

Noninsulin Diabetes Medications Summary Chart

Medications marked with an asterisk (*) can cause hypoglycemia

MED GROUP DESCRIPTOR Drug Class DRUG NAME	ACTION SIDE EFFECTS Notes	DOSAGE (mg/tab)	DOSING FREQUENCY/DAY	DOSING RANGE (mg/day)
INSULIN SECRETAGOGUES				
Sulfonylureas*				
GLYBURIDE* (Diabeta) (Micronase)	Action: Stimulates β -cell insulin production Side effects: Potential for hypoglycemia	1.25, 2.5, 5	1–2 times/day Take with meals to avoid hypoglycemia	1.25–20
MICRONIZED GLYBURIDE* (Glynase Prestabs)		1.5, 3, 6	1–2 times/day With meals	0.75–12
GLIPIZIDE* (Glucotrol)		5, 10	1–2 times/day 30 minutes premeal	2.5–40
GLIPIZIDE EXTENDED RELEASE* (Glucotrol XI)		2.5, 5, 10	1–2 times/day With meals	5–20
GLIMEPIRIDE* (Amaryl)		1, 2, 4	1 time/day With meals	0.5–8
Meglitinides*				
REPAGLINIDE* (Prandin)	Action: Stimulates β -cell insulin production Side effects: Potential for hypoglycemia	0.5, 1, 2, 4	2–4 times/day, 0–30 min premeals Skip meal, skip dose Add meal, add dose to total of 4 doses/day	0.5–16
D-Phenylalanine Derivative*				
NATEGLINIDE* (Starlix)	Action: Stimulates β -cell insulin production Side effects: Potential for hypoglycemia	60, 120	1–3 times/day, 0–30 min premeals Skip meal, skip dose	180–360
GLUCOSE SUPPRESSORS				
Biguanides				
METFORMIN (Glucophage)	Action: Decreases hepatic glucose production and improves glucose transport Side effects: Gas, diarrhea, lactic acidosis. To decrease lactic acidosis risk, avoid in: <ul style="list-style-type: none"> • Liver disease, alcohol abuse/bingeing • If creatinine ≥ 1.4 mg/dL in women; ≥ 1.5 mg/dL in men • IV contrast • If creatinine clearance ≤ 50 mL/min • Recurrent CHF • Severe infection, acute MI • Hold for IV contrast dye, surgery, or severe vomiting or diarrhea. Repeat creat. in 48 hrs; if OK, restart metformin Note: Take with food to decrease gas, diarrhea	500, 850, 1000	2–4 times/day Take with meals to avoid stomach upset	500–2550

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METFORMIN SUSTAINED RELEASE (Glucophage XR)	See above	500, 750	1–2 times/day With meals	500–2000
METFORMIN EXTENDED RELEASE (Fortamet)		500, 1000	1 time/day With meals	500–2500
METFORMIN EXTENDED RELEASE (Glumetza)		500, 1000	1 time/day With meals	500–2500
METFORMIN ORAL SOLUTION (Riomet)		500 mg/5 mL	2–3 times/day With meals	500–2550
INSULIN SENSITIZERS				
Thiazolidinediones				
ROSIGLITAZONE (Avandia)	<p>Action (both): Improves glucose transport and decreases hepatic glucose production; may have beneficial effect on endothelium</p> <p>Side effects (both): Weight gain, fluid retention, osteopenia, increase in CHF in those at risk</p> <ul style="list-style-type: none"> • Liver disease – check LFTs at baseline, then periodically <p>Notes (both):</p> <ul style="list-style-type: none"> • May cause resumption of ovulation in perimenopausal women • Take same time daily • May require up to 2 weeks to see an effect 	2, 4, 8	1–2 times/day Same time daily	4–8
PIOGLITAZONE (Actos)		15, 30, 45	1 time/day Same time daily	15–45
DPP-4 INHIBITORS				
SITAGLIPTIN PHOSPHATE (Januvia)	<p>Action: Slows the inactivation of incretin hormones, resulting in increased insulin synthesis and decreased glucagon levels in a glucose-dependent manner</p> <p>Side effects: URI, stuffy nose, sore throat, occasional diarrhea and stomach discomfort; UTI with Onglyza</p> <p>Notes:</p> <ul style="list-style-type: none"> • Decrease dose for renal disease (Januvia and Onglyza). • Watch for interactions with drugs that induce CYP450 3A4 (Tradjenta) • Watch for interactions with drugs that inhibit CYP450 3A4 (Onglyza) 	25, 50, 100	1 time/day unrelated to food Same time daily	25–100
SAXAGLIPTIN (Onglyza)		2.5, 5	1 time/day unrelated to food Same time daily	
LINAGLIPTIN (Tradjenta)		5	1 time/day unrelated to food Same time daily	

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STARCH BLOCKERS				
Alpha-Glucosidase Inhibitors				
MIGLITOL (Glyset)	Action: Delays absorption and breakdown of carbohydrates from intestines Side effects: Gas, diarrhea; elevation of LFTs with acarbose in doses >50 mg tid, and wt < 132 lbs Notes: • Use glucose to treat hypoglycemia when used in combination therapy • Dose low and increase slowly to decrease flatulence	25, 50, 100	3 times/day With first bite of meal	25–300
ACARBOSE (Precose)		25, 50, 100	3 times/day With first bite of meal	25–300
BILE ACID SEQUESTRANTS				
COLESEVELAM (Welchol)	Action: Reduces LDL cholesterol and improves glycemic control Side effects: Constipation, nausea, diarrhea, gas, heartburn, headache; may interact with glyburide, levothyroxine, and contraceptives	625 mg tablet 1.875 g, 3.75 g powder packet	6 tablets (or 3.75 g powder packet) daily or 3 tablets (or 1.875 g powder packet) twice daily with a meal and liquid	1875–3750
DOPAMINE AGONIST				
BROMOCRIPTINE MESYLATE* (Cycloset)	Action: Unknown; lowers glucose without increasing insulin; reduces the risk of MI and stroke Side effects: Hypotension, orthostatic changes, fainting, drowsiness, may worsen psychotic disorders, hypoglycemia, nausea, fatigue, severe dizziness	0.8mg	1 time/day with food within 2 hrs of waking	1.6–4.8
FIXED COMBINATIONS				
GLYBURIDE and METFORMIN* (Glucovance)	Action: Stimulates β -cell insulin production and decreases hepatic glucose production	1.25 mg/250 mg 2.5 mg/500 mg 5 mg/500 mg	1–2 times/day with meals	Dependent on dosing combination used
GLIPIZIDE and METFORMIN* (Metaglip)	Side effects: See above for sulfonylureas and biguanides	2.5 mg/250 mg 2.5 mg/500 mg 5 mg/500 mg	1–2 times/day with meals	Dependent on dosing combination used
ROSIGLITAZONE [†] and METFORMIN (Avandamet [†])	Action: Improves glucose transport and decreases hepatic glucose production Side effects: See above for thiazolidinediones and biguanides	1 mg/500 mg 2 mg/500 mg 4 mg/500 mg 2 mg/1000 mg 4 mg/1000 mg	1–2 times/day with meals	Dependent on dosing combination used
PIOGLITAZONE and METFORMIN (Actoplus Met)		15 mg/500 mg 15 mg/850 mg	1–2 times/day with meals	15–45 mg/ 500–2250
REPAGLINIDE and METFORMIN (Prandimet)	Action: Stimulates β -cell insulin production and decreases hepatic glucose production Side effects: See above for meglitinides and biguanides	1 mg/500 mg 2 mg/500 mg	2-3 times/day 15 minutes pre-meal Skip meal, skip dose	Dependent on dosing combination used Max dose 10 mg/2500 mg

[†]See note under thiazolidinediones regarding limitations on use

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ROSLIGLITAZONE [†] and GLIMEPIRIDE* (Avandaryl [†])	Action: Improves glucose transport, decreases hepatic glucose production, and stimulates β -cell insulin production Side effects: See above for thiazolidinediones and sulfonylureas	4 mg/1 mg 4 mg/2 mg 4 mg/4 mg	1 time/day with first meal	Dependent on dosing combination used
PIOGLITAZONE and GLIMEPRIDE* (Duetact)	Action: Improves insulin action in adipose tissue, liver, and skeletal muscle; may have beneficial effect on vascular cells and β cells; stimulates β -cell insulin production Side effects: See above for pioglitazone and glimepride	15 mg, 30 mg, 45 mg	1 time/day before first meal	Start at 15 mg/day Increase every 4 to 8 weeks or more, as needed, to 30 mg/day, and then to 45 mg/day
SITAGLIPTIN and METFORMIN (Janumet) <hr/> SAXAGLIPTIN and METFORMIN XR (Kombiglyze XR)	Action: Slows the inactivation of incretin hormones, resulting in increased insulin synthesis and decreased glucagon levels in a glucose-dependent manner; decreases hepatic glucose production and improves glucose transport Side effects: See above for sitagliptin and metformin; reduce Kombiglyze to 2.5 mg/1000 mg if also taking strong CYP3A4/5 inhibitors, such as ketoconazole	50 mg sitagliptin/500 mg metformin; 50 mg sitagliptin/1000 mg metformin <hr/> 5 mg/500 mg 5 mg /1000 mg 2.5 mg /1000mg	2 times/ day, taken with food <hr/> 1 time/day with evening meal	Dependent on dosing combination used
LINAGLIPTIN and METFORMIN (Jentadueto)		2.5mg linagliptin/500 mg metformin 2.5mg linagliptin/850 mg metformin 2.5mg linagliptin/1000 mg metformin	2 times/day	

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MED GROUP DESCRIPTOR Drug Class DRUG NAME	ACTION SIDE EFFECTS Notes	DOSAGE (mcg or mg/dose)	DOSING FREQUENCY/DAY	DOSING RANGE (mcg or mg/day or week)
Injectables				
GLP-1 RECEPTOR AGONISTS*				
EXENATIDE (Byetta)	Action: Increases the level of incretin hormones, resulting in enhanced insulin secretion and reduced glucagon secretion in a glucose-dependent manner Side effects: Nausea, anorexia, vomiting	5 or 10 mcg/dose (multidose prefilled pen)	2 times/day 0–60 min premeals (6+ hours apart)	10–20 mcg/day
EXENATIDE EXTENDED- RELEASE (Bydureon)		2 mg/dose (single-dose tray)	1 time/week	2 mg/week
LIRAGLUTIDE (Victoza)		0.6, 1.2, 1.8 mg/dose (multidose prefilled pen)	1 time/day	1.2–1.8 mg/day (initiate at 0.6 mg/d)
AMYLIN MIMETIC*				
PRAMLINTIDE (Symlin)	Action: Exact mechanism unknown; decreases postprandial glucose, suppresses glucagon secretion, slows gastric emptying similar to GLP-1 agonists Side effects: Nausea, anorexia, vomiting	Type 2 60–120 mcg (multidose prefilled pen) Type 1 15–60 mcg (multidose prefilled pen)	With meals containing 250 calories or 30 grams of carbohydrates	180–360 mcg/day 30–180 mcg/day