

GUIDE FOR STARTING PATIENTS on a Low Carb Lifestyle

A low carbohydrate (carb) lifestyle consists of reducing one's carbohydrate intake to 50-130g of total carbohydrates per day. Patients with type 2 diabetes (T2DM) who are interested in adopting a low carbohydrate lifestyle should monitor their blood glucose carefully and work closely with their primary care team to adjust medications as needed. **Risk of hypoglycemia is greatest among patients who are on insulin or sulfonylureas, particularly if they significantly reduce carbohydrate intake without adjusting their medications.**

Patients with T2DM who are on these medications may need to have their medications proactively reduced (i.e., when their diet is initiated) to prevent hypoglycemia. View a detailed review on medication management for patients with T2DM who follow a low carbohydrate lifestyle by visiting michmed.org/Jyng5 or scanning the QR code.



Low carbohydrate lifestyles are not 'one-size-fits-all.' Success may require fine-tuning and adjustments along the way to find a suitable carbohydrate range for a patient. Considerations such as patient desire/interest, experience, cultural background, and commitment to work closely with their care team and be proactive in self-management skills are necessary tools for success.



MONITORING BLOOD PRESSURE

- Monitor BP for all patients
- For patients with controlled BP or edema:
 - Consider stopping/decreasing diuretics during the first 2-4 weeks of dietary change
 - If BP/edema increase: return to prior dose
- TREAT hypotension: advise patient to monitor for fatigue and dizziness, can give patient permission to stop a medication in this setting (HOLD medication and call office).
- Monitor for hyponatremia
- Hydration!

SETTING CARB GOALS & ADJUSTING MEDICATIONS

GREEN CATEGORY: CONTINUE

Patients will need minimal medication adjustment

Population: These patients are considered low risk for hypoglycemia: Patients with T2D who are NOT on insulin or sulfonylureas (Biguanides/Metformin, GLP-1 receptor agonists, DPP-4 inhibitors are OKAY).

Carb goal: Work with your patients to set a suitable carb goal. A starting carb goal of 50-130g of carbohydrates per day may be appropriate for this population.



Biguanides
GLP-1 RAs
DPP-4 Inhibitors

Medication adjustments: IF patients are on BP-lowering medications, close monitoring and adjustments may be necessary to prevent hypotension.

Blood glucose range and monitoring: Most patients should achieve a fasting glucose level of 70-130 mg/dL and a two-hour post-prandial meal of <180 mg/dL. Work with your patient to determine blood sugar monitoring goals.

YELLOW CATEGORY: REDUCE

Patients may need to have their medications adjusted

Population: Patients who are on one or more of these medications: Basal long acting insulins or thiazolidinediones. Please communicate with patients to ensure they understand the importance of close communication with their healthcare team.

Carb goals: Work with your patients to set a suitable carb goal. A starting carb goal of 100-130g of carbohydrates per day may be appropriate for this population.



Thiazolidinediones

Basal long-acting insulins (*May need to reduce dose by up to 50%. Follow blood sugars and adjust as needed*)

Medication adjustments: General recommendations for dosing basal insulin: Reduce basal insulin by 25-50%. Consider greater reductions for patients with lower A1c/ frequent episodes of hypoglycemia.

- If A1c is high ($\geq 10\%$): Reduce by 25-50%

Blood glucose range and monitoring: We encourage patients to closely monitor for hypoglycemia and communicate with their healthcare team. General recommendations include:

- Self-monitoring via glucometer or CGM (at least four times a day for bolus insulin)
- Give patient permission to skip insulin dose and call office if hypoglycemia
- Okay for glucose to run slightly high ($\sim 150-250$) x1 month while adjusting

RED CATEGORY: CAUTION OR STOP

Low carb lifestyle may not be suitable for these patients

Population: Patients on sulfonylureas, combination insulin, basal-bolus insulin, meglitinides, or alpha-glucosidase inhibitors (decreases carb absorption) may need to stop these medications upon initiation of a low carb lifestyle.

Carb goal: We recommend patients have a visit with their clinician before starting to discuss carb goals and medication adjustments based on their level of comfort and experience. A starting carb goal of 100-130g of carbohydrates per day may be appropriate for this population.

Blood glucose range and monitoring: We encourage patients to closely monitor for hypoglycemia and communicate with their healthcare team. General recommendations include:

- Self-monitoring via glucometer or CGM (at least four times a day for bolus insulin)
- Give patient permission to skip insulin dose and call office if hypoglycemia
- Okay for glucose to run slightly high ($\sim 150-250$) x1 month while adjusting



Sulfonylureas

Megalitinides

SGLT2 Inhibitors

Bolus meal time insulin (*might need some amounts to correct high blood sugar*)

Combination insulins (70/30) - *switch to basal long acting*

Alpha-glucosidase Inhibitors

Medication adjustments: Closely monitor these patients to avoid, detect and treat hypoglycemia while safely reducing their carbohydrate intake. Consider laboratory testing to exclude Type 1 Diabetes, especially for patients on basal/bolus insulin, prior to starting a low carb lifestyle.

- If A1c is high ($\geq 10\%$): Reduce insulins by 25-50% and reduce or stop sulfonylureas/meglitinides
- If A1C is $< 10\%$: Reduce insulins by 50% and stop sulfonylureas/meglitinides
- Goal is to have basal insulin as 1/2 to 2/3 of total daily insulin dose
- STOP SGLT2 inhibitors to avoid euglycemic ketoacidosis
- STOP Alpha-glucosidase inhibitors as they are ineffective in low carb lifestyles