



Medications

for type 2 diabetes

People with type 2 diabetes are often given tablets to help control their blood glucose levels. These tablets are intended to be used in conjunction with healthy eating and regular physical activity, not as a substitute. Diabetes tablets are not an oral form of insulin.

If your doctor has prescribed tablets for your diabetes, it is usually recommended that you test your blood glucose levels so you and your doctor can see if your treatment is satisfactory.

Are there different types of tablets?

There are **five** classes of tablets currently used in Australia for lowering blood glucose levels. They are known as biguanides, sulphonylureas, thiazolidinediones (glitazones), meglitinides and alpha glucosidase inhibitor (acarbose).

1. Biguanides (metformin)

Chemical Name	Some Brand Names	
Metformin	Diabex Diabex XR Glucohexal Glucoophage Metformin-BC	Diaformin Formet Glucomet Genrx metformin

Points to remember about biguanides

- They help to lower blood glucose levels by:
 - reducing the amount of stored glucose released by the liver.
 - slowing the absorption of glucose from the intestine.
 - helping the body to become more sensitive to insulin so that your own insulin works better.
- Side effects can include nausea, diarrhoea and a metallic taste in the mouth.
- To reduce side effects, tablets should be taken with or after a meal.
- They need to be started at a low dose and increased slowly.
- Metformin doesn't generally put on weight and may help to lose a few kilos. It is often prescribed as the first diabetes tablet for people with type 2 diabetes who are overweight.
- Metformin should not be used by people with severe liver, kidney or heart disease. Metformin may need to be stopped before surgery or procedures that require injecting a radio-opaque dye such as a coronary angiogram. Always check with your doctor.
- They are rarely prescribed for women who are pregnant or breast-feeding.
- Over time, your doctor may need to gradually increase the dose.
- Metformin may need to be combined with the sulphonylurea class of tablets.

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2. Sulphonylureas

Chemical Name	Some Brand Names	
Gliclazide	Diamicron	Glyade
	Diamicron MR	Mellihexal
	Nidem	Genrx gliclazide
Glibenclamide	Daonil	Glimel
Glipizide	Melizide	Minidiab
Glimepiride	Amaryl	Dimirel

Points to remember about sulphonylureas

- They lower blood glucose levels by stimulating the pancreas to release more insulin.
- They can cause hypoglycaemia (low blood glucose or 'hypo'). Be sure to discuss this with your doctor or diabetes educator or call Diabetes Australia for more information.
- Tablets should be taken just before a meal. There is less risk of having a 'hypo' if you have regular meals and snacks throughout the day.
- Side effects can include weight gain, skin rashes, gastric upsets and jaundice.
- They are rarely prescribed for women who are pregnant or breast-feeding.
- Over time, your doctor may need to gradually increase the dose.
- Sulphonylureas may need to be combined with metformin tablets.

3. Thiazolidinediones (glitazones)

Chemical Name	Brand Name
Rosiglitazone	Avandia
Pioglitazone	Actos

Points to remember about thiazolidinediones (glitazones)

- They help to lower blood glucose levels by increasing the effect of your own insulin, especially on muscle and fat cells ie: they improve insulin resistance.
- Their effect is slow, taking days to weeks to begin working and one to two months for their full effect.
- They work well in conjunction with some of the other diabetes tablets.
- Taken on their own, they do not cause low blood glucose levels however this can occur when they are taken with a sulphonylurea.
- They don't need to be taken with a meal and can be taken once or twice daily at any convenient time.
- A side effect is weight gain. Fat is moved from areas where it is bad for your health (around the tummy) to other areas such as the top of the thighs, where you still may not want it but it is not as harmful to your health.
- Another side effect is fluid accumulation and glitazones should generally be avoided by people with heart failure.
- They should not be taken by women who are pregnant or breast-feeding.

- Because a closely related tablet that is no longer used caused some cases of severe liver damage, it is recommended that regular checks of liver function are done particularly in the first year of treatment with these tablets. Your doctor will need to discuss this with you when starting you on these tablets.

4. Meglitinides

Chemical Name	Brand Name
Repaglinide	Novonorm

Points to remember about meglitinides

- They lower blood glucose levels by stimulating the pancreas to release more insulin, although they are not chemically related to the sulphonylureas.
- They are quick acting and don't last long so a tablet is taken before each meal to stimulate insulin to cope with that meal. They offer flexibility for people with erratic eating patterns eg: shift workers.
- They can cause hypoglycaemia (low blood glucose or 'hypo').
- Side effects other than a low blood glucose level are unusual but can include gastro upsets and abnormalities of liver function tests.
- They should not be taken by women who are pregnant or breast-feeding.

5. Alpha glucosidase inhibitor

Chemical Name	Brand Name
Acarbose	Glucobay

Points to remember about alpha glucosidase inhibitor

- They help to slow down the digestion and absorption of certain dietary carbohydrates in the stomach (intestine). Taken on their own, they don't cause hypoglycaemia.
- If hypoglycaemia occurs, due to another diabetes tablet you may be taking, it must be treated with pure glucose such as glucose tablets, gel or Lucozade. Absorption of other forms of carbohydrate may be affected by Glucobay.
- Side effects include flatulence (wind), bloating and diarrhoea.
- They need to be started at low doses and increased slowly to reduce side effects.
- They need to be taken just before eating.
- They should not be taken by women who are pregnant or breast-feeding.

6. Combinations

At some stage your doctor may decide to add a second or even a third type of tablet to maintain the effect on your blood glucose levels. For example, metformin plus a sulphonylurea is a common combination.

As an alternative to taking two separate tablets there is currently one product that is a metformin and a sulphonylurea (glibenclamide) combined into a single tablet:

Chemical Name	Brand Name
Metformin/glibenclamide	Glucovance

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Points to remember about combinations

Refer to the 'Points to Remember' relating to each medication previously listed in this information sheet.

Others

Two other medications, Orlistat (Xenical®) and Sibutramine (Reductil®), are not specific to diabetes but are used to help lose weight.

Xenical® reduces the amount of dietary fat that is absorbed from the gut. It can sometimes help people change their eating patterns and encourage a low fat diet. The side effects of flatulence (wind), diarrhoea and oily bowel movements can occur if you eat too much fat.

Reductil® helps you to lose weight by making you feel satisfied though you've eaten less food.

As these two weight loss medications are only suitable for certain people, discuss them with your doctor. After review, your doctor will choose the tablet or combination of tablets that's best for you.

Will I ever need to go on to insulin?

Type 2 diabetes is a progressive condition with decreasing insulin production over time. As all the tablets need enough insulin to work, when a person with diabetes is no longer making enough of their own insulin, they will need insulin treatment to control their blood glucose levels, sometimes with tablets as well. This can happen quite quickly but more often occurs in about 50% of people within 10 years of being diagnosed.

No matter which tablets your doctor prescribes, make sure you take them as directed. Tablets need to be taken in conjunction with healthy eating and regular physical activity to help keep blood glucose at a safe level – not as a substitute.

Would you like to join Australia's leading diabetes organisation?

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- Dietary services
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For more information phone 1300 136 588

Website: www.diabetesaustralia.com.au

Multilingual information: www.multilingualdiabetes.org.au

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