



ADULT Medication Monograph

INSULIN

This document should be read in conjunction with this [DISCLAIMER](#)

[Formulary: Restricted](#)

[Formulary: Unrestricted](#)



 **HIGH RISK Medication**

Class	Insulin		
Presentation	All products contain 100 units of insulin per mL:		
	Insulin Type	Insulin	Form and Brand (Volume)
	Ultra-short acting	Insulin aspart (analogue)	Pen: NovoRapid FlexPen® (3mL) Cartridge: NovoRapid Penfill® (3mL) Vial: NovoRapid® (10mL)
		Insulin lispro (analogue)	Cartridge: Humalog® (3mL)
		Insulin glulisine	Pen: Apidra SoloStar® Cartridge: Apidra Cartridge® Vial: Apidra Vial®
	Short acting	Neutral insulin (human)	Cartridge: Actrapid Penfill®, Humulin R® (3mL)
	Long acting	Isophane insulin (human)	Cartridge: Humulin NPH®, Protaphane Penfill® (3mL) Innolet: Protaphane InnoLet® (3mL)
		Neutral insulin/ Isophane insulin (human)	Innolet: Mixtard 30/70 InnoLet® (3mL)
		Insulin aspart/ Insulin aspart protamine (analogue)	Pen: NovoMix 30 FlexPen® (3mL)
		Insulin detemir (analogue)	Pen: Levemir FlexPen® (3mL)

		Insulin glargine (analogue)	Cartridge: Lantus® (3mL) Pen: Lantus SoloStar® (3mL)	
		Insulin aspart/Insulin degludec	Cartridge: Ryzodeg Penfill® (3mL) Pen: Ryzodeg FlexTouch® (3mL)	
Storage	<p><u>Pre-filled pens/Innolet/Cartridges/Vials</u></p> <p>Protect from light</p> <p>Unopened insulin: Refrigerate (2-8°C), do not freeze. Discard if frozen.</p> <p>Once in use: Store at room temperature, below 25°C.</p> <p>Discard insulin within 28 days after first use.</p> <p><u>IV infusion</u></p> <p>Store at room temperature, below 25°C.</p> <p>Discard after 24 hours.</p> <p>For more information refer to Clinical Practice Guideline: Storage and Handling of Insulin</p>			
Dose	Refer to relevant KEMH Clinical Guidelines for appropriate dose regimes (links below)			
Administration	<p><u>SUBCUT Injection:</u></p> <p>Inject into the abdomen (preferred), upper arm, thigh or buttocks. Rotate site of injection. Do not massage site after injecting.</p> <p><u>IV Infusion:</u></p> <p>Step 1 Dilution: Dilute 50 units of short acting insulin in 50mL Sodium Chloride 0.9%. Final concentration is 1unit/mL.</p> <p>Step 2 Administration: Infuse via syringe pump</p>			
Pregnancy		Safe to use	Considered safe to use	Limited safety information; consider alternative
	1st Trimester	Insulin Aspart	Insulin Glargine	Insulin Degludec
		Insulin Isophane	Insulin Detemir	Insulin Glulisine
		Insulin Lispro		
		Insulin Neutral		

	2nd Trimester	As above	As above	As above
	3rd Trimester	As above	As above	As above
Breastfeeding	<p>Safe to use</p> <p>Insulin Degludec: limited information, consider alternative; For more information, please contact KEMH Obstetric Medicines Information Service.</p>			
Monitoring	Blood glucose levels, glycosylated haemoglobin (HbA1c)			
Clinical Guidelines and Policies	<p>WNHS Policies: WNHS Medication Management Framework</p> <p>KEMH Clinical Guidelines: Clinical Practice Guideline - Diabetes Corticosteroids: Management in Pregnancy with Diabetes Western Australia Department of Health: Know your insulins</p> <p>KEMH Pharmaceutical & Medicines Management Guidelines: KEMH Pharmaceutical & Medicines Management Guideline: Medication Administration Storage and Handling of Insulin Pre-operative Medication Management Prescribing Procedure</p>			
References	<p>Australian Medicines Handbook. Insulin. In: Australian Medicines Handbook [Internet]. Adelaide (South Australia): Australian Medicines Handbook; 2019 [cited 2020 Apr 02]. Available from: https://amhonline.amh.net.au/</p> <p>The Royal Women's Hospital. Insulin. In: Pregnancy and Breastfeeding Medicines Guide [Internet]. Parkville (Victoria): The Royal Women's Hospital; 2019 [cited 2020 Apr 02]. Available from: https://thewomenspbmg.org.au/</p> <p>Therapeutic Guidelines. Diabetes. In: eTG complete [Internet]. West Melbourne (Victoria): Therapeutic Guidelines; 2019 [cited 2020 Apr 02]. Available from: https://tgldcdp.tg.org.au</p> <p>MIMS Australia. Insulin. In: MIMS Online [Internet]. St Leonards (New South Wales): MIMS Australia; 2019 [cited 2020 Apr 02]. Available from https://www-mimonline-com-au.kelibresources.health.wa.gov.au</p>			

	<p>Truven Health Analytics. Insulin human regular. In: Micromedex [Internet]. Greenwood Village (CO): Truven Health Analytics; 2019 [cited 2020 Apr 02]. Available from: http://www-micromedexsolutions-com.kelibresources.health.wa.gov.au/micromedex2/librarian/</p> <p>American Society of Health-System Pharmacists. Insulins. In: AHSF Drug Information [Internet]. [Bethesda, Maryland]; 2019 [cited 2020 Apr 10]. Available from: http://online.statref.com.kelibresources.health.wa.gov.au/titles?FxlD=141</p>
--	--

Keywords:	Insulin, Diabetes, Diabetes Mellitus, Gestational Diabetes, T1DM, T2DM, Hyperglycaemia, GDM, Novorapid, Protaphane, Lantus, Novomix, Humalog, glucose intolerance		
Publishing:	<input checked="" type="checkbox"/> Intranet	<input checked="" type="checkbox"/> Internet	
Document owner:	Chief Pharmacist		
Author / Reviewer:	KEMH Pharmacy Department		
Date first issued:	June 2015	Version:	2
Last reviewed:	April 2020	Next review date:	April 2023
Endorsed by:	Medicines and Therapeutics Committee	Date:	
Standards Applicable:	NSQHS Standards: 1  Governance, 4  Medication Safety		
<p>Printed or personally saved electronic copies of this document are considered uncontrolled.</p> <p>Access the current version from the WNHS website.</p> <p>For any enquiries relating to this guideline, please email KEMH.PharmacyAdmin@health.wa.gov.au</p>			

© Department of Health Western Australia 2020