

**SFGH Diabetes Team  
Oral Medication Algorithm  
2011**



# Glucose Control Algorithm

## TYPE 2 DIABETES- Oral medications

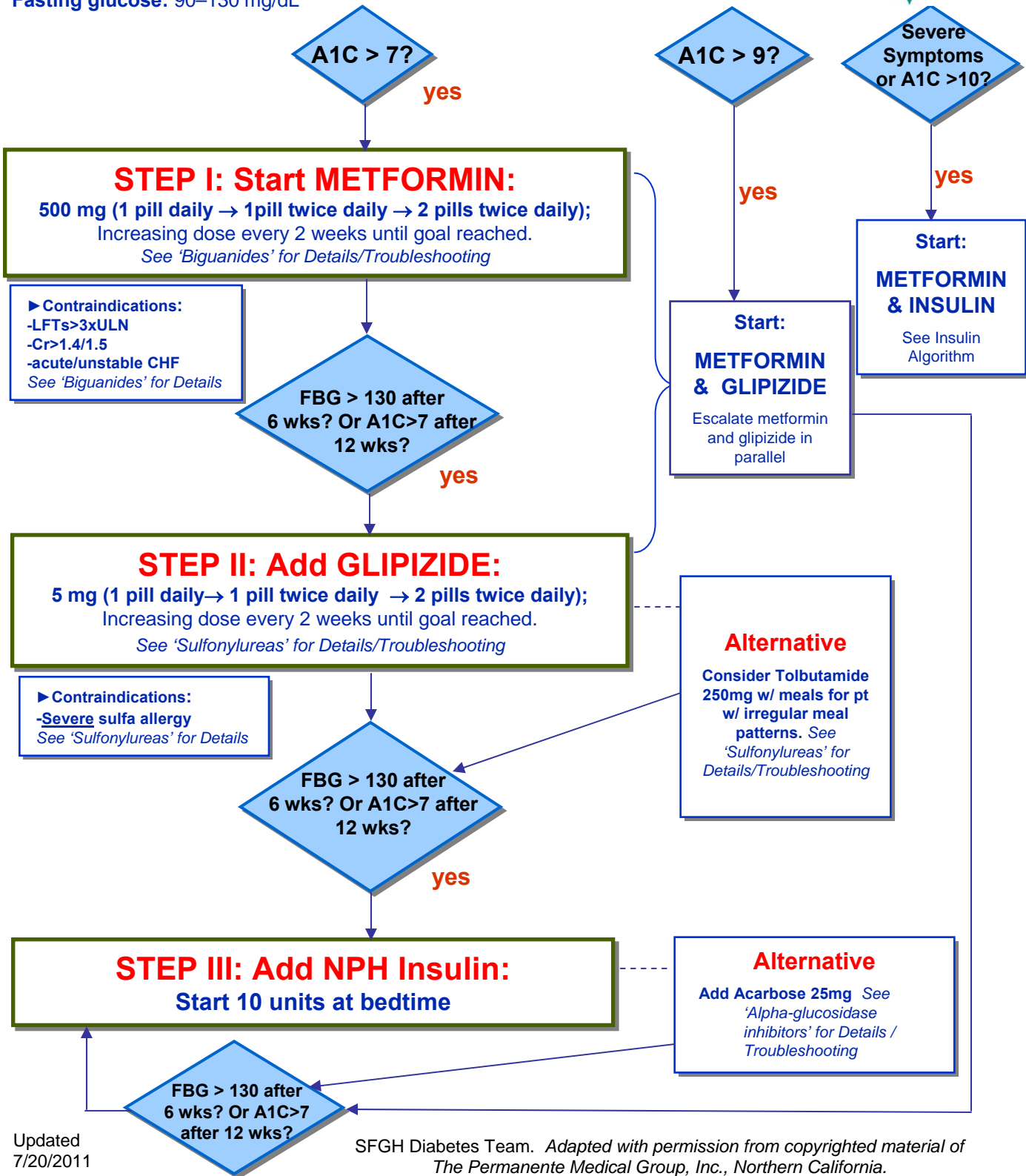


### TREATMENT TARGETS:

**A1C < 7%\***

**Fasting glucose: 90–130 mg/dL**

*\*Higher or lower A1C treatment targets may be appropriate in some pts (e.g., frail older adults and pts w/ life expectancy <5 yrs or during pregnancy).*



## ADA Recommendations 2011 for DM patients

### Diagnosis:

One of following (repeat unless unequivocal hyperglycemia): A1C  $\geq$  6.5%, fasting glucose  $\geq$  126mg/dl, 2hr  $\geq$  200 on 75g OGTT, **OR** random glucose  $\geq$  200mg/dl with classic symptoms.

### Targets:

- **A1C < 7.0%** (test q3 mos if not at goal or if med change. At goal: twice yearly)
- **BP  $\leq$  129/79 mmHg**
- **LDL < 100 mg/dl.** (Consider LDL goal of <70 if overt CVD. If not at goal @ max tolerated statin therapy, alt goal is 30-40% reduction in LDL from baseline.)

### Immunizations/Medications:

- **Influenza vaccine.** Annually for pts  $\geq$  6 months of age.
- **Pneumococcal vaccine.** x1 for pts  $\geq$  2yo. Repeat once for  $\geq$  65yo if 1<sup>st</sup> was >5yrs ago and pt was < 65yo.
- **Aspirin.** For any pt w/ overt CVD. Consider for men >50, women >60 w/ 1+ CVD risk factors (FH of CVD, htn, smoking, dyslipidemia, albuminuria).
- **Statin.** If overt CVD or > 40yo w/ 1+ CVD risk factors, regardless of baseline lipid levels.  
(*contraindicated in pregnancy*)
- **ACEI/ARB.** Treat micro- or macroalbuminuria in non-pregnant pts. Treat htn to target. Monitor serum creatinine and potassium. (*contraindicated in pregnancy*)

### Screening (DM2: begin at diagnosis, DM1: w/in 5 yrs of dx):

- **Nephropathy:** Annual serum creatinine, albumin-to-creatinine ratio. Monitor for disease progression and to assess response to therapy.
- **Retinopathy:** Annual dilated and comprehensive eye exam by ophthalmologist or optometrist
- **Polyneuropathy:** For all pts starting at dx: Annual foot exam to identify ulcer/amputation risk: inspect, check pulses, test for loss of protective sensation w/ monofilament.

### Education:

- **Daily foot care.** • **Tobacco:** ADVISE ALL PATIENTS NOT TO SMOKE. 1-800-NO BUTTS.
- **Nutrition:** Monitor carbs. Limit alcohol (<1 drink/day ♀, 2 for ♂), sat. fat (<7% tot cal), trans fats. Refer to nutritionist.
- **Physical activity:** 150 min/wk of mod intensity aerobic activity (DM2 pts: resistance training 3x/wk if not contraindicated)
- **Hypoglycemia** (BS <70mg/dl). Treat with 15-20g glucose (or any form CHO that contains glucose). Test 15 min after tx. If cont'd hypoglycemia, then repeat tx. Once SMBG returns to normal, pt should eat meal/snack to prevent recurrence. (**Glucagon emergency kit.** Consider prescription if at risk of severe hypoglycemia. Instruct caregivers on use.)

| <b>Drug</b>               | <b>Dosage</b>               | <b>Initial dose and titration</b>  | <b>A1C effect</b> | <b>Onset</b> | <b>Duration</b> |
|---------------------------|-----------------------------|--|-------------------|--------------|-----------------|
| glipizide<br>(Glucotrol)  | 5 mg<br>10 mg               | 5 mg daily before meals, ↑ by 2.5-5 mg q1-2 wks to max dose 20 mg twice daily  | ↓ 1 – 2%          | 1-3 hrs      | 6-12 hrs        |
| glyburide<br>(Diabeta)    | 1.25 mg<br>2.5 mg<br>5 mg   | 2.5–5 mg before meal, ↑ by 2.5-5 mg q1-2 wks to max dose 10 mg twice daily   | ↓ 1 – 2%          | 2-4 hrs      | 16-24 hrs       |
| glimepiride<br>(Amaryl)   | 1 mg<br>2 mg<br>4 mg        | Initial, 1-2 mg before first meal of the day, ↑ by 1-2 mg/day every 1-2 wks to max dose 8 mg daily   | ↓ 1 – 2%          | 2-3 hrs      | 24 hrs          |
| tolbutamide<br>(Orinase)  | 500 mg                      | 250-1000 mg before meal, ↑ by 250-500 mg/meal to max dose 1000 mg three times daily  | ↓ 1 – 2%          | 1 hr         | 6-12 hrs        |
| metformin<br>(Glucophage) | 500 mg<br>850 mg<br>1000 mg | 500 mg 1 tab daily, then 1 tab twice daily, then 2 tabs twice daily, ↑ q1-2 wks. Max dose 1000 mg twice daily or 850 mg three times daily  | ↓ 1.5 - 2%        |              | 12-18 hrs       |
| acarbose<br>(Precose)     | 25 mg<br>50 mg<br>100 mg    | 25 mg three times daily, ↑ by 25-50 mg per meal q4-8 wks as needed to achieve goal blood sugars and to minimize GI side effects. Max dose 50 mg three times daily for patient < 60 kg, or 100 mg three times daily for patient > 60 kg | ↓ 0.4 – 0.7%      | 1 hr         | 4 hours         |