



AAACE/ACE DIABETES ALGORITHM *For Glycemic Control*

**A1C Goal
≤ 6.5%***

LIFESTYLE MODIFICATION

A1C 6.5 – 7.5%**

Monotherapy

MET †	DPP4 ¹	GLP-1	TZD ²	AGI ³
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↓ 2 - 3 Mos.***

Dual Therapy

MET	+	GLP-1 or DPP4 ¹
		TZD ²
		Glinide or SU ⁵
TZD	+	GLP-1 or DPP4 ¹
MET	+	Colesevelam
		AGI ³

↓ 2 - 3 Mos.***

Triple Therapy

MET + GLP-1 or DPP4 ¹	+	TZD ²
		Glinide or SU ^{4,7}

↓ 2 - 3 Mos.***

INSULIN ± Other Agent(s) ⁶

A1C 7.6 – 9.0%

Dual Therapy ⁸

MET	+	GLP-1 or DPP4 ¹ or TZD ²
		SU or Glinide ^{4,5}

↓ 2 - 3 Mos.***

Triple Therapy ⁹

MET	+	GLP-1 or DPP4 ¹	+ TZD ²
		GLP-1 or DPP4 ¹	+ SU ⁷
		TZD ²	

↓ 2 - 3 Mos.***

INSULIN ± Other Agent(s) ⁶

A1C > 9.0%

Drug Naive | *Under Treatment*

Symptoms

No Symptoms

INSULIN ± Other Agent(s) ⁶

MET	+	GLP-1 or DPP4 ¹	± SU ⁷
		TZD ²	
		GLP-1 or DPP4 ¹	± TZD ²

INSULIN ± Other Agent(s) ⁶

- * May not be appropriate for all patients
- ** For patients with diabetes and A1C < 6.5%, pharmacologic Rx may be considered
- *** If A1C goal not achieved safely
- † Preferred initial agent
- 1 DPP4 if ↑ PPG and ↑ FPG or GLP-1 if ↑↑ PPG
- 2 TZD if metabolic syndrome and/or nonalcoholic fatty liver disease (NAFLD)
- 3 AGI if ↑ PPG
- 4 Glinide if ↑ PPG or SU if ↑ FPG
- 5 Low-dose secretagogue recommended
- 6 a) Discontinue insulin secretagogue with multidose insulin
b) Can use pramlintide with prandial insulin
- 7 Decrease secretagogue by 50% when added to GLP-1 or DPP-4
- 8 If A1C < 8.5%, combination Rx with agents that cause hypoglycemia should be used with caution
- 9 If A1C > 8.5%, in patients on Dual Therapy, insulin should be considered

AAACE/ACE Algorithm for Glycemic Control Committee

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TABLE 1

SUMMARY OF KEY BENEFITS AND RISKS OF MEDICATIONS

Benefits are classified according to major effects on fasting glucose, postprandial glucose, and nonalcoholic fatty liver disease (NAFLD). Eight broad categories of risks are summarized. The intensity of the background shading of the cells reflects relative importance of the benefit or risk.*

MEDICATIONS*										
	Metformin (MET)	DPP4 Inhibitor	GLP-1 Agonist (Incretin Mimetic)	Sulfonylurea (SU)	Glinide**	Thiazolidinedione (TZD)	Colesevelam	Alpha-glucosidase inhibitor (AGI)	Insulin	Pramlintide
BENEFITS										
Postprandial Glucose (PPG) - lowering	Mild	Moderate	Moderate to Marked	Moderate	Moderate	Mild	Mild	Moderate	Moderate to Marked	Moderate to Marked
Fasting glucose (FPG) - lowering	Moderate	Mild	Mild	Moderate	Mild	Moderate	Mild	Neutral	Moderate to Marked	Mild
Nonalcoholic fatty liver disease (NAFLD)	Mild	Neutral	Mild	Neutral	Neutral	Moderate	Neutral	Neutral	Neutral	Neutral
RISKS										
Hypoglycemia	Neutral	Neutral	Neutral	Moderate	Mild	Neutral	Neutral	Neutral	Moderate to Severe	Neutral
Gastrointestinal Symptoms	Moderate	Neutral	Moderate	Neutral	Neutral	Neutral	Moderate	Moderate	Neutral	Moderate
Risk of use with renal insufficiency	Severe	Reduce Dosage	Moderate	Moderate	Neutral	Mild	Neutral	Neutral	Moderate	Unknown
Contraindicated in Liver Failure or Predisposition to Lactic Acidosis	Severe	Neutral	Neutral	Moderate	Moderate	Moderate	Neutral	Neutral	Neutral	Neutral
Heart failure / Edema	Use with caution in CHF	Neutral	Neutral	Neutral	Neutral	Mild / Moderate Contraindicated in class 3,4 CHF	Neutral	Neutral	Neutral unless with TZD	Neutral
Weight Gain	Benefit	Neutral	Benefit	Mild	Mild	Moderate	Neutral	Neutral	Mild to Moderate	Benefit
Fractures	Neutral	Neutral	Neutral	Neutral	Neutral	Moderate	Neutral	Neutral	Neutral	Neutral
Drug-Drug interactions	Neutral	Neutral	Neutral	Moderate	Moderate	Neutral	Neutral	Neutral	Neutral	Neutral

* The abbreviations used here correspond to those used on the algorithm (Fig. 1).

** The term 'glinide' includes both repaglinide and nateglinide.