

Insulin Comparison Chart

Insulin Name (Trade)	When does it start working? (onset)	When will the effect be the greatest? (peak)	How long will it lower blood glucose? (duration)	Notes for Use	MGH Formulary Availability*
Rapid Acting Analogs					
Lispro (HumaLOG™)	<15 minutes	30-90 minutes	3-5 hours	If mixing with NPH, rapid acting insulin (clear formulation) should be drawn into syringe first. Mixture should be given immediately to avoid effects on peak action.	Nonformulary
Aspart (NovoLog™)	<15 minutes	30-90 minutes	3-5 hours		3 mL FlexPen®
Glulisine (Apidra™)	<15 minutes	30-90 minutes	3-5 hours		Nonformulary
Short Acting					
Regular (Novolin R™ or Humulin R™)	0.5-1 hour	2-4 hours	4-8 hours	If mixing with NPH, short acting insulin (clear formulation) should be drawn into syringe first. Mixture should be given immediately to avoid effects on peak action.	3 mL vial 20 mL vial (500 units/mL)— <i>restricted</i>
Intermediate Acting					
NPH (NovoLIN N™ or HumuLIN N™)	1-2 hours	4-10 hours	10-18 hours	Cloudy formulation.	3 mL vial
Long Acting Analogs					
Glargine (Lantus™)	1-2 hours	No peak	20-24 hours	Do not mix with other insulin formulations.	3 mL SoloStar® pen
Detemir (Levemir™)	1-2 hours	Relatively flat	Up to 24 hours (dose-dependent)	Both glargine and detemir are clear formulations.	3 mL FlexPen®
Combinations					
NovoLIN 70/30 or HumuLIN 70/30	0.5-1 hour	2-10 hours	10-18 hours	70% NPH +30% regular insulin. Insulin action includes 2 peaks (1 from each formulation). Cloudy formulation.	3 mL vial
NovoLog Mix 70/30 or HumaLOG Mix 75/25 or 50/50	<15 minutes	1-2 hours	10-18 hours	Insulin action includes 2 peaks (1 from each formulation). <u>Novolog Mix (cloudy formulation):</u> aspart protamine 70% + aspart 30% <u>Humalog mix (cloudy formulation):</u> 75/25=75% lispro protamine + 25% lispro 50/50=50% lispro protamine + 50% lispro	10 mL vial— <i>HumaLOG Mix 75/25 only</i>

*All insulin preparations are 100 units/mL except concentrated regular insulin U500 containing 500 units/mL.

Onset, Peak, and Duration may vary considerably in different people.

Insulin analogs and analog mix formulations are available in prefilled pens:

- KwikPen® is a disposable pen manufactured for Lilly products including HumaLOG® and HumaLOG® Mix.
- FlexPen® is a disposable pen manufactured for Novo Nordisk products including NovoLog® and Levemir®.
- SoloSTAR® pen is a disposable pen manufactured for Sanofi products including Lantus® and Apidra®.