

MEDICATIONS

Glucose-lowering medications for type 2 diabetes

Who will need diabetes medications?

Most people with type 2 diabetes will benefit from taking glucose-lowering medications.

Continue to focus on eating well and keeping active regardless of which medication you take.

Everyone's diabetes is different, and some medications may suit you better than others. Your diabetes will also change over time, so make sure you check in with your GP or NP regularly.

Ask to see a **diabetes educator** any time there is a change in your diabetes management.

Reviewing glucose-lowering medications

If you start a new medication, or the dose changes, see your GP or NP for a review after 3 months.

Notify your GP or NP if you experience any side effects.

Discuss your glucose targets with your GP, NP or diabetes educator to know whether your treatment is working best for you. See the table below as a guide.

	HbA1c Recommended Target	Average blood glucose pre-meal or fasting*	Average blood glucose level 2 hours post-meal*
Adult	≤ 7.0% (53 mmol/mol)	4.0 – 8.0 mmol/L	≤ 10.0 mmol/L
Elderly with comorbidities, falls risk OR High hypo risk	≤ 8.0% (64 mmol/mol)	5.0 – 8.0 mmol/L	≤ 10.0 mmol/L
Frail, dependent, in residential care and risk of hypo	≤ 8.5% (69 mmol/mol)	6.0 – 10.0 mmol/L	≤ 12.0 mmol/L

*These ranges are a guide only. For HbA1c of 6% estimated Average Glucose (eAG) is 7.0 (5.5-8.5); for 7% eAG is 8.6 (6.8-8.3); for 8% eAG is 10.2 (8.1-12.1); for 9% eAG is 11.8 (9.4-13.9).

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Commonly used medications for type 2 diabetes

Please note these medications can have different brand names and are available in various combinations.

Class	Drug name (brand name)	How they work	Potential side effects	Considerations	Temporarily stop taking and consult your GP, NP or diabetes team if:
Biguanide Tablet/s taken with food	Metformin (Diabex®, Diaformin®, Formet®)	Increases insulin sensitivity Reduces the liver's release of glucose ♥	Nausea Diarrhoea Metallic taste in mouth	Avoid in severe kidney or liver problems. Extended release has fewer side-effects. Can cause modest weight loss .	<ul style="list-style-type: none"> Fasting or unable to eat or drink carbohydrates Vomiting and/or diarrhoea
DPP-4 inhibitor Tablet/s taken with or without food	Alogliptin (Nesina®) Linagliptin (Trajenta®) Saxagliptin (Onglyza®) Sitagliptin (Januvia®) Vildagliptin (Galvus®)	Increases insulin production after food Reduces the liver's release of glucose	Gastrointestinal upset Flu-like symptoms Joint or muscle pain Risk of pancreatitis	Low risk for hypoglycaemia when taken on their own. Caution in heart failure. Avoid if history of pancreatitis. Weight neutral. Dose reduction for kidney problems (except linagliptin).	
GLP-1 RA Injection either twice a day, or once a week	Twice daily: Exenatide (Byetta®) Once a week: Dulaglutide (Trulicity®) Semaglutide (Ozempic®)	Increases insulin production after food Slows stomach emptying ♥	Nausea Vomiting Diarrhoea Weight loss Risk of pancreatitis	Avoid if history of pancreatitis. May suppress appetite . Avoid in the frail or underweight. Gastrointestinal effects more common in elderly .	
SGLT2 inhibitor Tablet/s taken with full glass of water, with or without food	Dapagliflozin (Forxiga®) Empagliflozin (Jardiance®) Ertugliflozin (Steglatro®)	Increases glucose loss through urine ♥	Dehydration Low blood pressure Urinary incontinence Urinary tract infection Ketoacidosis Weight loss	Risk of diabetic ketoacidosis (with normal or low blood glucose levels) if fasting or unwell. Caution kidney problems. Avoid if eating a very low carbohydrate diet. Will increase need to urinate .	<ul style="list-style-type: none"> Fasting or unable to eat or drink carbohydrates Vomiting and/or diarrhoea
Sulfonylurea Tablet/s taken with food	Glibenclamide (Daonil®, Diamicon®) Gliclazide (Glyade®) Glipizide (Melizide®) Glimepiride (Amaryl®)	Increases pancreas insulin production	Nausea Diarrhoea Hypoglycaemia Weight gain	Avoid in frail, older people with irregular eating patterns. Avoid in severe kidney or liver impairment. Efficacy may reduce as pancreas (beta-cell) function declines. Requires daily blood glucose monitoring due to hypo risk.	<ul style="list-style-type: none"> Fasting or unable to eat or drink carbohydrates Vomiting and/or diarrhoea

DPP-4= Dipeptidyl peptidase-4; GLP-1 RA= Glucagon-like peptide-1 receptor agonist; SGLT-2 = Sodium-glucose co-transporter 2; GP = general practitioner; NP = nurse practitioner ♥ Some benefit for people with cardiovascular disease or a previous heart attack

Other less commonly used diabetes medication include **thiazolidinediones (pioglitazone and rosiglitazone) and **alpha glucosidase inhibitors** (acarbose). Please speak to your GP, NP or diabetes team about these medications if you would like to know more.

Tips for people taking diabetes medication



1. Take the correct dose at the right time, as prescribed by your GP or NP. An incorrect dose can increase some side effects from that medication.



4. If you drink alcohol, talk to your GP or NP or diabetes educator, as it may affect your medication or risk causing a hypo.



2. Read the information leaflet that comes in the medication box or ask your pharmacist for information.



5. If you need help remembering to take your medication, ask your pharmacist about using a dosette box or Webster-pak®.



3. Don't split or crush your tablets without checking with your pharmacist first, as it may change the effectiveness of your medication.

Further resources

NDSS (National Diabetes Services Scheme)

Contact the NDSS on **1800 637 700** to order printed copies, or visit ndss.com.au/about-diabetes/resources

- [Medications for type 2 diabetes](#)

Australian Diabetes Society

[Australian Diabetes Society Treatment Algorithm for Type 2 Diabetes](#)

Next steps

- Non-insulin injectable medications
- Monitoring blood glucose levels
- Hyperglycaemia & sick day management
- Nutrition and eating well

Need help?

Phone **6215 9000**

or visit diabetestas.org.au