



Effective						
Action	Insulin Name	Onset	Peak	Duration	Considerations	
Bolus	Very Rapid Acting Analogs	Aspart (Fiasp)	16 - 20 min	1 - 3 hrs	5 - 7 hrs	Bolus insulin lowers after-meal glucose. Post meal BG reflects efficacy.
		Lispro-aabc (Lyumjev)	15 - 17 min	2 - 3 hrs	5 - 7 hrs	
	Rapid Acting Analogs	Aspart (Novolog / Merilog)	20 - 30 min	1 - 3 hrs	3 - 7 hrs	
		Lispro (Humalog* / Admelog)	30 min	2 - 3 hrs	5 - 7 hrs	
	Short Acting	Regular*	30 - 60 min	2 - 4 hrs	5 - 8 hrs	Basal insulin controls BG between meals and nighttime. Fasting BG reflects efficacy.
Basal	Intermediate	NPH	2 - 4 hrs	4 - 10 hrs	10 - 16 hrs	Side effects: hypoglycemia, weight gain.
	Long Acting	Glargine (Lantus*/Basaglar/Semglee/Rezvoglar)	2 - 4 hrs	No Peak	20 - 24 hrs	
		Degludec (Tresiba)*	~ 1 hr		< 42 hrs	Typical dosing range: 0.5-1.0 units/kg body wt/day.
Basal + Bolus	Intermediate + short	Combo of NPH + Reg 70/30 = 70% NPH + 30% Reg 50/50 = 50% NPH + 50% Reg	30 - 60 min	Dual peaks	10 - 16 hrs	Discard most open vials after 28 days. For pen storage guidelines, see package insert.
	Intermediate + rapid	Novolog® Mix - 70/30 Humalog® Mix - 75/25 or 50/50	5 - 15 min		24 hrs	

\*Concentrated insulins available - see Concentrated Insulin Card for details. Insulin action times vary; time periods are general guidelines only. All PocketCard content is for educational purposes only. Please consult prescribing information for detailed guidelines. © 2/2025

## Concentrated & Inhaled Insulins

Name/Concentration	Insulin/Action	Considerations
Humulin Regular U-500 • 500 units insulin/mL • KwikPen or Vial	Regular Bolus / Basal	Indicated for those taking 200+ units daily. 3 mL pen holds 1,500 units. Max dose 300 units. Once opened, good for 28 days. 20 mL vial holds 10,000 units. Max dose 250 units using U-500 syringe. Once opened, good for 40 days.
Humalog KwikPen U-200 200 units insulin/mL.	Lispro (Humalog) Bolus	3 mL pen holds 600 units. Max dose 60 units. Once opened good for 28 days.
Lyumjev KwikPen U-200 200 units insulin/mL.	Lispro (Lyumjev) Bolus	3 mL pen holds 600 units. Max dose 60 units. Once opened good for 28 days.
Toujeo Solostar U-300 Pen 300 units insulin/mL.	Glargine (Lantus) Basal	1.5 mL pen holds 450 units. Max dose 80 units. 3 mL Max Solostar pen holds 900 units. Max dose 160 units. Once opened good for 56 days.
Tresiba FlexTouch U-200 Pen 200 units insulin/mL.	Degludec (Tresiba) Ultra basal	3 mL pen holds 600 units. Max dose 160 units. Once opened good for 56 days.

All concentrated insulin pens and the U-500 syringe automatically deliver correct dose (in less volume). No conversion, calculation or adjustments required. For example, if order reads 30 units, dial the concentrated pen to 30 units or draw up 30 units on the U-500 syringe. Important – never withdraw concentrated insulin from the pen using a syringe.

## Inhaled Insulins

Action	Insulin Name	Dose Range	Onset	Peak	Duration	Considerations
Bolus – Rapid-acting	Afrezza Inhaled regular human insulin	4, 8, and 12 unit cartridges before meals	~ 12 min	35 - 45 mins	1.5 - 3 hrs	Assess lung function. Avoid in lung disease — bronchospasm risk. Side effects: hypo, cough, throat irritation.

The information listed here are not guidelines. Please consult prescribing information for details.

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## Insulin/Injectable Combos

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Name	Combines	Considerations
IDegLira* Xultophy 100/3.6	Insulin degludec (IDeg or Tresiba) Ultra long insulin + Liraglutide (Victoza) GLP-1 Receptor Agonist (GLP-1 RA)	<b>Xultophy 100/3.6 pre-filled pen</b> = 100 units IDeg / 3.6 mg liraglutide per mL Once daily injection – Dose range 10 to 50 = 10 – 50 units IDeg + 0.36 -1.8 mg liraglutide <b>Recommended starting dose:</b> • 16 IDegLira (= 16 units IDeg + 0.58 mg liraglutide) Titrate dose up or down by 2 units every 3-4 days to reach target. Supplied in package of five single-use 3mL pens. Once opened, good for 21 days.
iGlarLixi* Soliqua 100/33	Insulin glargine (Lantus) Basal Insulin + Lixisenatide (Adlyxin) GLP-1 Receptor Agonist	<b>Soliqua 100/33 Solostar Pen</b> = 100 units glargine / 33 µg lixisenatide per mL Once daily injection an hour prior to first meal of day. Dose range 15 – 60 = 15-60 units glargine + 5 – 20µg lixisenatide <b>Recommended starting dose:</b> • 15 units if not meeting glucose target on 30 units basal insulin or GLP-1 RA • 30 units if not meeting glucose target on 30-60 units basal insulin or GLP-1 RA Titrate dose up or down by 2-4 units every week to reach target. Supplied in package of five single-use 3mL pens. Once opened, good for 14 days.

\*Discontinue basal insulin /GLP-1 RA therapy before starting. If dose missed, resume with next usual scheduled dose.

Observe precautions of each component drug.

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## GLP-1 & GIP Receptor Agonists

Class/Main Action	Name	Dose Range	Considerations
GLP-1 RA - Glucagon Like Peptide Receptor Agonist “Incretin Mimetic” • Increases insulin release with food • Slows gastric emptying • Promotes satiety • Suppresses glucagon	exenatide (Byetta)	5 and 10 mcg BID	<b>Side effects:</b> nausea, vomiting, weight loss, injection site reaction. Report signs of acute pancreatitis or intestinal blockage (ileus) and stop med. <b>Black box warning:</b> Thyroid C-cell tumor warning (avoid if family history of medullary thyroid tumor).  *Significantly reduces risk of CV death, heart attack, and stroke. §Approved to reduce risk of CKD †Approved for pediatrics 10-17 yrs  Lowers A1C 0.5 – 1.6% Weight loss: 4-6% body weight loss.
	exenatide XR† (Bydureon)	2 mg 1x a week Pen injector - Bydureon BCise	
	liraglutide*† (Victoza)	0.6, 1.2 and 1.8 mg daily	
	dulaglutide*† (Trulicity)	0.75, 1.5, 3.0 and 4.5 mg 1x a week pen injector	
GLP-1 & GIP Receptor Agonist Activates receptors for GLP-1 (see above) & Glucose-dependent Insulinotropic Polypeptide (GIP).	semaglutide*§ (Ozempic)	0.25, 0.5, 1.0 and 2.0 mg 1x a week pen injector	Lowers A1C ~ 1.8 - 2.4% Weight loss: 7-13% body weight loss at max dose.
	(Rybelsus) Oral tablet	3, 7, and 14 mg daily in a.m. Take on empty stomach with sip of water	
	Tirzepatide (Mounjaro)	2.5, 5.0, 7.5, 10, 12.5 and 15 mg 1x a week prefilled single dose pen Increase dose by 2.5 mg once monthly to reach targets.	<b>Side effects:</b> nausea, diarrhea, injection site reaction. Report pancreatitis, signs of intestinal blockage. <b>Black box warning:</b> Avoid if family history of medullary thyroid tumor.

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