

SIX-MINUTE INTENSIVE TRAINING:

Glucose-lowering medicines for type 2 diabetes

People with type 2 diabetes are often given glucose-lowering medicines to help manage their blood glucose levels (BGLs).

Glucose-lowering medicines are different to insulin. Most are taken as tablets, although some must be injected. In Australia there are seven classes of these medicines, each of which may have several different brand names. Note: some diabetes medicines contain two or more classes of medicines in the one tablet.

Class	Drug(s)	Brand(s)*	Action	Side effects	Considerations	Administration
Biguanide	» Metformin	» Diabex » Diaformin » Formet	» Increases insulin sensitivity » Reduces glucose release from liver	» Nausea » Diarrhoea » Metallic taste in mouth	» Cease if diarrhoea continues for a few days » Contraindicated if severe kidney or liver disease » May cause modest weight loss	» With or just after food » Withhold if fasting, nil-by-mouth or if acutely unwell
Sulphonylurea	» Glibenclamide » Gliclazide » Glimepiride » Glipizide	» Daonil » Glyade » Nidem » Amaryl » Melizide » Minidiab	» Stimulates the pancreas to release more insulin	» Hypoglycaemia » Weight gain » Skin rashes » Stomach upsets » Jaundice	» Generally not recommended for residents in aged care due to hypo risk » Contraindicated if severe kidney or liver disease	» With or just after food » Withhold if fasting, nil-by-mouth or if vomiting/diarrhoea
DPP-4i (Dipeptidyl peptidase-4 inhibitor)	» Alogliptin » Linagliptin » Saxagliptin » Sitagliptin » Vildagliptin	» Nesina » Trajenta » Onglyza » Januvia » Galvus	» Increases insulin release after food » Reduces glucose production in the liver	» Nausea » Increased infection risk » Headaches » Dizziness » Itchy rash	» Dose reduction or stopping DPP-4 inhibitors is recommended for people with kidney or liver impairment	» Before or after food
GLP-1RA (Glucagon-like peptide-1 receptor agonist)	» Dulaglutide » Semaglutide » Tirzepatide (dual GLP-1RA/GIP (glucose-dependent insulinotropic polypeptide))	» Trulicity » Ozempic » Mounjaro	» Increases insulin release after food » Reduces glucose production in the liver » Slows gastric emptying	» Nausea, vomiting, diarrhoea » Heartburn » Abdominal pain » Reduced appetite and weight loss » Pancreatitis » Reduced absorption of other medicines	» Avoid if history of pancreatitis » Avoid in frail or underweight residents » Avoid in residents with severe GI disease or severe kidney disease	» Subcutaneous injection only » Once weekly, with or without food
SGLT2i (Sodium-glucose cotransporter 2 inhibitor)	» Dapagliflozin » Empagliflozin	» Forxiga » Jardiance	» Increases glucose passing through urine	» Dehydration » Low blood pressure » Genitourinary infections » Ketoacidosis	» Avoid if low carbohydrate intake » Caution with kidney disease » Increases need to urinate – caution with residents using diuretics or who are dehydrated	» Before or after food » Withhold if fasting, nil-by-mouth or acutely unwell
Alpha-glucosidase inhibitor	» Acarbose	» Glybosay	» Slows carbohydrate absorption	» Bloating » Flatulence » Diarrhoea » Hepatitis	» Limited role in residential aged care due to side effects » Hypoglycaemia must be treated with pure glucose	» With food
Thiazolidinediones (glitazones)	» Pioglitazone	» Actos » Vexazone	» Increases insulin sensitivity	» Fluid retention » Heart failure » Fractures in women » Weight gain	» Change in BGL may take up to 6 weeks » May worsen heart failure » Only used if other medications not suitable	» Before or after food

*Note: Other brands and/or generic versions of these medicines may be available.

Regular review of glucose-lowering medicines in aged care

Notify the registered nurse (RN) if the person with diabetes is experiencing medication side effects, or BGLs are too low (hypoglycaemia) or high (hyperglycaemia). Their diabetes management plan may need review.

Next steps

Read:

- » **Diabetes management in aged care: a practical handbook** – chapter 10: Glucose lowering medicines for type 2 diabetes
- » **Six minute intensive training posters:** Know your insulin, Hypoglycaemia, Sick day management.