ORAL MEDICATION MANAGEMENT OF DIABETES

Class	Names	Mechanism of action	Adverse effects	Teaching
Biguanides PO	Metformin	• Increase glucose uptake by muscles, decrease glucose production by liver • Type 2 only	• GI distress • Rare lactic acidosis	• Can be used as monotherapy or in combination • May be used in gestational diabetes • Do not drink alcohol, must be stopped prior to tests w/ iodine contrast. • Teach signs of lactic acidosis.
2nd-generation sulfonylureas PO	Glipizide, glyburide	• Increase insulin release from pancreas, may also encourage tissues to be receptive to insulin • Type 2 only	• Low blood sugar • Weight gain	Can be used as monotherapy or w/ metformin
Meglitinides (glinides) PO	Nateglinide, repaglinide	• Increase insulin release from pancreas • Type 2 only	• Low blood sugar • Weight gain	• Can be used as monotherapy or w/ metformin • Shorter-acting than sulfonylureas, taken w/ each meal • Must eat within 30 minute of taking
Thiazolidinediones (glitazones) PO	Pioglitazone, rosiglitazone	• Decrease insulin resistance, increase glucose uptake by muscles, may decrease glucose production by liver • Type 2 only	• Sinusitis, URI • Fluid retention • Risk of fractures, increased ovulation	• Can be used as monotherapy or w/ metformin or sulfonylureas • Must be monitored closely for clients w/ heart failure
Alpha-glucosidase inhibitors PO	Acarbose, miglitol	• Slow down carbohydrate absorption & digestion; reduce postprandial increase • Type 2 only	• GI distress • Borborygmus	• Can be used as monotherapy or w/ insulin or sulfonylureas • No risk of low blood sugar when used alone
DPP-4 inhibitors (gliptins) PO	Linagliptin, saxagliptin	• Slow down the breakdown of incretins by DPP-4; increase insulin release, reduce glucagon release & liver glucose production • Type 2 only	• Pancreatitis • Hypersensitivity reactions	• Can be used as monotherapy or in combination • Teach clients signs of pancreatitis.
Dopamine agonist PO	Bromocriptine	• Activate dopamine receptors in the CNS; improve glycemic control, but unknown how exactly • Type 2 only	• Orthostatic hypotension • Exacerbation of psychosis	• Can be used as monotherapy or in combination • Marketed under different name for Parkinson's, hyperprolactinemia
Sodium-glucose co-transporter-2 (SGLT-2) inhibitors PO	Canagliflozin, dapagliflozin	• Block SGLT-2 in the tubules of the kidney and increase glucose excretion in urine • Type 2 only	• Genital fungal infections • UTI, polyuria • Orthostatic hypotension	• Can be used as monotherapy or in combination • Ongoing research for use w/ type 1 DM

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