

Common Types of Insulin used During Pregnancy

Rapid Acting Analogs:

Lispro Insulin (Humalog®), **Aspart Insulin** (Novolog®)

Rapid acting

Onset: Within 15 minutes

Peak: 1–2 hours

Rapid-acting insulins are an analog of human insulin, in which amino acids are interchanged in part of the molecule in order to accelerate the onset and duration of the insulin. Rapid-acting insulins closely approximate the normal insulin peak during a meal. The patient must start eating the meal soon after 10–15 minutes of administration or may become hypoglycemic.

Regular Insulin (Humulin R®, Novolin R®)

Short acting

Onset: Within 30 minutes

Duration: 4–8 hours (mostly in the first 2–4 hours)

The patient must start eating the meal within 30 minutes of administration or may become hypoglycemic.

NPH Insulin (Humulin N®, Novolin N®)

Intermediate acting

Onset: 1–4 hours

Duration: 12–20 hours (mostly in the first 8–10 hours)

Glargine Insulin (Lantus®), **Detemir Insulin** (Levemir®)

Long acting - Consistent absorption for up to 24 hours

Administration: Given daily usually at the same time of day.

Never to be mixed in a syringe with any other insulin.

Before withdrawing the needle after injection, keep the needle beneath the skin for 3–5 seconds (this allows the insulin to crystallize in the subcutaneous tissue and decreases the risk of irritating the skin).

Regular U-500 Insulin (Humulin R U-500®)

Onset: 30 minutes.

Duration up to 24 hours.

Regular insulin concentrated to 500 units/mL (from the usual 100 units/mL) is used by patients who require very high doses of insulin. It is usually administered 2-3 times daily. Regular U-500 insulin is usually ordered in terms of “syringe units” (the volume it takes up in a conventional U-100 syringe) or in actual units via a pen.

Storage

Insulin in-use can be kept at room temperature. Unopened vials and pens should be stored in the refrigerator.

Never allow your insulin to freeze or to be kept at a temperature in excess of 85 degrees F.



Length of Use

- Vials can be used for 28 days or 1 month
 - Except for U500 Humulin R 40 days
- Pens:
 - NPH Pen 14 days
 - Humalog (U100/U200) and Novolog Pens 28 days
 - Levemir Flextouch Pen 42 days
 - U500 Humulin R Kwikpen 28 days

Do Not Share your insulin vials/pens and needles as blood-borne illnesses such as hepatitis and HIV can be transmitted through this practice.

Types of Insulin

Type of insulin	Generic name	Approximate duration of SC insulin (in hours)						Brand name	Manufacturer
		0	4	8	12	16	20		
Rapid-acting	lispro							Humalog	Lilly
	aspart								Novolog
Short-acting	Regular							Humulin R	Lilly
									Novolin R
Intermediate-acting	NPH							Humulin N	Lilly
									Novolin N
Long-acting**	glargine							Lantus	Aventis
	detemir								Levemir

*The duration of Regular U-500 insulin varies considerably from one person to another, usually requiring 2-3 injections/day.

**For some people, long-acting insulins last less than 24 hours so they may require 2 injections/day.

***Glargine is not typically used during pregnancy.



Common insulin regimens used during pregnancy:

- Lispro/aspart insulin and NPH or Levemir insulin before morning meal and at bedtime.
- Lispro/aspart insulin before each meal and NPH or levemir insulin at bedtime.

Important notes about your regimen:

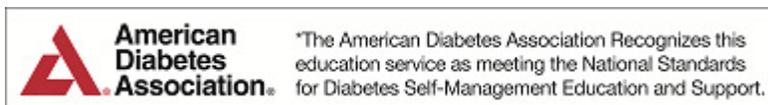
- The fast acting insulin covers mealtime insulin needs, while slower acting insulin covers background (basal) insulin needs.
- NPH insulin has a peak after 5 hours, with am dosing this could cover the lunch meal. If lunch is later than 5 hours after am NPH is taken, a low glucose can occur.
- Correction (sliding scale) insulin may be required when blood levels are unstable. The role of correction insulin is limited because it is always retrospective, looking back, trying to lower the glucose level that has already become excessive.

The goal of insulin therapy is to provide the right amount of insulin to cover the anticipated insulin needs.

If you have questions contact the Perinatal Clinic's Diabetes Educator

at (608) 417-5703 or the Perinatal Clinic at (608) 417-6667

The UnityPoint Health-Meriter Center for Perinatal Care has been Recognized by the American Diabetes Association for Quality Self-Management Education and support.*



My Insulin Plan

Time	What's Happening	Insulin Type and Amount
	Fasting Glucose	
	Pre Breakfast Insulin	
	Breakfast	
	1 or 2 hour Post Meal Glucose	
	Snack	
	Pre Lunch Insulin	
	Lunch	
	1 or 2 hour Post Meal Glucose	
	Snack	
	Pre Dinner Insulin	
	Dinner	
	1 or 2 hour Post Meal Glucose	
	Snack	
	Bedtime Insulin	

Corrective Insulin: (_____)

If glucose is above _____.

Take 1 unit for every _____.

Target glucose: _____.

