

# ORAL DIABETES MEDICINES

DRUG CLASS	DRUG NAMES	HOW IT WORKS	WHEN TO TAKE
Alpha-glucosidase inhibitors	acarbose (Precose) miglitol (Glyset)	Slows down the digestion of certain carbohydrates in intestines	Take with the first bite of each meal.
Biguanides	metformin (Glucophage, Glucophage XR, Riomet [liquid formulation])	Decreases production of glucose by the liver; improves insulin sensitivity in liver, muscle, and fat cells	Take with food to minimize side effects.
<p>Note: Liver and kidney function should be checked before starting metformin and periodically while taking it; discontinue before and for at least 48 hours after surgical procedures or radiocontrast dye studies.</p>			
D-Phenylalanine derivatives	nateglinide (Starlix)	Stimulates the pancreas to release more insulin	Take 1 to 30 minutes before meals.
Meglitinides	repaglinide (Prandin)	Stimulates the pancreas to release more insulin	Take 15 minutes before meals.
Sulfonylureas	chlorpropamide (Diabinese)	Stimulates the pancreas to release more insulin	Take with food.
	glyburide (Diabeta, Glynase, Micronase)		Take before a meal.
	glipizide (Glucotrol)	Take 30 minutes before a meal.	
	glipizide extended-release (Glucotrol XL) glimepiride (Amaryl)	May be taken with a meal; do not crush or chew. Take before or with meals.	
Thiazolidinediones	pioglitazone (Actos) rosiglitazone (Avandia)	Improves insulin sensitivity, decreases production of glucose in the liver; takes up to 4–6 weeks for full effect	Take with or between meals.
<p>Note: Liver function tests must be done before starting a thiazolidinedione and periodically while taking it; caution is needed if a person has heart failure; may decrease effectiveness of birth control medicines or cause ovulation to resume.</p>			
Combination products	Avandamet (rosiglitazone and metformin) Glucovance (glyburide and metformin) Metaglip (glipizide and metformin)	Drug actions include those for each type of medicine in pill.	Take as directed.

The information in this table is based on drug package labeling.

# AT A GLANCE

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SIDE EFFECTS	COMMENTS
Upset stomach, diarrhea, gas, bloating	Increase dose gradually; if hypoglycemia develops, use glucose gel or tablets for treatment; monitor liver function with acarbose; not to be used by people with inflammatory bowel disease.
Nausea, diarrhea, gas, metallic taste, decreased absorption of vitamin B <sub>12</sub>	May improve lipid (blood fat) levels; use only with normal kidney function due to risk of lactic acidosis. If lactic acidosis is suspected, call for medical help immediately; avoid alcohol.
Hypoglycemia, weight gain, headache	Skip dose if meal skipped.
Hypoglycemia, weight gain, headache	Skip dose if meal skipped; add dose if meal added.
Hypoglycemia, edema (swelling), low sodium	Long acting (up to 72 hours); avoid alcohol.
Hypoglycemia, weight gain, nausea, diarrhea, constipation, stomach pain, sun sensitivity, skin rash (can occur with glyburide, glipizide, glipizide extended-release, and glimepiride)	With all sulfonylureas, create a regular schedule to eat meals. Eat meals on time and do not skip.
Headache, weight gain, anemia, edema (swelling)	May improve lipid (blood fat) levels.
See side effects for each type of medicine in pill.	

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## EFFECTIVENESS OF ORAL MEDICINES

Some classes of diabetes drugs lower blood glucose more than others, but in some cases, two or even three classes of drugs can be combined for more effective treatment.

DRUG CLASS	EXAMPLES	AMOUNT IT DECREASES FASTING BLOOD GLUCOSE LEVELS	AMOUNT IT DECREASES HbA <sub>1c</sub>
Alpha-glucosidase inhibitors	acarbose (Precose) miglitol (Glyset)	35–40 mg/dl	0.7% to 1.0%
Biguanides	metformin (Glucophage)	50–70 mg/dl	1.5% to 2.0%
D-Phenylalanine derivatives	nateglinide (Starlix)	65–75 mg/dl	0.5% to 2.0%
Meglitinides	repaglinide (Prandin)	65–75 mg/dl	0.5% to 2.0%
Sulfonylureas	glipizide (Glucotrol, Glucotrol XL) glyburide (DiaBeta, Glynase, Micronase) glimepiride (Amaryl)	60–70 mg/dl	0.8% to 2.0%
Thiazolidinediones	pioglitazone (Actos) rosiglitazone (Avandia)	25–50 mg/dl	0.5% to 1.5%

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