

## Select Injectable Insulin Drugs Approved by the FDA in the

Drug	Active Ingredient	Company	U.S. Launch Date [2]	Method of Administration	
				Vial	Pen
<b>Fast-Acting [4]</b>					
Admelog SoloSTAR	Insulin Lispro	Sanofi Aventis	March 2018		X
Admelog Vial	Insulin Lispro	Sanofi Aventis	March 2018	X	
Apidra Vial	Insulin Glulisine	Sanofi Aventis	January 2006	X	
Apidra OptiClik	Insulin Glulisine	Sanofi Aventis	February 2006		X
Apidra SoloSTAR	Insulin Glulisine	Sanofi Aventis	April 2009		X
Humalog Reusable Pen	Insulin Lispro	Eli Lilly	August 1996		X
Humalog Vial	Insulin Lispro	Eli Lilly	August 1996	X	
Humalog Pen	Insulin Lispro	Eli Lilly	December 1998		X
Humalog KwikPen	Insulin Lispro	Eli Lilly	January 2008		X
Humalog Jr. KwikPen	Insulin Lispro	Eli Lilly	September 2017		X
Humulin R Pen	Insulin Human	Eli Lilly	July 1983		X
Humulin R Vial	Insulin Human	Eli Lilly	July 1983	X	
Humulin R KwikPen	Insulin Human	Eli Lilly	March 2016		X
NovoLog Vial	Insulin Aspart	Novo Nordisk	August 2001	X	
NovoLog Pen	Insulin Aspart	Novo Nordisk	September 2001		X
NovoLog FlexPen	Insulin Aspart	Novo Nordisk	February 2003		X
<b>Intermediate-Acting [5]</b>					
Humalog Pen Mix 75/25	Insulin Lispro	Eli Lilly	February 2000		X
Humalog Mix 75/25 Vial	Insulin Lispro	Eli Lilly	December 2000	X	
Humalog Pen Mix 50/50	Insulin Lispro	Eli Lilly	February 2006		X
Humalog Mix 50/50 Vial	Insulin Lispro	Eli Lilly	November 2006	X	
Humalog KwikPen 50/50	Insulin Lispro	Eli Lilly	January 2008		X
Humalog KwikPen 75/25	Insulin Lispro	Eli Lilly	January 2008		X
NovoLog FlexPen Mix 70/30	Insulin Aspart	Novo Nordisk	September 2002		X
NovoLog Mix 70/30 Vial	Insulin Aspart	Novo Nordisk	February 2003	X	

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				Vial	Pen
<b>Long-Acting</b>					
Basaglar KwikPen	Insulin Glargine	Eli Lilly	December 2016		X
Humulin U Vial [6]	Insulin Human	Eli Lilly	July 1987	X	
Lantus Vial	Insulin Glargine	Sanofi Aventis	April 2001	X	
Lantus OptiClik	Insulin Glargine	Sanofi Aventis	January 2005		X
Lantus SoloSTAR	Insulin Glargine	Sanofi Aventis	July 2007		X
Levemir FlexPen	Insulin Detemir	Novo Nordisk	February 2006		X
Levemir Vial	Insulin Detemir	Novo Nordisk	February 2006	X	
Levemir FlexTouch	Insulin Detemir	Novo Nordisk	May 2014		X
Toujeo SoloSTAR	Insulin Glargine	Sanofi Aventis	March 2015		X
Toujeo Max SoloSTAR	Insulin Glargine	Sanofi Aventis	April 2018		X
Tresiba FlexTouch	Insulin Degludec	Novo Nordisk	November 2015		X

Source: IMS Health; U.S. Food & Drug Administration

Note:

[1] Drugs included are either sold by Sanofi, part of the Humalog Franchise, Humulin U Vial, NovoLog Mix 70/30 Vial, had over \$350,000,000 in sales in 2018, or accompanied administration with over \$350,000,000 in sales in 2018.

[2] Launch date is defined as the first month of IMS data with non-zero sales or prescriptions. For drugs launched prior to January 2001, the date listed in the Product variable in the IMS data.

[3] Strength is measured in insulin units per milliliter.

[4] Other fast-acting drugs in the IMS data are Fiasp FlexTouch, Fiasp Vial, Human Insulin R Vial, Humulin BR Vial, Novolin R Innolet Pen, Novolin R Prefilled Pen, Novolin R Vial, Relion R Vial, Velosulin Human BR Vial, and Velosulin RDNA BR Vial.

[5] Other intermediate-acting drugs in the IMS data are Human Insulin 70/30 Pen, Human Insulin 70/30 Vial, Human Insulin N Pen, Human Insulin N Prefilled Pen, Humulin 70/30 KwikPen, Humulin 70/30 Pen, Humulin 70/30 Pen (Unspecified), Humulin 70/30 Vial, Humulin L Vial, Humulin N KwikPen, Humulin N Pen (Unspecified), Humulin N Vial, Mixtard Human 70/30 Vial, NovoLog Mix 70/30 Pen, Novolin 70/30 FlexPen, Novolin 70/30 Pen, Novolin 70/30 Prefilled Pen, Novolin 70/30 Vial, Novolin L Vial, Novolin N Innolet Pen, Novolin N Pen, Novolin N Prefilled Pen, Novolin N Vial, Relion N Vial, Relion Novolin 70/30 Vial, and Relion Novolin N Vial.

[6] Humulin U Vial was discontinued in 2005.