

University of Louisiana at Monroe School of Nursing

**INSULIN
PHARMACODYNAMICS/KINETICS**

(To be used throughout all five nursing semesters to ensure a standardized approach.)

<i>Pharmacologic Category</i>	<i>Specific Drug</i>	<i>ONSET</i>	<i>PEAK</i>	<i>DURATION</i>
Rapid Acting Insulin	aspart (Novolog) lispro (Humalog) glulisine (Apidra)	< 15 minutes	1-3 hours	3-5 hours
Short Acting Insulin	Humulin R (Regular) Novolin R (Regular)	0.5-1 hour	2-4 hours	5-8 hours
Intermediate Acting Insulin	Humulin N (NPH) Novolin N (NPH)	1-2 hours	4-12 hours	14-24 hours
Long Actin Insulin	determir (Levemir)	3-4 hours	3-9 hours or near peakless	up to 24 hours
	glargine (Lantus)	3-4 hours	peakless	up to 24 hours

Based upon a review of the literature, many variances have been noted in insulin onset, peak, and duration times. The ULM School of Nursing adopted this chart for students to standardize the nursing care for patients receiving insulin therapy.

Each patient may respond differently to a specific insulin. According to UpToDate.com, the rate of absorption, onset, and duration of activity may be affected by site of injection, exercise, presence of lipodystrophy, local blood supply, and/or temperature.