Diet Doctor

Type 2 diabetes medication reduction with carb-restricted diets

The main consideration is to prevent symptomatic hypoglycemia and coordinate the speed of medication adjustment with the patient's wishes and concerns. This involves weighing the potential risks against the potential benefits for each medication. In addition, all patients need to be comfortable checking their blood glucose multiple times per day.

Drug group (example)	Drug action	Hypoglycemia risk?	Suggested action
Long-acting insulins (Insulin glargine)	Long-acting exogenous insulin	**YES**	**REDUCE** by 50% for rapid reduction, or 33% if the patient is more concerned with maintaining strict glucose control.
Short-acting insulins (Insulin aspart)	Short-acting exogenous insulin	**YES**	**STOP** all short-acting, pre-meal insulin.
Combined long- and short-acting insulin	Mixture of long- and short-acting exogenous insulin	**YES**	**STOP** and convert to long-acting insulin with the appropriate adjustments.
Sulfonylureas (glyburide)	Increase pancreatic insulin secretion	**YES**	**STOP** (can consider continuing, if lowest blood sugar is still >200mg/dl).
Meglitinides (repaglinide)	Increase pancreatic insulin secretion	**YES**	**STOP.**
SGLT-2 inhibitors (canagliflozin)	Increase renal glucose secretion	**No**	**STOP** due to risk of euglycemic ketoacidosis.
Biguanides (metformin)	Reduce insulin resistance	**No**	No need to stop; may continue long term unless patient desires stopping all medication.
GLP-1 agonists (liraglutide)	Slow gastric emptying Increase glucose-dependent pancreatic insulin secretion	**No**	No need to stop initially. Can consider once glucose control maintained.
Thiazolidinediones (pioglitazone)	Reduce peripheral insulin resistance	**No**	Do not need to stop specifically for carb restriction; need to assess overall risk-benefit ratio.
DPP-4 inhibitors (sitagliptin)	Inhibit DPP-4 enzyme	**No**	No need to stop with carb-restricted diet; can consider once glucose control is maintained.
Alpha-glucosidase inhibitors (acarbose)	Delay digestion of starch and sucrose	**No**	Generally no benefit when eating low-carb meals. **STOP.**

Suspect latent autoimmune diabetes of adults (LADA) in adults who have a history of diabetic ketoacidosis (DKA) or severe hyperglycemia. Although this diagnosis is rare, individuals with LADA will not be able to reduce medications as quickly and may not be able to stop them completely.