











INSULIN

	Insulin	Manufacturer	Onset (approximately)	Peak (approximately)	Duration (approximately)	
RAPID ACTING	NovoLog® Vial Insulin aspart (rDNA origin) injection	 Novo Nordisk	10–20 minutes	1–3 hours	3–5 hours	
	NovoLog® PenFill® Insulin aspart (rDNA origin) injection	 Novo Nordisk	10–20 minutes	1–3 hours	3–5 hours	
	NovoLog® FlexPen (prefilled)	 Novo Nordisk	10–20 minutes	1–3 hours	3–5 hours	
	Apidra® (insulin glulisine [rDNA origin] injection)	Sanofi	15–30 minutes	60–90 minutes	<5 hours	
	Apidra® SoloSTAR® (prefilled)	 Sanofi	15–30 minutes	60–90 minutes	<5 hours	
	Apidra® Cartridge	 Sanofi  Afrezza	15–30 minutes	0.5–2.5 hours	5 hours or less	
	Afrezza® (Insulin human) Inhalation Powder	MannKind	Immediate	12–15 minutes	180 minutes	
	Humalog® Vial (insulin lispro injection, USP [rDNA origin])	 Lilly	Lilly	15–30 minutes	0.5–2.5 hours	5 hours or less
	Humalog® Cartridge (insulin lispro injection, USP [rDNA origin])	Lilly	15–30 minutes	0.5–3.0 hours	5 hours or less	
	Humalog® KwikPen™ (insulin lispro injection, USP [rDNA origin])	 Lilly	Lilly	15–30 minutes	0.5–3.0 hours	5 hours or less
Humalog® KwikPen™ U-200	 Lilly	Lilly	15–30 minutes	0.5–3.0 hours	5 hours or less	
SHORT ACTING	Novolin® R Vial (Regular human insulin)	 Novo Nordisk	30 minutes	1.5–3.5 hours	8 hours	
	Humulin® R (Regular insulin human injection, USP [rDNA origin])	 Lilly	30–60 minutes	2–4 hours	5–8 hours	
	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	
INTERMEDIATE ACTING	Novolin® N Vial (NPH human insulin isophane)	Novo Nordisk	1.5 hours	4–12 hours	24 hours	
	Humulin® N (NPH) Vial (NPH human insulin [rDNA origin] isophane suspension)	Lilly	1–2 hours	2–8 hours	14–24 hours	
	Humulin® N (NPH) KwikPen® (prefilled) (NPH human insulin [rDNA origin] isophane suspension)	Lilly	1–2 hours	2–8 hours	14–24 hours	

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.

	Room Temperature Storage Range (59°–86° F)	Need to Roll Briskly 10+ Times?	Cartridge Sizes	Pens That Fit the Cartridges
	Up to 28 days	No	N/A	N/A
	Up to 28 days	No	3 mL	NovoPen Echo *NovoPen 3 and NovoPen Jr have been discontinued as of March, 2014
	Up to 28 days ^c	No	3 mL	N/A
	Up to 28 days	No	N/A	N/A
	Up to 28 days	No	Pre-filled	N/A
	Up to 28 days	No	3 mL	N/A
	Up to 10 days	No	4 Unit, 8 Unit, 12 Unit	N/A
	Up to 28 days	No	N/A	N/A
	Up to 28 days ^c	No	3 mL	HumaPen® Luxura™ HD
	Up to 28 days ^c	No	N/A	N/A
	Up to 28 days	No	N/A	N/A
	Up to 42 days below 77° F	No	N/A	N/A
	Up to 31 days	No	N/A	N/A
	Up to 40 days	No	N/A	N/A
	Up to 42 days below 77° F	Yes	N/A	N/A
	Up to 31 days	Rotate between hands & invert	N/A	N/A
	Up to 14 days ^c	Yes	N/A	N/A

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

INSULIN

	Insulin	Manufacturer	Onset (approximately)	Peak (approximately)
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
	Levemir® Vial (insulin detemir [rDNA origin] injection)	Novo Nordisk	1.6 hours	No pronounced peak ^b
	Levemir® FlexTouch®	Novo Nordisk	1.6 hours	No pronounced peak ^b
	Lantus® (insulin glargine injection) 100 Units/mL	Sanofi	1.1 hours	5 hours
	Lantus® Cartridge	Sanofi	1.5 hours	None ^b
	Lantus® SoloSTAR® (insulin glargine injection) 100 Units/mL	Sanofi	1.1 hours	5 hours
	Toujeo® SoloSTAR® (insulin glargine injections) 300 Units/mL	Sanofi	6 hours	12 hours (at .4 units per kg)
INTERMEDIATE/RAPID ACTING	NovoLog® Mix 70/30 Vial® (70% insulin aspart protamine suspension/30% aspart)	Novo Nordisk	10–20 minutes	2.4 hours
	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
	Humalog® Mix 50/50™ Vial (50% insulin lispro protamine suspension, 50% insulin lispro injection [rDNA origin])	Lilly	15–30 minutes	0.5–3 hours
	Humalog® Mix 50/50™ KwikPen™ (50% insulin lispro protamine suspension, 50% insulin lispro injection [rDNA origin]) *	Lilly	15–30 minutes	0.5–3 hours
	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
	Humalog® Mix 75/25™ KwikPen™ (prefilled) (75% insulin lispro protamine suspension, 25% insulin lispro injection [rDNA origin]) *	Lilly	15–30 minutes	0.5–2.5 hours
INTERMEDIATE/SHORT ACTING	Novolin® 70/30 Vial® (70% NPH/30% Regular)	Novo Nordisk	30 minutes	2–12 hours
	Humulin® 70/30 Vial (70% human insulin isophane suspension, 30% human insulin injection [rDNA origin])	Lilly	30–90 minutes	1.5–6.5 hours
	Humulin® 70/30 KwikPen™ (prefilled) (70% human insulin isophane suspension, 30% human insulin injection [rDNA origin]) *	Lilly	30–90 minutes	1.5–6.5 hours



*KwikPen 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.

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.

INSULIN

	Duration (approximately)	Room Temperature Storage Range (59°–86° F)	Need to Roll Briskly 10+ Times?	Cartridge Sizes	Pens That Fit the Cartridges
	Beyond 42 hours	Up to 56 days	No	3 mL	N/A
	Up to 24 hours	Up to 42 days	No	N/A	N/A
	Up to 24 hours	Up to 42 days ^c	No	3 mL	N/A
	24 hours	Up to 28 days	No	N/A	N/A
	24 hours	Up to 28 days	No	3 mL	N/A
	24 hours	Up to 28 days	No	Pre-filled	N/A
	24 hours	Up to 42 days	No	Pre-filled	N/A
	Up to 24 hours	Up to 28 days ^c	Yes	N/A	N/A
	Up to 24 hours	Up to 14 days ^c	Yes	3 mL	N/A
	14-24 hours	Up to 28 days	Yes Carefully shake/rotate	N/A	N/A
	14-24 hours	Up to 10 days ^c	Roll between hands and invert	N/A	N/A
	14-24 hours	Up to 28 days	Yes	N/A	N/A
	14-24 hours	Up to 10 days ^c	Yes	N/A	N/A
	24 hours	Up to 42 days below 77° F	Yes	N/A	N/A
	18-24 hours	Up to 31 days	Yes Carefully shake/rotate	N/A	N/A
	18-24 hours	Up to 10 days ^c	Yes	N/A	N/A

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