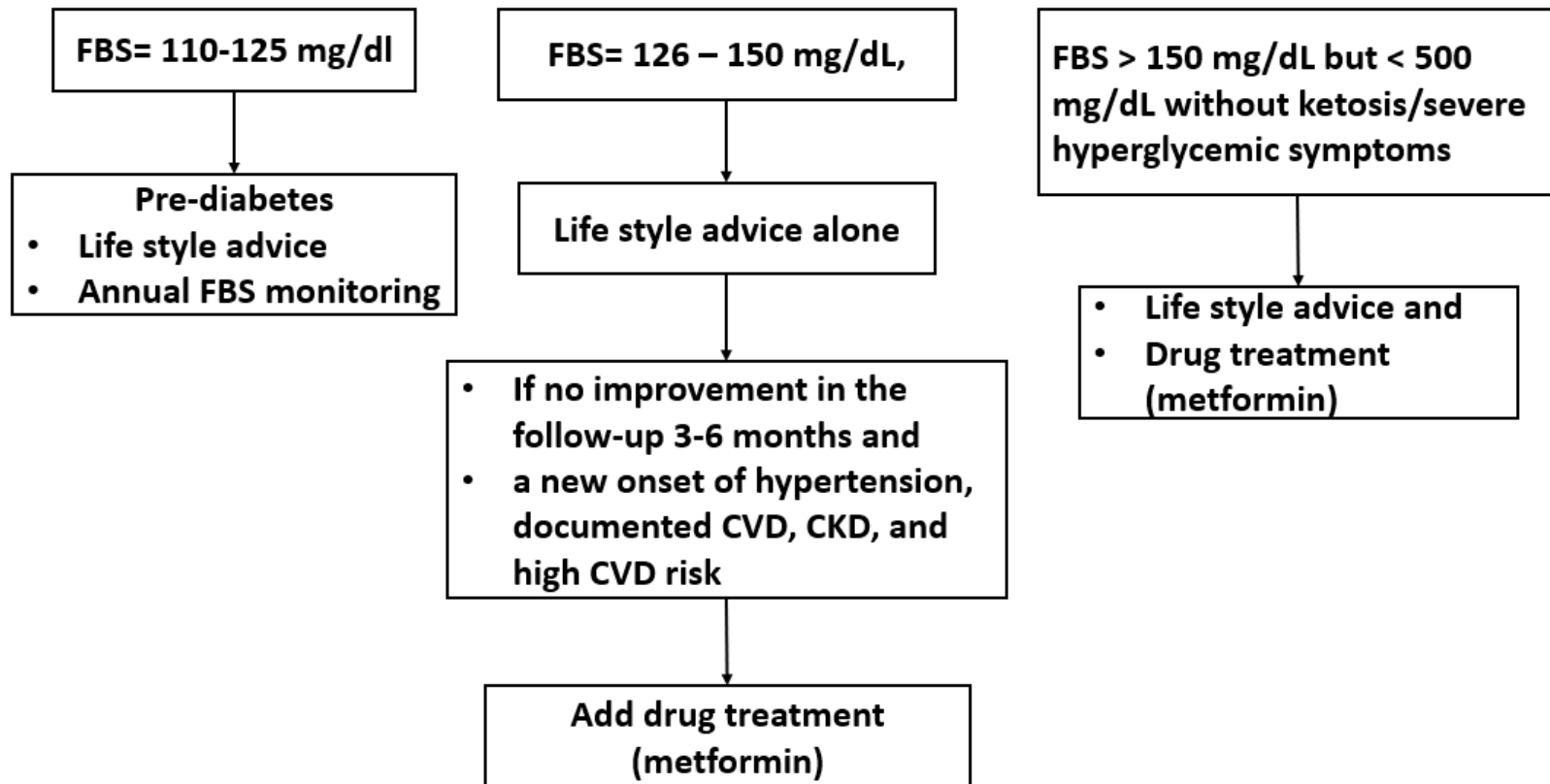


Management of newly diagnosed diabetes

(Less severe hyperglycemia)



Drug therapy

- Metformin is recommended as the first-line drug in the treatment of diabetes.
- Sulfonylurea is recommended as the second-line treatment, and human insulin as the third-line treatment.
- The dose of Metformin should be maximized first, before adding Gliclazide

i. Metformin

- Contraindicated in renal impairment, as above, and also in severe liver impairment if AST or ALT >3x normal.
- Side effects - Gastrointestinal irritation (divide the dose and increase slowly), and very rarely lactic acidosis, risk reduced by sticking to the dose limitations above.
- Standard dose
 - start with 500mg od and
 - if RBS not at target, increase at 4 weekly intervals to a maximum of 2g daily as follows, and as Creatinine Clearance allows:

Before breakfast	Before Lunch	Before evening meal	
500			
500		500	(maximum dose if CrCl 30-44)
500	500	500	
1000	500	500	(maximum dose if CrCl ≥ 45)

NB: Adjust the timing of Metformin as needed based on the patient's food intake.

: You should not start Metformin until the patient's Creatinine Clearance is known.

: You should maximize the dose of Metformin first, before adding Gliclazide.

- CrCl $\geq$ 60 No dose adjustment required. Maximum dose 2g daily. Monitor renal function annually.
- CrCl 45-59 No dose adjustment required. Maximum dose 2g daily. Check Creatinine Clearance 6 monthly, and if CrCl $\geq$ 60, check Creatinine clearance annually and reduce the dose if it is falling.
- CrCl 30-44 Do not initiate treatment. Patients on treatment may continue, but check Creatinine Clearance 3 monthly and discontinue if $<$ 30. Maximum dose 1g daily
- CrCl $<$ 30 Metformin is contraindicated

ii. **Gliclazide**

- Contraindicated in pregnancy and lactation, severe renal impairment with creatinine clearance $<$ 30ml/min, severe liver impairment with AST or ALT $>$ 3x normal, and type 1 diabetes.
- Side effects: Hypoglycemia
 - warn the patient about possible symptoms of hypoglycemia and the actions to take if they occur.
 - Patients should be advised that they must not miss meals and that prolonged periods of exercise can cause hypoglycemia.
 - Alcohol also increases the hypoglycemic effect of gliclazide.
- If sugars are not at target on the maximum dose of Metformin, then, as long as not contraindicated, gliclazide should be added as follows, and
- the dose increased at 4 weekly intervals until the target is reached:

Before breakfast

Before evening meal

80	
120	
160	
160	40
160	80
160	120
160	160

If patients are still not controlled on maximum metformin and gliclazide, they should be referred to the hospital OPD for consideration of insulin treatment.

Treatment targets

	Type 2 DM patients < 65 years	Type 2 DM patients ≥ 65 years
HbA1c	<7.5% for all	<7.5% for all
	<7.0%- reasonable if it can be achieved without excessive hypoglycemia	<8.5%- (2 or more coexisting illnesses or poor cognitive impairment)
FBS	80 -130 mg/dl	100-180 mg/dl

***Also, patients of any age with significant morbidity**, including cardiovascular disease, advanced microvascular or macrovascular complications, or cognitive impairment, who might be at increased risk of hypoglycemia and falls.

Follow-up

Monthly	If medication was adjusted, or if blood sugar is poorly controlled (RBS >200mg/dl but <500mg/dl)
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<i>Three monthly</i>	If blood sugar levels are to target. Check FBS and BP at each visit
<i>Annual review</i>	For diabetic complications
<i>Admit to hospital</i>	If RBS is >500mg/dl or if the patient is ketotic or unwell