

The Use of Insulin to treat DM	
DM	Is chronic hyperglycemia & might be ass. With insulin resistant
Glycemia	<ul style="list-style-type: none"> -normal blood glc: <140 -normal fasting blood glc: <100 -Prediabetic fasting blood glc: <120 -diabetic fasting blood glc: >120 <div style="border: 1px solid black; padding: 2px; display: inline-block; margin-left: 200px;">*fasting for 12h*</div>
DM pt	<ul style="list-style-type: none"> -They must follow the treatment & their diet very strictly -if they <u>missed a meal</u>, <u>did unusual exercise</u> or <u>took over dose of insulin</u>: they'll have a severe hypoglycemia that might kill them -if they did have a sudden severe hypoglycemia, management is: For conscious pt: oral glc intake For unconscious pt: IV glc & IM or SC Glucagon
Meds compl.	<ul style="list-style-type: none"> -Lipodystrophy (lipolysis at site of inj.) -Lipohypertrophy (lipogenesis at site of inj.) -Hypokalaemia

Insulin	
hl	4m
Degradation	<ul style="list-style-type: none"> -60% liver & 40% renal (endogenous - normal) -60% renal & 40% liver (exogenous - meds)
Meds use	stored cold, but warmed up before use.
Meds expiration	Within 1month tops

	DM1	DM2
Onset	Childhood (puberty)	>40 yo
Starter manner	Sudden	Gradual
% of all cases	15%	85%
Genetic relation	Moderate	Very strongly related!
Pathogen.	B-cells destruction	Insuff. Insulin or resis. To it
Blood insulin	Zero	Minute amount
Pt. health status	Thin	Obese
Ketosis	Yup	Nope
Symptoms	<ul style="list-style-type: none"> -Polydipsia (thirst) -polyphagia (hunger) -polyuria 	Very often asymptomatic
Lab	Hypercholesterolemia	Hypercholesterolemia & Hyper triglycerides emia
Treatment	Insulin intake	Insulin intake & Other Hypoglycemic meds

Insulin supp meds (for type 1)				
Meds families	Ultrashort acting	Short acting (regular acting)	Intermediate acting	Long acting
Meds	Lispro, aspart & glulisine	Humulin	-isophane(NPH) -lente	-Glargine(lantus) -detemir(Levemir)
Effects durations	fastest onset shortest effcts	Fast onset Short effects	slow onset long effects	slowest onset longest effects
from	Clear solutions		Turbid (imp) suspension	Clear solution
pH	Neutral (normal)			-
Structure	Monomeric	Hexameric	-	-
Adminst	SC or IV	SC	SC	SC
Effect onst	15m <u>after inj.</u>	30-45m	2h	2h
Peak seen	0.5-1.5 h	3h	6h	5h
Effct time	4h	7h	16h	1d
Adv	-rapid onset -short duration (no risk of hyperinsulinemia)		Lente: Is mix of 30%semi-lente &70%ultralente	-produces a plateau (low steady insulin lvl) -no signed peak -safer than intermediate acting (low risk of sudden hypoglycemia)
Dosing	2-3 a day		-	-
Ind & contraind	-postprandial Hyperglycemia (SC) -emergency diabetic ketoacidosis (IV)		-not used in emergency	-contraind with any other insulin med