

## Your Complete **Insulin** Reference Guide From *Diabetes Health*

	Insulin	Manufacturer	Onset (approximately)	Peak (approximately)	Duration (approximately)
INHALABLE INSULIN	<b>EXUBERA</b> (insulin human [rDNA origin]) Inhalation Powder 	Pfizer	10–20 minutes	49 minutes (range 30–90 minutes)	6 hours
	<b>Apidra Cartridge</b> (insulin glulisine [rDNA origin] injection)	sanofi aventis	15–30 minutes	0.5–2.5 hours	5 hours or less
RAPID ACTING	<b>Apidra Vial</b> (insulin glulisine [rDNA origin] injection)	sanofi aventis	15–30 minutes	0.5–2.5 hours	5 hours or less
	<b>Humalog Vial</b> (insulin lispro) 	Eli Lilly & Company	15–30 minutes	0.5–2.5 hours	5 hours or less
	<b>Humalog Cartridge</b>	Eli Lilly & Company	15–30 minutes	0.5–2.5 hours	5 hours or less
	<b>Humalog Pen (prefilled)</b>	Eli Lilly & Company	15–30 minutes	0.5–2.5 hours	5 hours or less
	<b>NovoLog Vial</b> (insulin aspart) 	Novo Nordisk	10–20 minutes	1–3 hours	3–5 hours
	<b>NovoLog PenFill</b>	Novo Nordisk	10–20 minutes	1–3 hours	3–5 hours
	<b>NovoLog FlexPen (prefilled)</b>	Novo Nordisk	10–20 minutes	1–3 hours	3–5 hours
SHORT ACTING	<b>Humulin R (Regular) Vial<sup>a</sup></b>	Eli Lilly & Company	30–60 minutes	2–4 hours	5–8 hours
	<b>Novolin R (Regular) InnoLet</b> 	Novo Nordisk	30 minutes	2.5–5 hours	8 hours
	<b>Novolin R (Regular) PenFill</b>	Novo Nordisk	30 minutes	2.5–5 hours	8 hours
	<b>Novolin R Vial (Regular human insulin)</b>	Novo Nordisk	30 minutes	2.5–5 hours	8 hours
	<b>ReliOn/Novolin R Vial</b>	Novo Nordisk	30 minutes	2.5–5 hours	8 hours
INTERMEDIATE ACTING	<b>Humulin N (NPH) Vial</b>	Eli Lilly & Company	1–2 hours	2–8 hours	14–24 hours
	<b>Humulin N (NPH) Pen (prefilled)</b>	Eli Lilly & Company	1–2 hours	2–8 hours	14–24 hours
	<b>Novolin N PenFill (NPH human insulin isophane)</b>	Novo Nordisk	1.5 hours	4–12 hours	24 hours
	<b>Novolin N Vial (NPH human insulin isophane)</b> 	Novo Nordisk	1.5 hours	4–12 hours	24 hours

All insulins listed are U-100 strength. All insulins should be refrigerated at 36°–46° F.

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: Eli Lilly 3-ml cartridges fit the Owen Mumford Auto Pen.

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Room Temperature Storage Range (59°–86° F)	Need to Roll Briskly 10+ Times?	Cartridge Sizes	Pens That Fit the Cartridges	Suggested Retail Price <sup>e/f</sup>
Blister Storage—Unopened: Do not freeze or refrigerate. Opened: use within 3 months after opening the foil overwrap; Blisters: protect from moisture and do not freeze or refrigerate. Inhaler Storage - Up to one year from the date of first use; do not freeze or refrigerate.	N/A	N/A	N/A	The Wholesale Acquisition Cost ranges from \$3.73 - \$5.00 per day.
Up to 28 days	No	3-ml	OptiClik®	Pending
Up to 28 days	No	N/A	N/A	Pending
Up to 28 days	No	N/A	N/A	10-ml vial: \$80.86
Up to 28 days	No	3-ml	Autopen	Five 3-ml cartridges: \$162.69
Up to 28 days <sup>c</sup>	No	N/A	N/A	Five 3-ml pens: \$156.25
Up to 28 days	No	N/A	N/A	10-ml vial: \$83.70
Up to 28 days	No	3-ml	NovoPen 3, Novo-Pen Junior	Five 3-ml cartridges: \$155.50
Up to 28 days	No	3-ml	N/A	Five 3-ml pens: \$161.69
Up to 28 days	No	N/A	N/A	10-ml vial: \$34.59
Up to 28 days	No	3-ml	N/A	Five 3-ml dosers: \$73.64
Up to 28 days	No	3-ml	NovoPen 3, Novo-Pen Junior	Five 3-ml cartridges: \$109.55
Up to 30 days	No	N/A	N/A	10-ml vial: \$34.59
Up to 30 days	No	N/A	N/A	10 mL vial: \$19.96
Up to 28 days	Yes	N/A	N/A	10-ml vial: \$34.59
Up to 14 days <sup>c</sup>	Yes	N/A	N/A	Five 3-ml pens: \$109.56
14 days	Yes	3-ml	NovoPen3, Novo-Pen Junior	Five 3-ml cartridges: \$109.55
Up to 30 days	Yes	N/A	N/A	10-ml vial: \$34.59

e: Prices for Eli Lilly insulins are average wholesale price as reported by First Data Bank.

f: Prices for Novo Nordisk insulins are average wholesale price as reported by First Data Bank.

Customer Support:

Eli Lilly & Co. (800) 545-5979  
 Novo Nordisk (800) 727-6500  
 sanofi-aventis (800) 633-1610

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	Insulin	Manufacturer	Onset (approximately)	Peak (approximately)
	Novolin N InnoLet (NPH human insulin isophane)	Novo Nordisk	1.5 hours	4–12 hours
	ReliOn/Novolin N Vial	Novo Nordisk	1.5 hours	4–12 hours
LONG ACTING	Lantus Vial (insulin glargine)	sanofi-aventis	1.5 hours	None <sup>b</sup>
	Lantus Cartridge			
			Lantus Vial	
	Levemir Vial (insulin detemir [rDNA origin] injection)	Novo Nordisk	0.8–2.0 hours	Relatively flat
	Levemir FlexPen (insulin detemir [rDNA origin] injection)	Novo Nordisk	0.8–2.0 hours	Relatively flat
		Levemir FlexPen		
INTERMEDIATE/RAPID ACTING	Humalog Mix 75/25 Vial	Eli Lilly & Company	15–30 minutes	0.5–2.5 hours
	Humalog Mix 75/25 Pen (prefilled)	Eli Lilly & Company	15–30 minutes	0.5–2.5 hours
			Humalog Mix 75/25 Pen	
	NovoLog Mix 70/30 Vial (70% insulin aspart protamine suspension/30% aspart)	Novo Nordisk	10–20 minutes	2.4 hours
	NovoLog Mix 70/30 PenFill	Novo Nordisk	10–20 minutes	2.4 hours
		NovoLog Mix 70/30 FlexPen		
	NovoLog Mix 70/30 FlexPen	Novo Nordisk	10–20 minutes	2.4 hours
INTERMEDIATE/SHORT ACTING	Humulin 50/50 Vial (50% NPH/50% Regular)	Eli Lilly & Company	30–60 minutes	0.5–2.5 hours
	Humulin 70/30 Vial (70% NPH/30% Regular)	Eli Lilly & Company	30–60 minutes	2–4 hours
	Humulin 70/30 Pen (prefilled)			
			Humulin 70/30 Pen	
	Novolin 70/30 PenFill (70% NPH/30% Regular)	Novo Nordisk	30 minutes	2–12 hours
	Novolin 70/30 InnoLet (70% NPH/30% Regular)	Novo Nordisk	30 minutes	2–12 hours
	Novolin 70/30 Vial (70% NPH/30% Regular)	Novo Nordisk	30 minutes	2–12 hours
		Novolin 70/30 InnoLet		
	ReliOn/Novolin 70/30 Vial	Novo Nordisk	30 minutes	2–12 hours

All insulins listed are U-100 strength. All insulins should be refrigerated at 36°–46° F.

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Duration (approximately)	Room Temperature Storage Range (59°–86° F)	Need to Roll Briskly 10+ Times?	Cartridge Sizes	Pens That Fit the Cartridges	Suggested Retail Price <sup>e/f</sup>
24 hours	Up to 14 days	Yes	N/A	N/A	Five 3-ml dosers: \$73.64
24 hours	Up to 30 days	Yes	N/A	N/A	10ml vial: \$19.96
20–24 hours	Up to 28 days	No	N/A	N/A	10-ml vial: \$53.99
20–24 hours	Up to 28 days	No	3-ml	sanofi-aventis OptiClik pen	Five 3-ml cartridges: \$142.79
Up to 24 hours	Up to 42 days	No	N/A	N/A	10-ml vial: \$83.70
Up to 24 hours	Up to 42 days	No	3-ml	N/A	Five 3-ml pens: \$161.69
Up to 24 hours	Up to 28 days	Yes	N/A	N/A	10-ml vial: \$80.86
Up to 24 hours	Up to 10 days <sup>c</sup>	Yes	N/A	N/A	Five 3-ml pens: \$156.25
Up to 24 hours	Up to 28 days	Yes	N/A	N/A	10-ml vial: \$83.70
Up to 24 hours	Up to 14 days <sup>c</sup>	Yes	3-ml	NovoPen 3, NovoPen Junior,	Five 3-ml cartridges: \$155.50
Up to 24 hours	Up to 14 days	Yes	3-ml	N/A	Five 3-ml pens: \$161.69
Up to 24 hours	Up to 28 days	Yes	N/A	N/A	10-ml vial: \$34.59
Up to 24 hours	Up to 28 days	Yes	N/A	N/A	10-ml vial: \$34.59
Up to 24 hours	Up to 10 days	Yes	N/A	N/A	Five 3-ml pens: \$109.56
24 hours	Up to 10 days	Yes	3-ml	NovoPen 3, NovoPen Junior,	Five 3-ml cartridges: \$109.55
24 hours	Up to 10 days	Yes	3-ml	N/A	Five 3-ml dosers: \$73.64
24 hours	Up to 30 days	Yes	N/A	N/A	10-ml vial: \$34.59
24 hours	Up to 30 days	Yes	N/A	N/A	10ml vial: \$19.96

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