

# Initial Insulin Prescription for Type 2 Diabetes

Indications: Type 2 diabetes, in accordance with [NICE Type 2 Diabetes guidelines \(Ng 28, 2015\)](#).

**Consider insulin treatment if HbA1c >58 mmol/mol.**

**Target HbA1c and BG levels should be agreed between the person and their Healthcare Professional.**

Usually HbA1c 48 – 59 mmol/mol. For frail elderly ≤ 69mmol/mol.

Blood glucose before breakfast 5.5- 7.0

adjusted for frail elderly and those at risk of

Blood glucose before other meals 4 – 7 mmol/l

hypoglycaemia.

Blood glucose after meals < 8.5 mmol/l

N.B must be 5mmol/l or greater to drive.

**Select from the following options:** Please note disposable pens are available if preferred – some are more expensive than cartridges.

Good choice for older patients or introduction to insulin. May achieve target where HbA1c < 75 mmol/mol.  
Gives constant background level.

**Continue** OHAs (except pioglitazone)

**Stop** GLP1 eg Exenatide / Liraglutide or seek specialist advice

**Basal insulin only choose one:**

**First choice: Humulin I**  
**Alternative choice: Insulatard**  
**Consider: Abasaglar\*\*/ Levemir** if night-time hypos

InnoLet device (Insulatard and Levemir) can be useful for those with dexterity problems)

Good for active lifestyle where flexibility is important.  
Probably better where HbA1c >75 mmol/mol

**Stop** OHAs (except Metformin)  
**Stop** GLP1 eg Exenatide / Liraglutide or seek specialist advice

**MDI (Multiple dose Injections)**  
*(also called: basal bolus)*

**Basal (Choose one)**  
**First choice : Humulin I**  
**Alternative choice: Insulatard**  
Consider **Abasaglar\*\* / Levemir** if night-time hypos

**PLUS: -**

**Bolus**

**(Choose one)**  
**First choice : Insuman rapid**  
**Alternative choice : Humulin S**

For patients who prefer to inject insulin immediately before a meal **(Choose one)**  
**First choice: Humalog or Novorapid**  
**Alternative choice: Apidra**

Good for reasonably active, but fairly habitual lifestyle.  
Probably better where HbA1c >75 mmol/mol

**Stop** OHAs (except Metformin)  
**Stop** GLP1 eg Exenatide / Liraglutide or seek specialist advice

**B.D. (twice daily) mixture**

**(Choose one)**  
**First choice: Insuman Comb 25**  
**Alternative choice: Humulin M3**

For patients who prefer to inject insulin immediately before a meal **(Choose one)**  
**First choice: Novomix 30**  
**Alternative choice: Humalog Mix 25**

**Also prescribe for all patients:-**

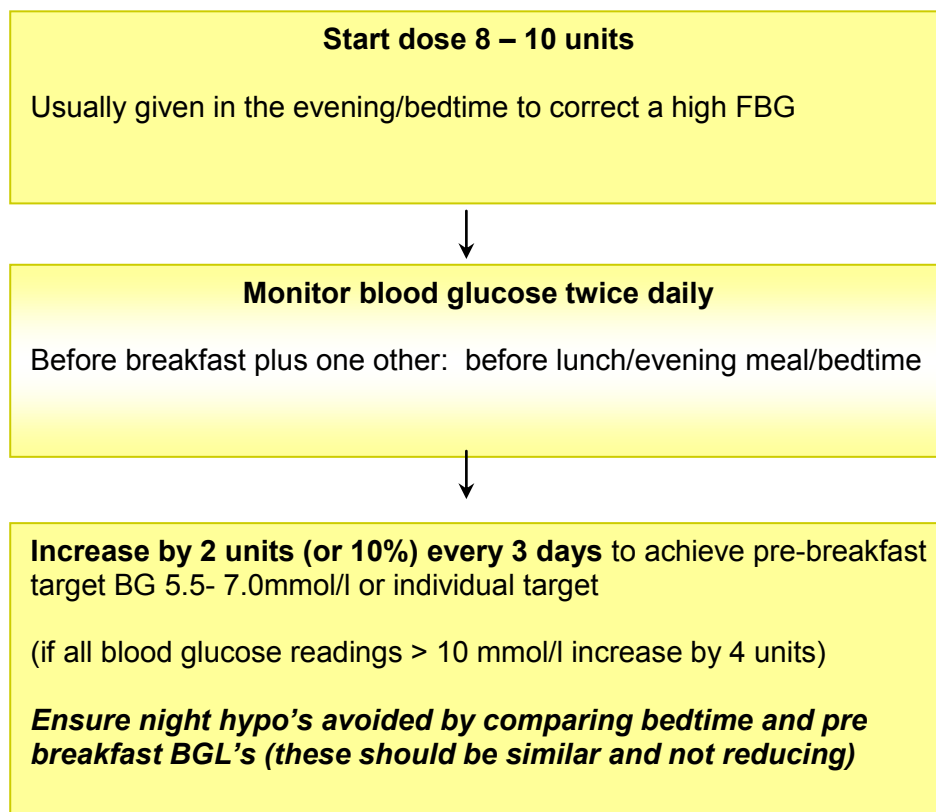
- Sharps guard (bin)
- Gluco Rx or BD Viva pen needles  
4 to 6 mm
- Supply of blood glucose monitoring strips for use with appropriate meter

**\*\* Use ABASAGLAR for new initiation only.**  
**[If currently on LANTUS to continue.](#)**

## **Insulin titration**

### **Basal insulin only**

**Humulin I or Insulatard (or Abasaglar or Levemir if hypoglycaemia becomes a problem ) in combination with Oral Hypoglycaemic Agents (OHA)**



#### Additional recommendations:

If blood glucose < 4.0 mmol/l at any time, decrease nearest *preceding* insulin dose by 2 units (or 10%)

Consider twice daily HUMULIN I/ INSULATARD OR LEVEMIR (breakfast and bedtime) if needed. Please note ABASAGLAR is licensed for once daily use only.

Referral to structured education (X-PERT/ CIM) is advised. Please provide patient with XPERT/ CIM booking form. For any queries please contact:

Mrs. Joanne Gallagher, Diabetes Structured Education Co-Ordinator, Dept. Nutrition, Dietetics & Diabetes, South Essex Partnership University N.H.S. Foundation Trust, 2<sup>nd</sup> Floor, Epping Forest Unit, St. Margaret's Hospital, The Plain, Epping, Essex, CM16 6TN.  
☎: Direct - 01992 561666 (Ext. 5469) / Office: 01279 827238

**For further support and advice contact**  
Specialist Community Diabetes Service  
01279 827238

## Insulin titration

### M.D.I./Basal bolus insulin

**Basal dose:** Start Humulin I or Insulatard (or Abasaglar or Levemir if hypoglycaemia becomes a problem) 8 - 12 units at bedtime/evening meal

**Bolus:** Start Humulin S or Insuman rapid or Apidra or Humalog or Novorapid 2 - 6 units with meals



**Monitor blood glucose 4 times a day**  
Before breakfast plus others: before meals, before bed



**Titrate basal (bedtime) insulin first** in order to establish pre-breakfast levels 5.5 - 7 mmol/l or individual target by increases of 2 - 4 units (or 10%) every 3 days

**Ensure night hypo's avoided by comparing bedtime and pre breakfast BGL's (these should be similar and not reducing)**

**Increasing the basal dose may necessitate reduction of mealtime (bolus) doses as it will raise general background insulin level**



**Once the correct basal dose is established, titrate mealtime (bolus) doses** by 2 units up or down to achieve pre meal blood glucose levels of 4- 7mmol/l or individual target. Advise patient regarding adjusting according to prospective carbohydrate content of the meal

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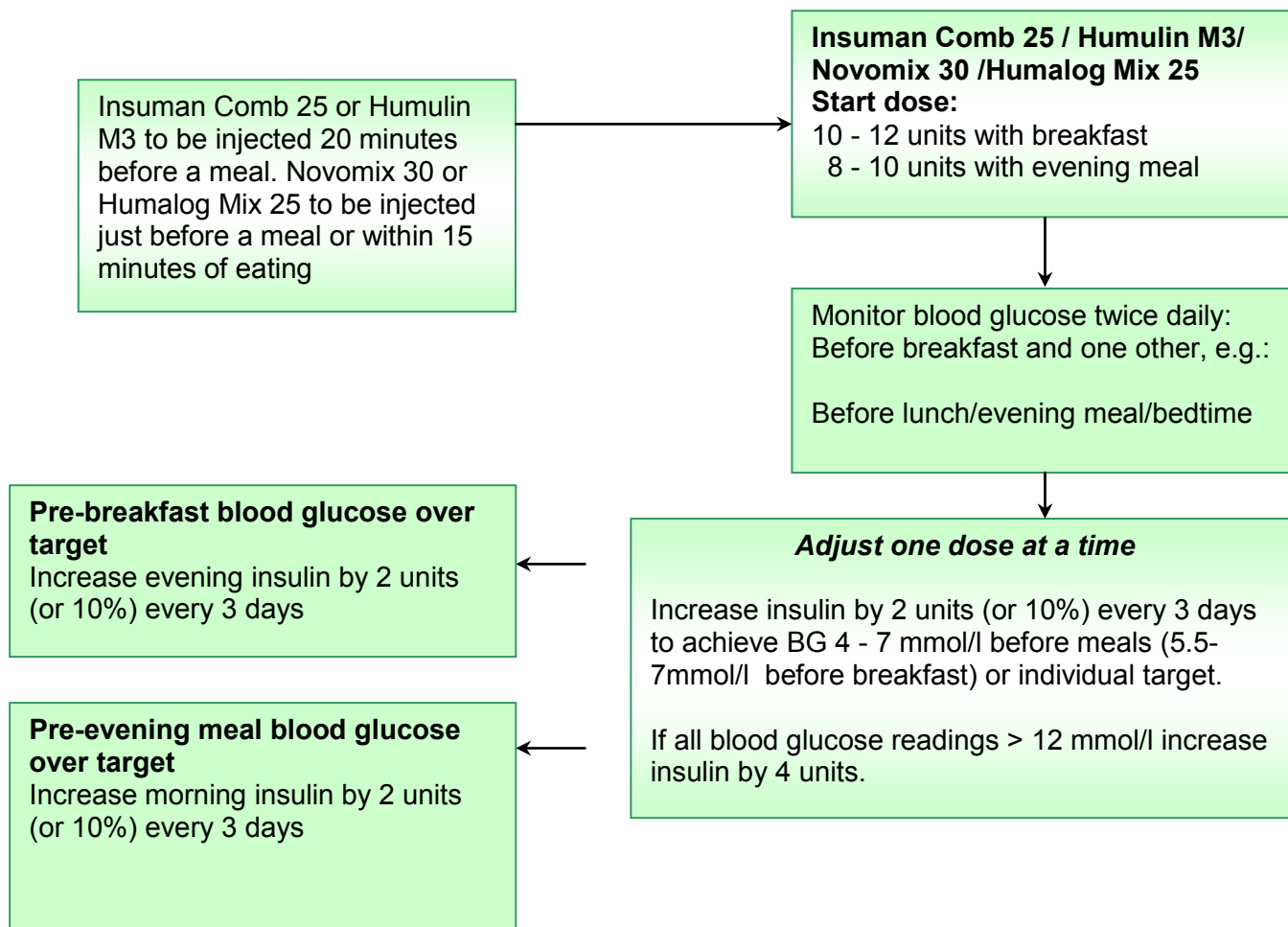
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## Insulin titration

### B.D. (twice daily) insulin mixtures



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Insulin Key:

Brand Name	Generic Name
LEVEMIR®	DETEMIR
LANTUS®	GLARGINE
ABASAGLAR®	GLARGINE - biosimilar
NOVORAPID®	ASPART
HUMALOG®	LISPRO
APIDRA®	GLULISINE

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