

Recommended Insulin Products

- This guideline states the **Gloucestershire Joint Formulary** recommended, first choice insulin products.
- The intention is to support the choice of treatment for new patients, or patients needing treatment alteration.
- Patients stabilised on alternative 'non-first line' insulin products should not be switched unless this is deemed to be clinically appropriate and the patient receives adequate education regarding any changes.
- The intention is that, for the majority of patients requiring a new insulin or treatment alteration, one of the below choices will be prescribed, using the **brand names stated below** to minimise the risk of dispensing errors.
- Where cartridges are prescribed, a compatible cartridge pen device should be used.

Short-acting insulins

Disposable Pen				
Recommended:	Trurapi [®] (insulin aspart)	SoloStar disposable pen	£21.42	
Cartridge Pen				
Recommended:	Trurapi [®] (insulin aspart)	3ml cartridge	£19.82	
Vial				
Specific indication:	Actrapid [®] (soluble insulin)	10ml vial	£7.48	– In-patient use for insulin sliding scale
	NovoRapid [®] (insulin aspart)	10ml vial	£14.08	– Specialist only, for continuous SC insulin infusion

Biphasic insulins

Disposable Pen				
Recommended:	Humulin M3 (biphasic isophane insulin)	KwikPen disposable pen	£21.70	
Specific indication:	NovoMix 30 (biphasic insulin aspart)	FlexPen disposable pen	£29.89	– Where human insulin unsuitable
Cartridge Pen				
Recommended:	Humulin M3 (biphasic isophane insulin)	3ml cartridge	£19.08	
Specific indication:	NovoMix 30 (biphasic insulin aspart)	3ml cartridge	£28.79	– Where human insulin unsuitable

Intermediate- and long-acting insulins

Disposable Pen				
Recommended:	Humulin I (isophane insulin)	KwikPen disposable pen	£21.70	
Specific indication:	Semglee (insulin glargine)	Disposable pen	£29.99	– Where human insulin unsuitable
Cartridge Pen				
Recommended:	Humulin I (isophane insulin)	3ml cartridge	£19.08	
Specific indication:	Abasaglar (insulin glargine)	3ml cartridge	£35.28	– Where human insulin unsuitable

Human versus Analogue Insulin

In type 2 diabetes, the preferred basal insulin recommended by NICE is human NPH (neutral protamine Hagedorn) insulin. Long-acting insulin analogues are recommended by NICE in specific patient circumstances (see below). However, for most people with type 2 diabetes, long-acting insulin analogues offer no significant advantage over human NPH insulin and are much more expensive (a defined daily dose of insulin costs over twice as much for the insulin analogues than for Human NPH insulin).

The following guidance has been produced as part of the national NHS QIPP programme to address the inappropriate use of expensive analogue insulins in type 2 diabetic patients.

1. Choose HUMAN NPH insulin for type 2 diabetics requiring insulin

Initiation of insulin in these patients occurs after failure of appropriate oral therapy. The majority of patients will be obese with high blood glucose levels on waking which are similar throughout the day. If this is the case, patients should be started on:

- Night time (basal) human NPH Insulin e.g. **Humulin I**

If blood glucose levels rise throughout the day despite maximum oral therapy then either:

- Twice daily biphasic insulin should be started (e.g. Humulin M3), OR
- A basal bolus scheme (e.g. Humulin I + Trurapi) depending on patient's preference.

2. Consider switching type 2 diabetics with poor control on analogue insulin to HUMAN NPH insulin

For those patients already on analogue insulins whose control is poor (HbA1c persistently >8.5% [69mmol/mol]), switch to human insulins especially if on disposable regimes (no pen costs).

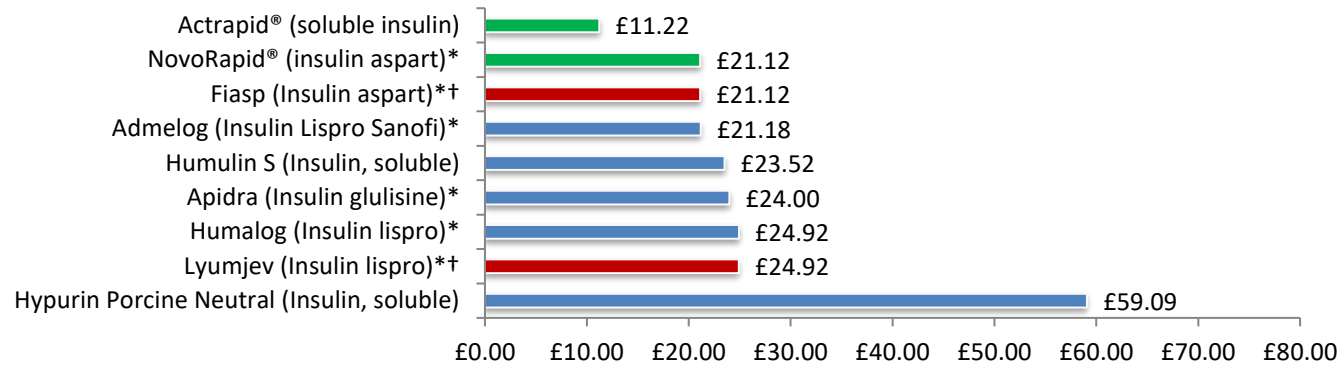
3. Use analogue insulin in type 2 patients appropriately

NICE recommends human insulin as first choice in Type 2 diabetics. Insulin analogues should only be considered in certain circumstances:

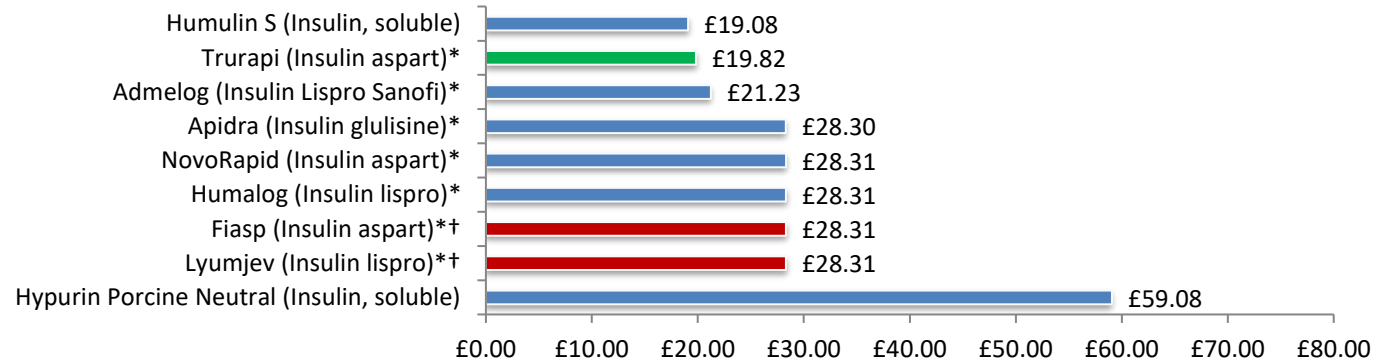
- The patient is reliant on a professional to inject insulin, and use of a long-acting insulin analogue (e.g. Semglee) would reduce the frequency of injections from twice to once daily, OR
- The person's lifestyle is restricted by recurrent symptomatic hypoglycaemic episodes, OR
- Patients who cannot use the device needed to inject human NPH insulin

Short acting insulins:

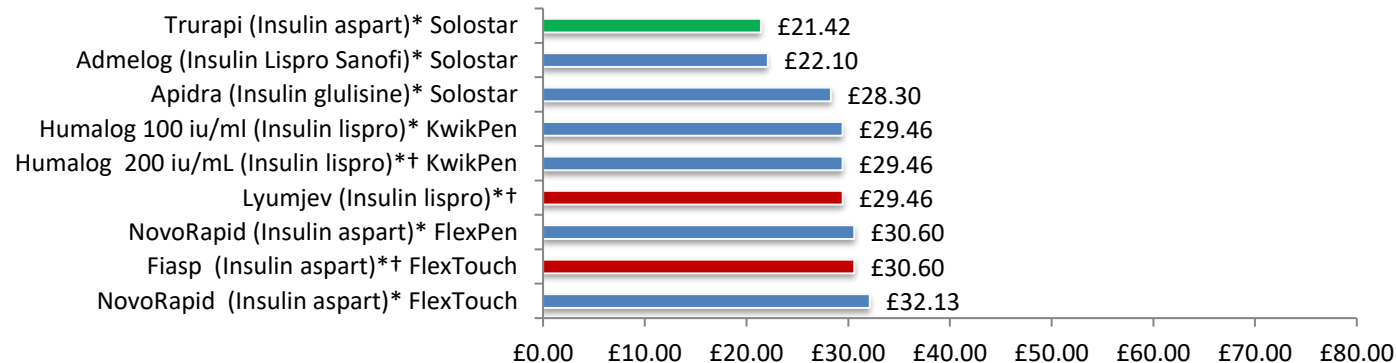
Vials



Cartridges



Disposable Pens



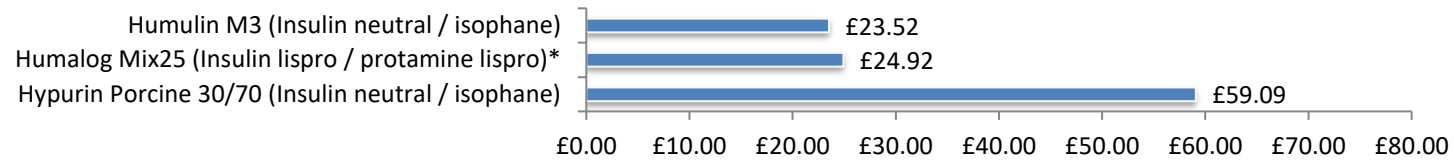
*Analogue insulin

†Specialist initiation only

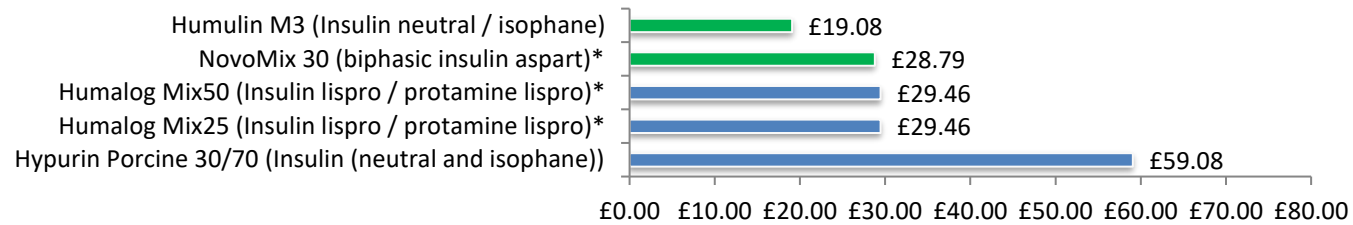
Formulary Recommended

Biphasic insulins:

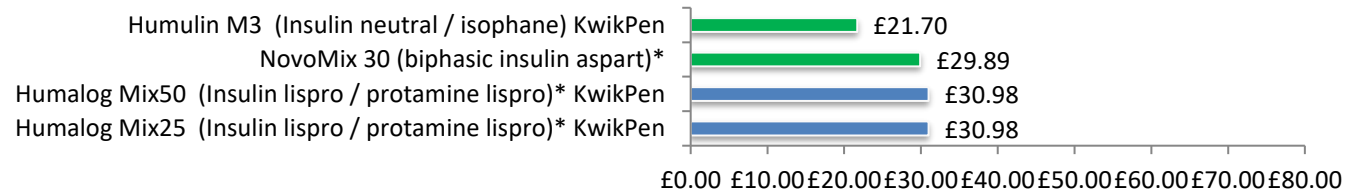
Vials



Cartridges



Disposable Pens



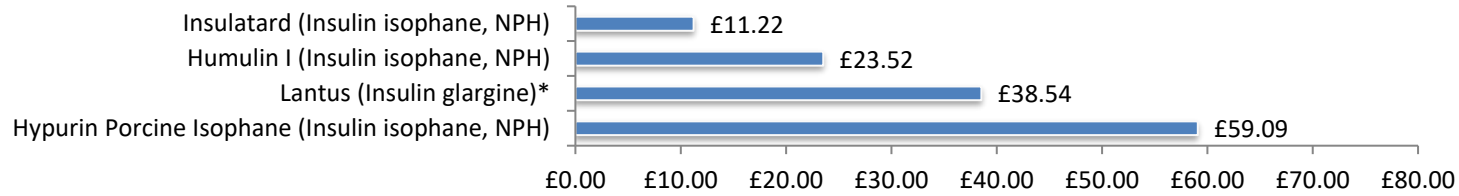
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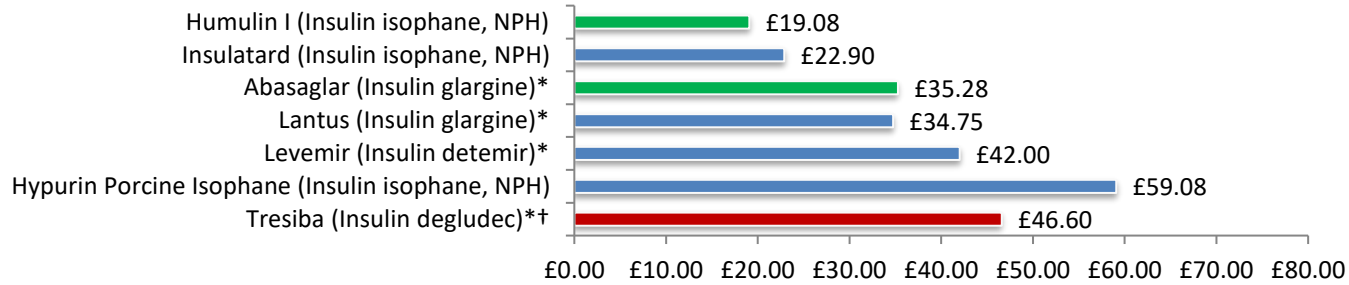
Formulary Recommended

Intermediate- and long-acting insulins

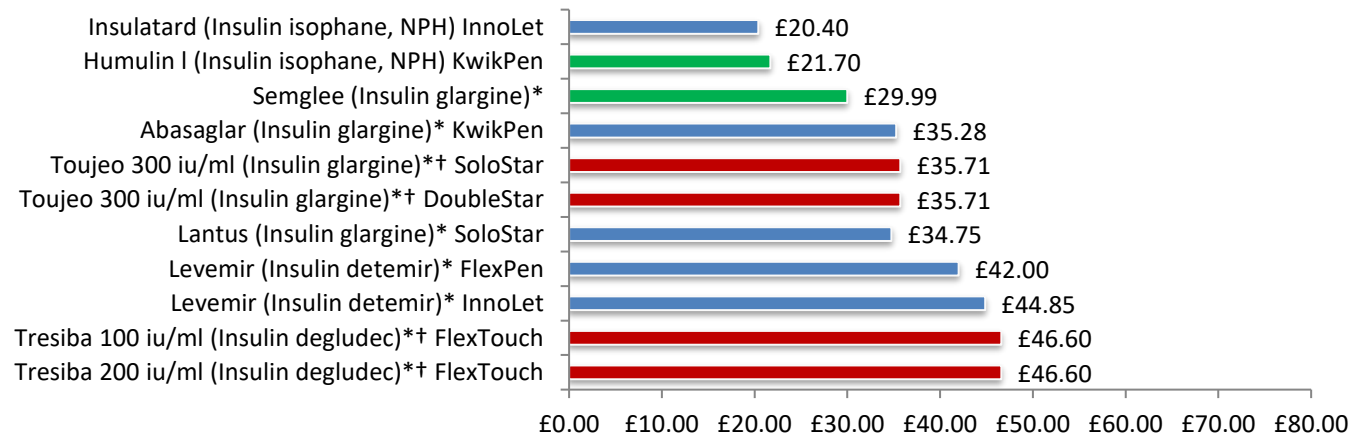
Vials



Cartridges



Disposable Pens



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Formulary Recommended

Prices correspond to 1,500 iu (MIMS February 2023)