

Diabetes Drug Chart

	Drug	Action	Use	Side Effects	Nursing Implications
	Insulin Lispro-rapid acting Regular-short acting NPH-intermediate acting Ultralente-long acting	-stimulates glucose uptake by fat and muscle cells -promotes glycogen formation in liver & muscle cells	-used for Type 1 diabetes -used for Type 2 diabetes, not controlled by diet and/or oral hypoglycemics	-metabolic derangements w/ inadequate therapy—ketoacidosis or hypoglycemic coma -lipoatrophy at injection sites -allergies	-teach proper monitoring and management of blood sugar levels -teach S/Sx of hypo/hyperglycemia -rotate injection sites DDIs: moderate to high alcohol consumption inc. hypoglycemic action of insulin -beta-adrenergic agents or corticosteroids may antagonize actions of insulin and mask hypoglycemic state
Incr. INSULIN SECRETION	Sulfonylureas 1 st gen: tolbutamide (ORINASE) 2 nd gen: glipizide (GLUCOTROL)	-blocks K channel in the membrane of pancreatic β cells; depolarizes cell & stimulates release of insulin -may also decr. hepatic glucose production (glyconolysis and gluconeogenesis) and incr. tissue responsiveness to insulin	-for Type 2 diabetics <u>2nd generation:</u> -fewer side effects -more predictable action times & half-lives -fewer DDIs-bind to proteins differently -more expensive	-GI distress -dizziness, drowsiness, HA -allergies—skin rxs -hypoglycemia - weight gain	-not to be used w/ renal or liver impaired patients DDIs: sulfonamides, salicylates, phenylbutazon : hypoglycemia -thiazides: hyperglycemic activity -beta-adrenergic blocking agents -disulfiram-like rx or possible hypoglycemia w/ alcohol
	Insulin Enhancers Repaglinide, (PRANDIN)	-promotes insulin secretion by the pancreas	-for type 2 diabetics	-hypoglycemia	-patients must eat w/i 30 minutes of administration
	Nateglinide (STARLIX)	-stimulates insulin secretion by pancreas - extent of insulin release is glucose dependent ('smart drug')	-used alone or in combo therapy w/ Metformin or Glyburide -for type 2 diabetes	-GI: same as metformin	- Give 1-30 minutes before meals - Category C: do not use during pregnancy - Avoid in patients w/ severe liver insuff - Works more quickly than Prandin
Decr. Glucose production	Biguanides Metformin (GLUCOPHAGE)	- decr. hepatic glucose production - incr. peripheral insulin sensitivity esp. in muscle tissue	-for treatment of type 2 diabetes, alone or w/ a sulfonylurea - does not cause hypoglycemia -an antihyperglycemic drug	-GI effects— anorexia , flatulence, metallic taste, N/V, stomach pain, weight loss - Weight loss - Decr. absorption of vitamin B12 and folic acid	-Avoid in patients w/ severe liver or renal dx, cardiorespiratory insufficiency, CHF DDIs: avoid alcohol—hypoglycemic cimetidine, digoxin, morphine, rantidine, trimethorprim, furosemide, vancomycin—incr. blood concentration of metformin
Stop Gut N-Zymes	Alpha-glucosidase inhibitors acarabose (PRECOSE) miglitol (GLYSET)	-prolongs digestion of CHO -decr. peak plasma glucose levels by inhibiting intestinal enzymes in SI that break complex carbohydrates into smaller molecules	-for treatment of type 2 diabetes aka "starch-blockers"	-GI: flatulence, abdominal pain, distention, diarrhea, borborygmi -Incr. in liver enzymes	-used as mono or combo therapy w/ sulfonylureas -TID w/ first bite of food -SE diminish w/ time—usually 3 wks DDIs: corticosteroids & thiazides—interfere w/ control of hyperglycemia

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Decr. insulin resistance	Thiazolidinediones (Glitazones) rosiglitazone (AVANDIA) pioglitazone (ACTOS)	-acts on target tissues to decr. insulin resistance in skeletal muscle -may also decr. glucose output by the liver	-for treatment of type 2 diabetes; mono or combo therapy	-edema, weight gain -anemia	-cytochrome P450 inducer so check liver function: 1st six months-check monthly; 2nd six months-check every 2 months -teach patient of liver failure signs DDIs: Ca channel blocking agents corticosteroids, statins and BC pills

BLOOD GLUCOSE LOWERING EFFECTS

Glucose Lowering Effect

Acetaminophen
 Alcohol
 Allopurinol
 Aspirin (large doses)
 Alpha-glucosidase inhibitors
 Beta-adrenergic blockers
 Biguanides
 Clofibrate
 Histamine antagonists
 Insulin
 MOA inhibitors
 Probenecid
 Sulfonylureas
 Troglitazone
 Tricyclic antidepressants
 Urinary acidifiers

Glucose Raising Effect

Beta-adrenergic blockers
 Birth control pills
 Cholestyramine (Questran)
 Corticosteroids
 Ethacrynic acid
 Morphine
 Epinephrine
 Furosemide (LASIX)
 Glucagons
 Lithium
 Nicotine
 Nifedipine
 Phenobarbital
 Pnenothiazines
 Phenytoin (DILANTIN)
 Rifampin
 Thiazide diuretics
 Urinary alkalizing agents