

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 |

| | Drug | Action | Use | Side Effects | Nursing Implications |
|--------------------------|---|--|--|--------------------------------|--|
| 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