



Actions of oral diabetes medications

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Class: Biguanide (Metformin)

Brands: Diabex, Diaformin

Action: Slows the absorption of glucose from the GUT, ↓the amount of glucose produced by the liver, and makes muscles and liver more sensitive to insulin

Class: Sulfonylurea **Brands:**

Daonil, Glimel, Diamicon, Diamicon MR, Gliclazide, Glyade, Amaryl, Melizide, Minidiab

Action: Stimulates the pancreas to release more insulin

Class: DPP-4 inhibitors (Sitagliptin)

Brand: Januvia

Action: Increases active levels of incretins (intestinal hormones) that ↑ insulin release from the pancreas and ↓ the amount of glucose released by the liver

Class: Thiazolidinedione (Glitazone)

Brands: Actos, Avandia

Action: Makes muscle cells more sensitive to insulin, and reduces production of glucose by liver

Class: Alpha-glucosidase Inhibitor (Acarbose)

Brand: Glucobay

Action: Slows down the digestion of some carbohydrates in the intestine

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Healthy Living NT is the trading name of the Diabetes Association of the Northern Territory Incorporated.



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Oral Diabetes Medications

Produced by Healthy Living NT

Drug class	Chemical name	Brand name and Tablet strength	Approx. duration	Daily dose range	Expected result	Adverse reactions	Contraindications
Biguanide	Metformin	Diabex, Diaformin, Glucophage 500mg, 850mg, 1g	12 hours	0.5-3.0g	HbA1c ↓ 1.5 – 2.0%	Anorexia, Flatulence, Bloating Vomiting, Diarrhoea, Lactic acidosis	<ul style="list-style-type: none"> Renal impairment (stage 4&5) Cardiac insufficiency Septicaemia Severe dehydration History of lactic acidosis
		Diabex XR 500mg once a day - slow release	24 hours	0.5 – 2.0g	Fasting BGL ↓ 2.8 – 3.8 mmol		
Sulfonylureas	Glibenclamide	Daonil, Glimel, 5mg	18-24 hours	2.5-20mg	HbA1c ↓ 1.1 – 2.0%	Weight gain Hypoglycaemia Skin rashes Blood dyscrasias	<ul style="list-style-type: none"> Reduced ability to deal with hypoglycaemia Severe renal or liver impairment Hypersensitivity to sulphonylureas
	Gliclazide	Diamicron MR 30mg once a day – slow release	24 hours	30-120mg			
		Diamicron 80mg Glyade 80mg	18–24 hours	40-320mg			
	Glimepiride	Amaryl, Dimirel 1mg, 2mg, 3mg, 4mg	>24 hours	1-4mg			
	Glipizide	Melizide, Minidiab 5mg	6-12 hours	2.5-40mg			
Thiazolidinedione	Pioglitazone	Actos 15mg, 30mg, 45mg	24 hours	15-45mg	HbA1c ↓ 0.5-1.5%	Mild oedema Weight gain	<ul style="list-style-type: none"> Moderate to severe liver impairment Moderate or severe heart failure female of child-bearing potential
	Rosiglitazone	Avandia 4mg, 8mg	24 hours	4-8mg	Fasting BGL ↓ 2.3 – 2.9 mmol	Mild oedema Weight gain High cholesterol	
Combination drugs	Metformin and Glibenclamide	Glucovance 500mg & 2.5mg 500mg & 5mg	Combination of both drugs		~ 1% reduction in addition to either agent as monotherapy	Combination of both drugs	Combination of both drugs
	Rosiglitazone and Metformin	Avandamet 2mg & 500mg 4mg & 500mg 2mg & 1000mg 4mg & 1000mg	Combination of both drugs			Combination of both drugs	Combination of both drugs
Alpha-glucosidase Inhibitors	Acarbose	Glucobay 50mg, 100mg	3 hours	150 -600mg	HbA1c ↓ 0.5-1%	Flatulence Abnormal LFT Skin rashes	<ul style="list-style-type: none"> Inflammatory bowel disease Gastrointestinal disorders Conditions aggravated by intestinal gas
DPP-4 inhibitors	Sitagliptin	Januvia 100mg, 50mg, 25mg (preferred am dose)	24 hours	100mg (50 mg eGFR 50- 30 mL/min) (25 mg eGFR < 30 mL/min)	HbA1c ↓ 0.5- 1.8% BGL Fast ↓ 1.4 mmol PP ↓ 3.0 mmol	Nasopharyngitis, headache, URTI ↑ infections	<ul style="list-style-type: none"> Caution when renal insufficiency (reduced dose)

References

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