

Insulin Products Comparison Chart

Type of Insulin	Brand Name/ Formulary Status/ Manufacturer	Concentration	May Be Mixed With	Onset	Peak	Duration	Administration in Relation to Meals	Appearance
Prandial or Correction (Rapid Acting)								
Aspart	Novolog [®] (F) Novo Nordisk	100 units/mL	NPH	10 to 20 minutes	1 to 3 hours	3 to 5 hours	5 to 10 minutes before meals	clear
Lispro	Humalog [®] (NF) Lilly	100 units/mL	NPH	15 to 30 minutes	1 to 2 hours	3 to 5 hours	15 minutes before or immediately after meals	clear
Prandial or Correction (Short Acting)								
Regular	Novolin [®] R (R) Novo Nordisk	100 units/mL	NPH	30 to 60 minutes	2 to 4 hours	4 to 8 hours	30 minutes before meals	clear
Regular	Humulin [®] R U-500 (F) Lilly	500 units/mL	do not mix with other insulins	30 to 60 minutes	2 to 4 hours	4 to 8 hours	30 minutes before meals	clear
Regular	Humulin [®] R (NF) Lilly	100 units/mL	NPH	30 to 60 minutes	2 to 4 hours	4 to 8 hours	30 minutes before meals	clear
Basal (Intermediate Acting)								
NPH	Novolin [®] N (F) Novo Nordisk	100 units/mL	aspart, regular	1 to 2 hours	6 to 14 hours	16 to 24 hours	§see below	cloudy
NPH	Humulin [®] N (NF) Lilly	100 units/mL	lispro, regular	1 to 2 hours	6 to 14 hours	16 to 24 hours	§see below	cloudy
Basal (Long Acting)								
Glargine	Lantus [®] (F) Aventis	100 units/mL	do not mix with other insulins	1 to 2 hours	no peak	24 hours	without regard to meals	clear

- Regarding formulary status, F means the product is on the formulary, NF means the product is not on the formulary, and R means that use is restricted.
- The subcutaneous administration of regular insulin for correction or scheduled prandial doses is restricted to the Diabetes Management Service. This product is still available for intravenous use.
- When combining insulin products in a single syringe, remember “fast first,” meaning that the rapid- or short-acting product should be drawn up first, followed by the intermediate-acting product.
- When mixing NPH with a rapid-acting product, follow the administration in relation to meals information for the specified product.
- Only insulins from the same manufacturer should be mixed (ie, Lilly products with Lilly products).
- The 500-units/mL concentration of regular insulin is prepared and dispensed by pharmacy services.
- Neither NovoLog[®] Mix 70/30 nor Humalog[®] Mix 75/25 contains NPH insulin.
- ***Mixed insulins cannot be obtained through the nonformulary process. Separate orders for basal and rapid acting insulin must be written.*** A conversion chart for 70/30 to insulin glargine or NPH can be found on the Clinical Order Forms Page or contact the Diabetes Management Service

This reference is produced by MUSC Drug Information Services (November 2007).

This reference has been reviewed and approved by the MUSC Diabetes Taskforce and the Pharmacy and Therapeutics Committee.

Supporting literature is available upon request. www.musc.edu/pharmacyservices/medusepol/InsulinComparisonChart.pdf

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Basal and Prandial Premixed Combinations								
70% Insulin aspart protamine 30% Insulin aspart	NovoLog [®] 70/30 (NF)* Novo Nordisk	100 units/mL	do not mix with other insulins	10 to 20 minutes	1 to 4 hours	15 to 18 hours	within 15 minutes of meal initiation	cloudy
70% NPH 30% Regular	Novolin [®] 70/30 (NF)* Novo Nordisk	100 units/mL	do not mix with other insulins	30 to 60 minutes	2 to 12 hours	10 to 16 hours	30 minutes before meals	cloudy
50% NPH 50% Regular	Humulin [®] 50/50 (NF)* Lilly	100 units/mL	do not mix with other insulins	30 to 60 minutes	2 to 5.5 hours	10 to 16 hours	30 minutes before meals	cloudy
70% NPH 30% Regular	Humulin [®] 70/30 (NF)* Lilly	100 units/mL	do not mix with other insulins	30 to 60 minutes	2 to 12 hours	10 to 16 hours	30 minutes before meals	cloudy
75% Insulin lispro protamine 25% Insulin lispro	Humalog [®] 75/25 (NF)* Lilly	100 units/mL	do not mix with other insulins	15 to 30 minutes	1 to 6.5 hours	up to 24 hours	within 15 minutes of meal initiation	cloudy

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- The subcutaneous administration of regular insulin for correction or scheduled prandial doses is restricted to the Diabetes Management Service. This product is still available for intravenous use.
- When combining insulin products in a single syringe, remember “fast first,” meaning that the rapid- or short-acting product should be drawn up first, followed by the intermediate-acting product.
- When mixing NPH with a rapid- or short-acting product, follow the administration in relation to meals information for the specified product.
- Only insulins from the same manufacturer should be mixed (ie, Lilly products with Lilly products).
- The 500 units/mL concentration of regular insulin is prepared and dispensed by pharmacy services.
- Neither NovoLog[®] Mix 70/30 nor Humalog[®] Mix 75/25 contains NPH insulin.
- Unless *dispense as written* is specified by the physician, orders written for Humulin[®] R or Humulin[®] N will automatically be converted to Novolin[®] R or Novolin[®] N, respectively.
- ***Mixed insulins cannot be obtained through the nonformulary process. Separate orders for basal and rapid acting insulin must be written.*** A conversion chart for 70/30 to insulin glargine or NPH can be found on the Clinical Order Forms Page or contact the Diabetes Management Service

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