Glycemic Control Algorithm for Type 2 Diabetes Mellitus In Adults

Glycemic Goals
Individualize goal based on patient risk factors

<table>
<thead>
<tr>
<th>A1c</th>
<th>≤6%</th>
<th>&gt;7%</th>
<th>&gt;8%</th>
</tr>
</thead>
<tbody>
<tr>
<td>FPG</td>
<td>≤110</td>
<td>≤120</td>
<td>≤140 mg/dL</td>
</tr>
<tr>
<td>2h PP</td>
<td>≤130</td>
<td>≤180</td>
<td>≤180 mg/dL</td>
</tr>
</tbody>
</table>

Initial Intervention
1. Diabetes Self-Management Education and
2. Self-monitored Blood Glucose and
3. Medical Nutrition, Weight Control, Exercise
4. Begin monotherapy with metformin if A1c <1% above goal, otherwise begin dual therapy if A1c >1% above goal

If A1c not at goal after 3 months
Dual therapy
Continue non-pharmacological measures and Metformin plus:
- SU or TZD or DPP-4i or SGLT2i or GLP-1 or Basal Insulin

If A1c not at goal after 3 months
Triple therapy
Continue non-pharmacological measures and Metformin if using:
1. SU add TZD or DPP-4i or SGLT2i or GLP-1 or Basal Insulin
2. TZD add SU or DPP-4i or SGLT2i or GLP-1 or Basal Insulin
3. DPP-4i add SU or TZD or DPP-4i or Basal Insulin
4. SGLT2i add SU or TZD or DPP-4i or Basal Insulin
5. GLP-1 add SU or TZD or Basal Insulin
6. Basal Insulin add TZD or DPP-4i or SGLT2i or GLP-1

If A1c not at goal after 3 months
Begin basal insulin and continue oral agents
Begin basal + prandial insulin and metformin (+/- SGLT-2i)
Change to basal + prandial insulin management
Basal insulin (+/- prandial insulin) plus GLP-1 agonist
Four-oral agents may be considered

A1c at Goal
Continue therapy
Recheck A1c every 6 months

Footnotes
2. If initial A1c on presentation is ≥10%, consider insulin, with or without oral agents, as the initial intervention (see Insulin Algorithm)
3. These interventions should be maintained life-long (refer to Medical Nutrition, Weight Loss, and Exercise Algorithms)
4. Dose is reduced based on either serum creatinine (metformin, DPP4i’s) or calculated/estimated glomerular filtration rates (SGLT2i’s)
5. If a SU is selected, glipizide ER or glimepiride are recommended because they have a lower incidence of hypoglycemia than glyburide
6. SGLT-2 inhibitors are not indicated if the glomerular filtration rate is less than 40%
7. See package insert for drug contraindications and warnings.
8. See Insulin Algorithm

Abbreviations
DPP-4i Dipeptidyl peptidase-4 Inhibitor
FPG Fasting plasma glucose
GLP-1 Glucagon-like peptide-1 agonist
PP Postprandial
SGLT2i Sodium-Glucose Cotransporter-2 inhibitor
SU Sulfonylurea
TZD Thiazolidinedione

See disclaimer at www.tdctoolkit.org/algorithms_and_guidelines.asp
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**Sulfonylurea + Rosiglitazone**

**Metformin or Sulfonylurea + Exenatide**


**Nateglinide or Repaglinide + Metformin**

**Repaglinide + Metformin**

**Nateglinide + Metformin**

**Nateglinide + Thiazolidinedione**

**Repaglinide + Thiazolidinedione**

**Liraglutide + Metformin**

**Liraglutide + Sulfonylurea**
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**Sulfonylurea + Metformin + Alpha glucosidase inhibitors**  


**Sulfonylurea + Metformin + Thiazolidinedione**  


**Sulfonylurea + Metformin + Exenatide**  


**Liraglutide + Metformin and TZD**  

**Liraglutide + Metformin and Sulfonylurea**  