





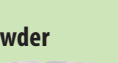







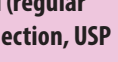




	Insulin	Manufacturer	Onset (approximately)	Peak (approximately)	Duration (approximately)		Room Temperature Storage Range (59°–86° F)	Need to Roll Briskly 10+ Times?	Cartridge Sizes	Pens That Fit the Cartridges
RAPID ACTING	 NovoLog® Vial (insulin aspart [rDNA origin] injection)	Novo Nordisk	10–20 minutes	1–3 hours	3–5 hours		Up to 28 days	No	N/A	N/A
	 NovoLog® PenFill® (insulin aspart [rDNA origin] injection)	Novo Nordisk	10–20 minutes	1–3 hours	3–5 hours		Up to 28 days	No	3 mL	NovoPen Echo *NovoPen 3 and NovoPen Jr have been discontinued as of March, 2014
	 NovoLog® FlexPen (prefilled)	Novo Nordisk	10–20 minutes	1–3 hours	3–5 hours		Up to 28 days ^c	No	3 mL	N/A
	 Apidra® (insulin glulisine [rDNA origin] injection)	Sanofi	15–30 minutes	60–90 minutes	<5 hours		Up to 28 days	No	N/A	N/A
	 Apidra® SoloSTAR® (prefilled)	Sanofi	15–30 minutes	60–90 minutes	<5 hours		Up to 28 days	No	Pre-filled	N/A
	 Apidra® Cartridge	Sanofi	15–30 minutes	0.5–2.5 hours	5 hours or less		Up to 28 days	No	3 mL	N/A
	 Afrezza® (Insulin human) Inhalation Powder	MannKind	Immediate	12–15 minutes	180 minutes		Up to 10 days	No	4 Unit, 8 Unit, 12 Unit	N/A
	 Humalog® Vial (insulin lispro injection, USP [rDNA origin])	Lilly	15–30 minutes	0.5–2.5 hours	5 hours or less		Up to 28 days	No	N/A	N/A
	 Humalog® Cartridge (insulin lispro injection, USP [rDNA origin])	Lilly	15–30 minutes	0.5–3.0 hours	5 hours or less		Up to 28 days ^c	No	3 mL	HumaPen® Luxura™ HD
	 Humalog® KwikPen™ (insulin lispro injection, USP [rDNA origin])	Lilly	15–30 minutes	0.5–3.0 hours	5 hours or less		Up to 28 days ^c	No	N/A	N/A
	 Humalog® KwikPen™ U-200	Lilly	15–30 minutes	0.5–3.0 hours	5 hours or less		Up to 28 days	No	N/A	N/A
SHORT ACTING	 Novolin® R Vial (Regular human insulin)	Novo Nordisk	30 minutes	1.5–3.5 hours	8 hours		Up to 42 days below 77° F	No	N/A	N/A
	 Humulin® R (Regular insulin human injection, USP [rDNA origin])	Lilly	30–60 minutes	2–4 hours	5–8 hours		Up to 31 days	No	N/A	N/A
	 Humulin® U-500 Humulin® R (U-500) Vial (regular U-500 [concentrated] insulin human injection, USP [rDNA origin]) ^d	Lilly	30 minutes	N/A	Up to 24 hours		Up to 40 days	No	N/A	N/A
INTERMEDIATE ACTING	 Novolin® N Vial (NPH human insulin isophane)	Novo Nordisk	1.5 hours	4–12 hours	24 hours		Up to 42 days below 77° F	Yes	N/A	N/A
	 Humulin® N (NPH) Vial (NPH human insulin [rDNA origin] isophane suspension)	Lilly	1–2 hours	2–8 hours	14–24 hours		Up to 31 days	Rotate between hands & invert	N/A	N/A
	 Humulin® N (NPH) KwikPen® (prefilled) (NPH human insulin [rDNA origin] isophane suspension)	Lilly	1–2 hours	2–8 hours	14–24 hours		Up to 14 days ^c	Yes	N/A	N/A

All insulins listed are U-100 strength. All insulins should be refrigerated at 36°–46° F prior to use.
a: Also available in U-500 by prescription only.
b: Lantus and Levemir release at a relatively constant rate over a 24-hour period.
c: Pens in use (open) should not be stored in the refrigerator.
d: This insulin differs from Humulin U-100 because it has both prandial and basal properties.

Printer-friendly charts are available at www.DiabetesHealth.com/charts
Customer Support: Lilly, The Lilly Answers Center (800) 545-5979
Novo Nordisk (800) 727-6500
sanofi-aventis (800) 633-1610

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LONG ACTING	Tresiba® (insulin degludec injection) FlexTouch U100 and U200, Novo Nordisk, 1 hour, virtually peakless	Novo Nordisk	1.6 hours	No pronounced peak ^b		Beyond 42 hours	Up to 56 days	No	3 mL	N/A
	Levemir® Vial (insulin detemir [rDNA origin] injection)	Novo Nordisk	1.6 hours	No pronounced peak ^b		Up to 24 hours	Up to 42 days	No	N/A	N/A
	Levemir® FlexTouch®	Novo Nordisk	1.6 hours	No pronounced peak ^b		Up to 24 hours	Up to 42 days ^c	No	3 mL	N/A
	Lantus® (insulin glargine injection) 100 Units/mL	Sanofi	1.1 hours	5 hours		24 hours	Up to 28 days	No	N/A	N/A
	Lantus® Cartridge	Sanofi	1.5 hours	None ^b		24 hours	Up to 28 days	No	3 mL	N/A
	Lantus® SoloSTAR® (insulin glargine injection) 100 Units/mL	Sanofi	1.1 hours	5 hours		24 hours	Up to 28 days	No	Pre-filled	N/A
	Toujeo® SoloSTAR® (insulin glargine injections) 300 Units/mL	Sanofi	6 hours	12 hours (at .4 units per kg)		24 hours	Up to 42 days	No	Pre-filled	N/A
INTERMEDIATE/RAPID ACTING	NovoLog® Mix 70/30 Vial® (70% insulin aspart protamine suspension/30% aspart)	Novo Nordisk	10–20 minutes	2.4 hours		Up to 24 hours	Up to 28 days ^c	Yes	N/A	N/A
	NovoLog® Mix 70/30 FlexPen® (70% insulin aspart protamine suspension/30% aspart insulin aspart injection, [rDNA origin])	Novo Nordisk	10–20 minutes	2.4 hours		Up to 24 hours	Up to 14 days ^c	Yes	3 mL	N/A
	Humalog® Mix 50/50™ Vial (50% insulin lispro protamine suspension, 50% insulin lispro injection [rDNA origin])	Lilly	15–30 minutes	0.5–3 hours		14–24 hours	Up to 28 days	Yes Carefully shake/rotate	N/A	N/A
	Humalog® Mix 50/50™ KwikPen™ (50% insulin lispro protamine suspension, 50% insulin lispro injection [rDNA origin]) ^a	Lilly	15–30 minutes	0.5–3 hours		14–24 hours	Up to 10 days ^c	Roll between hands and invert	N/A	N/A
	Humalog® Mix 75/25™ Vial (75% insulin lispro protamine suspension, 25% insulin lispro injection [rDNA origin])	Lilly	15–30 minutes	0.5–2.5 hours		14–24 hours	Up to 28 days	Yes	N/A	N/A
	Humalog® Mix 75/25™ KwikPen™ (prefilled) (75% insulin lispro protamine suspension, 25% insulin lispro injection [rDNA origin]) ^a	Lilly	15–30 minutes	0.5–2.5 hours		14–24 hours	Up to 10 days ^c	Yes	N/A	N/A
INTERMEDIATE/SHORT ACTING	Novolin® 70/30 Vial® (70% NPH/30% Regular)	Novo Nordisk	30 minutes	2–12 hours		24 hours	Up to 42 days below 77° F	Yes	N/A	N/A
	Humulin® 70/30 Vial (70% human insulin isophane suspension, 30% human insulin injection [rDNA origin])	Lilly	30–90 minutes	1.5–6.5 hours		18–24 hours	Up to 31 days	Yes Carefully shake/rotate	N/A	N/A
	Humulin® 70/30 KwikPen™ (prefilled) (70% human insulin isophane suspension, 30% human insulin injection [rDNA origin]) ^a	Lilly	30–90 minutes	1.5–6.5 hours		18–24 hours	Up to 10 days ^c	Yes	N/A	N/A

^aKwikPen must never be shared between patients, even if the needle is changed. Patients using Humalog Mix50/50 vials must never share needles or syringes with another person. Sharing poses a risk for transmission of blood-borne pathogens.

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