



BSW Insulin Formulary

All registered and unregistered healthcare professionals involved in the prescribing, supply or administration of insulin have a responsibility to be trained and competent in the use of insulin and insulin administration equipment.

It is an NHS HEE requirement that insulin safety training be undertaken every 2 years
<https://diabetesonthenet.com/cpd-modules/the-six-steps-to-insulin-safety/>

For patients on 'non-formulary' insulins (e.g. from out of area) a switch is not required but refer to specialist services if there are concerns over treatment choices.

Ensure that insulins are prescribed by **brand** name and take into account individual circumstances and preferences when prescribing.

When people are already using an insulin for which a lower cost biosimilar is available, discuss the possibility of switching to the biosimilar making a shared decision with the patient. [NICE 2021]

GREEN: Appropriate for initiation in both primary and secondary care

AMBER: Suitable for primary care prescribing following specialist initiation or recommendation

Type 1 Diabetes

Basal-Bolus

Offer multiple daily injection basal-bolus insulin regimens as the injection regime of choice for all adults with type 1 diabetes.

Do not offer adults newly diagnosed with type 1 non-basal-bolus insulin regimens. [NICE 2021]

Long Acting Basal Insulin

Insulin detemir is 1st choice basal insulin therapy [NICE 2021] but not used 1st line locally as glargine offers convenience with once daily dosing.

Lantus® (insulin glargine 100units/mL)	Vial £25.69 Cartridge £34.75 Solosta® pen £34.75
Abasaglar® (biosimilar insulin glargine 100 units/mL)	Cartridge £35.28 Pen £35.28
Levemir® (insulin detemir 100units/mL)	Cartridge £42 FlexPen® £42

Ultra Long Acting Basal Insulin

Consider ultra long acting insulin if there is a particular concern about nocturnal hypoglycaemia or if people need help from a carer or healthcare professional to administer injections. [NICE 2021]

Tresiba® (insulin degludec 100units/mL)	Cartridges £46.60 FlexTouch 100units/mL® £46.60
Tresiba® (insulin degludec 200units/mL)	FlexTouch 200units/mL® £55.92 BANES: Not on formulary SWINDON: Not on formulary SALISBURY: Only for Type 1 diabetic patients with treatment limiting recurrent hypoglycaemia despite optimal treatment prior to insulin pump therapy, patients with recurrent DKA requiring hospital admission due to delayed administration. Patients receiving insulin from a carer where irregular administration times may contribute to hyper/hypoglycaemia

Please ensure the correct product is selected when prescribing.



Type 1 Diabetes (continued)	
Rapid Acting Insulin	
Offer rapid acting insulin analogues that are injected before meals, rather than rapid acting soluble human or animal insulins, for mealtime insulin replacement for adults with type 1 diabetes. Do not advise routine use of rapid acting insulin analogues after meals for adults with type 1 diabetes. [NICE 2021]	
Trurapi® <i>(biosimilar insulin aspart 100 units/mL)</i>	Vial £11.97 Cartridge £19.82 SoloStar pen £21.42
Apidra® <i>(insulin glulisine 100 units/mL)</i>	Vial £16 Cartridge £28.30 Solostar® pen £28.30
Novorapid® <i>(insulin aspart 100 units/mL)</i>	Vial £14.08 cartridge £28.31 FlexPen® £30.60 FlexTouch® pen £32.13
Humalog® <i>(insulin lispro 100 units/mL)</i>	Vial £16.61 Cartridge £28.31 KwikPen® £29.46
High Strength Rapid Acting Insulin	
Consider using a high strength rapid acting insulin where severe insulin resistance and requirement to use more than 20 units of rapid acting insulin per day.	
Humalog® <i>(insulin lispro 200 units/mL)</i>	KwikPen® £58.92
Ultra Rapid Acting Insulin	
Consider if post prandial hyperglycaemia.	
Fiasp® <i>(insulin aspart 100 units/mL)</i>	FlexTouch® pen £30.60
Lyumjev® <i>(insulin lispro 100 units/mL)</i>	Vial £16.61 Cartridge £28.31 KwikPen £29.46
Lyumjev® 200units/mL also available. Please ensure the correct product is selected when prescribing.	
Type 2 Diabetes	
NPH (neutral protamine Hagedorn) Insulin	
Injected once or twice daily according to need. [NICE 2022]	
Insuman® Basal <i>(isophane insulin 100 units/mL)</i>	Cartridge £17.50 Solostar® pen £19.80
Humulin® I <i>(isophane insulin 100 units/mL)</i>	Vial £15.68 Cartridge £19.08 KwikPen® £21.70
Short Acting Insulin	
Consider starting both NPH and short acting insulin (particularly if HbA1c > 75), administered either separately or as a pre-mixed (biphasic) human insulin preparation. [NICE 2022]	
Insuman® Rapid <i>(insulin soluble human)</i>	Cartridge £17.50
Humulin® S <i>(insulin soluble human)</i>	Vial £15.68 Cartridge £19.08
Rapid Acting Insulin	
It may be necessary to consider a rapid acting analogue insulin for type 2 diabetes patients. This should be under the guidance of Specialist Services and would be considered Amber under TLS. See preparations under Type 1 guidance.	



Type 2 Diabetes (continued)		
Pre-mixed (biphasic) NPH Insulin		
Require administration immediately prior to a meal.		
Insuman® Comb 25 <i>(biphasic isophane insulin 100 units/mL)</i>	Cartridge £17.50 SoloStar pen £19.80	
Insuman® Comb 50 <i>(biphasic isophane insulin 100 units/mL)</i>	Cartridge £17.50	
Humulin® M3 <i>(biphasic isophane insulin 100 units/mL)</i>	Vial £15.68 Cartridge £19.08 Kwikpen® £21.70	
Pre-mixed Analogue Insulin		
Consider using if patient unable to inject insulin immediately before a meal, hypoglycaemia is a problem or blood glucose levels rise markedly after meals. [NICE 2022]		
Novomix® 30 <i>(biphasic insulin aspart 100units/mL)</i>	Cartridge £28.79 Flexpen £29.89	
Humalog® Mix 25 <i>(biphasic insulin lispro 100 units/mL)</i>	Vial £16.61 Cartridge £29.46 Kwikpen £30.98	
Humalog® Mix 50	Cartridge £29.46 Kwikpen £30.98	
Long Acting Basal Insulin		
Consider if injection frequency needs reducing or recurrent hypoglycaemia restricts lifestyle or achievement of HbA1c target or the person would otherwise need twice daily NPH injections in combination with oral glucose-lowering drugs. [NICE 2022]		
Lantus® <i>(insulin glargine 100 units/mL)</i>	Vial £25.69 Cartridge £34.75 Solostar® pen £34.75	
Abasaglar® <i>(biosimilar insulin glargine 100 units/mL)</i>	Cartridge £35.28 Kwikpen® £35.28	
Levemir® <i>(insulin detemir 100 units/mL)</i>	Cartridge £42.00 Flexpen® £42.00 Innolet® Pen £44.85	
Ultra Long Acting Basal Insulin		
Tresiba® <i>(insulin degludec 100units/mL)</i>	Cartridges £46.60 FlexTouch 100units/mL® £46.60	Criteria for use: BANES: SALISBURY: SWINDON: Recurrent episodes of nocturnal hypoglycaemia or people need help from a carer or healthcare professional to administer injections



Type 2 Diabetes (continued)
High Strength Basal Insulin
Caution is required with high strength insulins to avoid prescribing, dispensing and administration errors.

Toujeo® (insulin glargine 300 units/mL)	Solostar® pen £32.14	BANES SALISBURY SWINDON: Recurrent hypoglycaemia and dose <80 units.
Toujeo® (insulin glargine 300 units/mL)	Doublestar® pen £64.27	BANES: SALISBURY: WILTSHIRE: Insulin resistance (total dose >1.2mg/kg) or dose >80 units.

The SoloStar® pre-filled pen can provide a dose of 1-80 units per single injection in steps of 1 unit. The Doublestar® pen can provide a dose of 2-160 units in one injection in steps of 2 units.

Toujeo DoubleStar® is one of the very few insulin devices in the UK which administers 2 units of insulin per click, presenting a risk patients could receive double the dose if the wrong Toujeo product is dispensed or if DoubleStar® is used incorrectly by assuming one click is equivalent to one unit of insulin



Tresiba® (insulin degludec 200 units/mL)	200 units/mL £55.92	BANES: Not on formulary SALISBURY & SWINDON: Insulin resistance (total dose >1.2mg/kg) or dose >80units/day.
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Review criteria for high strength insulins:

- Improved blood glucose management.
- Patient satisfaction

MHRA alert Tresiba:

<https://assets.publishing.service.gov.uk/media/547307fde5274a130300002b/con228797.pdf>



References

1. Type 1 diabetes in adults: diagnosis and management NG17. Published 2015. Accessed Feb 2022. Available from <https://www.nice.org.uk/guidance/ng17>
2. Type 2 diabetes in adults: management NG28. Published December 2015 and last updated February 2022. Accessed Feb 2022. Available from <https://www.nice.org.uk/guidance/ng28>
3. Drug Tariff. Accessed February 2022. Available from <https://nhsbsa.nhs.uk/pharmacies-gp-practices-and-appliance-contractors/drug-tariff>

All costs are correct as per Drug Tariff price February 2022.