4 hours	Generally considered peakless (8-12 hours in some individuals)	20-24 hours
Insulin glargine 300 units/ml (Ultralong acting)	Toujeo® (SoloStar® / DoubleStar®)	4-6 hours	No pronounced Peak	30-36 hours
Insulin degludec (Ultralong acting)	Tresiba® 100 units/ml (FlexTouch® / cartridges) Tresiba® 200 units/ml (FlexTouch®)	30-90 minutes	No pronounced Peak	42 hours
Human isophane insulin (intermediate acting) *NPH insulin*	Humulin I® (KwikPen® / cartridges)	2-4 hours	4-8 hours	Approximately 16 hours Range (14-24 h)

Example Adult patient scenarios

The examples below aim to support clinicians in the safe selection and establishment of alternative options to use in place of Levemir® insulin.

The following examples can be adapted for use in diabetes in pregnancy and in gestational diabetes albeit limited to the preferred options outlined in algorithm 2 above.

Please read in conjunction with Key Points and Advice for Prescribers sections

Once daily Levemir®	***Preferred options:*** • Insulin glargine 100 units/ml (Lantus®) • Human isophane insulin (Humulin I®) ***Alternative options:*** • Insulin glargine 300 units/ml (Toujeo®) • Insulin degludec 100units/ml or 200 units/ml • (Tresiba®) **For individuals with Type 1 diabetes or Type 3c diabetes, ensure 24-hour basal insulin coverage.** For those on once daily Levemir®, consider the initial purpose of this treatment choice, for example, was this once daily Levemir® given in the morning chosen to avoid overnight hypoglycaemia in which case an intermediate acting insulin such as Humulin I® may be the most appropriate alternative. When considering alternative insulin options taking glucose levels into account and consider reducing the dose by 10-20% depending on fasting glucose levels and any incidence of hypoglycaemic episodes. If considering switching to Humulin I® consider if once or twice daily dosing is more appropriate based on glucose levels. ***Worked example - Insulin glargine 100 units/ml (Lantus®)*** *Levemir® 30 units once daily at night switching to Lantus® once daily could be converted to:* • *10% reduction = Lantus® 27 units once daily at night* • *20% reduction = Lantus® 24 units once daily at night* ***Worked examples (Humulin I®):*** *Levemir® 20 units once daily in the morning being used to avoid overnight hypoglycaemia switching to Humulin I® could be converted to:* ***Once daily =*** • *10% reduction = Humulin I® 18 units in the morning* • *20% reduction = Humulin I® 16 units in the morning* ***Twice daily due to raised fasting glucose upon review =***

	• *Reduce by 10% = Humulin I® 18 units total daily dose (TDD)* *(This could be split as ⅔ morning and ⅓ evening* =* 12 units Humulin I® in the morning and 6 units in the evening) ****Required split will be based on evidence from glucose monitoring*** **Caveats:** 1. **For individuals with Type 1 diabetes or Type 3c diabetes, ensure 24-hour basal insulin coverage. Do not switch to once-daily Humulin I® unless specifically advised by a specialist diabetes renal clinic or equivalent service.** 2. Clinical trials show that when switching to Toujeo®, achieving comparable glucose control often requires a 10–18% higher dose. Therefore, a cautious dose reduction approach is recommended initially, with the expectation that the final Toujeo® dose will likely exceed the equivalent unit dose of Levemir®. 3. For those using Toujeo® / Tresiba® follow the worked example above for insulin glargine 100 units/ml once daily 4. If there is uncertainty seek advice and guidance or refer to community / specialist services as per locally agreed pathways.
Twice daily Levemir® with equal doses (less than 20% difference between two doses)	***Preferred options:*** • Insulin glargine 300 units/ml (Toujeo®) • Insulin degludec 100units/ml or 200 units/ml • (Tresiba®) • Insulin glargine 100 units/ml (Lantus®) For those prescribed twice daily Levemir® it is important to continue to ensure insulin cover across 24 hours especially in Type 1 / Type 3c diabetes. This is best achieved through ultralong acting insulin such as Toujeo®/Tresiba® or twice daily insulin glargine 100 units/ml. It is important to note that twice daily insulin glargine is considered off-licence use for Lantus® which are only licenced for once daily use. The dose of the chosen alternative insulin should be calculated by taking the total daily dose (TDD) of Levemir® and reducing the dose by 10-20%, prescribing this as a once-a-day injection. If the total daily dose exceeds 80 units, then Toujeo® DoubleStar® device should be prescribed with the number of units prescribed as an even number because of the 2-unit increments on this device. ***Worked examples:*** ***1.** Levemir® 20 units twice daily in the morning and night switching to Toujeo® / Tresiba® once daily could be converted to:*

20 units twice daily = 40 units total daily dose (TDD)

- *10% reduction = 36 units Toujeo® / Tresiba® once daily in the morning **OR** night*
- *20% reduction = 32 units Toujeo® / Tresiba® once daily in the morning **OR** night*

***2.** Levemir® 18 units in the morning and 15 units at night could be converted to:*

18 units morning and 15 units night = 33 units TDD

- *10% reduction = 30 units Tresiba® once daily **OR** 15 units twice daily 100 units/ml insulin glargine (off licence).*
- *20% reduction = 27units Tresiba® once daily **OR** 14 units twice daily 100 units/ml insulin glargine (off licence).*

Caveats:

- For individuals with Type 1 diabetes or Type 3c diabetes, ensure 24-hour basal insulin coverage with ultralong acting basal insulin (Toujeo® or Tresiba®) or *off licence* twice daily insulin glargine 100 units/ml (Lantus®)
- For individuals with Type 2 diabetes on lower doses (< 50 units TDD), once daily insulin glargine 100 units/ml (Lantus®) may be considered, where the dose would be calculated as per worked example 1 and 2 above for once daily Toujeo®/ Tresiba®.
- For individuals with Type1, Type 2 or Type 3c diabetes on higher doses (>50 units TDD), check injection technique and for evidence of lipohypertrophy at injection sites and consider utilising a concentrated insulin such as Toujeo®; with a DoubleStar® device prescribed if doses exceed 80 units or splitting insulin glargine 100 units/ml (Lantus®) twice daily *(off licence)* as outlined in international guidance[2]. This is due to the diminished dose-response effect of s/c insulin observed when injecting higher volumes subcutaneously (>0.5ml or 50 units of 100 units/ml insulin).
- No additional dose adjustments are necessary beyond those already documented when switching between 100 units/ml and 200/300 units/ml insulin preparations. Although the concentration and injected volume differ, the unit markings on pen devices are accurate and do not require conversion.
- Clinical trials show that when switching to Toujeo®, achieving comparable glucose control often requires a 10–18% higher dose. Therefore, a cautious dose reduction approach is recommended initially, with the expectation that the final Toujeo® dose will likely exceed the equivalent unit dose of Levemir®.

	• If there is uncertainty seek advice and guidance from a specialist service.
Twice daily Levemir® with unequal doses (more than 20% difference between two doses)	***Preferred options for Type 1 diabetes:*** • Insulin glargine 300 units/ml (Toujeo®) • Insulin degludec 100units/ml or 200 units/ml • (Tresiba®) • Insulin glargine 100 units/ml (Lantus®) ***Preferred options for Type 2 diabetes:*** • Human isophane insulin (Humulin I®) • Insulin glargine 100 units/ml (Lantus®) • Insulin glargine 300 units/ml (Toujeo®) • Insulin degludec 100 units/ml (Tresiba®) For individuals with Type 1 or Type 3c diabetes who are prescribed twice-daily Levemir®, it is important to maintain consistent 24-hour basal insulin coverage. However, if there is a difference of more than 20% between the morning and evening doses, further evaluation is needed to understand the rationale for this dosing pattern. This is best achieved using an ultra-long-acting insulin such as Toujeo® / Tresiba®. Insulin glargine 100 units/ml Lantus® twice daily may be considered after review by an endocrinologist. It is important to note that twice-daily use of insulin glargine 100 units/ml Lantus® is considered off-licence for Lantus® as this product is only licensed for once-daily administration. For individuals with Type 2 diabetes, human isophane insulin may be the preferred choice in certain circumstances. However, due to its variable dose–response profile it is important to initiate treatment cautiously, with careful titration to achieve an appropriate insulin dose. To calculate an appropriate dose of alternative once daily insulin (either insulin glargine 100 units/ml (Lantus®) or ultralong basal insulin such as Toujeo® / Tresiba®), take the lowest of the two Levemir® doses and multiple this by 2, and consider this the maximum safe daily dose initially. Reduce this maximum safe daily dose by 10-20% as the initial new dose of basal insulin. In Type 2 diabetes to convert to a twice daily Humulin I® dose, reduce each individual dose by 10-20% compared with the Levemir® dose, matching the original prescribing times if still considered appropriate. ***Worked examples (once daily basal analogue):*** • *Levemir® 20 units in the morning and 14 units at night switching to insulin glargine 100 units/ml* (Lantus®) or *(Toujeo®/Tresiba® once daily can be calculated as:* *Maximum safe daily dose* = lowest dose Levemir® x2* *(14 units x 2 = 28 units)*

	• *10% reduction = 25 units once daily in the morning **OR** night* • *20% reduction = 22 units once daily in the morning **OR** night* *A significant reduction in total daily dose using this method may indicate future underdosing during part of the day. In such cases, adjustments to mealtime insulin (if prescribed) or to adjunct oral and injectable therapies in Type 2 diabetes should be considered. ***Worked examples (twice daily Humulin I®):*** • Levemir® 36 units in the morning and 20 units in the evening switching to Humulin I® can be calculated as: • 10% reduction = Humulin I® - 32 units morning and 18 units evening • 20% reduction = Humulin I® - 29 units morning and 16 units evening **Caveats:** • For individuals with Type 1 diabetes or Type 3c diabetes, ensure 24-hour basal insulin coverage with ultralong acting basal insulin (Toujeo® or Tresiba®) or ***off licence*** twice daily insulin glargine 100 units/ml (Lantus®) • For individuals with Type 1, Type 2 or Type 3c diabetes on higher doses (>50 units TDD), check injection technique and for evidence of lipohypertrophy at injection sites and consider utilising a concentrated insulin such as Toujeo®; with a DoubleStar® device prescribed if doses exceed 80 units or splitting insulin glargine 100 units/ml (Lantus®) twice daily *(off licence)* as outlined in international guidance[2]. This is due to the diminished dose-response effect of s/c insulin observed when injecting higher volumes subcutaneously (>0.5ml or 50 units of 100 units/ml insulin). • No additional dose adjustments are necessary beyond those already documented when switching between 100 units/ml and 200/300 units/ml insulin preparations. Although the concentration and injected volume differ, the unit markings on pen devices are accurate and do not require conversion. • Clinical trials show that when switching to Toujeo®, achieving comparable glucose control often requires a 10–18% higher dose. Therefore, a cautious dose reduction approach is recommended initially, with the expectation that the final Toujeo® dose will likely exceed the equivalent unit dose of Levemir®. • If there is uncertainty seek advice and guidance from a specialist service.
Levemir® as backup insulin for Adult	***Preferred options:*** • Insulin glargine 100 units/ml (Lantus®)

Patients on insulin pumps	• Human isophane insulin (Humulin I®) The purpose of a backup insulin for those on an insulin pump is to ensure basal insulin is available in case of pump failure. The backup basal insulin is generally only needed for up to 72 hours in the majority of cases whilst a replacement pump device is obtained. An insulin which can reach steady state quickly and does not have a long half-life is preferred in this scenario over ultra-long-acting insulin, as ultralong acting insulin can complicate re-initiation of pump therapy. Specialist teams should review backup plans and ensure these are clearly communicated to primary care teams to enable repeat prescribing lists to be updated.

Example Paediatric patient scenarios

The examples below aim to support clinicians in the safe selection and establishment of alternative options to use in place of Levemir® insulin for paediatric patients.

Please read in conjunction with Key Points and Advice for Prescribers sections

Once Daily Levemir® in paediatric patients	***Preferred option in paediatric patients:*** • Insulin glargine 100 units/ml (Lantus®) (licensed in ages 2 years and above) ***Alternative options:*** • Insulin glargine 300 units/ml (Toujeo®) (licensed in ages 6 years and above) • Insulin degludec 100units/ml or 200 units/ml (Tresiba®) (licensed in ages 1 year and above) **For paediatric patients with Type 1 diabetes or Type 3c diabetes, ensure 24-hour basal insulin coverage.** ***Worked example - Insulin glargine 100 units/ml (Lantus®)*** *Levemir® 10 units once daily in the evening switching to Lantus® once daily could be converted to:* • *10% reduction = Lantus® 9 units once daily in the evening* • *20% reduction = Lantus® 8 units once daily in the evening* **Caveats:** • Clinical trials show that when switching to Toujeo®, achieving comparable glucose control often requires a 10–18% higher dose. Therefore, a cautious dose reduction approach is recommended initially, with the expectation that the final Toujeo® dose will possibly exceed the equivalent unit dose of Levemir®. • For those using Toujeo® / Tresiba® follow the worked example above for insulin glargine 100 units/ml once daily

	• If there is uncertainty seek advice and guidance or refer to community / specialist services as per locally agreed pathways.
Levemir® as backup insulin for Paediatric patients on insulin pumps	***Preferred options:*** • Insulin glargine 100 units/ml (Lantus®) The purpose of a backup insulin for those on an insulin pump is to ensure basal insulin is available in case of pump failure. The backup basal insulin is generally only needed for up to 72 hours in the majority of cases whilst a replacement pump device is obtained. An insulin which can reach steady state quickly and does not have a long half-life is preferred in this scenario over ultra-long-acting insulin, as ultralong acting insulin can complicate re-initiation of pump therapy. Specialist teams should review backup plans and ensure these are clearly communicated to primary care teams to enable repeat prescribing lists to be updated.

References

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Appendices

1 Version History

Revision Number	Revision Date	Summary of Changes
1.1	March 2026	Information on availability of Humulin I added; Insulin degludec (Tresiba® 100units/ml or 200 units/ml) added as alternate option for use in pregnancy

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