INSULINS

Insulin products available and defined according to derivation, onset*, peak, and duration of action.**
Route of administration is also shown.

Preparation	Brand		Manufacturer	Route	Onset (hours)	Peak (hours)	Duration (hours)	Source
Insulin Aspart	**NovoLog**[2]	℞	*Novo Nordisk*	SC, IV,CSII	<0.25	1-3	3-5	human
Insulin Aspart Protamine/ Insulin Aspart	**NovoLog Mix 70/30**[2]	℞	*Novo Nordisk*	SC	<0.25	2.4	24	human
Insulin Degludec	**Tresiba**[2]	℞	*Novo Nordisk*	SC	1	none	42	human
Insulin Degludec/ Insulin Aspart	**Ryzodeg 70/30**[2]	℞	*Novo Nordisk*	SC	0.25	1-1.5	>24	human
Insulin Detemir	**Levemir**[2]	℞	*Novo Nordisk*	SC	1	none	24	human
Insulin Glargine	**Lantus**[3]	℞	*Sanofi Aventis*	SC	1.1	none	≥24	human
	Toujeo[1]	℞	*Sanofi Avenits*	SC	6	None	24	human
Insulin Glulisine	**Apidra**[3]	℞	*Sanofi Aventis*	SC, IV***	≤0.25	1	2-4	human
Insulin Lispro	**Humalog**[3]	℞	*Lilly*	SC	<0.25	1	3.5-4.5	human
Insulin Lispro Protamine/ Insulin Lispro	**Humalog Mix 75/25**[3]	℞	*Lilly*	SC	≤0.25	0.5-1.5	24	human
	Humalog Mix 50/50[3]	℞	*Lilly*	SC	≤0.25	1	16	human
Insulin Injection Regular (R)	**Humulin R**[1]	OTC	*Lilly*	SC, IM, IV***	0.5	2-4	6-8	human
	Humulin R U-500[1]	℞	*Lilly*	SC	0.5	1.75-4	24	human
	Novolin R[2]	OTC	*Novo Nordisk*	SC, IM, IV	0.5	2.5-5	8	human
Insulin Inhalation Regular (R)	**Afrezza**[1]	℞	*MannKind*	Inh	≤0.25	1	3-5	human
Insulin Isophane Suspension (NPH)/ Regular Insulin (R)	**Humulin 70/30**[1]	OTC	*Lilly*	SC	0.5	2-12	24	human
	Novolin 70/30[2]	OTC	*Novo Nordisk*	SC	0.5	2-12	24	human
Insulin Isophane Suspension (NPH)	**Humulin N**[1]	OTC	*Lilly*	SC	1-2	6-12	18-24	human
	Novolin N[2]	OTC	*Novo Nordisk*	SC	1.5	4-12	24	human

NOTES

CSII= continuous subcutaneous insulin infusion, IM= intramuscular injection, Inh= inhalation, IV= intravenous infusion, SC = subcutaneous injection

*Onset for injectable formulations is always for the SC route. All times are appropriate.

**Maximum effect occurs between these times; actual effect may last longer

***IV to be used in a clinical setting under proper medical supervision

Injectable insulins listed are available in a concentration of 100 units/ml; Toujeo is a concentrated formulation of insulin glargine available as 300 units/ml; Humulin R, in a concentration of 500 units/ml for SC injection only, is available by prescription from Lilly for insulin resistant patients who are hospitalized or under close medical supervision.

[1]Recombinant (using *E. coli*).

[2]Recombinant (using *S. cerevisiae*).

[3]Recombinant human insulin analogue (using *E. coli*).

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