

### Action

Promotes cellular uptake of glucose  
 Converts glucose into glycogen  
 Stops release of fats  
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 Stops gluconeogenesis  
 Starts producing glycogen & fat  
 Converts amino acids into proteins  
 Converts fatty acids into triglycerides  
 Moves Potassium into cells

### Indication

Type 1, 2, or gestational diabetes  
 (DOC in pregnancy due to limited adverse effects and inability to cross placenta)

### Cautions

Elderly  
 Renal patients b/c insulin can accumulate

### Contraindications

hold medication if blood glucose <50

### Routes of Administration

Timing: varies depending on type of insulin  
 SubQ all types  
 IV/IM only regular insulin (short acting)  
 Insulin pump only rapid acting  
 Inhaled only rapid acting

### Administration Timing Guide

Types	Onset	Peak	Duration
Rapid	10-20 min	0.5-2 hr.	3-5 hr
Short	30-60 min	2.5 hr	6-12 hr
Inter-mediate	1-1.5 hr	4-14 hr	24 hr
Long-A-cting	60-70 min	None	24 hr

### Patient Education

Educated about sick day rules  
 Educated about long-term complications of diabetes  
 Rotate administration sites to prevent lipodystrophy  
 Life-long treatment (T1D)  
 Wear a medical alert bracelet  
 Store unopened insulin in fridge  
 Discard insulin after 30 days of use

### Drug Interactions

Beta Blockers mask signs of hypoglycemia  
 Steroids decrease effectiveness of insulin  
 Alcohol Can cause increased or decreased blood glucose levels  
 MAOIs  
 Thiazide

### Adverse Effects

Hypoglycemia  
 Lipodystrophy  
 Hypokalemia  
 DKA

