

TREATMENT WITH ORAL HYPOGLYCAEMIC AGENTS

Treatment with Oral Hypoglycaemic Agents

Aims of Drug Treatment

- to achieve target HbA1c
- to alleviate hyperglycaemic symptoms
- to avoid hyperglycaemia
- to avoid excessive weight gain
- to reduce long term complications of diabetes
- where possible, to prevent long term complications of diabetes

When to consider tablets

- in type 2 diabetes with inadequate control after at least 12 weeks appropriate diet
- possibly sooner if symptoms troublesome or if not overweight (BMI < 25)
- **avoid in females who are pregnant or planning a pregnancy**

Choice of Drug

- See Table on [page 30](#)

Dosage Alteration

- changes in dosage should be gradual; in general, dosage adjustments should be made every few months

Remember prescriptions are free for all patients who receive oral hypoglycaemic agents or insulin

Tablets must be replaced by insulin before and during pregnancy, and during severe illness

Oral Hypoglycaemic Drugs

Class	Action	Generic Name	Daily Dose (max single dose)	Dose Frequency	Comments
Sulphonylurea	Stimulates insulin secretion from the pancreas	Gliclazide	40-320mg (160mg)	1-2 times daily	Take before meals, as absorption reduced by food and hyper-glycaemia S/E: Weight gain, Hypoglycaemia AVOID as 1 st line in obese and in liver disease or significant renal impairment AVOID Glibenclamide & Chlorpropramide in elderly (long acting; higher risk of hypos). *No longer 1 st line agents; no need to change therapy in patients who are stable
		Glipizide	2.5-20mg (15mg)	1-3 times daily	
		Glimepiride	1-6mg (6mg)	Daily	
		Glibenclamide	2.5-15mg (15mg)	Daily	
		Chlorpropramide*	250-500mg (500mg)	Daily	
		Tolbutamide*	50mg-1.5g (1g)	1-3 times daily	
Biguanide	Decreases gluconeogenesis & increases peripheral glucose utilisation	Metformin	500mg-3g	1-3 times daily	1 st choice if obese. Take with or after food. Gradual dose titration. No hypos if used as mono-therapy S/E: GI upset, rarely lactic acidosis AVOID in critical limb ischaemia or hypoxia
α -Glucosidase Inhibitor	Delays digestion of starch & sucrose; reduces post-prandial rise in blood glucose	Acarbose	50-600mg (200mg)	1-3 times daily	Take with food. S/E: Flatulence, minimised by gradual dose titration CAUTION: Use limited by GI S/E
Thiazolidinedione	Improves insulin sensitivity	Rosiglitazone Pioglitazone	4-8 mg 15-45 mg	Daily Daily	Usually second line agents although now licensed as monotherapy. Useful in combination with Sulphonylurea or Metformin. May be used as monotherapy in obese patients intolerant of Metformin. S/E: Weight gain, fluid retention
Prandial Glucose Regulator	Stimulates post-prandial insulin secretion.	Repaglinide Nateglinide	0.5-16mg (4mg) 60-80 mg	With each meal With each meal	Take before food (omit when meals not taken) S/E: Weight gain, Hypoglycaemia

Combination Therapy

The following combinations are considered useful:

Metformin + Sulphonylurea

Metformin + Glitazone

Metformin + Prandial Glucose Regulator

Thiazolidinedione + Sulphonylurea

When insulin is started in obese patients, oral agents may be continued to minimise weight gain.

Triple Therapy

The combination of Metformin + Sulphonylurea + Glitazone is sometimes used where insulin treatment is considered an unacceptable option e.g. morbidly obese patients, or those not wishing to lose a vocational driving licence

Treatment with Oral Hypoglycaemic Drugs

