



# KNOW YOUR INSULIN

Products in this chart are not shown to scale. These materials have been prepared by Eli Lilly Australia Pty Ltd 112 Wharf Rd, West Ryde, NSW 2114.

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**The product information is current at the date of preparation (January 2016).**

**All Australian insulin preparations (except Toujeo®) contain 100 units/mL.**

**DO NOT SUBSTITUTE BRANDS OF INSULIN**

## INSULIN QUICK IDENTIFICATION CHART

Insulins are clustered into 5 groups depending on onset of action and duration

### ANALOGUES

	BRAND NAME	GENERIC NAME(S)
RAPID ACTING	Apidra®	glulisine
	Humalog®	lispro
	NovoRapid®	aspart (rys)
LONG ACTING (basal insulins)	Lantus®	glargine <b>100 units/mL</b>
	Levemir®	detemir (rys)
	Toujeo®	glargine <b>300 units/mL</b>
PREMIXES	Humalog® Mix25™	lispro 25% / lispro protamine 75%
	Humalog® Mix50™	lispro 50% / lispro protamine 50%
	NovoMix® 30	30% rapid-acting / 70% protaminated insulin aspart (rys)

### HUMAN

SHORT ACTING	Humulin® R	neutral
	Actrapid®	neutral
INTERMEDIATE ACTING	Humulin® NPH	isophane
	Protaphane®	isophane
PREMIXES	Humulin® 30/70	neutral 30% / isophane 70%
	Mixtard® 30/70	neutral 30% / isophane 70%
	Mixtard® 50/50	neutral 50% / isophane 50%

### BOVINE

SHORT ACTING	Hypurin® Neutral	neutral
INTERMEDIATE ACTING	Hypurin® Isophane	NPH

**Presentation**

Apidra® SoloStar® 3mL prefilled multidose disposable injection device.

Apidra® 10mL glass vial.

Apidra® 3mL cartridge (suitable for use with ClikSTAR® reusable device)

Clear colourless solution.

## Apidra® SoloStar® insulin *glulisine* RAPID ACTING INSULIN ANALOGUE



Apidra® SoloStar® disposable injection pen



Apidra® 10mL vial



Apidra® 3mL cartridge

Formulation	Type	Manufacturer	Time to maximal effect / peaktime	Duration (time effect terminates)	Administration Guide
Rapid acting human insulin analogue. Also known as insulin glulisine.	Human insulin analogue	Sanofi	Approximately 1 hour.	Approximately 4 hours.	Give immediately (up to 15 minutes) before a meal. When necessary, can be given soon after meals (within 20 minutes of the start of the meal).

**Presentation**

Humalog® 3mL KwikPen™ prefilled multidose disposable injection device.

Humalog® 10mL glass vial.

Humalog® 3mL cartridge (suitable for use with HumaPen® Savvio™ and Luxura™ HD reuseable devices).

Clear colourless solution. Commonly used in Continuous Glucose Monitoring PUMPS.

## Humalog® insulin *lispro* RAPID ACTING INSULIN ANALOGUE



Humalog® KwikPen™



Humalog® 10mL vial



Humalog® 3mL cartridge

Formulation	Type	Manufacturer	Time to maximal effect / peaktime	Duration (time effect terminates)	Administration Guide
Rapid acting human insulin analogue. Also known as insulin lispro solution.	Human insulin analogue	Lilly	Earlier peak of action compared to regular insulin. Insulin lispro solution maximal effect is reached at approximately 1 hour.	Shorter duration of activity compared to regular insulin - approximately 3.5 to 4.5 hours.	Very rapid onset of action within 15 minutes. Give immediately (up to 15 minutes) before a meal. When necessary, can be given soon after meals (within 20 minutes of the start of a meal).

**Presentation**

NovoRapid® 3mL FlexPen® prefilled multidose disposable injection device.

NovoRapid® 10mL glass vial.

NovoRapid® 3mL Penfill®

Clear, colourless solution.

Commonly used in Continuous Glucose Monitoring PUMPS.

## NovoRapid® insulin *aspart (rys)* RAPID ACTING INSULIN ANALOGUE



NovoRapid® FlexPen®



NovoRapid® 10mL vial



NovoRapid® 3mL Penfill®

Formulation	Type	Manufacturer	Time to maximal effect / peaktime	Duration (time effect terminates)	Administration Guide
Rapid acting human insulin analogue. Also known as insulin aspart.	Human insulin analogue	Novo Nordisk	Between 1 to 3 hours.	3 to 5 hours, a shorter duration of action compared to soluble human insulin.	Faster onset of action than soluble human insulin - within 10 to 20 minutes. Should be given immediately before a meal or, when necessary, after the start of the meal.

## ANALOGUES

**RAPID ACTING**  
 Apidra® (*glulisine*)  
 Humalog® (*lispro*)  
 NovoRapid® (*aspart*)

**Presentation**

Lantus SoloStar® 3mL prefilled disposable injection device.

Lantus® 10mL glass vial.

Lantus® 3mL cartridge (suitable for use with the KlikSTAR® reusable device).

Clear colourless solution.

## Lantus® *insulin glargine* LONG ACTING BASAL INSULIN ANALOGUE



Lantus® SoloStar® disposable injection pen



Lantus® 10mL vial



Lantus® 3mL cartridge

Formulation	Type	Manufacturer	Time to maximal effect / peaktime	Duration (time effect terminates)	Administration Guide
Long acting basal human insulin analogue. Also known as insulin glargine.	Human insulin analogue	Sanofi	There is a lack of a peak.	24 hours.	At morning or bedtime. Administer same time every day.

**Presentation**

Toujeo® SoloStar® 1.5mL prefilled disposable injection device.

Clear colourless solution.

## Toujeo® *insulin glargine* LONG ACTING BASAL INSULIN ANALOGUE



Toujeo® SoloStar® disposable Injection Pen

Formulation	Type	Manufacturer	Time to maximal effect / peaktime	Duration (time effect terminates)	Administration Guide
Long acting basal human insulin analogue. Also known as insulin glargine. <b>300 units/mL</b>	Human insulin analogue	Sanofi	There is a lack of a peak.	Up to 36 hours.	At morning or bedtime. Administer same time every day.

**Presentation**

Levemir® 3mL FlexPen® prefilled multidose disposable injection device.

Levemir® 3mL Penfill®.

Clear colourless solution.

## Levemir® *insulin detemir (rys)* LONG ACTING BASAL INSULIN ANALOGUE



Levemir® FlexPen®



Levemir® 3mL Penfill®

Formulation	Type	Manufacturer	Time to maximal effect / peaktime	Duration (time effect terminates)	Administration Guide
Long acting human insulin analogue. Also known as insulin detemir.	Human insulin analogue	Novo Nordisk	3 to 14 hours.	Up to 24 hours.	Once or twice daily. At evening meal, bedtime or breakfast.

## ANALOGUES

### LONG ACTING (basal)

- Lantus® (*glargine*)
- Levemir® (*detemir*)
- Toujeo® (*glargine* 300 units/mL)

**Presentation**

Humalog® KwikPen™ prefilled multidose disposable injection device.

Humalog® Mix 25™ 3mL cartridge (suitable for use with HumaPen® Savvio™ reusable devices).

White suspension.

## Humalog® Mix 25™ 25/75 PREMIXED BIPHASIC INSULIN ANALOGUE



Humalog® Mix25 KwikPen™



Humalog® Mix25 3mL cartridge

Formulation	Type	Manufacturer	Time to maximal effect / peaktime	Duration (time effect terminates)	Administration Guide
Premixed combination of rapid acting and intermediate-acting insulin (insulin lispro 25% and insulin lispro protamine suspension 75%)	Biphasic human insulin analogue	Lilly	Earlier peak of action compared to regular insulin. Insulin lispro solution maximal effect is reached at approximately 1 hour.	16 to 18 hours.	Very rapid onset of action within 15 minutes. Give immediately (up to 15 minutes) before a meal. When necessary, can be given soon after meals (within 20 minutes of the start of a meal).

**Presentation**

Humalog® KwikPen™ prefilled multidose disposable injection device.

Humalog® Mix 50™ 3mL cartridge (suitable for use with HumaPen® Savvio™ reusable devices).

White suspension.

## Humalog® Mix 50™ 50/50 PREMIXED BIPHASIC INSULIN ANALOGUE



Humalog® Mix50™ KwikPen™



Humalog® Mix 50™ 3mL cartridge

Formulation	Type	Manufacturer	Time to maximal effect / peaktime	Duration (time effect terminates)	Administration Guide
Premixed combination of rapid acting and intermediate-acting insulin (insulin lispro 50% and insulin lispro protamine suspension 50%)	Biphasic human insulin analogue	Lilly	Earlier peak of action compared to regular insulin. Insulin lispro solution maximal effect is reached at approximately 1 hour.	16 to 18 hours.	Very rapid onset of action within 15 minutes. Give immediately (up to 15 minutes) before a meal. When necessary, can be given soon after meals (within 20 minutes of the start of a meal).

**Presentation**

NovoMix® 30 3mL FlexPen® prefilled multidose disposable injection device.

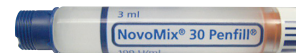
NovoMix® 30 3mL Penfill®.

White, cloudy suspension.

## NovoMix® 30 30/70 PREMIXED BIPHASIC INSULIN ANALOGUE



NovoMix® 30 FlexPen®



NovoMix® 30 3mL Penfill®

Formulation	Type	Manufacturer	Time to maximal effect / peaktime	Duration (time effect terminates)	Administration Guide
Premixed combination of rapid-acting and intermediate-acting insulin (30% soluble insulin aspart, 70% protaminated insulin aspart)	Biphasic human insulin analogue	Novo Nordisk	1 to 4 hours.	Up to 24 hours.	Within 10 to 20 minutes - should be given immediately before a meal or, when necessary, after the start of a meal.

## ANALOGUES

### PREMIXES

Humalog® Mix 25™ (25/75)  
 Humalog® Mix 50™ (50/50)  
 NovoMix® 30 (30/70)

**Presentation**

Humulin® R 10mL glass vial.

Humulin® R 3mL cartridge (suitable for use with HumaPen® Savvio™ and Luxura™ HD reuseable devices).

Clear colourless solution.

**Humulin® R neutral, soluble or regular insulin SHORT ACTING HUMAN INSULIN**



Humulin® R 10mL vial



Humulin® R 3mL cartridge

Formulation	Type	Manufacturer	Time to maximal effect / peaktime	Duration (time effect terminates)	Administration Guide
Short acting human insulin. Also known as neutral, soluble or regular insulin.	Human	Lilly	2 to 4 hours	6 to 8 hours	30 minutes before meals.

**Presentation**

Actrapid® 10mL glass vial.

Actrapid® 3mL Penfill®.

Clear colourless solution.

**Actrapid® neutral, soluble or regular insulin SHORT ACTING HUMAN INSULIN**



Actrapid® 10mL vial



Actrapid® 3mL Penfill®

Formulation	Type	Manufacturer	Time to maximal effect / peaktime	Duration (time effect terminates)	Administration Guide
Short acting human insulin. Also known as neutral, soluble or regular insulin.	Human	Novo Nordisk	2.5 and 5 hours.	8 hours.	30 minutes before meals.

**HUMAN**

**SHORT ACTING**  
Humulin® R  
Actrapid®

**Presentation**

Humulin® NPH 10mL glass vial.

Humulin® NPH 3mL cartridge (suitable for use with HumaPen® Savvio™ and Luxura™ HD reuseable devices).

Suspension of white, crystalline precipitate.

**Humulin® NPH isophane** INTERMEDIATE ACTING HUMAN INSULIN



Humulin® NPH 10mL vial



Humulin® NPH 3mL cartridge

Formulation	Type	Manufacturer	Time to maximal effect / peaktime	Duration (time effect terminates)	Administration Guide
Intermediate acting human insulin. Also known as isophane insulin.	Human	Lilly	Approximately 1 hour / 4 to 10 hours	16 to 18 hours	Can be administered once or twice daily as an evening and/or morning injection.

**Presentation**

Protaphane® 3mL InnoLet® plastic disposable delivery device.

Protaphane® 10mL vial.

Protaphane® 3mL Penfill®

White, cloudy suspension.

**Protaphane® isophane** INTERMEDIATE ACTING HUMAN INSULIN



Protaphane® 3mL InnoLet®



Protaphane® 10mL vial



Protaphane® 3mL Penfill®

Formulation	Type	Manufacturer	Time to maximal effect / peaktime	Duration (time effect terminates)	Administration Guide
Intermediate acting human insulin. Also known as isophane insulin.	Human	Novo Nordisk	Approximately 1.5 hours / 4 and 12 hours.	Up to 24 hours.	Can be administered once or twice daily as an evening and/or morning injection.

**HUMAN**  
**INTERMEDIATE**  
**ACTING**  
 Humulin® NPH  
 Protaphane®

**Presentation**

Humulin® 30/70 10mL glass vial.

Humulin® 30/70 3mL cartridge (suitable for use with HumaPen® Savvio™ reusable device).

Suspension of white, crystalline precipitate.

**Humulin® 30/70 PREMIXED BIPHASIC HUMAN INSULIN**



Humulin® 30/70 10mL vial



3Humulin® 30/70 3mL cartridge

Formulation	Type	Manufacturer	Time to maximal effect / peaktime	Duration (time effect terminates)	Administration Guide
A mixture consisting of 30% Humulin R (regular/neutral insulin) and 70% Humulin NPH (isophane insulin).	Human	Lilly	2 to 12 hours	16 to 18 hours	Intermediate acting insulin with more rapid onset of action than NPH alone. Approximately 30 minutes before a meal.

**Presentation**

Mixtard® 30/70 3mL InnoLet® plastic disposable delivery device.

Mixtard® 30/70 3mL Penfill®.

White, cloudy suspension.

**Mixtard® 30/70 PREMIXED BIPHASIC HUMAN INSULIN**



Mixtard® 30/70 3mL InnoLet®



Mixtard® 30/70 3mL Penfill®

Formulation	Type	Manufacturer	Time to maximal effect / peaktime	Duration (time effect terminates)	Administration Guide
A mixture consisting of neutral, short-acting insulin (30%) and isophane, intermediate-acting insulin (70%).	Human	Novo Nordisk	2 and 12 hours.	24 hours.	Approximately 30 minutes before a meal.

**Presentation**

Mixtard® 50/50 3 mL Penfill®.

White, cloudy suspension.

**Mixtard® 50/50 PREMIXED BIPHASIC HUMAN INSULIN**



Mixtard® 50/50 3mL Penfill®

Formulation	Type	Manufacturer	Time to maximal effect / peaktime	Duration (time effect terminates)	Administration Guide
A mixture consisting of neutral, short-acting insulin (50%) and isophane, intermediate-acting insulin (50%).	Human	Novo Nordisk	4 and 8 hours.	24 hours.	Approximately 30 minutes before a meal.

**HUMAN**

**PREMIXES**

- Humulin® 30/70
- Mixtard® 30/70
- Mixtard® 50/50

**Presentation**

Hypurin® Neutral  
10mL glass vial.

Clear, colourless solution.

## Hypurin® Neutral *neutral, soluble or regular insulin*



Hypurin® Neutral 10mL vial

Formulation	Type	Manufacturer	Time to maximal effect / peaktime	Duration (time effect terminates)	Administration Guide
Short-acting insulin. Also known as neutral, soluble or regular insulin.	Bovine	Aspen Pharmacare	Approximately 30 to 60 minutes; maximal effect is exerted over the mid-range.	6 to 8 hours.	Approximately 30 to 60 minutes before a meal.

**Presentation**

Hypurin® Isophane  
10mL glass vial.

White suspension.

## Hypurin® Isophane *NPH*



Hypurin® Isophane 10mL vial

Formulation	Type	Manufacturer	Time to maximal effect / peaktime	Duration (time effect terminates)	Administration Guide
Intermediate-acting isophane insulin.	Bovine	Aspen Pharmacare	Approximately 2 hours; 6 to 12 hours	Approximately 18 hours.	Single dose before breakfast.

### BOVINE

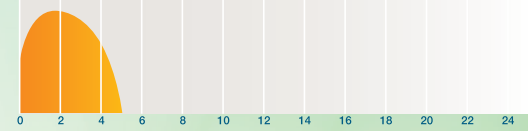
**SHORT ACTING**  
Hypurin®  
Neutral

**INTERMEDIATE ACTING**  
Hypurin®  
Isophane (*NPH*)



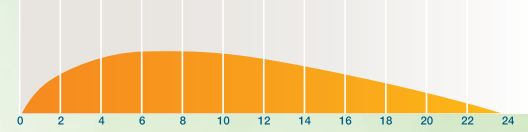
RAPID ACTING (analogue)

**Apidra**  
**Humalog**  
**NovoRapid**



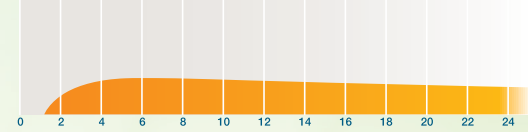
LONG ACTING BASAL ANALOGUE (detemir)

**Levemir**



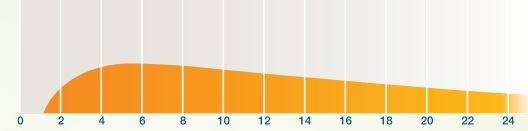
LONG ACTING BASAL ANALOGUE (glargine) **300 units/mL**

**Toujeo**



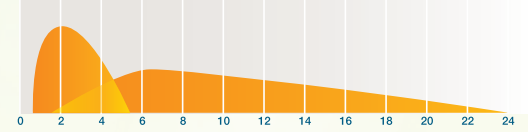
LONG ACTING BASAL ANALOGUE (glargine) **100 units/mL**

**Lantus**



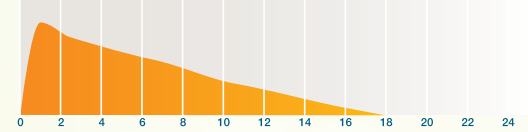
30% RAPID AND 70% INTERMEDIATE ACTING ANALOGUE INSULIN

**NovoMix 30**



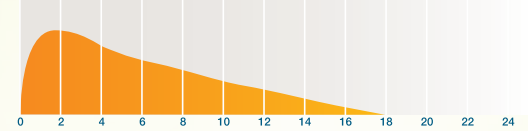
25% RAPID AND 75% INTERMEDIATE ACTING ANALOGUE INSULIN

**Humalog Mix25**



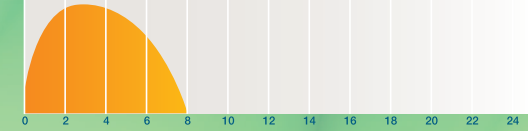
50% RAPID AND 50% INTERMEDIATE ACTING ANALOGUE INSULIN

**Humalog Mix50**



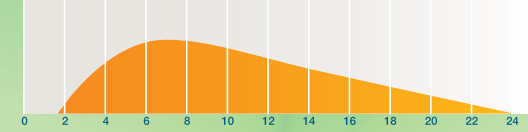
SHORT ACTING HUMAN INSULIN (neutral)

**Actrapid**  
**Humulin R**



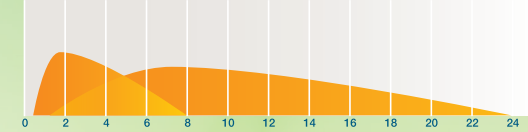
INTERMEDIATE ACTING HUMAN INSULIN (isophane)

**Protaphane**  
**Humulin NPH**



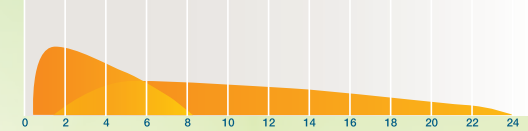
30% SHORT AND 70% INTERMEDIATE ACTING HUMAN INSULIN

**Mixtard 30/70**  
**Humulin 30/70**



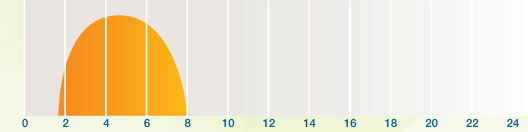
50% SHORT AND 50% INTERMEDIATE ACTING HUMAN INSULIN

**Mixtard 50/50**



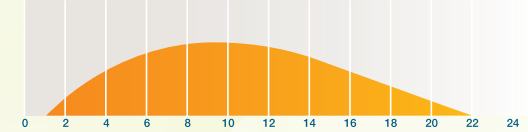
BOVINE SHORT ACTING

**Hypurin Neutral**



BOVINE INTERMEDIATE ACTING (isophane)

**Hypurin Isophane**



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