

## Pharmacological management of adult patients with type 2 diabetes, No. 23, November 2013

### Appendix 2- Insulin

<b>Insulin Category: Rapid acting</b> <b>Onset of Action* = 10-20 mins / Duration of Action* = 2-5 hours</b>		
<b>Type of Insulin/Name of Insulin/(Brand name)</b>	<b>Compatible Injection Devices/(Type of Device)<sup>◇</sup></b>	<b>Formulary Status of Insulin</b>
<b>Analogues:</b>		
Insulin lispro (Humalog <sup>®</sup> )	Autopen <sup>®</sup> Classic (reusable) HumaPen <sup>®</sup> (Luxura <sup>a</sup> , Luxura HD, Memoir) (reusable) KwikPen <sup>®</sup> (disposable)	Preferred List
Insulin aspart (NovoRapid <sup>®</sup> )	NovoPen <sup>®</sup> (reusable) FlexPen <sup>®</sup> (disposable) FlexTouch <sup>®</sup> (disposable)	Preferred List
Insulin glulisine (Apidra <sup>®</sup> )	Autopen <sup>®</sup> 24 (reusable) ClikSTAR <sup>®</sup> (reusable) SoloStar <sup>®</sup> (disposable)	Total Formulary – <i>restricted to use in patients where regular human soluble insulin is inappropriate.</i>
<b>Insulin Category: Short acting</b> <b>Onset of Action* = 30-60 mins / Duration of Action* = 6-9 hours</b>		
<b>Type of Insulin/Name of Insulin/(Brand name)</b>	<b>Compatible Injection Devices/(Type of Device)<sup>◇</sup></b>	<b>Formulary Status of Insulin</b>
<b>Soluble or neutral insulin:</b>		
Actrapid <sup>®</sup>	N/A	Preferred List
Humulin S <sup>®</sup>	Autopen <sup>®</sup> Classic (reusable) HumaPen <sup>®</sup> (Luxura <sup>a</sup> , Luxura HD, Memoir) (reusable)	Preferred List
Insuman <sup>®</sup> Rapid	Autopen <sup>®</sup> 24 (reusable) ClikSTAR <sup>®</sup> (reusable)	Preferred List
Hypurin <sup>®</sup> Bovine Neutral	Autopen <sup>®</sup> Classic (reusable)	Non-Formulary
Hypurin <sup>®</sup> Porcine Neutral	Autopen <sup>®</sup> Classic (reusable)	Non-Formulary

\*These figures are used as a guide only. The time course of action of any insulin may vary considerably in different individuals or at different times in the same individual. The duration of action is dependent on dose, site of injection, blood supply, temperature and physical activity.

◇ Different devices and presentations for administration of the same insulin may differ in cost. When prescribing for the first time, use the most cost-effective device that best meets the patient's needs.

<sup>a</sup> HumaPen<sup>®</sup> Luxura injection device will be discontinued in March 2014 and replaced with the HumaPen<sup>®</sup> Savvio injection device.

<b>Insulin Category: Intermediate acting</b> <b>Onset of Action* = 1-2 hours / Duration of Action* = 11-24 hours</b>		
<b>Type of Insulin/Name of Insulin/(Brand name)</b>	<b>Compatible Injection Devices/(Type of Device<sup>◇</sup>)</b>	<b>Formulary Status of Insulin</b>
<b>Isophanes (suspension of insulin with protamine):</b>		
Insulatard <sup>®</sup>	NovoPen <sup>®</sup> (reusable) InnoLet <sup>®</sup> (disposable)	Preferred List
Humulin I <sup>®</sup>	Autopen <sup>®</sup> Classic (reusable) HumaPen <sup>®</sup> (Luxura <sup>a</sup> , Luxura HD, Memoir) (reusable) KwikPen <sup>®</sup> (disposable)	Preferred List
Insuman <sup>®</sup> Basal	Autopen <sup>®</sup> 24 (reusable) ClikSTAR <sup>®</sup> (reusable) SoloStar <sup>®</sup> (disposable)	Non-Formulary
Hypurin <sup>®</sup> Bovine Isophane	Autopen <sup>®</sup> Classic (reusable)	Non-Formulary
Hypurin <sup>®</sup> Porcine Isophane	Autopen <sup>®</sup> Classic (reusable)	Non-Formulary
<b>Insulin Category: Long acting</b> <b>Onset of Action* = 2-6 hours / Duration of Action* = 24-36 hours</b>		
<b>Type of Insulin/Name of Insulin/(Brand name)</b>	<b>Compatible Injection Devices/(Type of Device<sup>◇</sup>)</b>	<b>Formulary Status of Insulin</b>
<b>Non-analogues:</b>		
Insulin zinc suspension (Hypurin <sup>®</sup> Bovine Lente)	N/A	Non-Formulary
Protamine zinc insulin (Hypurin <sup>®</sup> Bovine Protamine Zinc)	N/A	Non-Formulary
<b>Analogues:</b>		
Insulin detemir (Levemir <sup>®</sup> )	NovoPen <sup>®</sup> (reusable) FlexPen <sup>®</sup> (disposable) InnoLet <sup>®</sup> (disposable)	Total Formulary - <i>restricted to initiation by consultant diabetologists in patients with severe/ frequent nocturnal hypoglycaemia. Not for routine use in type 2 diabetes unless patients suffers from recurrent episodes of hypoglycaemia.</i>
Insulin glargine (Lantus <sup>®</sup> )	Autopen <sup>®</sup> 24 (reusable) ClikSTAR <sup>®</sup> (reusable) SoloStar <sup>®</sup> (disposable)	Preferred List – <i>In type 2 diabetes, restricted to those who suffer from recurrent episodes of hypoglycemia or require assistance with their insulin injections.</i>
Insulin degludec (Tresiba <sup>®</sup> )	FlexTouch <sup>®</sup> (disposable)	Non-Formulary

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<b>Insulin Category: Insulin mixes (biphasic)</b> <b>Onset of Action* = 15 mins-2 hours / Duration of Action* = 11-24 hours</b>		
<b>Type of Insulin/Name of Insulin/(Brand name)</b>	<b>Compatible Injection Devices/(Type of Device<sup>◇</sup>)</b>	<b>Formulary Status of Insulin</b>
<b>Non-analogues (biphasic isophane insulin):</b>		
Humulin M3 <sup>®</sup>	Autopen <sup>®</sup> Classic (reusable) HumaPen <sup>®</sup> (Luxura <sup>a</sup> , Luxura HD, Memoir) (reusable) KwikPen <sup>®</sup> (disposable)	Preferred List
Insuman <sup>®</sup> Comb 15	Autopen <sup>®</sup> 24 (reusable) ClikSTAR <sup>®</sup> (reusable)	Non-Formulary
Insuman <sup>®</sup> Comb 25	Autopen <sup>®</sup> 24 (reusable) ClikSTAR <sup>®</sup> (reusable) SoloStar <sup>®</sup> (disposable)	Non-Formulary
Insuman <sup>®</sup> Comb 50	Autopen <sup>®</sup> 24 (reusable) ClikSTAR <sup>®</sup> (reusable)	Non-Formulary
Hypurin <sup>®</sup> Porcine 30/70 Mix	Autopen <sup>®</sup> Classic (reusable)	Non-Formulary
<b>Analogues:</b>		
<b>Biphasic insulin aspart:</b>		
NovoMix <sup>®</sup> 30	NovoPen <sup>®</sup> (reusable) FlexPen <sup>®</sup> (disposable)	Preferred List
<b>Biphasic insulin lispro:</b>		
Humalog <sup>®</sup> Mix25	Autopen <sup>®</sup> Classic (reusable) HumaPen <sup>®</sup> (Luxura <sup>a</sup> , Luxura HD, Memoir) (reusable) KwikPen <sup>®</sup> (disposable)	Preferred List
Humalog <sup>®</sup> Mix50	Autopen <sup>®</sup> Classic (reusable) HumaPen <sup>®</sup> (Luxura <sup>a</sup> , Luxura HD, Memoir) (reusable) KwikPen <sup>®</sup> (disposable)	Preferred List

**For advice on insulin regimens and dosage adjustment refer to NHSGGC Diabetes Guideline**

**References**

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Manufacturer's Summary of Product Characteristics (SPC) available at <http://www.medicines.org.uk/emc/>

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